REDACTED VERSION

SEMS Inc.
Southern Environmental Management & Specialties

3801 N. Causeway Boulevard, Suite209
Metairie, LA 7002
Phone: 504.342.2340
Fax: 504.342.2543
www.semsinc.net

July 26, 2010 2010 JUL 30 PM 3 13 Project No.: 207-0006

Mr. Tom Harris, Administrator
Louisiana Department of Environmental Quality
Remediation Services Division
Office of Environmental Assessment
Post Office Box 4314
Baton Rouge, Louisiana 70821-4314

**Operation and Maintenance Report**
**Second Quarter 2010**
**Delatte Metals Superfund Site**
**Ponchatoula, Tangipahoa Parish, Louisiana**
**Agency Interest No. 2328**

Dear Mr. Harris:

SEMS, Inc. (SEMS) is hereby submitting an original and two copies of the attached quarterly Operation and Maintenance Report for the above referenced project and reporting period. A brief site history, summary of the current monitoring events, and recommendations are included in the attached report. This report was prepared in accordance with the bid specifications associated with state solicitation number 2219038 and state purchase order number 3233226. SEMS contract to performs Operations and Maintenance is set to expire on October 1, 2010 with the last quarterly report being the 3rd Quarter 2010.

Should you have any questions or require additional information, please contact the undersigned at (504) 342-2340. **Please send any official correspondence regarding this site to Brian Sullivan at our corporate office address in Baton Rouge.**

Sincerely,
**SEMS, Inc.**

Jesse Hoppes, P.G.
Project Manager

Brian H. Sullivan, P.E.
Project Director

9791727

SEMS Inc.
Southern Environmental Management & Specialties

3801 N. Causeway Boulevard, Suite209
Metairie, LA 7002
Phone: 504.342.2340
Fax: 504.342.2543
www.semsinc.net

July 26, 2010

Project No.: 207-0006

Mr. Tim Harris, Administrator
Louisiana Department of Environmental Quality
Remediation Services Division
Office of Environmental Assessment
Post Office Box 4314
Baton Rouge, Louisiana 70821-4314

**Operation and Maintenance Report**
**Second Quarter 2010**
**Delatte Metals Superfund Site**
**Ponchatoula, Tangipahoa Parish, Louisiana**
**Agency Interest No. 2328**

Dear Mr. Harris:

SEMS, Inc. (SEMS) is hereby submitting an original and two copies of the attached quarterly Operation and Maintenance Report for the above referenced project and reporting period. A brief site history, summary of the current monitoring events, and recommendations are included in the attached report. This report was prepared in accordance with the bid specifications associated with state solicitation number 2219038 and state purchase order number 3233226. SEMS contract to performs Operations and Maintenance is set to expire on October 1, 2010 with the last quarterly report being the 3rd Quarter 2010.

Should you have any questions or require additional information, please contact the undersigned at (504) 342-2340. **Please send any official correspondence regarding this site to Brian Sullivan at our corporate office address in Baton Rouge.**

Sincerely,
**SEMS, Inc.**

Jesse Hoppes, P.G.
Project Manager

Brian H. Sullivan, P.E.
Project Director

SEMS Inc.
Southern Environmental Management & Specialties

3801 N. Causeway Boulevard, Suite 209
Metairie, LA 70002
Phone: 504.342.2340
Fax: 504.342.2543
www.semsinc.net

# OPERATION AND MAINTENANCE REPORT
# SECOND QUARTER 2010
# AGENCY INTEREST NO. 2328

**PREPARED FOR**

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**
**POST OFFICE BOX 4314**
**BATON ROUGE, LOUISIANA 70821-4314**
**(225) 219-3236**

**SEMS, INC. – CORPORATE OFFICE**
**11628 SOUTH CHOCTAW DRIVE**
**BATON ROUGE, LOUISIANA, 70815**
**(225) 924-2002**

**PREPARED BY:**
**SEMS, INC. - NEW ORLEANS OFFICE**
**CONTACT: JESSE HOPPES**
**(504) 342-2340**

**JESSE HOPPES, P.G.**
**PROJECT MANAGER**

Brian H. Sullivan

**BRIAN H. SULLIVAN, P.E.**
**PROJECT DIRECTOR**

1.0 INTRODUCTION AND BACKGROUND ..... 1
2.0 CHRONOLOGY OF EVENTS ..... 3
3.0 OPERATION AND MAINTENANCE ACTIVITIES ..... 5
3.1 ACCESS TO WELLS ..... 6
3.2 MONITOR WELL INSPECTION ..... 6
3.3 PERMEABLE REACTIVE BARRIER (PRB) INSPECTION ..... 6
3.4 REVIEW OF INSTITUTIONAL CONTROLS ..... 7
3.5 GROUNDWATER MONITORING, SAMPLING, AND ANALYTICAL PROCEDURES ..... 7
4.0 ANALYTICAL DATA REVIEW ..... 9
4.1 CURRENT MONITORING PERIOD GROUNDWATER FLOW DIRECTION ..... 9
4.2 CURRENT PERIOD CONSTITUENT CONCENTRATION ..... 9
4.3 HISTORICAL GROUNDWATER MONITORING TRENDS ..... 13
4.4 QUALITY ASSURANCE/QUALITY CONTROL AND UNUSUAL FINDINGS ..... 15
5.0 CONCLUSIONS AND RECOMENDATIONS ..... 16

**LIST OF TABLES**

| TABLE NUMBERS | TITLE |
|---|---|
| 1 | MONITORING WELL CONSTRUCTION DATA |
| 2 | WATER WELL CONSTRUCTION DATA |
| 3 | GROUNDWATER SAMPLING SUMMARY |
| 4 | CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY |
| 5 | HISTORICAL GROUNDWATER MONITORING SUMMARY |

**LIST OF FIGURES**


| FIGURE NUMBERS | TITLE |
|---|---|
| 1 | FACILITY MAP |
| 2 | FIRST, SECOND, AND THIRD WATER BEARING ZONE POTENTIOMETRIC MAPS (2A, 2B, & 2C) |
| 3 | FIRST, SECOND, AND THIRD WATER BEARING ZONE AND WATER WELL pH CONTOUR MAPS (3A, 3B, 3C, & 3D) |
| 4 | FIRST, SECOND, AND THIRD WATER BEARING ZONE AND WATER WELL LEAD ISOCONCENTRATION MAPS (4A, 4B, 4C, & 4D) |
| 5 | FIRST, SECOND, AND THIRD WATER BEARING ZONE AND WATER WELL ARSENIC ISOCONCENTRATION MAPS (5A, 5B, 5C, & 5D) |
| 6 | FIRST, SECOND, AND THIRD WATER BEARING ZONE AND WATER WELL MANGANESE ISOCONCENTRATION MAPS (6A, 6B, 6C, & 6D) |
| 7 | FIRST, SECOND, AND THIRD WATER BEARING ZONE AND WATER WELL NICKEL ISOCONCENTRATION MAPS (7A, 7B, 7C, & 7D) |
| 8 | FIRST, SECOND, AND THIRD WATER BEARING ZONE AND WATER WELL THALLIUM ISOCONCENTRATION MAPS (8A, 8B, 8C, & 8D) |

**LIST OF ATTACHMENTS**


| ATTACHMENT LETTER | TITLE |
|---|---|
| A | FIELD DATA SHEETS & WASTE MANIFESTS |
| B | LABORATORY ANALYTICAL REPORT |
| C | HISTORICAL CONCENTRATION VS. TIME GRAPHS (PAST EIGHT QUARTERS) |
| D | DATA VALIDATION PACKAGE |
| E | LEVEL IV DATA PACKAGE (CD ATTACHED) |

## 1.0 INTRODUCTION AND BACKGROUND

SEMS, Inc. (SEMS) was selected by the Louisiana Department of Environmental Quality (LDEQ) for the continued Operations and Maintenance (O&M) at the Delatte Metals Superfund Site, in Tangipahoa Parish, Ponchatoula, Louisiana in accordance with the bid specifications associated with state solicitation number 2219038 and purchase order number 3233226. The Delatte Metals Superfund Site is currently under quarterly O&M including groundwater sampling to determine if constituents of concern (COCs) remediated at the site are in a declining condition and to ensure that COCs are not migrating horizontally past the permeable reactive barrier (PRB) or vertically into lower water bearing zones. This report summarizes the site activities conducted during this quarter. A facility map depicting the well locations and site features is presented as Figure 1. A brief status and history of the site are provided below.

The physical location of the site is approximately 5.5 miles south-southeast of Hammond, Louisiana, 1.5 miles southeast of Ponchatoula, Louisiana, and adjacent to the new Delatte Recycling, LLC whose physical address is 19113 Weinberger Road, Ponchatoula, Louisiana. The site lies to the north of the Weinberger Road, in a rural area with numerous residences within a one-mile radius of the site. The latitude and longitude for the site are 30°25'16"N and 90°24'39"W, respectively. The site is bounded by Weinberger Road followed by residences to the south, drainage ditches and residence to the north and east, and Selser's Creek and a residence to the west.

According to previous reports, the 19-acre Delatte Metals Superfund Site includes the Delatte Metals, Inc. facility and the abandoned North Ponchatoula Battery Facility which performed identical lead salvage operations and generated the same type of waste. Delatte Metals, Inc. operated a lead smelter to recover additional lead materials began operation in the early 1970's as the Fuscia Battery Company, and ceased operations in 1993. The Ponchatoula Battery Company moved its operation adjacent to the Delatte and Fuscia Battery Company between 1972 and 1978.

During LDEQ and EPA investigations, discharge from the facilities showed a pH range from 0.55 to 2 standard units (s.u.). Analytical samples from on-site soil and groundwater samples

indicated the presence of heavy metals including Lead, Arsenic, and Cadmium. An observed release of Lead and Cadmium to Selser's Creek was documented by the analytical data from the sediment samples collected at three probable points of entry.

Remedial action (RA) operations began on November 18, 2002, and the implementation was completed on September 22, 2003. During the RA, the principle threat wastes were excavated, immobilized, and transported off-site for disposal. A permeable reactive barrier wall (PRB) was installed to neutralize the acidity of the shallow water-bearing zone and limit the migration of dissolved metals. A groundwater monitoring program was put in place to ensure the effectiveness of the selected remedy. Long-term groundwater monitoring of approximately 30 monitoring and water wells includes sampling to determine the groundwater pH downgradient of the PRB and metal concentrations in site groundwater. For the RA to be effective the groundwater downgradient of the PRB should be approaching pH neutrality and the metal concentrations in groundwater should demonstrate either a stable or preferably decreasing trend.

Three distinct and local water bearing zones (WBZ) were identified at the site during previous investigations. The three WBZ are located at the site from ground surface to approximately 100 feet below ground surface (ft-bgs).

- The First WBZ is generally found between 5 and 15 ft-bgs. This zone is semi-confined on its sides and is overlain by sandy/silty clay across the northern section of the site. During the Remedial Investigation (RI), a clay unit was encountered underneath this First WBZ. Currently nine monitor wells are screened in this zone. This WBZ was previously classified according to RECAP as a Class 3B aquifer.

- The Second WBZ encountered at the site generally consists of intermittent layers of gray, tan, and orange clayey silt. At various locations, this WBZ is typically encountered between 15 and 40 ft-bgs. The Second WBZ appears to be confined and relatively continuous across the site. Currently 13 monitor wells are screened in this zone. This WBZ was previously classified according to RECAP as a Class 2C aquifer.

- The Third WBZ encountered at the site consists of light brown to gray silty sand and sand. During the RI, this Third WBZ was encountered between 58 and 62 ft-bgs, extending to the maximum depth of the site borings (100 ft-bgs). The Third WBZ appears to be confined and continuous across the site. There are currently four monitor wells screened in this zone. This WBZ was previously classified according to RECAP as a Class 1B aquifer.

The monitor wells installed in these WBZs and their construction details are summarized in Table 1. Underneath the three local WBZs identified at the site are three regional aquifers: The Shallow Aquifer (also known as the Upland Terrace Aquifer), the Ponchatoula Aquifer (which is subdivided into two units: the upper and lower Ponchatoula Aquifers), and the Tchefuncte Aquifer. Five water wells are also being sampled from below the third water bearing zone and a summary of the water well characteristics is provided as Table 2.

## 2.0 CHRONOLOGY OF EVENTS

A chronology of events is as follows:

- October 2, 2007 – SEMS received award for O&M from LDEQ.
- October 12, 2007 – SEMS attended the Post-Award Conference with the LDEQ to discuss upcoming site activities.
- November 7, 2007 – SEMS submitted the draft Quality Assurance Project Plan (QAPP) for Delatte Metals to the LDEQ.
- November 30, 2007 – SEMS received conditional approval of the Draft QAPP including the approval to use SW-846 Method 6020B for analysis of Total and Dissolved Metals.
- December 3, 2007 – SEMS mobilized to the site cleared the brush around groundwater wells for access.
- December 6, 2007 – SEMS submitted the Final QAPP for Delatte Metals to LDEQ for approval.
- December 10 through 13, 2007 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.

- February 2008 – EPA sampled the groundwater at the site, and cut the locks off of the wells at the site at the time.
- February 28, 2008 – SEMS submitted the Fourth Quarter 2007 Operation and Maintenance Report to LDEQ for approval.
- March 19 through 21, 2008 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- March 27, 2008 – SEMS received approval of the Final QAPP and the Fourth Quarter 2007 Operation and Maintenance Report from LDEQ.
- April 30, 2008 – SEMS submitted the First Quarter 2008 Operation and Maintenance Report to LDEQ for approval.
- May 19 through 21, 2008 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- June 14, 2008 and July 11, 2008 – SEMS subcontracted Crescent Geotechnical Services, Inc. to do repair work on monitor wells.
- July 31, 2008 – SEMS submitted the Second Quarter 2008 Operation and Maintenance Report to LDEQ for approval.
- August 11, 26, and 27, 2008 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- October 16, 2008 – Three 55-gallon drums of purge water were properly disposed.
- October 20, 2008 – SEMS submitted the Third Quarter 2008 Operation and Maintenance Report to LDEQ for approval.
- November 3 through November 5, 2008 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- December 31, 2008 – SEMS submitted the Fourth Quarter 2008 Operation and Maintenance Report to LDEQ for approval.
- February 4 through February 6, 2009 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- April 24, 2009 – SEMS submitted the First Quarter 2009 Operation and Maintenance Report to LDEQ for approval.

- May 2009 – LDEQ requested SEMS to complete the Recommended Annual O&M/Remedy Evaluation Checklist. LDEQ also requested that SEMS perform sampling for 10 downgradient PRB piezometers.
- May 18, 2009 through May 21, 2009 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling. SEMS also conducted monitoring and sampling of the ten piezometers located downgradient of the PRB.
- July 31, 2009 – SEMS submitted the Second Quarter 2009 Operation and Maintenance Report to LDEQ for approval.
- August 24, 2009 through August 26, 2009 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- November 17, 2009 – SEMS submitted letter to LDEQ agreeing to sample an additional water well as requested by the LDEQ.
- November 30, 2009 – SEMS submitted the Third Quarter 2009 Operation and Maintenance Report to LDEQ for approval.
- December 9, 2009 through December 11, 2009 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- February 2, 2010 – SEMS submitted the Fourth Quarter 2009 Operation and Maintenance Report to LDEQ for approval.
- February 8, 2010 through February 11, 2010 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- April 5, 2010 through April 7, 2010 – SEMS mobilized to the site and performed quarterly monitoring and groundwater sampling.
- April 30, 2010 – SEMS submitted the First Quarter 2010 Operation and Maintenance Report to LDEQ for approval.
- July 22, 2010 – SEMS submitted the Second Quarter 2010 Operation and Maintenance Report to LDEQ for approval.

## 3.0 OPERATION AND MAINTENANCE ACTIVITIES

On April 5 through April 7, 2010 SEMS mobilized to the site and performed quarterly groundwater sampling, including the inspection of the monitor wells and the PRB. Details of activities performed at the site are summarized below.

## 3.1 ACCESS TO WELLS

Access to the site was still clear of brush from a recent clearing event.

## 3.2 MONITOR WELL INSPECTION

The monitor wells were inspected during the groundwater sampling event for damage. Table 1 includes a listing of the monitoring wells at the site, and Figure 1 shows the locations of the wells. The monitor well inspection checklist is included with the field data in Attachment A. The following deficiencies were repaired during this visit:

- Replaced lock on BC-03 during this visit;
- Dirt was over the concrete slab of monitor well BC-07, which was removed.

The following observations were made and should be monitored or repaired during the upcoming visit:

- The post for BC-17 was bent, but still functional.
- No other repairs are to be performed on the upcoming sampling event.

## 3.3 PERMEABLE REACTIVE BARRIER (PRB) INSPECTION

The PRB has been cleared and was inspected. The following locations surface elevations were lower in grade relative to the surrounding PRB:

- The southwest corner of the PRB around MW-02; and
- Near the bend of the PRB, approximately, 75 feet southeast of MW-1.

The PRB will continue to be inspected quarterly to determine if fill material is needed.

## 3.4 REVIEW OF INSTITUTIONAL CONTROLS

Inspections were made of deed files 650403, 674854, and 674853 online at the Tangipahoa website (www.tangiclerk.org) for the institutional controls limiting site reuse to an industrial scenario at the Tangipahoa Parish Clerk of Court. A review of these files showed that they are still on file with the Tangipahoa Parish Clerk of Court.

## 3.5 GROUNDWATER MONITORING, SAMPLING, AND ANALYTICAL PROCEDURES

During the quarterly sampling events a total of 26 monitoring wells and five (5) water wells were sampled. The water well ([redacted] WELL) is now part of the quarterly sampling rotation, but will not be added to the figures. The [redacted] WELL is located east of WW-04 adjoining the Brown's residence. Some of these water wells are drinking water wells located at residences.

The monitoring wells were located and opened to allow for water level equilibration. After equilibration, depth-to-water was measured to the nearest one-hundredth of a foot, with an interface probe. The interface probe was decontaminated prior to on-site work, between each well, and after fluid level measurements were completed. Fluid level measurements are summarized in Table 3.

Following gauging, the wells were purged via low flow micro purging technique with a peristaltic pump (Geopump) for the shallow wells and deeper wells using dedicated tubing. The purge rates were maintained between 0.1 and 0.5 liters per minute and are recorded on the field forms. The water quality readings were taken from the low flow cell. Groundwater samples were collected following the stabilization of at least three of the following the water parameters including temperature, pH, conductivity, turbidity, oxidation–reduction potential, and dissolved oxygen which are summarized on Table 3. The five (5) water wells were sampled after the water was allowed to flow for 20 minutes.

Groundwater samples were collected before the low flow cell and the water was placed in laboratory supplied, pre-preserved containers. Quality Assurance/Quality Control (QA/QC)

samples were also collected that included four duplicates, two matrix spikes, and two matrix spike duplicates. The groundwater and QA/QC sample containers were labeled and placed in a cooler on ice for transportation to Southern Petroleum Laboratories (SPL) in Scott, Louisiana for analysis. The samples were shipped accompanied by proper chain-of-custody documentation.

Groundwater samples were analyzed for Total Metals including arsenic, lead, manganese, nickel, and thallium via SW-846 method 6020B. Monitor wells BA-01, BA-05, and DW-01 had a turbidity reading above 10 NTU during sampling and an additional sample was field filtered and analyzed for dissolved metals. Dissolved metal analytical results were used to supersede the total metals results on the figures attached and for the historical graphs. Summaries of groundwater analytical data are provided in Table 4 and are further discussed in Section 4.0. A copy of the laboratory reports and chain-of-custody documentation are included in Attachment B.

Groundwater collected at the site during low-flow sampling was contained in a 55-gallon plastic drum and stored at the site south of the "North Well" water well. The personal protective equipment, tubing, and other disposable material that contacted the groundwater at the site are stored in a 55-gallon metal drum. When applicable, copies of drum disposal manifests are included in Attachment A. No drums were disposed of during this sampling event, and the next disposal will follow the third quarter sampling event.

It should be noted that three additional drums are located in the drum storage area that were not generated by SEMS:

- One unlabeled 55-gallon metal drum is onsite and is empty.
- Two unlabeled 55-gallon metal drums appear to be filled with water and have a rusty lid that has holes on the top from being rusted.

The EPA has contracted the United States Geological Survey (USGS) to sample and arrange for the disposal of these drums and other drums at the site from EPA sampling. The USGS is

sampling these drums during the third quarter sampling event for waste characterization and disposal will follow this sampling event.

## 4.0 ANALYTICAL DATA REVIEW

Below is a summary of SEMS review of the potentiometric and analytical data collected during the current quarter.

### 4.1 CURRENT MONITORING PERIOD GROUNDWATER FLOW DIRECTION

Potentiometric maps were prepared for each of the three WBZ. The First, Second, and Third WBZ potentiometric maps are presented as Figures 2A, 2B, and 2C, respectively. Potentiometric maps show that the groundwater flow direction for this quarter as described below:

**First WBZ:** The groundwater flow direction appears to be to the north to northwest towards the unnamed creek that flows into Selser's Creek.

**Second WBZ:** The groundwater flow direction appears to be to the north to northwest towards the unnamed creek that flows into Selser's Creek in the area of the PRB. In the area just north of the current Delatte Metals facility, the groundwater trends to the west towards Selser's Creek.

**Third WBZ**: The groundwater flow direction appears to be to east.

The current period groundwater flow directions are consistent with historic monitoring results and the directions of flow have not changed.

### 4.2 CURRENT PERIOD CONSTITUENT CONCENTRATION

A file review was performed and only Site Cleanup levels for pH and lead were found. The lead and pH Site Cleanup levels according to the QAPP prepared for the EPA in September 28, 2004

were 0.015 mg/L and 7.0 s.u., respectively. Since a perfect pH of 7.0 s.u. is not practically obtainable, SEMS recommends that an alternative pH be used for the acceptable pH level. The EPA acceptable range for drinking water is 6.5-8.5 s.u. and the acceptable EPA range for storm water discharge is 6.0-9.0 s.u. SEMS will evaluate the First WBZ using the 6.0-9.0 s.u. range for pH since the groundwater of this zone is classified as Groundwater Class 3B. The Second WBZ, Third WBZ, and Water Wells are classified as Groundwater Class 1 and 2 aquifers and their pH should be evaluated using the 6.5-8.5 s.u. range for pH. According to the LDEQ, the LDEQ RECAP Screening Standards (SS) should be used for comparison to the other site COCs.

Below is a brief summary of all COCs exceeding the applicable site SS:

The following wells were outside their pH evaluation:

- **First WBZ**: All monitor wells in the First WBZ were below the pH range of 6.0-9.0 s.u.; with pH readings of 3.06 to 5.56 s.u.
- **Second WBZ**: Monitor wells BA-01, and BA-05 were below the pH range of 6.5-8.5 s.u. with the minimum pH reading of 5.94 in BA-01.
- **Third WBZ**: Monitor well BB-01 was above the pH range of 6.5-8.5 s.u. with a pH reading of 9.66 s.u.
- **Water Wells**: Water wells WW-04, North Well, and South Well were above the pH range of 6.5-8.5 s.u. with a maximum pH reading of 8.80 s.u. in the South Well.

The following wells had arsenic concentrations reported above its RECAP SS of 0.010 mg/L:

- **First WBZ**: DW-01, DW-02, DW-03, MW-01, and BA-09 were above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.043 mg/L in monitoring well MW-01.
- **Second WBZ**: No monitor wells sampled were reported above the arsenic RECAP SS. The highest arsenic concentration was reported to be 0.0044 mg/L in monitor well BA-01.

- **Third WBZ**: No monitor wells sampled were reported above the arsenic RECAP SS. The highest arsenic concentration was reported to be 0.00638 mg/L in monitor well BA-01A.
- **Water Wells**: No water wells sampled were reported above the arsenic RECAP SS. The highest arsenic concentration was reported to be 0.00171 mg/L in water well (b) (6) Well.

The following wells had lead concentrations reported above the site cleanup level of 0.015 mg/L:

- **First WBZ**: DW-03 and BA-03 were reported above the site cleanup level; the highest lead concentration was reported to be 0.144 mg/L in monitoring well BA-03.
- **Second WBZ**: BC-17 was reported above the site cleanup level for lead with a concentration of 0.0172 mg/L.
- **Third WBZ**: No monitor wells sampled were reported above the site cleanup level for lead. The highest lead concentration was reported to be 0.00449 mg/L in monitor well BB-01.
- **Water Wells**: No water wells sampled were reported above the site cleanup level for lead. The highest lead concentration was reported to be 0.00177 mg/L in the (b) (6) Well.

The following wells had manganese concentrations reported above its RECAP SS of 0.51 mg/L:

- **First WBZ**: All monitor wells in the First WBZ were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 16.9 mg/L in monitor well DW-02.
- **Second WBZ**: MW-03, BA-01, and BA-05 were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 14.1 mg/L in monitor well BA-05.
- **Third WBZ**: No monitor wells sampled were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 0.037 mg/L in monitor well BA-03A.

- **Water Wells**: No water wells sampled were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 0.0249 mg/L in the (b) (6) Well.

The following wells had nickel concentrations reported above its RECAP SS of 0.073 mg/L:

- **First WBZ**: DW-02, DW-03, MW-01, MW-02, BA-03, and BA-09 were reported above the nickel RECAP SS; the highest nickel concentration was reported to be 0.824 mg/L in monitor well DW-02.
- **Second WBZ**: No monitor wells sampled were reported above its nickel RECAP SS; the highest nickel concentration was reported to be 0.0605 mg/L in monitor well BA-01.
- **Third WBZ**: No monitor wells sampled were reported above the nickel RECAP SS; the highest nickel concentration was reported to be 0.00176 mg/L in monitor well BA-05A.
- **Water Wells**: No water wells sampled were reported above the nickel RECAP SS. the highest nickel concentration was reported to be 0.0013 mg/L in water well North Well.

The following wells had thallium concentrations reported above the RECAP SS of 0.0020 mg/L:

- **First WBZ**: No monitor wells sampled were reported above the thallium RECAP SS. the highest thallium concentration was reported to be 0.000804 mg/L in monitor well MW-02. Monitor wells DW-02 was reported as non-detect with detection limits above the thallium RECAP SS.
- **Second WBZ**: No monitor wells sampled were reported above the thallium RECAP SS; the highest thallium concentration was reported to be 0.00015 mg/L in monitor well MW-A.
- **Third WBZ**: No monitor wells sampled were reported above the thallium RECAP SS. All concentration were reported to be non-detect.
- **Water Wells**: No water wells sampled were reported above the thallium RECAP SS; the highest thallium concentration was reported to be 0.000339 mg/L in water well North Well.

Analytical results for this quarter are summarized in Table 4. Isoconcentration maps prepared for each WBZ and the water wells are presented as Figures 3A through 8D. Following a review of the isoconcentration maps the following constituents were found to not be horizontally delineated to their applicable site SS:

- The First WBZ – pH, arsenic, lead, manganese, and nickel
- The Second WBZ – pH, lead, and manganese
- The Third WBZ – pH
- The Water Wells – pH

SEMS sampled the PRB piezometers in the Second Quarter of 2009. The EPA has contracted the USGS to continue with this sampling and reporting of the downgradient PRB piezometers. The USGS is submitting this data to the EPA for review.

## 4.3 HISTORICAL GROUNDWATER MONITORING TRENDS

A historical summary of the past eight quarters groundwater analytical and potentiometric data is presented in Table 5. Historical data trend graphs are presented in Attachment C that show pH, arsenic, lead, manganese, nickel, and thallium concentrations over time. For samples reported below laboratory detection limits, the reporting detection limit was used for graphing purposes. The historical data trend graphs were completed in Excel and a linear regression trendline was generated by Excel using the previous eight quarters of data for each COC.

Only those wells with at least two quarters of analytical data exceeding site cleanup or RECAP SS are considered in the trend evaluation below: A review of the graphs and evaluation of constituent trends provides the information below:

**First WBZ Trends**

The following exceeding constituent concentration trends were observed in the following wells:

**Lead:** Increasing: DW-03

Decreasing: BA-03

**Arsenic**: Decreasing: DW-01, DW-02, DW-03, MW-01, BA-03, and BA-09

**Manganese**: Increasing: DW-01, DW-02, DW-03, and BA-09

Stable: BA-03

Decreasing: MW-01, MW-02, MW-06, and PW-04

**Nickel**: Increasing: DW-02 and DW-03

Stable: BA-03 and BA-09

Decreasing: MW-01 and MW-02

**Thallium:** No exceedances observed for any two of the previous eight quarters sampled.

**pH:** Below 6.0 s.u. and increasing: DW-01, DW-03, PW-04, and BA-03

Below 6.0 s.u. and stable: DW-02, MW-01, MW-02, MW-06, and BA-09

## Second WBZ Trends

The following exceeding constituent concentration trends were observed in the following wells:

**Lead:** Decreasing: BC-17

**Arsenic:** Increasing: BA-01

**Manganese:** Increasing: BA-01 and BA-05

Decreasing: MW-03

**Nickel and Thallium:** None reported to exceed the Site Cleanup or RECAP SS during two of the previous eight quarters sampled.

**pH:** Below 6.5 s.u. and stable: MW-04

Decreasing: BA-01 and BA-05

## Third WBZ Trends

**Lead, Arsenic, Manganese, Nickel, and Thallium:** No metals exceedances observed for any two of the previous eight quarters sampled.

**pH:** Above 8.5 s.u. and decreasing: BB-01

## Water Well Trends

The following exceeding constituent concentration trends were observed in the following wells:

**Lead, Arsenic, Manganese, Nickel, and Thallium:** No exceedances observed for any two of the previous eight quarters sampled.

**pH:** Above 8.5 s.u. and stable: (b) (6) Well and South Well

Above 8.5 s.u. and decreasing: WW-04, WW-09, and North Well

## 4.4 QUALITY ASSURANCE/QUALITY CONTROL AND UNUSUAL FINDINGS

A summary of QA/QC samples collected is included in the field data sheets presented in Attachment A. All QA/QC duplicate sample analytical results were reported within a factor of 10 of the original analytical sample results. Blank samples included Duplicate #1 (BC-19), Duplicate #2 (BC-17), Duplicate #3 (DW-02), and Duplicate #4 (MW-02). All data sets were accepted. Full laboratory analytical reports are included in Attachment B. Each laboratory analytical report includes laboratory QA/QC documentation.

The analytical data was reviewed by Intergrate, Inc, a third party data validator. Intergrate, Inc. reviewed ten percent of the samples analyzed including samples BC-25, BA-09, (b) (6) Well, and MW-06. The data validation report found no major discrepancies and their report is included in Attachment D. The Level IV analytical report is attached to this report with a compact disk (CD) in an electronic format as requested by LDEQ.

The following unusual findings were noted during this report:

- The analytical result from monitor well DW-02 was reported non-detect with detection limits above the RECAP SS for thallium. The laboratory, SPL, has had difficulties with matrix interference (interference with the internal standard or standards associated with a particular metal) for this sample. This sample was diluted in order to reduce the interference.

- Arsenic for samples BA-09, BA-01, DW-03, PW-04, DW-02, MW-02, MW-01, BA-03, Duplicate #3, and Duplicate #4 was subcontracted out to SPL-Houston and run by method 6010B.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on evaluation of data presented within this groundwater monitoring report.

- SEMS recommends continuing with quarterly O&M.

# TABLES

**TABLE 1**
**MONITORING WELL CONSTRUCTION DATA**

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**



| Well ID | Northing | Easting | Latitude | Longitude | Well Diameter (inches) | Total Well Depth (ft bgs) | Top of Casing Elevation (NGVD) | Ground Surface Elevation (NGVD) | Sereened Interval Elevation (NGVD) | Sreeened Interval (ft bgs) |
|---|---|---|---|---|---|---|---|---|---|---|
| **First Water-Bearing Zone** | | | | | | | | | | |
| DW-1 | 701226.57 | 3571439.3 | $30^0$ 25' 30" | $90^0$ 24' 41" | 2 | 19 | 13.36 | 12.03 | 3.5 to -6.5 | 8.5 to 18.5 |
| DW-2 | 700994.96 | 3571554.5 | $30^0$ 25' 28" | $90^0$ 24' 39" | 2 | 11 | 14.12 | 12.65 | 7.2 to 2.2 | 5.5 to 10.5 |
| DW-3 | 701096.8 | 3571730.9 | $30^0$ 25' 29" | $90^0$ 24' 37" | 2 | 16 | 11.59 | 10.09 | 4.6 to -5.4 | 5.5 to 15.5 |
| MW-1 | 701242.6 | 3571218.6 | $30^0$ 25' 30" | $90^0$ 24' 43" | 2 | 28.5 | 15.08 | 13.58 | 0.6 to -14.4 | 13.0 to 28.0 |
| MW-2 | 700954.99 | 3571119.9 | $30^0$ 25' 27" | $90^0$ 24' 44" | 2 | 10.5 | 14.23 | 11.79 | 6.8 to 1.8 | 5.0 to 10.0 |
| MW-6 | 700833.83 | 3571351.4 | $30^0$ 25' 26" | $90^0$ 24' 42" | 2 | 16.5 | 16.77 | 15.17 | NA | NA |
| MW-7* | 701240.79 | 3571056.2 | $30^0$ 25' 30" | $90^0$ 24' 45" | 2 | 15 | 8.21 | 6.01 | NA | NA |
| PW-4 | 701018.61 | 3571950.1 | $30^0$ 25' 28" | $90^0$ 24' 35" | 2 | 19.5 | 12.22 | 8.96 | NA | NA |
| BA-03 | 701018.61 | 3571248.6 | $30^0$ 25' 28" | $90^0$ 24' 43" | 2 | 13.5 | 14.57 | 11.8 | 8.80 to -1.20 | 3.0 to 13.0 |
| BA-09 | 701286.58 | 3571522.6 | $30^0$ 25' 31" | $90^0$ 24' 40" | 2 | 18.0 | 9.46 | 8.10 | 0.60 to -9.40 | 7.5 to 17.5 |
| BC-31* | 701305.48 | 3571090.6 | $30^0$ 25' 31" | $90^0$ 24' 48" | 2 | 16 | 11.36 | 8.75 | 3.25 to -6.75 | 5.5 to 15.5 |
| **Second Water-Bearing Zone** | | | | | | | | | | |
| DW-4 | 7000081.4 | 3571557.4 | $30^0$ 25' 19" | $90^0$ 24' 39" | 2 | 38 | 14.21 | 13 | -14.5 to -24.5 | 27.5 to 37.5 |
| MW-A | 701114.99 | 3571481.7 | $30^0$ 25' 29" | $90^0$ 24' 40" | 2 | 27.0 | 15.12 | 12.35 | -4.2 to -14.2 | 16.5 to 26.5 |
| MW-3 | 700801.96 | 3571573.60 | $30^0$ 25' 26" | $90^0$ 24' 39" | 2 | 27.5 | 14.8 | 12.83 | -4.2 to 14.2 | 17.0 to 27.0 |
| MW-4 | 701248.27 | 357817.05 | $30^0$ 25' 30" | $90^0$ 24' 36" | 2 | 24.0 | 17.38 | 14.67 | 1.2 to -8.8 | 13.5 to 23.5 |
| MW-5* | 701508.89 | 3571524.3 | $30^0$ 25' 33" | $90^0$ 24' 40" | 2 | 20.0 | 11.43 | 8.89 | -5.6 to -10.6 | 14.5 to 19.5 |

Notes: 1) ft bgs = Feet below ground surface
2) ID = Identification
3) NA= Not available
4) NGVD = Nationa Deodetic Vertical Datum
5) Denotes Well Plugged and Abandoned by the EPA

**TABLE 1**
**MONITORING WELL CONSTRUCTION DATA**

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**



| Well ID | Northing | Easting | Latitude | Longitude | Well Diameter (inches) | Total Well Depth (ft bgs) | Top of Casing Elevation (NGVD) | Ground Surface Elevation (NGVD) | Sereened Interval Elevation (NGVD) | Sreeened Interval (ft bgs) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Second Water-Bearing Zone** | | | | | | | | | | |
| BA-01 | 700965.85 | 3571654 | $30^0$ 25' 27" | $90^0$ 24' 38" | 2 | 26.0 | 14.57 | 11.48 | -4.02 to -14.02 | 15.5 to 25.5 |
| BA-05 | 701084.30 | 3571574.7 | $30^0$ 25' 29" | $90^0$ 24' 39" | 2 | 18.5 | 14.20 | 11.02 | 3.02 to -6.98 | 8.0 to 18.0 |
| BA-09A | 701290.47 | 3571515.1 | $30^0$ 25' 31" | $90^0$ 24' 40" | 2 | 42.0 | 11.10 | 7.92 | -23.58 to -33.58 | 31.5 to 41.5 |
| BC-01* | 699516.45 | 3571517.6 | $30^0$ 25' 13" | $90^0$ 24' 40" | 2 | 26.5 | 15.99 | 13.35 | -2.65 to -12.65 | 16.0 to 26.0 |
| BC-03 | 699684.61 | 3571900.1 | $30^0$ 25' 15" | $90^0$ 24' 36" | 2 | 28.0 | 16.32 | 13.78 | -3.72 to -13.72 | 17.5 to 27.5 |
| BC-07 | 699855.32 | 3571454.1 | $30^0$ 25' 16" | $90^0$ 24' 41" | 2 | 18.5 | 11.37 | 8.19 | 0.19 to -9.81 | 8.0 to 18.0 |
| BC-11* | 699967.64 | 3571524.00 | $30^0$ 25' 18" | $90^0$ 24' 40" | 2 | 28.5 | 15.72 | 12.53 | -5.47 to -15.47 | 18.0 to 28.0 |
| BC-17 | 700232.77 | 3571685.2 | $30^0$ 25' 20" | $90^0$ 24' 38" | 2 | 28.0 | 15.18 | 12.22 | -5.28 to -15.28 | 17.5 to 27.5 |
| BC-19 | 700257.08 | 3571479.8 | $30^0$ 25' 20" | $90^0$ 24' 40" | 2 | 22.5 | 13.85 | 10.92 | -1.08 to -11.08 | 12.0 to 22.0 |
| BC-21R | 700499.25 | 3571655.5 | $30^0$ 25' 23" | $90^0$ 24' 38" | 2 | 17.5 | 15.28 | 12.62 | 0.62 to -4.38 | 12.0 to 17.0 |
| BC-25 | 700599.29 | 3571504.10 | $30^0$ 25' 24" | $90^0$ 24' 40" | 2 | 32.0 | 15.73 | 12.66 | -8.84 to -18.84 | 21.5 to 31.5 |
| BC-27* | 700721.57 | 3571738.1 | $30^0$ 25' 25" | $90^0$ 24' 37" | 2 | 28.0 | 15.91 | 13.04 | -4.46 to -14.46 | 17.5 to 27.5 |
| **Third-Water-Bearing Zone** | | | | | | | | | | |
| BA-03A | 701004.96 | 3571249.7 | $30^0$ 25' 43" | $90^0$ 24' 43" | 2 | 100.0 | 14.76 | 11.72 | -77.78 to -87.78 | 89.5 to 99.5 |
| BA-05A | 701085.48 | 3571565.3 | $30^0$ 25' 29" | $90^0$ 24' 39" | 2 | 54.0 | 14.42 | 11.16 | -24.84 to -28.34 | 36.0 to 39.5 |
| BB-01 | 699827.30 | 3571572.4 | $30^0$ 25' 16" | $90^0$ 24' 39" | 2 | 96.0 | 15.75 | 12.69 | -72.81 to -82.81 | 85.5 to 95.5 |
| BA-01A | 700957.45 | 3571661.4 | $30^0$ 25' 27" | $90^0$ 24' 38" | 2 | 46.0 | 15.03 | 11.61 | -23.89 to -33.89 | 35.5 to 45.5 |

Notes: 1) ft bgs = Feet below ground surface
2) ID = Identification
3) NA= Not available
4) NGVD = Nationa Deodetic Vertical Datum
5) Denotes Well Plugged and Abandoned by the EPA

**TABLE 2**
**WATER WELL CONSTRUCTION DATA**
**DELATTE METALS SUPERFUND SITE**
**PONCHATOULA, LOUISIANA**
**AGENCY INTEREST NO. 2328**

| Well ID | Address | Depth (feet) | Date Installed |
|---|---|---|---|
| WW-04* | 39229 Keaghey Road<br>Ponchatoula, LA 70454 | Unknown | Unknown |
| WW-09* | 39233 Keaghey Road<br>Ponchatoula. LA70454 | 60 | 10/94 |
| North Well | 19119 Weinberger Road<br>Ponchatoula. LA 70454 | Unknown | Unknown |
| South Well | 19113 Weinberger Road<br>Ponchatoula, LA 70454 | Unknown | Unknown |
| (b) (6) Well** | Keaghey Road<br>Ponchatoula. LA70454 | Unknown | Unknown |

Notes: Water Well
*Designations for water wells WW-04 and WW-09 were obtained from the Delatte Metals Remedial Investigation Report (Tetra Tech 2000)
**Designation was named in field based on current owners name

# TABLE 3
# GROUNDWATER SAMPLING SUMMARY
# DELATTE METALS SUPERFUND SITE
# PONCHATOULA, LOUISIANA
# AGENCY INTEREST NO. 2328

| Monitoring/ Sample Well No. & Date | Groundwater Elevation | | | Groundwater Quality Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | Temperature °C | Specific Conductivity mS/sec | Dissolved Oxygen (mg/L) | pH Standard Unit | ORP Eh | Turbidity NTU |
| **FIRST WATER-BEARING ZONE** | | | | | | | | | |
| **DW-01** | | | | | | | | | |
| August-08 | 13.36 | 10.58 | 2.78 | 23.91 | 1.88 | 0.26 | 4.89 | -131 | 3.7 |
| November-08 | 13.36 | 11.42 | 1.94 | 23.02 | 1.131 | 0.63 | 5.21 | -149 | 6.6 |
| February-09 | 13.36 | 11.64 | 1.72 | 19.67 | 1.302 | 0.53 | 4.97 | -140 | 5.3 |
| May-09 | 13.36 | 10.97 | 2.39 | 20.36 | 0.585 | 0.45 | 5.71 | -121 | 4.6 |
| August-09 | 13.36 | 11.70 | 1.66 | 24.78 | 0.537 | 0.34 | 5.60 | 3 | 6.9 |
| December-09 | 13.36 | 9.68 | 3.68 | 19.93 | 1.388 | 1.95 | 5.16 | 6.4 | 15.02 |
| February-10 | 13.36 | 8.96 | 4.40 | 16.92 | 0.717 | 2.90 | 5.19 | 213 | 27.8 |
| April-10 | 13.36 | 11.10 | 2.26 | 18.40 | 0.604 | 0.45 | 5.53 | 129 | 24.8 |
| **DW-02** | | | | | | | | | |
| August-08 | 14.12 | 3.84 | 10.28 | 27.92 | 9.00 | 0.37 | 2.97 | -7 | 0.0 |
| November-08 | 14.12 | 5.85 | 8.27 | 23.64 | 9.05 | 1.29 | 2.70 | 125 | 0.0 |
| February-09 | 14.12 | 4.82 | 9.30 | 16.42 | 8.05 | 0.89 | 3.42 | 101 | 0.0 |
| May-09 | 14.12 | 4.51 | 9.61 | 24.87 | 7.26 | 0.36 | 2.90 | -46 | 0.0 |
| August-09 | 14.12 | 6.13 | 7.99 | 30.01 | 7.73 | 0.28 | 3.06 | 103 | 1.4 |
| December-09 | 14.12 | 3.90 | 10.22 | 18.34 | 5.72 | 2.16 | 2.90 | 253.8 | 5.56 |
| February-10 | 14.12 | 3.84 | 10.28 | 14.70 | 6.84 | 0.26 | 3.20 | 157 | 3.0 |
| April-10 | 14.12 | 4.88 | 9.24 | 14.50 | 7.48 | 0.91 | 3.06 | 183 | 2.4 |
| **DW-03** | | | | | | | | | |
| August-08 | 11.59 | 5.49 | 6.10 | 24.57 | 0.466 | 0.36 | 3.52 | -46 | 0.0 |
| November-08 | 11.59 | 6.33 | 5.26 | 23.21 | 1.68 | 0.66 | 3.59 | -48 | 0.0 |
| February-09 | 11.59 | 5.59 | 6.00 | 19.91 | 2.43 | 0.15 | 3.77 | 57 | 0.0 |
| May-09 | 11.59 | 5.49 | 6.10 | 21.44 | 1.116 | 0.27 | 3.74 | -113 | 0.0 |
| August-09 | 11.59 | 7.07 | 4.52 | 25.00 | 1.42 | 0.28 | 3.79 | 49 | 1.1 |
| December-09 | 11.59 | 4.92 | 6.67 | 19.19 | 0.198 | 2.08 | 4.02 | 299.2 | 3.59 |
| February-10 | 11.59 | 4.80 | 6.79 | 14.92 | 0.370 | 1.46 | 3.88 | 461 | 9.9 |
| April-10 | 11.59 | 5.58 | 6.01 | 18.74 | 2.84 | 0.22 | 3.76 | -4 | 3.2 |
| **MW-01** | | | | | | | | | |
| August-08 | 15.08 | 14.24 | 0.84 | 21.50 | 6.17 | 0.34 | 3.15 | -31 | 0.0 |
| November-08 | 15.08 | 13.84 | 1.24 | 21.72 | 6.28 | 1.10 | 3.60 | -24 | 0.0 |
| February-09 | 15.08 | 14.58 | 0.50 | 20.95 | 6.07 | 0.24 | 3.19 | -45 | 0.0 |
| May-09 | 15.08 | 13.28 | 1.80 | 19.87 | 6.07 | 0.42 | 3.11 | -32 | 0.0 |
| August-09 | 15.08 | 14.01 | 1.07 | 22.69 | 5.23 | 0.39 | 3.33 | 94 | 1.7 |
| December-09 | 15.08 | 12.64 | 2.44 | 19.62 | 4.849 | 1.79 | 3.43 | 177.9 | 2.54 |
| February-10 | 15.08 | 12.64 | 2.44 | 18.67 | 4.53 | 0.45 | 3.11 | 152 | 2.9 |
| April-10 | 15.08 | 13.81 | 1.27 | 19.19 | 5.08 | 0.43 | 3.46 | 7 | 0.1 |
| **MW-02** | | | | | | | | | |
| August-08 | 14.23 | 7.05 | 7.18 | 26.19 | 2.32 | 0.53 | 2.89 | 267 | 0.0 |
| November-08 | 14.23 | 7.60 | 6.63 | 24.40 | 2.36 | 0.43 | 3.36 | 292 | 93.7 |
| February-09 | 14.23 | 7.34 | 6.89 | 17.45 | 2.14 | 0.24 | 3.16 | 279 | 0.0 |
| May-09 | 14.23 | 7.14 | 7.09 | 23.7 | 1.662 | NA | 3.05 | 221 | 0.01 |
| August-09 | 14.23 | 8.37 | 5.86 | 26.33 | 1.78 | 0.33 | 3.04 | 260 | 1.3 |
| December-09 | 14.23 | 6.53 | 7.70 | 17.69 | 1.745 | 2.34 | 3.16 | 353.9 | 2.45 |
| February-10 | 14.23 | 6.50 | 7.73 | 15.45 | 1.73 | 0.47 | 2.92 | 388 | 5.5 |
| April-10 | 14.23 | 7.25 | 6.98 | 18.92 | 1.62 | 0.32 | 3.39 | 320 | 0.6 |
| **MW-06** | | | | | | | | | |
| August-08 | 16.77 | 8.49 | 8.28 | 22.25 | 0.802 | 0.30 | 3.52 | 238 | 0.0 |
| November-08 | 16.77 | 9.27 | 7.50 | 21.54 | 0.536 | 0.38 | 3.82 | 238 | 7.4 |
| February-09 | 16.77 | 8.43 | 8.34 | 16.61 | 0.651 | 0.45 | 3.70 | 263 | 5.0 |
| May-09 | 16.77 | 8.36 | 8.41 | 20.04 | 0.675 | 0.33 | 3.72 | 135 | 0.0 |
| August-09 | 16.77 | 10.41 | 6.36 | 23.66 | 0.499 | 0.31 | 3.89 | 306 | 5.8 |
| December-09 | 16.77 | 6.59 | 10.18 | 17.58 | 0.568 | 2.25 | 3.72 | 401.2 | 4.68 |
| February-10 | 16.77 | 6.48 | 10.29 | 15.13 | 0.549 | 0.69 | 3.92 | 376 | 2.1 |
| April-10 | 16.77 | 8.21 | 8.56 | 17.17 | 0.479 | 0.36 | 3.90 | 329 | 3.0 |

# TABLE 3
# GROUNDWATER SAMPLING SUMMARY
# DELATTE METALS SUPERFUND SITE
# PONCHATOULA, LOUISIANA
# AGENCY INTEREST NO. 2328

| Monitoring/ Sample Well No. & Date | Groundwater Elevation | | | Groundwater Quality Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | Temperature °C | Specific Conductivity mS/sec | Dissolved Oxygen (mg/L) | pH Standard Unit | ORP Eh | Turbidity NTU |
| **FIRST WATER-BEARING ZONE (continued)** | | | | | | | | | |
| **PW-04** | | | | | | | | | |
| August-08 | 12.22 | 5.41 | 6.81 | 23.06 | 1.189 | 0.32 | 3.72 | -68 | 0.0 |
| November-08 | 12.22 | 6.28 | 5.94 | 21.96 | 1.030 | 1.49 | 3.53 | 271 | 3.3 |
| February-09 | 12.22 | 5.20 | 7.02 | 16.98 | 1.91 | 0.24 | 4.19 | -21 | 0.0 |
| May-09 | 12.22 | 5.08 | 7.14 | 19.97 | 1.87 | 0.31 | 3.83 | -62 | 0.0 |
| August-09 | 12.22 | 7.12 | 5.10 | 22.73 | 1.210 | 0.20 | 3.93 | 70 | 0.9 |
| December-09 | 12.22 | 4.14 | 8.08 | 18.44 | 0.959 | 1.77 | 4.24 | 98.3 | 1.74 |
| February-10 | 12.22 | 3.46 | 8.76 | 14.84 | 1.094 | 0.38 | 4.06 | 328 | 4.8 |
| April-10 | 12.22 | 4.50 | 7.72 | 18.55 | 0.706 | 0.24 | 4.15 | 293 | 3.2 |
| **BA-03** | | | | | | | | | |
| August-08 | 14.57 | 6.68 | 7.89 | 27.78 | 1.73 | 2.27 | 4.04 | 305 | 0.0 |
| November-08 | 14.57 | 7.39 | 7.18 | 24.22 | 1.90 | 1.47 | 4.53 | 288 | 0.0 |
| February-09 | 14.57 | 6.93 | 7.64 | 18.13 | 1.71 | 1.45 | 3.40 | 341 | 0.0 |
| May-09 | 14.57 | 6.76 | 7.81 | 24.6 | 1.674 | NA | 3.98 | 168 | 0.44 |
| August-09 | 14.57 | 8.14 | 6.43 | 27.72 | 2.86 | 0.24 | 3.11 | 467 | 2.3 |
| December-09 | 14.57 | 6.33 | 8.24 | 17.03 | 0.364 | 4.05 | 4.63 | 236.2 | 4.11 |
| February-10 | 14.57 | 6.05 | 8.52 | 15.10 | 1.76 | 2.24 | 4.52 | 316 | 5.8 |
| April-10 | 14.57 | 6.83 | 7.74 | 19.43 | 1.62 | 1.87 | 4.58 | 2.77 | 1.7 |
| **BA-09** | | | | | | | | | |
| August-08 | 9.46 | 9.11 | 0.35 | 23.48 | 3.75 | 0.17 | 3.68 | -37 | 0.0 |
| November-08 | 9.46 | 8.70 | 0.76 | 23.62 | 3.63 | 0.26 | 3.68 | 12 | 0.0 |
| February-09 | 9.46 | 8.97 | 0.49 | 18.20 | 3.90 | 0.41 | 3.71 | 65 | 0.0 |
| May-09 | 9.46 | 8.35 | 1.11 | 20.09 | 3.68 | 0.33 | 3.63 | 14 | 0.0 |
| August-09 | 9.46 | 8.98 | 0.48 | 22.97 | 3.57 | 0.34 | 3.63 | 42 | 0.3 |
| December-09 | 9.46 | 5.61 | 3.85 | 20.84 | 2.160 | 1.55 | 3.60 | 78.2 | 5.82 |
| February-10 | 9.46 | 7.09 | 2.37 | 18.84 | 3.93 | 0.26 | 3.58 | 144 | 0.0 |
| April-10 | 9.46 | 8.56 | 0.90 | 18.44 | 3.57 | 4.86 | 3.71 | 78 | 1.3 |
| **SECOND WATER-BEARING ZONE** | | | | | | | | | |
| **DW-04** | | | | | | | | | |
| August-08 | 14.21 | 4.75 | 9.46 | 22.76 | 2.06 | 0.24 | 7.15 | -128 | 0.0 |
| November-08 | 14.21 | 5.14 | 9.07 | 21.35 | 2.03 | 1.46 | 7.13 | -110 | 0.0 |
| February-09 | 14.21 | 4.42 | 9.79 | 19.11 | 2.05 | 5.71 | 7.90 | 95 | 0.0 |
| May-09 | 14.21 | 4.22 | 9.99 | 21.80 | 2.14 | 0.30 | 7.10 | -95 | 0.0 |
| August-09 | 14.21 | 5.79 | 8.42 | 23.44 | 1.87 | 0.44 | 7.15 | 7 | 1.5 |
| December-09 | 14.21 | 4.72 | 9.49 | 20.60 | 1.74 | 2.08 | 7.13 | 24.2 | 4.73 |
| February-10 | 14.21 | 3.89 | 10.32 | 17.21 | 1.92 | 7.65 | 7.88 | 405 | 0.2 |
| April-10 | 14.21 | 4.12 | 10.09 | 20.76 | 1.83 | 6.92 | 7.51 | 408 | 0.0 |
| **MW-A** | | | | | | | | | |
| August-08 | 15.12 | 9.86 | 5.26 | 23.40 | 0.783 | 0.26 | 7.20 | -118 | 0.0 |
| November-08 | 15.12 | 10.27 | 4.85 | 22.42 | 0.778 | 1.18 | 7.23 | -135 | 0.0 |
| February-09 | 15.12 | 10.64 | 4.48 | 20.87 | 0.789 | 1.82 | 7.35 | 33 | 0.0 |
| May-09 | 15.12 | 9.74 | 5.38 | 20.61 | 0.792 | 0.39 | 7.19 | -28 | 0.0 |
| August-09 | 15.12 | 10.58 | 4.54 | 25.58 | 0.705 | 0.31 | 7.14 | -27 | 2.1 |
| December-09 | 15.12 | 9.52 | 5.60 | 19.22 | 0.695 | 2.97 | 7.07 | -68.9 | 2.30 |
| February-10 | 15.12 | 9.29 | 5.83 | 18.67 | 0.762 | 2.54 | 7.39 | -4 | 7.4 |
| April-10 | 15.12 | 10.12 | 5.00 | 19.68 | 0.722 | 1.82 | 6.91 | 74 | 2.0 |
| **MW-03** | | | | | | | | | |
| August-08 | 14.80 | 6.18 | 8.62 | 22.33 | 2.05 | 0.28 | 6.63 | -117 | 0.0 |
| November-08 | 14.80 | 6.99 | 7.81 | 22.53 | 2.07 | 0.37 | 6.78 | -105 | 0.0 |
| February-09 | 14.80 | 6.26 | 8.54 | 18.58 | 2.11 | 0.75 | 6.91 | 171 | 0.0 |
| May-09 | 14.80 | 5.39 | 9.41 | 21.26 | 2.14 | 0.27 | 6.71 | -256 | 0.0 |
| August-09 | 14.80 | 7.78 | 7.02 | 22.91 | 1.90 | 0.28 | 6.59 | -65 | 2.7 |
| December-09 | 14.80 | 6.14 | 8.66 | 20.29 | 1.814 | 4.73 | 6.93 | 15.8 | 5.11 |
| February-10 | 14.80 | 4.78 | 10.02 | 16.64 | 2.05 | 1.24 | 6.82 | 378 | 4.3 |
| April-10 | 14.80 | 5.40 | 9.40 | 19.88 | 1.93 | 0.24 | 6.60 | 184 | 1.6 |

# TABLE 3
# GROUNDWATER SAMPLING SUMMARY
# DELATTE METALS SUPERFUND SITE
# PONCHATOULA, LOUISIANA
# AGENCY INTEREST NO. 2328

| Monitoring/ Sample Well No. & Date | Groundwater Elevation | | | Groundwater Quality Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | Temperature °C | Specific Conductivity mS/sec | Dissolved Oxygen (mg/L) | pH Standard Unit | ORP Eh | Turbidity NTU |
| **SECOND WATER-BEARING ZONE (continued)** | | | | | | | | | |
| **MW-04** | | | | | | | | | |
| August-08 | 17.38 | 15.16 | 2.22 | 21.46 | 0.342 | 1.40 | 6.37 | 30 | 0.0 |
| November-08 | 17.38 | 14.63 | 2.75 | 20.73 | 0.343 | 1.61 | 6.99 | -115 | 0.0 |
| February-09 | 17.38 | 14.00 | 3.38 | 17.58 | 0.351 | 3.47 | 6.75 | -67 | 1.5 |
| May-09 | 17.38 | 13.54 | 3.84 | 19.29 | 0.352 | 3.23 | 6.40 | -71 | 0.0 |
| August-09 | 17.38 | 15.61 | 1.77 | 21.21 | 0.314 | 1.68 | 6.41 | -19 | 4.2 |
| December-09 | 17.38 | 13.41 | 3.97 | 20.73 | 0.323 | 3.09 | 6.42 | -21.3 | 4.61 |
| February-10 | 17.38 | 12.46 | 4.92 | 18.78 | 0.277 | 5.32 | 6.77 | 5 | 5.1 |
| April-10 | 17.38 | 13.38 | 4.00 | 19.64 | 0.401 | 3.49 | 6.70 | -10 | 3.9 |
| **BA-01** | | | | | | | | | |
| August-08 | 14.57 | 6.21 | 8.36 | 23.07 | 2.29 | 0.23 | 6.31 | -79 | 1.6 |
| November-08 | 14.57 | 6.87 | 7.70 | 24.66 | 2.19 | 0.30 | 6.65 | -127 | 3.2 |
| February-09 | 14.57 | 6.55 | 8.02 | 20.73 | 2.47 | 0.47 | 6.69 | -10 | 9.7 |
| May-09 | 14.57 | 5.65 | 8.92 | 22.53 | 2.70 | 0.26 | 6.22 | -61 | 127 |
| August-09 | 14.57 | 7.46 | 7.11 | 25.30 | 2.10 | 0.26 | 6.27 | 35 | 13.4 |
| December-09 | 14.57 | 6.30 | 8.27 | 22.12 | 2.149 | 2.08 | 6.28 | -79 | 8.61 |
| February-10 | 14.57 | 5.44 | 9.13 | 17.82 | 2.85 | 0.30 | 6.16 | 95 | 411 |
| April-10 | 14.57 | 5.80 | 8.77 | 21.86 | 2.65 | 0.36 | 5.94 | 18 | 390 |
| **BA-05** | | | | | | | | | |
| August-08 | 14.20 | 7.40 | 6.80 | 24.33 | 5.63 | 3.12 | 6.36 | -63 | 0.0 |
| November-08 | 14.20 | 8.65 | 5.55 | 23.33 | 5.44 | 2.58 | 6.32 | -37 | 0.1 |
| February-09 | 14.20 | 8.05 | 6.15 | 18.12 | 6.42 | 0.26 | 6.45 | -97 | 76.1 |
| May-09 | 14.20 | 7.17 | 7.03 | 23.41 | 6.04 | 0.34 | 6.17 | -120 | 7.7 |
| August-09 | 14.20 | 8.35 | 5.85 | 26.80 | 5.19 | 0.49 | 6.23 | 14 | 34.0 |
| December-09 | 14.20 | 8.43 | 5.77 | 18.88 | 5.708 | 1.72 | 6.08 | -67.1 | 22.29 |
| February-10 | 14.20 | 7.05 | 7.15 | 17.12 | 6.37 | 0.27 | 6.33 | 2 | 9.6 |
| April-10 | 14.20 | 7.58 | 6.62 | 20.12 | 5.70 | 0.33 | 6.15 | -27 | 31.8 |
| **BA-09A** | | | | | | | | | |
| August-08 | 11.10 | 1.94 | 9.16 | 23.25 | 0.272 | 0.26 | 6.76 | -8 | 0.0 |
| November-08 | 11.10 | 1.46 | 9.64 | 22.98 | 0.272 | 0.37 | 7.42 | -111 | 0.0 |
| February-09 | 11.10 | 0.97 | 10.13 | 16.91 | 0.277 | 1.19 | 6.94 | -44 | 0.0 |
| May-09 | 11.10 | 0.88 | 10.22 | 19.93 | 0.274 | 0.47 | 6.69 | -5 | 0.0 |
| August-09 | 11.10 | 1.79 | 9.31 | 21.91 | 0.247 | 0.39 | 6.50 | 88 | 1.2 |
| December-09 | 11.10 | 0.90 | 10.20 | 20.44 | 0.261 | 1.86 | 6.82 | 98.8 | 1.46 |
| February-10 | 11.10 | 0.60 | 10.50 | 19.19 | 0.259 | 1.60 | 7.19 | 54 | 1.2 |
| April-10 | 11.10 | 1.23 | 9.87 | 19.72 | 0.243 | 0.82 | 6.92 | 41 | 0.6 |
| **BC-03** | | | | | | | | | |
| August-08 | 16.32 | 6.91 | 9.41 | 23.41 | 3.40 | 0.22 | 6.92 | -109 | 0.0 |
| November-08 | 16.32 | 6.89 | 9.43 | 22.63 | 3.41 | 0.32 | 7.36 | -204 | 0.2 |
| February-09 | 16.32 | 5.43 | 10.89 | 19.41 | 3.53 | 2.65 | 7.55 | -88 | 0.0 |
| May-09 | 16.32 | 5.11 | 11.21 | 23.05 | 3.54 | 0.44 | 7.19 | -117 | 0.0 |
| August-09 | 16.32 | 7.51 | 8.81 | 25.92 | 3.17 | 0.33 | 7.15 | -51 | 0.5 |
| December-09 | 16.32 | 5.49 | 10.83 | 22.46 | 3.209 | 3.00 | 7.05 | -33.4 | 1.78 |
| February-10 | 16.32 | 3.65 | 12.67 | 18.71 | 3.49 | 3.33 | 7.46 | 3 | 0.8 |
| April-10 | 16.32 | 4.45 | 11.87 | 21.35 | 3.28 | 2.03 | 7.17 | -27 | 0.0 |
| **BC-07** | | | | | | | | | |
| August-08 | 11.37 | 3.89 | 7.48 | 23.77 | 2.45 | 0.50 | 6.83 | -88 | 3.6 |
| November-08 | 11.37 | 4.12 | 7.25 | 20.77 | 2.32 | 4.53 | 7.20 | 284 | 5.9 |
| February-09 | 11.37 | 2.94 | 8.43 | 16.52 | 2.51 | 1.01 | 7.44 | 160 | 0.0 |
| May-09 | 11.37 | 2.80 | 8.57 | 20.71 | 2.61 | 1.02 | 7.14 | -171 | 0.0 |
| August-09 | 11.37 | 4.84 | 6.53 | 23.68 | 2.17 | 1.08 | 7.04 | -8 | 1.3 |
| December-09 | 11.37 | 2.80 | 8.57 | 18.81 | 2.077 | 2.97 | 7.01 | 32.4 | 7.98 |
| February-10 | 11.37 | 2.24 | 9.13 | 14.12 | 2.57 | 1.99 | 7.39 | 423 | 1.5 |
| April-10 | 11.37 | 2.92 | 8.45 | 17.47 | 2.41 | 0.80 | 7.19 | 379 | 0.8 |

# TABLE 3
## GROUNDWATER SAMPLING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUISIANA
## AGENCY INTEREST NO. 2328

| Monitoring/ Sample Well No. & Date | Groundwater Elevation | | | Groundwater Quality Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | Temperature °C | Specific Conductivity mS/sec | Dissolved Oxygen (mg/L) | pH Standard Unit | ORP Eh | Turbidity NTU |
| **SECOND WATER-BEARING ZONE (continued)** | | | | | | | | | |
| **BC-17** | | | | | | | | | |
| August-08 | 15.18 | 4.64 | 10.54 | 27.13 | 2.20 | 0.44 | 6.81 | -126 | 2.5 |
| November-08 | 15.18 | 6.43 | 8.75 | 23.13 | 2.20 | 2.17 | 7.01 | -76 | 0.0 |
| February-09 | 15.18 | 4.55 | 10.63 | 19.19 | 2.28 | 0.79 | 6.95 | 253 | 0.0 |
| May-09 | 15.18 | 4.26 | 10.92 | 23.21 | 2.27 | 0.33 | 6.97 | -57 | 0.0 |
| August-09 | 15.18 | 6.68 | 8.50 | 24.92 | 2.07 | 0.35 | 6.68 | 24 | 1.9 |
| December-09 | 15.18 | 4.45 | 10.73 | 20.76 | 1.995 | 5.35 | 7.11 | 89.1 | 3.84 |
| February-10 | 15.18 | 3.90 | 11.28 | 17.09 | 2.22 | 1.23 | 7.06 | 492 | 1.5 |
| April-10 | 15.18 | 4.30 | 10.88 | 21.44 | 2.08 | 0.38 | 6.69 | 125 | 3.8 |
| **BC-19** | | | | | | | | | |
| August-08 | 13.85 | 5.60 | 8.25 | 23.02 | 3.05 | 0.28 | 6.72 | -127 | 1.3 |
| November-08 | 13.85 | 5.56 | 8.29 | 22.90 | 3.06 | 2.15 | 7.19 | -181 | 4.9 |
| February-09 | 13.85 | 4.71 | 9.14 | 18.88 | 3.07 | 3.25 | 7.36 | 72 | 0.0 |
| May-09 | 13.85 | 4.61 | 9.24 | 22.25 | 3.08 | 0.25 | 6.94 | -78 | 0.0 |
| August-09 | 13.85 | 6.55 | 7.30 | 25.19 | 2.81 | 0.23 | 6.90 | -15 | 3.7 |
| December-09 | 13.85 | 4.95 | 8.90 | 21.25 | 2.721 | 4.65 | 7.06 | 33.3 | 6.68 |
| February-10 | 13.85 | 4.02 | 9.83 | 15.73 | 3.00 | 3.52 | 7.26 | 333 | 1.8 |
| April-10 | 13.85 | 4.40 | 9.45 | 20.70 | 2.79 | 1.49 | 6.97 | 179 | 0.4 |
| **BC-21R** | | | | | | | | | |
| August-08 | 15.28 | 5.76 | 9.52 | 25.16 | 1.340 | 0.36 | 6.84 | -202 | 0.0 |
| November-08 | 15.28 | 7.03 | 8.25 | 24.03 | 1.337 | 5.02 | 7.32 | 36 | 0.0 |
| February-09 | 15.28 | 5.66 | 9.62 | 18.74 | 1.408 | 3.79 | 7.21 | 0.0 | 7.55 |
| May-09 | 15.28 | 4.88 | 10.40 | 22.06 | 1.416 | 0.61 | 6.81 | 255 | 0.0 |
| August-09 | 15.28 | 7.92 | 7.36 | 24.88 | 1.257 | 0.38 | 6.75 | 22 | 0.3 |
| December-09 | 15.28 | 5.56 | 9.72 | 19.61 | 1.228 | 5.13 | 7.03 | 83.9 | 7.48 |
| February-10 | 15.28 | 4.01 | 11.27 | 14.76 | 1.390 | 4.40 | 7.24 | 526 | 2.0 |
| April-10 | 15.28 | 4.67 | 10.61 | 19.39 | 1.309 | 2.45 | 6.83 | 445 | 0.2 |
| **BC-25** | | | | | | | | | |
| August-08 | 15.73 | 6.88 | 8.85 | 22.78 | 0.935 | 0.25 | 7.01 | -158 | 0.0 |
| November-08 | 15.73 | 7.89 | 7.84 | 21.15 | 0.921 | 0.83 | 7.00 | -120 | 0.0 |
| February-09 | 15.73 | 6.74 | 8.99 | 18.81 | 0.909 | 0.97 | 7.10 | 158 | 0.0 |
| May-09 | 15.73 | 6.01 | 9.72 | 22.28 | 1.119 | 0.28 | 6.80 | -85 | 0.0 |
| August-09 | 15.73 | 8.74 | 6.99 | 23.28 | 0.794 | 0.27 | 6.95 | -24 | 1.8 |
| December-09 | 15.73 | 6.71 | 9.02 | 19.98 | 0.800 | 1.74 | 6.95 | -7.7 | 2.88 |
| February-10 | 15.73 | 5.02 | 10.71 | 17.04 | 1.004 | 6.72 | 7.32 | 404 | 1.2 |
| April-10 | 15.73 | 5.68 | 10.05 | 20.74 | 1.285 | 1.25 | 6.75 | 431 | 3.6 |
| **THIRD WATER-BEARING ZONE** | | | | | | | | | |
| **BA-03A** | | | | | | | | | |
| August-08 | 14.76 | 2.32 | 12.44 | 24.90 | 0.313 | 0.58 | 8.42 | -174 | 11.5 |
| November-08 | 14.76 | 2.20 | 12.56 | 22.70 | 0.318 | 0.71 | 8.43 | -192 | 4.3 |
| February-09 | 14.76 | 1.76 | 13.00 | 19.16 | 0.321 | 0.39 | 8.81 | -198 | 2.4 |
| May-09 | 14.76 | 1.74 | 13.02 | 24.5 | 0.3155 | NA | 6.84 | 12 | 242.7 |
| August-09 | 14.76 | 3.00 | 11.76 | 24.02 | 0.284 | 0.29 | 8.18 | -123 | 76.5 |
| December-09 | 14.76 | 1.90 | 12.86 | 17.04 | 0.277 | 1.97 | 7.58 | -151.7 | 3.05 |
| February-10 | 14.76 | 1.80 | 12.96 | 16.96 | 0.308 | 0.71 | 8.39 | -114 | 6.6 |
| April-10 | 14.76 | 1.33 | 13.43 | 22.06 | 0.287 | 0.61 | 8.13 | -140 | 2.1 |
| **BA-05A** | | | | | | | | | |
| August-08 | 14.42 | 3.78 | 10.64 | 23.30 | 0.282 | 0.19 | 7.43 | -148 | 0.0 |
| November-08 | 14.42 | 3.69 | 10.73 | 22.46 | 0.284 | 0.27 | 7.50 | -159 | 0.0 |
| February-09 | 14.42 | 3.29 | 11.13 | 18.37 | 0.287 | 1.23 | 7.52 | -136 | 0.0 |
| May-09 | 14.42 | 3.22 | 11.20 | 23.46 | 0.299 | 0.93 | 7.16 | -181 | 0.0 |
| August-09 | 14.42 | 4.35 | 10.07 | 25.06 | 0.252 | 0.29 | 7.25 | -89 | 1.5 |
| December-09 | 14.42 | 3.32 | 11.10 | 18.14 | 0.257 | 1.83 | 6.82 | -33.7 | 2.69 |
| February-10 | 14.42 | 3.06 | 11.36 | 17.76 | 0.272 | 3.24 | 7.38 | -61 | 3.8 |
| April-10 | 14.42 | 2.95 | 11.47 | 21.78 | 0.252 | 4.93 | 7.39 | -75 | 1.4 |

# TABLE 3
## GROUNDWATER SAMPLING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUISIANA
## AGENCY INTEREST NO. 2328

| Monitoring/ Sample Well No. & Date | Groundwater Elevation | | | Groundwater Quality Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | Temperature °C | Specific Conductivity mS/sec | Dissolved Oxygen (mg/L) | pH Standard Unit | ORP Eh | Turbidity NTU |
| **THIRD WATER-BEARING ZONE (continued)** | | | | | | | | | |
| **BB-01** | | | | | | | | | |
| August-08 | 15.75 | 3.58 | 12.17 | 23.24 | 0.319 | 0.33 | 9.83 | -195 | 8.0 |
| November-08 | 15.75 | 3.29 | 12.46 | 21.36 | 0.316 | 0.49 | 10.53 | -213 | 4.0 |
| February-09 | 15.75 | 2.80 | 12.95 | 18.54 | 0.317 | 0.98 | 10.11 | -93 | 6.4 |
| May-09 | 15.75 | 2.86 | 12.89 | 21.89 | 0.311 | 0.43 | 10.10 | -174 | 0.0 |
| August-09 | 15.75 | 4.10 | 11.65 | 23.35 | 0.280 | 0.57 | 9.66 | -104 | 6.2 |
| December-09 | 15.75 | 2.96 | 12.79 | 19.27 | 0.279 | 1.91 | 9.75 | 27.1 | 8.38 |
| February-10 | 15.75 | 2.79 | 12.96 | 17.01 | 0.298 | 1.37 | 10.31 | 67 | 6.1 |
| April-10 | 15.75 | 2.42 | 13.33 | 20.51 | 0.279 | 0.49 | 9.66 | 40 | 5.7 |
| **BA-01A** | | | | | | | | | |
| August-08 | 15.03 | 4.81 | 10.22 | 23.44 | 0.278 | 0.43 | 7.18 | -106 | 0.0 |
| November-08 | 15.03 | 4.84 | 10.19 | 22.65 | 0.281 | 0.93 | 7.45 | -150 | 0.0 |
| February-09 | 15.03 | 4.33 | 10.70 | 19.67 | 0.284 | 1.51 | 7.58 | 145 | 0.0 |
| May-09 | 15.03 | 4.26 | 10.77 | 22.17 | 0.280 | 0.49 | 7.29 | 55 | 0.0 |
| August-09 | 15.03 | 5.38 | 9.65 | 23.93 | 0.250 | 0.42 | 7.13 | -19 | 0.1 |
| December-09 | 15.03 | 4.50 | 10.53 | 20.45 | 0.268 | 1.72 | 7.50 | -94.5 | 2.79 |
| February-10 | 15.03 | 4.12 | 10.91 | 18.32 | 0.268 | 1.44 | 7.65 | 317 | 1.8 |
| April-10 | 15.03 | 4.01 | 11.02 | 21.82 | 0.251 | 3.59 | 7.38 | 239 | 0.9 |
| **WATER WELLS** | | | | | | | | | |
| (b) (6) **Well** | | | | | | | | | |
| August-08 | NA | NA | NA | 21.63 | 0.256 | 1.47 | 8.07 | -172 | 0.0 |
| November-08 | NA | NA | NA | 20.21 | 0.235 | 2.49 | 8.61 | -184 | 0.0 |
| February-09 | NA | NA | NA | 17.52 | 0.304 | 3.01 | 8.22 | -124 | 0.0 |
| May-09 | NA | NA | NA | 20.18 | 0.297 | 3.55 | 6.84 | -149 | 0.0 |
| August-09 | NA | NA | NA | 21.53 | 0.270 | 3.35 | 7.73 | 8 | 0.2 |
| December-09 | NA | NA | NA | 20.33 | 0.279 | 4.04 | 7.81 | -101.5 | 1.89 |
| February-10 | NA | NA | NA | 19.66 | 0.284 | 3.11 | 8.60 | -106 | 0.2 |
| April-10 | NA | NA | NA | 20.93 | 0.267 | 2.87 | 8.26 | -88 | 0.0 |
| **WW-04** | | | | | | | | | |
| August-08 | NA | NA | NA | 21.89 | 0.303 | 3.12 | 8.60 | -226 | 0.0 |
| November-08 | NA | NA | NA | 20.51 | 0.304 | 2.45 | 9.32 | -138 | 0.0 |
| February-09 | NA | NA | NA | 17.36 | 0.305 | 2.66 | 8.73 | -164 | 0.0 |
| May-09 | NA | NA | NA | 21.76 | 0.303 | 2.92 | 8.68 | -251 | 0.0 |
| August-09 | NA | NA | NA | 22.84 | 0.270 | 2.96 | 8.27 | 2 | 0.0 |
| December-09 | NA | NA | NA | 20.64 | 0.289 | 3.92 | 7.73 | -122.8 | 2.08 |
| February-10 | NA | NA | NA | 19.77 | 0.287 | 2.29 | 9.10 | -149 | 0.9 |
| April-10 | NA | NA | NA | 21.25 | 0.269 | 1.67 | 8.72 | -138 | 0.0 |
| **WW-09** | | | | | | | | | |
| August-08 | NA | NA | NA | 23.31 | 0.291 | 2.37 | 8.19 | -95 | 0.0 |
| November-08 | NA | NA | NA | 20.00 | 0.293 | 3.91 | 9.00 | -131 | 0.0 |
| February-09 | NA | NA | NA | 14.40 | 0.325 | 3.56 | 7.61 | -83 | 0.0 |
| May-09 | NA | NA | NA | 20.59 | 0.293 | 5.54 | 8.54 | -172 | 0.0 |
| August-09 | NA | NA | NA | 21.76 | 0.264 | 3.15 | 8.03 | -11 | 0.0 |
| December-09 | NA | NA | NA | 19.68 | 0.265 | 5.72 | 7.18 | -77.2 | 3.04 |
| February-10 | NA | NA | NA | 19.51 | 0.277 | 3.14 | 8.29 | -80 | 0.6 |
| April-10 | NA | NA | NA | 19.58 | 0.260 | 2.71 | 7.94 | -90 | 0.5 |
| **North Well** | | | | | | | | | |
| August-08 | NA | NA | NA | 23.40 | 0.295 | 1.72 | 9.23 | -214 | 0.0 |
| November-08 | NA | NA | NA | 22.01 | 0.200 | 1.81 | 9.29 | -161 | 0.0 |
| February-09 | NA | NA | NA | 20.33 | 0.263 | 1.88 | 9.19 | -63 | 0.0 |
| May-09 | NA | NA | NA | 22.67 | 0.321 | 1.38 | 9.06 | -185 | 0.0 |
| August-09 | NA | NA | NA | 22.11 | 0.271 | 1.14 | 8.75 | -68 | 0.2 |
| December-09 | NA | NA | NA | 20.35 | 0.309 | 2.79 | 8.13 | 16.8 | 5.46 |
| February-10 | NA | NA | NA | 19.69 | 0.286 | 1.35 | 9.10 | 255 | 1.6 |
| April-10 | NA | NA | NA | 22.26 | 0.69 | 1.71 | 8.79 | -48 | 0.1 |

**TABLE 3**
**GROUNDWATER SAMPLING SUMMARY**
**DELATTE METALS SUPERFUND SITE**
**PONCHATOULA, LOUISIANA**
**AGENCY INTEREST NO. 2328**

| Monitoring/ Sample Well No. & Date | Groundwater Elevation | | | Groundwater Quality Data | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | Temperature °C | Specific Conductivity mS/sec | Dissolved Oxygen (mg/L) | pH Standard Unit | ORP Eh | Turbidity NTU |
| **WATER WELLS (continued)** | | | | | | | | | |
| **South Well** | | | | | | | | | |
| August-08 | NA | NA | NA | 22.08 | 0.303 | 1.66 | 8.85 | -170 | 0.0 |
| November-08 | NA | NA | NA | 20.58 | 0.298 | 3.30 | 9.48 | -145 | 0.0 |
| February-09 | NA | NA | NA | 19.01 | 0.305 | 3.28 | 9.26 | -143 | 0.0 |
| May-09 | NA | NA | NA | 20.89 | 0.302 | 1.75 | 9.03 | -147 | 0.0 |
| August-09 | NA | NA | NA | 21.41 | 0.271 | 2.44 | 8.85 | -67 | 0.0 |
| December-09 | NA | NA | NA | 19.35 | 0.282 | 3.66 | 9.32 | -111.3 | 3.68 |
| February-10 | NA | NA | NA | 17.78 | 0.037 | 5.02 | 9.42 | -62 | 1.7 |
| April-10 | NA | NA | NA | 21.61 | 0.236 | 2.90 | 8.80 | -65 | 0.0 |

Notes: 1) Top-of-casing (TOC) elevation - (depth to fluid) = Corrected GROUNDWATER (GW) elevation
2) Additional quarters will be added as sampling events continue
Abbrev.: NA = Not Appliciable mg/L = milligrams per Liter NF = Not Found
NM = Not Measured NS = Not Sampled

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Total Arsenic/7440-38-2 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.010 | 0.004 | 0.00192 | J | No |
| 2 | Total Lead/7439-92-1 | SW6020 | BA-09A | 10040344-01 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.000828 | J | No |
| 3 | Total Manganese/7439-96-5 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0239 | | No |
| 4 | Total Nickel/7440-02-0 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 5 | Total Thallium/7440-28-0 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **6** | **Total Arsenic/7440-38-2** | **SW6010** | **BA-09** | **10040344-02** | **100405** | **RECAP SS** | **0.010** | **0.005** | **0.0222** | | **Yes** |
| 7 | Total Lead/7439-92-1 | SW6020 | BA-09 | 10040344-02 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.000272 | J | No |
| **8** | **Total Manganese/7439-96-5** | **SW6020** | **BA-09** | **10040344-02** | **100405** | **RECAP SS** | **0.510** | **0.002** | **4.08** | | **Yes** |
| **9** | **Total Nickel/7440-02-0** | **SW6020** | **BA-09** | **10040344-02** | **100405** | **RECAP SS** | **0.073** | **0.002** | **0.195** | | **Yes** |
| 10 | Total Thallium/7440-28-0 | SW6020 | BA-09 | 10040344-02 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 11 | Total Arsenic/7440-38-2 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 12 | Total Lead/7439-92-1 | SW6020 | MW-04 | 10040344-03 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 13 | Total Manganese/7439-96-5 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.510 | 0.002 | 0.00843 | | No |
| 14 | Total Nickel/7440-02-0 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 15 | Total Thallium/7440-28-0 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 16 | Total Arsenic/7440-38-2 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 17 | Total Lead/7439-92-1 | SW6020 | WW-09 | 10040344-04 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 18 | Total Manganese/7439-96-5 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.510 | 0.002 | 0.017 | | No |
| 19 | Total Nickel/7440-02-0 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 20 | Total Thallium/7440-28-0 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 21 | Total Arsenic/7440-38-2 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 22 | Total Lead/7439-92-1 | SW6020 | WW-04 | 10040344-05 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 23 | Total Manganese/7439-96-5 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.510 | 0.002 | 0.00256 | | No |
| 24 | Total Nickel/7440-02-0 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 25 | Total Thallium/7440-28-0 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 26 | Total Arsenic/7440-38-2 | SW6020 | (b) (6) WELL | 10040344-06 | 100405 | RECAP SS | 0.010 | 0.004 | 0.00171 | J | No |
| 27 | Total Lead/7439-92-1 | SW6020 | [redacted] WELL | 10040344-06 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.00177 | J | No |
| 28 | Total Manganese/7439-96-5 | SW6020 | [redacted] WELL | 10040344-06 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0249 | | No |
| 29 | Total Nickel/7440-02-0 | SW6020 | [redacted] WELL | 10040344-06 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 30 | Total Thallium/7440-28-0 | SW6020 | [redacted] WELL | 10040344-06 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | Total Arsenic/7440-38-2 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 32 | Total Lead/7439-92-1 | SW6020 | BC-03 | 10040344-07 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 33 | Total Manganese/7439-96-5 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.510 | 0.002 | 0.000141 | J | No |
| 34 | Total Nickel/7440-02-0 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.073 | 0.002 | 0.000884 | J | No |
| 35 | Total Thallium/7440-28-0 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 36 | Total Arsenic/7440-38-2 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.010 | 0.004 | 0.0016 | J | No |
| 37 | Total Lead/7439-92-1 | SW6020 | BC-07 | 10040344-08 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 38 | Total Manganese/7439-96-5 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0314 | | No |
| 39 | Total Nickel/7440-02-0 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.073 | 0.002 | 0.000742 | J | No |
| 40 | Total Thallium/7440-28-0 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 41 | Total Arsenic/7440-38-2 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 42 | Total Lead/7439-92-1 | SW6020 | DW-04 | 10040344-09 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 43 | Total Manganese/7439-96-5 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.510 | 0.002 | < 0.002 | | No |
| 44 | Total Nickel/7440-02-0 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 45 | Total Thallium/7440-28-0 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 46 | Total Arsenic/7440-38-2 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 47 | Total Lead/7439-92-1 | SW6020 | BC-19 | 10040344-10 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 48 | Total Manganese/7439-96-5 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.510 | 0.002 | 0.000316 | J | No |
| 49 | Total Nickel/7440-02-0 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.073 | 0.002 | 0.00134 | J | No |
| 50 | Total Thallium/7440-28-0 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 51 | Total Arsenic/7440-38-2 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 52 | Total Lead/7439-92-1 | SW6020 | BC-25 | 10040344-11 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 53 | Total Manganese/7439-96-5 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0277 | | No |
| 54 | Total Nickel/7440-02-0 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 55 | Total Thallium/7440-28-0 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 56 | Total Arsenic/7440-38-2 | SW6020 | MW-03 | 10040344-12 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 57 | Total Lead/7439-92-1 | SW6020 | MW-03 | 10040344-12 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.0015 | J | No |
| **58** | **Total Manganese/7439-96-5** | **SW6020** | **MW-03** | **10040344-12** | **100405** | **RECAP SS** | **0.510** | **0.002** | **0.677** | | **Yes** |
| 59 | Total Nickel/7440-02-0 | SW6020 | MW-03 | 10040344-12 | 100405 | RECAP SS | 0.073 | 0.002 | 0.00138 | J | No |
| 60 | Total Thallium/7440-28-0 | SW6020 | MW-03 | 10040344-12 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | Total Arsenic/7440-38-2 | SW6020 | MW-06 | 10040344-13 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 62 | Total Lead/7439-92-1 | SW6020 | MW-06 | 10040344-13 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| **63** | **Total Manganese/7439-96-5** | **SW6020** | **MW-06** | **10040344-13** | **100405** | **RECAP SS** | **0.510** | **0.002** | **1.92** | | **Yes** |
| 64 | Total Nickel/7440-02-0 | SW6020 | MW-06 | 10040344-13 | 100405 | RECAP SS | 0.073 | 0.002 | 0.0179 | | No |
| 65 | Total Thallium/7440-28-0 | SW6020 | MW-06 | 10040344-13 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 66 | Total Arsenic/7440-38-2 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00518 | | No |
| 67 | Total Lead/7439-92-1 | SW6020 | BB-01 | 10040344-14 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.00449 | | No |
| 68 | Total Manganese/7439-96-5 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00489 | | No |
| 69 | Total Nickel/7440-02-0 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.073 | 0.002 | 0.000688 | J | No |
| 70 | Total Thallium/7440-28-0 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 71 | Total Arsenic/7440-38-2 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 72 | Total Lead/7439-92-1 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 73 | Total Manganese/7439-96-5 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00378 | | No |
| 74 | Total Nickel/7440-02-0 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 75 | Total Thallium/7440-28-0 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 76 | Total Arsenic/7440-38-2 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00248 | J | No |
| **77** | **Total Lead/7439-92-1** | **SW6020** | **BC-17** | **10040344-16** | **100406** | **EPA Site Cleanup** | **0.015** | **0.002** | **0.0172** | | **Yes** |
| 78 | Total Manganese/7439-96-5 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.510 | 0.002 | 0.106 | | No |
| 79 | Total Nickel/7440-02-0 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.073 | 0.002 | 0.00169 | J | No |
| 80 | Total Thallium/7440-28-0 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 81 | Total Arsenic/7440-38-2 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 82 | Total Lead/7439-92-1 | SW6020 | NORTH WELL | 10040344-17 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.000872 | J | No |
| 83 | Total Manganese/7439-96-5 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00457 | | No |
| 84 | Total Nickel/7440-02-0 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0013 | J | No |
| 85 | Total Thallium/7440-28-0 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.002 | 0.002 | 0.000339 | J | No |
| 86 | Total Arsenic/7440-38-2 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 87 | Total Lead/7439-92-1 | SW6020 | BC-21R | 10040344-18 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 88 | Total Manganese/7439-96-5 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00468 | | No |
| 89 | Total Nickel/7440-02-0 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.073 | 0.002 | 0.00123 | J | No |
| 90 | Total Thallium/7440-28-0 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 | Total Arsenic/7440-38-2 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00638 | | No |
| 92 | Total Lead/7439-92-1 | SW6020 | BA-01A | 10040344-19 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 93 | Total Manganese/7439-96-5 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00523 | | No |
| 94 | Total Nickel/7440-02-0 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 95 | Total Thallium/7440-28-0 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 96 | Dissolved Arsenic/7440-38-2 | SW6010 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.010 | 0.005 | 0.0044 | J | No |
| 97 | Dissolved Lead/7439-92-1 | SW6020 | BA-01 | 10040344-20 | 100406 | EPA Site Cleanup | 0.015 | 0.001 | < 0.001 | | No |
| **98** | **Dissolved Manganese/7439-96-5** | **SW6020** | **BA-01** | **10040344-20** | **100406** | **RECAP SS** | **0.510** | **0.002** | **1.42** | | **Yes** |
| 99 | Dissolved Nickel/7440-02-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0605 | B | No |
| 100 | Dissolved Thallium/7440-28-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **101** | **Total Arsenic/7440-38-2** | **SW6010** | **BA-01** | **10040344-20** | **100406** | **RECAP SS** | **0.010** | **0.005** | **0.015** | | **Yes** |
| 102 | Total Lead/7439-92-1 | SW6020 | BA-01 | 10040344-20 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.00105 | J | No |
| **103** | **Total Manganese/7439-96-5** | **SW6020** | **BA-01** | **10040344-20** | **100406** | **RECAP SS** | **0.510** | **0.002** | **1.51** | | **Yes** |
| 104 | Total Nickel/7440-02-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0612 | | No |
| 105 | Total Thallium/7440-28-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **106** | **Total Arsenic/7440-38-2** | **SW6010** | **DW-03** | **10040344-21** | **100406** | **RECAP SS** | **0.010** | **0.005** | **0.035** | | **Yes** |
| **107** | **Total Lead/7439-92-1** | **SW6020** | **DW-03** | **10040344-21** | **100406** | **EPA Site Cleanup** | **0.015** | **0.002** | **0.0846** | | **Yes** |
| **108** | **Total Manganese/7439-96-5** | **SW6020** | **DW-03** | **10040344-21** | **100406** | **RECAP SS** | **0.510** | **0.002** | **6.73** | | **Yes** |
| **109** | **Total Nickel/7440-02-0** | **SW6020** | **DW-03** | **10040344-21** | **100406** | **RECAP SS** | **0.073** | **0.002** | **0.178** | | **Yes** |
| 110 | Total Thallium/7440-28-0 | SW6020 | DW-03 | 10040344-21 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 111 | Total Arsenic/7440-38-2 | SW6010 | PW-04 | 10040344-22 | 100406 | RECAP SS | 0.010 | 0.005 | <0.005 | | No |
| 112 | Total Lead/7439-92-1 | SW6020 | PW-04 | 10040344-22 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.00109 | J | No |
| **113** | **Total Manganese/7439-96-5** | **SW6020** | **PW-04** | **10040344-22** | **100406** | **RECAP SS** | **0.510** | **0.002** | **0.931** | | **Yes** |
| 114 | Total Nickel/7440-02-0 | SW6020 | PW-04 | 10040344-22 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0237 | | No |
| 115 | Total Thallium/7440-28-0 | SW6020 | PW-04 | 10040344-22 | 100406 | RECAP SS | 0.002 | 0.002 | 0.000151 | J | No |
| **116** | **Total Arsenic/7440-38-2** | **SW6010** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.010** | **0.005** | **0.0407** | | **Yes** |
| 117 | Total Lead/7439-92-1 | SW6020 | DW-02 | 10040344-23 | 100406 | EPA Site Cleanup | 0.015 | 0.01 | 0.0114 | | No |
| **118** | **Total Manganese/7439-96-5** | **SW6020** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.510** | **0.01** | **16.9** | | **Yes** |
| **119** | **Total Nickel/7440-02-0** | **SW6020** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.073** | **0.01** | **0.824** | | **Yes** |
| **120** | **Total Thallium/7440-28-0** | **SW6020** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.002** | **0.01** | **< 0.01** | | **Yes** |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | Total Arsenic/7440-38-2 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00238 | J | No |
| 122 | Total Lead/7439-92-1 | SW6020 | BA-05A | 10040344-24 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.000326 | J | No |
| 123 | Total Manganese/7439-96-5 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00985 | | No |
| 124 | Total Nickel/7440-02-0 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.073 | 0.002 | 0.00176 | J | No |
| 125 | Total Thallium/7440-28-0 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 126 | Dissolved Arsenic/7440-38-2 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 127 | Dissolved Lead/7439-92-1 | SW6020 | BA05 | 10040344-25 | 100406 | EPA Site Cleanup | 0.015 | 0.001 | < 0.001 | | No |
| **128** | **Dissolved Manganese/7439-96-5** | **SW6020** | **BA05** | **10040344-25** | **100406** | **RECAP SS** | **0.510** | **0.002** | **14.1** | | **Yes** |
| 129 | Dissolved Nickel/7440-02-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0557 | B | No |
| 130 | Dissolved Thallium/7440-28-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 131 | Total Arsenic/7440-38-2 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00195 | J | No |
| 132 | Total Lead/7439-92-1 | SW6020 | BA05 | 10040344-25 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.000365 | J | No |
| **133** | **Total Manganese/7439-96-5** | **SW6020** | **BA05** | **10040344-25** | **100406** | **RECAP SS** | **0.510** | **0.002** | **13.5** | | **Yes** |
| 134 | Total Nickel/7440-02-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0517 | | No |
| 135 | Total Thallium/7440-28-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.002 | 0.002 | 0.00015 | J | No |
| 136 | Total Arsenic/7440-38-2 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 137 | Total Lead/7439-92-1 | SW6020 | MW-A | 10040344-26 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.000271 | J | No |
| 138 | Total Manganese/7439-96-5 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.510 | 0.002 | 0.00724 | | No |
| 139 | Total Nickel/7440-02-0 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.073 | 0.002 | 0.00178 | J | No |
| 140 | Total Thallium/7440-28-0 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.002 | 0.002 | 0.00015 | J | No |
| **141** | **Dissolved Arsenic/7440-38-2** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.010** | **0.004** | **0.041** | | **Yes** |
| 142 | Dissolved Lead/7439-92-1 | SW6020 | DW-01 | 10040344-27 | 100407 | EPA Site Cleanup | 0.015 | 0.001 | 0.000628 | J | No |
| **143** | **Dissolved Manganese/7439-96-5** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.510** | **0.002** | **3.82** | | **Yes** |
| 144 | Dissolved Nickel/7440-02-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.073 | 0.002 | 0.0222 | B | No |
| 145 | Dissolved Thallium/7440-28-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **146** | **Total Arsenic/7440-38-2** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.010** | **0.004** | **0.12** | | **Yes** |
| 147 | Total Lead/7439-92-1 | SW6020 | DW-01 | 10040344-27 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.00254 | | No |
| **148** | **Total Manganese/7439-96-5** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.510** | **0.002** | **4.72** | | **Yes** |
| 149 | Total Nickel/7440-02-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.073 | 0.002 | 0.0254 | | No |
| 150 | Total Thallium/7440-28-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.002 | 0.002 | 0.000324 | J | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151 | Total Arsenic/7440-38-2 | SW6010 | MW-02 | 10040344-28 | 100407 | RECAP SS | 0.010 | 0.005 | 0.0035 | J | No |
| 152 | Total Lead/7439-92-1 | SW6020 | MW-02 | 10040344-28 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.00418 | | No |
| **153** | **Total Manganese/7439-96-5** | **SW6020** | **MW-02** | **10040344-28** | **100407** | **RECAP SS** | **0.510** | **0.002** | **1.91** | | **Yes** |
| **154** | **Total Nickel/7440-02-0** | **SW6020** | **MW-02** | **10040344-28** | **100407** | **RECAP SS** | **0.073** | **0.002** | **0.0801** | | **Yes** |
| 155 | Total Thallium/7440-28-0 | SW6020 | MW-02 | 10040344-28 | 100407 | RECAP SS | 0.002 | 0.002 | 0.000804 | J | No |
| **156** | **Total Arsenic/7440-38-2** | **SW6010** | **MW-01** | **10040344-29** | **100407** | **RECAP SS** | **0.010** | **0.005** | **0.043** | | **Yes** |
| 157 | Total Lead/7439-92-1 | SW6020 | MW-01 | 10040344-29 | 100407 | EPA Site Cleanup | 0.015 | 0.01 | 0.00261 | J | No |
| **158** | **Total Manganese/7439-96-5** | **SW6020** | **MW-01** | **10040344-29** | **100407** | **RECAP SS** | **0.510** | **0.002** | **5.6** | | **Yes** |
| **159** | **Total Nickel/7440-02-0** | **SW6020** | **MW-01** | **10040344-29** | **100407** | **RECAP SS** | **0.073** | **0.002** | **0.239** | | **Yes** |
| 160 | Total Thallium/7440-28-0 | SW6020 | MW-01 | 10040344-29 | 100407 | RECAP SS | 0.002 | 0.01 | 0.000744 | J | No |
| 161 | Total Arsenic/7440-38-2 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 162 | Total Lead/7439-92-1 | SW6020 | BA-03A | 10040344-30 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.00119 | J | No |
| 163 | Total Manganese/7439-96-5 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.510 | 0.002 | 0.037 | | No |
| 164 | Total Nickel/7440-02-0 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.073 | 0.002 | 0.00163 | J | No |
| 165 | Total Thallium/7440-28-0 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 166 | Total Arsenic/7440-38-2 | SW6010 | BA-03 | 10040344-31 | 100407 | RECAP SS | 0.010 | 0.005 | 0.004 | J | No |
| **167** | **Total Lead/7439-92-1** | **SW6020** | **BA-03** | **10040344-31** | **100407** | **EPA Site Cleanup** | **0.015** | **0.002** | **0.144** | | **Yes** |
| **168** | **Total Manganese/7439-96-5** | **SW6020** | **BA-03** | **10040344-31** | **100407** | **RECAP SS** | **0.510** | **0.002** | **2.23** | | **Yes** |
| **169** | **Total Nickel/7440-02-0** | **SW6020** | **BA-03** | **10040344-31** | **100407** | **RECAP SS** | **0.073** | **0.002** | **0.0899** | | **Yes** |
| 170 | Total Thallium/7440-28-0 | SW6020 | BA-03 | 10040344-31 | 100407 | RECAP SS | 0.002 | 0.002 | 0.000412 | J | No |
| 171 | Total Arsenic/7440-38-2 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.004 | 0.00176 | J | NA |
| 172 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | < 0.002 | | NA |
| 173 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | 0.0024 | | NA |
| 174 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | 0.00276 | | NA |
| 175 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | < 0.002 | | NA |
| 176 | Total Arsenic/7440-38-2 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.004 | 0.00286 | J | NA |
| 177 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.0137 | | NA |
| 178 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.0976 | | NA |
| 179 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.00326 | | NA |
| 180 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.000154 | J | NA |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 181 | Total Arsenic/7440-38-2 | SW6010 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.005 | 0.0384 | | NA |
| 182 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.01 | 0.0134 | | NA |
| 183 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.002 | 11.7 | | NA |
| 184 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.002 | 0.526 | | NA |
| 185 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.01 | < 0.01 | | NA |
| 186 | Total Arsenic/7440-38-2 | SW6010 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.005 | 0.0035 | J | NA |
| 187 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 0.00325 | | NA |
| 188 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 2.04 | | NA |
| 189 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 0.0826 | | NA |
| 190 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 0.000777 | J | NA |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

**Monitoring/Sampling Period: Past 8 Quarters**

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **FIRST WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **DW-01** | | | | | | | | | | | | | | |
| August-08 | 13.36 | 10.58 | 2.78 | **4.89** | **0.186** | <0.01 | **2.02** | 0.0325 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 13.36 | 11.42 | 1.94 | **5.21** | **0.156** | 0.00200 | **0.711** | 0.0148 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 13.36 | 11.64 | 1.72 | **4.97** | **0.0656** | 0.000932 J | **2.57** | 0.0265 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 13.36 | 10.97 | 2.39 | **5.71** | **0.157** | 0.000127 JN | 0.417 | 0.00686 N | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 13.36 | 11.70 | 1.66 | **5.60** | **0.169** | 0.00115 | 0.291 | 0.00454 | 0.000945 J | NA | NA | NA | NA | NA |
| December-09 | 13.36 | 9.68 | 3.68 | **5.16** | **0.0410** | <0.002 | **2.10** | 0.0268 | <0.002 | **0.102 N** | 0.000443 J | **2.03 E** | 0.0263 N | <0.002 |
| February-10 | 13.36 | 8.96 | 4.40 | **5.19** | **0.0648** | 0.00357 | **5.19** | 0.0187 | <0.002 | 0.0029 J | 0.00283 | **6.21** | 0.022 | <0.002 |
| April-10 | 13.36 | 11.10 | 2.26 | **5.53** | **0.12** | 0.00254 | **4.72** | 0.0254 | 0.000324 J | **0.041** | 0.000628 J | **3.82** | 0.0222 | <0.002 |
| **DW-02** | | | | | | | | | | | | | | |
| August-08 | 14.12 | 3.84 | 10.28 | **2.97** | **0.0401** | 0.00834 J | **8.52** | **0.344** | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.12 | 5.85 | 8.27 | **2.70** | **0.153** | 0.00533 | **10.8** | **0.499** | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.12 | 4.82 | 9.30 | **3.42** | **0.0783** | 0.00303 | **12.1** | **0.511** | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.12 | 4.51 | 9.61 | **2.90** | **0.0628 N** | 0.00566 N | **9.22** | **0.370 N** | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.12 | 6.13 | 7.99 | **3.06** | **0.127** | 0.0138 | **16.3** | **0.783** | **0.00475 J** | NA | NA | NA | NA | NA |
| December-09 | 14.12 | 3.90 | 10.22 | **2.90** | **0.0926** | 0.00438 J | **10.9** | **0.471** | **<0.01** | NA | NA | NA | NA | NA |
| February-10 | 14.12 | 3.84 | 10.28 | **3.20** | **0.0915** | **0.0460** | **9.15** | **0.388** | **<0.01** | NA | NA | NA | NA | NA |
| April-10 | 14.12 | 4.88 | 9.24 | **3.06** | **0.0407** | 0.0114 | **16.9** | **0.824** | **<0.01** | NA | NA | NA | NA | NA |
| **DW-03** | | | | | | | | | | | | | | |
| August-08 | 11.59 | 5.49 | 6.10 | **3.52** | **0.0346** | **0.0617** | 0.365 | 0.0176 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 11.59 | 6.33 | 5.26 | **3.59** | **0.0389** | 0.0100 | **2.63** | 0.0710 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 11.59 | 5.59 | 6.00 | **3.77** | **0.0544** | **0.108** | **3.74** | **0.129** | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 11.59 | 5.49 | 6.10 | **3.74** | **0.0245 N** | **0.0207 N** | **1.82** | 0.0467 N | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 11.59 | 7.07 | 4.52 | **3.79** | **0.0218** | 0.00243 | **3.28** | **0.0789** | 0.000979 J | NA | NA | NA | NA | NA |
| December-09 | 11.59 | 4.92 | 6.67 | **4.02** | **<0.02** | **0.215** | 0.205 | 0.0111 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 11.59 | 4.80 | 6.79 | **3.88** | 0.00180 J | **0.220** | 0.284 | 0.0145 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 11.59 | 5.58 | 6.01 | **3.76** | **0.035** | **0.0846** | **6.73** | **0.178** | <0.002 | NA | NA | NA | NA | NA |
| **MW-01** | | | | | | | | | | | | | | |
| August-08 | 15.08 | 14.24 | 0.84 | **3.15** | **0.0737** | **0.0182** | **6.07** | **0.270** | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 15.08 | 13.84 | 1.24 | **3.60** | **0.102** | 0.00213 | **5.05** | **0.228** | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 15.08 | 14.58 | 0.50 | **3.19** | **0.0993** | 0.00331 | **4.89** | **0.209** | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.08 | 13.28 | 1.80 | **3.11** | **0.0708 N** | 0.000232 JN | **4.89** | **0.199 N** | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.08 | 14.01 | 1.07 | **3.33** | **0.0774** | 0.00539 | **5.44** | **0.237** | **0.00477 J** | NA | NA | NA | NA | NA |
| December-09 | 15.08 | 12.64 | 2.44 | **3.43** | **0.0467 J** | <0.01 | **5.26** | **0.223** | **<0.01** | NA | NA | NA | NA | NA |
| February-10 | 15.08 | 12.64 | 2.44 | **3.11** | **0.0792** | 0.00389 J | **3.57** | **0.15** | **<0.01** | NA | NA | NA | NA | NA |
| April-10 | 15.08 | 13.81 | 1.27 | **3.46** | **0.043** | 0.00261 J | **5.6** | **0.239** | 0.000744 J | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.0-9.0** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

**Monitoring/Sampling Period: Past 8 Quarters**

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **FIRST WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **MW-02** | | | | | | | | | | | | | | |
| August-08 | 14.23 | 7.05 | 7.18 | **2.89** | 0.00619 J | <0.01 | **3.99** | **0.143** | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.23 | 7.60 | 6.63 | **3.36** | **0.0207** | **0.0313** | **2.69** | **0.103** | <0.002 | **0.0187 J** | 0.00517 | **2.62 B** | **0.102** | <0.002 |
| February-09 | 14.23 | 7.34 | 6.89 | **3.16** | 0.00535 J | 0.00215 | **2.44** | **0.0895** | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.23 | 7.14 | 7.09 | **3.05** | <0.01 | 0.00229 N | **1.40** | **0.0753 N** | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.23 | 8.37 | 5.86 | **3.04** | **<0.02** | 0.00496 | **2.33** | **0.0918** | 0.00189 J | NA | NA | NA | NA | NA |
| December-09 | 14.23 | 6.53 | 7.70 | **3.16** | **<0.02** | 0.00257 | **0.934** | **0.0958** | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.23 | 6.50 | 7.73 | **2.92** | **<0.02** | 0.00150 | **0.728** | **0.0775** | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.23 | 7.25 | 6.98 | **3.39** | 0.0035 J | 0.00418 | **1.91** | **0.0801** | 0.000804 J | NA | NA | NA | NA | NA |
| **MW-06** | | | | | | | | | | | | | | |
| August-08 | 16.77 | 8.49 | 8.28 | **3.52** | 0.00533 J | <0.01 | **3.44** | 0.0324 | 0.000927 J | NA | NA | NA | NA | NA |
| November-08 | 16.77 | 9.27 | 7.50 | **3.82** | <0.01 | 0.00102 | **1.91** | 0.0189 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 16.77 | 8.43 | 8.34 | **3.70** | 0.00732 J | <0.001 | **2.55** | 0.0202 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 16.77 | 8.36 | 8.41 | **3.72** | <0.01 | <0.002 | **2.34** | 0.0260 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 16.77 | 10.41 | 6.36 | **3.89** | **<0.02** | 0.00148 | **2.31** | 0.0233 | 0.00102 J | NA | NA | NA | NA | NA |
| December-09 | 16.77 | 6.59 | 10.18 | **3.72** | **<0.02** | <0.002 | **2.44 N** | 0.0207 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 16.77 | 6.48 | 10.29 | **3.92** | **<0.02** | 0.000493 J | **2.25 N** | 0.0191 N | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 16.77 | 8.21 | 8.56 | **3.90** | <0.004 | <0.002 | **1.92** | 0.0179 | <0.002 | NA | NA | NA | NA | NA |
| **PW-04** | | | | | | | | | | | | | | |
| August-08 | 12.22 | 5.41 | 6.81 | **3.72** | **<0.02** | <0.01 | **1.45** | 0.0355 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 12.22 | 6.28 | 5.94 | **3.53** | <0.004 | 0.00192 | **0.877** | 0.0288 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 12.22 | 5.20 | 7.02 | **4.19** | 0.01 J | 0.00018 J | **2.42** | 0.0595 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 12.22 | 5.08 | 7.14 | **3.83** | <0.01 | 0.000447 JN | **2.37** | 0.0530 N | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 12.22 | 7.12 | 5.10 | **3.93** | **<0.02** | 0.00223 | **1.73** | 0.0452 | 0.000969 J | NA | NA | NA | NA | NA |
| December-09 | 12.22 | 4.14 | 8.08 | **4.24** | **<0.02** | <0.002 | **1.51** | 0.0393 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 12.22 | 3.46 | 8.76 | **4.06** | **<0.02** | 0.000655 J | **1.50** | 0.0358 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 12.22 | 4.50 | 7.72 | **4.15** | <0.005 | 0.00109 J | **0.931** | 0.0237 | 0.000151 J | NA | NA | NA | NA | NA |
| **BA-03** | | | | | | | | | | | | | | |
| August-08 | 14.57 | 6.68 | 7.89 | **4.04** | **<0.02** | **0.163** | **2.43** | **0.0988** | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.57 | 7.39 | 7.18 | **4.53** | **0.0113** | **0.219** | **1.96** | **0.0769** | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.57 | 6.93 | 7.64 | **3.40** | **0.0128 J** | **0.2** | **1.99** | **0.0749** | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.57 | 6.76 | 7.81 | **3.98** | <0.01 | **0.129 N** | **1.95** | **0.0742 N** | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.57 | 8.14 | 6.43 | **3.11** | **0.0105 J** | **0.346** | **4.55** | **0.188** | 0.00195 J | NA | NA | NA | NA | NA |
| December-09 | 14.57 | 6.33 | 8.24 | **4.63** | **<0.02** | **0.0329** | **0.755** | 0.0321 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.57 | 6.05 | 8.52 | **4.52** | **0.0150 J** | **0.146** | **2.2** | **0.0898** | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.57 | 6.83 | 7.74 | **4.58** | 0.004 J | **0.144** | **2.23** | **0.0899** | 0.000412 J | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.0-9.0** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

**Monitoring/Sampling Period: Past 8 Quarters**

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **FIRST WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **BA-09** | | | | | | | | | | | | | | |
| August-08 | 9.46 | 9.11 | 0.35 | **3.68** | **0.0388** | 0.000643 J | **3.36** | **0.176 *** | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 9.46 | 8.70 | 0.76 | **3.68** | **0.0536** | 0.00115 | **2.47** | **0.131** | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 9.46 | 8.97 | 0.49 | **3.71** | **0.0322** | 0.00418 | **3.05** | **0.147** | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 9.46 | 8.35 | 1.11 | **3.63** | **0.0297** | <0.002 | **2.99** | **0.146** | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 9.46 | 8.98 | 0.48 | **3.63** | **0.0407** | 0.000985 J | **3.91** | **0.194** | **<0.01** | NA | NA | NA | NA | NA |
| December-09 | 9.46 | 5.61 | 3.85 | **3.60** | **0.0364** | <0.01 | **2.04 N** | **0.121 N** | **<0.01** | NA | NA | NA | NA | NA |
| February-10 | 9.46 | 7.09 | 2.37 | **3.58** | **0.0452** | <0.005 | **3.41** | **0.161** | **<0.01** | NA | NA | NA | NA | NA |
| April-10 | 9.46 | 8.56 | 0.90 | **3.71** | **0.0222** | 0.000272 J | **4.08** | **0.195** | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.0-9.0** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |
| **SECOND WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **DW-04** | | | | | | | | | | | | | | |
| August-08 | 14.21 | 4.75 | 9.46 | 7.15 | **<0.02** | <0.01 | 0.0457 | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.21 | 5.14 | 9.07 | 7.13 | <0.004 | 0.00113 | 0.0324 | 0.00176 J | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.21 | 4.42 | 9.79 | 7.90 | <0.004 | <0.001 | <0.002 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.21 | 4.22 | 9.99 | 7.10 | <0.004 | <0.002 | 0.0434 | 0.00161 J | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.21 | 5.79 | 8.42 | 7.15 | <0.004 | 0.00139 | 0.0662 | 0.000995 J | 0.000935 J | NA | NA | NA | NA | NA |
| December-09 | 14.21 | 4.72 | 9.49 | 7.13 | <0.004 | <0.002 | 0.0519 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.21 | 3.89 | 10.32 | 7.88 | <0.004 | 0.000534 J | 0.000732 JN | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.21 | 4.12 | 10.09 | 7.51 | <0.004 | <0.002 | <0.002 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **MW-A** | | | | | | | | | | | | | | |
| August-08 | 15.12 | 9.86 | 5.26 | 7.20 | **<0.02** | <0.01 | 0.00369 J | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 15.12 | 10.27 | 4.85 | 7.23 | <0.004 | 0.000873 J | 0.00797 | 0.0016 J | 0.00149 J | NA | NA | NA | NA | NA |
| February-09 | 15.12 | 10.64 | 4.48 | 7.35 | <0.005 | <0.001 | 0.000847 J | <0.003 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.12 | 9.74 | 5.38 | 7.19 | <0.004 | <0.002 | 0.00508 | 0.00150 JN | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.12 | 10.58 | 4.54 | 7.14 | <0.004 | 0.000868 J | 0.0142 | 0.00154 J | 0.000933 J | NA | NA | NA | NA | NA |
| December-09 | 15.12 | 9.52 | 5.60 | 7.07 | <0.004 | <0.002 | 0.00287 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 15.12 | 9.29 | 5.83 | 7.39 | <0.004 | <0.001 | 0.00402 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 15.12 | 10.12 | 5.00 | 6.91 | <0.004 | 0.000271 J | 0.00724 | 0.00178 J | 0.00015 J | NA | NA | NA | NA | NA |
| **MW-03** | | | | | | | | | | | | | | |
| August-08 | 14.80 | 6.18 | 8.62 | 6.63 | **<0.02** | <0.01 | **1.17** | 0.00146 J | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.80 | 6.99 | 7.81 | 6.78 | <0.004 | 0.000993 J | **1.17** | 0.00537 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.80 | 6.26 | 8.54 | 6.91 | <0.004 | <0.001 | 0.319 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.80 | 5.39 | 9.41 | 6.71 | <0.004 | 0.000594 J | **7.26** | 0.00504 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.80 | 7.78 | 7.02 | 6.59 | <0.004 | 0.00544 | **0.946** | 0.00260 | 0.000957 J | NA | NA | NA | NA | NA |
| December-09 | 14.80 | 6.14 | 8.66 | 6.93 | <0.004 | 0.00333 | **0.535 N** | 0.00132 JN | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.80 | 4.78 | 10.02 | 6.82 | <0.004 | 0.00508 | 0.462 N | 0.00141 JN | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.80 | 5.40 | 9.40 | 6.60 | <0.004 | 0.0015 J | **0.677** | 0.00138 J | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

### Monitoring/Sampling Period: Past 8 Quarters

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **SECOND WATER-BEARING ZONE** | | | | | | | | | | | | | | | |
| **MW-04** | | | | | | | | | | | | | | | |
| August-08 | 17.38 | 15.16 | 2.22 | **6.37** | 0.00122 J | 0.000954 J | 0.00933 | 0.000687 JB | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 17.38 | 14.63 | 2.75 | 6.99 | <0.004 | 0.000709 J | 0.00532 | 0.00236 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 17.38 | 14.00 | 3.38 | 6.75 | <0.004 | 0.000837 J | 0.00970 | 0.00129 J | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 17.38 | 13.54 | 3.84 | **6.40** | <0.004 | 0.00121 J | 0.0223 | 0.00410 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 17.38 | 15.61 | 1.77 | **6.41** | <0.004 | 0.00128 | 0.0127 | 0.00102 J | 0.000941 J | NA | NA | NA | NA | NA |
| December-09 | 17.38 | 13.41 | 3.97 | **6.42** | <0.004 | <0.002 | 0.00898 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 17.38 | 12.46 | 4.92 | 6.77 | <0.004 | 0.000524 J | 0.00770 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 17.38 | 13.38 | 4.00 | 6.70 | <0.004 | <0.002 | 0.00843 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **BA-01** | | | | | | | | | | | | | | | |
| August-08 | 14.57 | 6.21 | 8.36 | **6.31** | **<0.02** | <0.01 | **1.00** | 0.0218 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.57 | 6.87 | 7.70 | 6.65 | 0.00219 J | 0.000508 J | **0.754** | 0.0135 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.57 | 6.55 | 8.02 | 6.69 | <0.004 | <0.001 | **0.948** | 0.0199 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.57 | 5.65 | 8.92 | **6.22** | 0.00908 JN | <0.002 | **1.16** | 0.0343 N | <0.002 | **0.0153** | <0.002 | **1.24** | 0.0368 | <0.002 |
| August-09 | 14.57 | 7.46 | 7.11 | **6.27** | **<0.02** | 0.000762 J | **0.879** | 0.0211 | 0.000939 J | **0.0128 J** | 0.000697 J | **1.02** | 0.0235 | 0.00190 J |
| December-09 | 14.57 | 6.30 | 8.27 | **6.28** | **<0.02** | <0.002 | **0.806** | 0.0194 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.57 | 5.44 | 9.13 | **6.16** | **0.0172 J** | 0.000806 J | **1.34** | 0.0465 | <0.002 | 0.00829 J | <0.001 | **1.59** | 0.0546 | <0.002 |
| April-10 | 14.57 | 5.80 | 8.77 | **5.94** | **0.015** | 0.00105 J | **1.51** | 0.0612 | <0.002 | 0.0044 J | <0.001 | **1.42** | 0.0605 B | <0.002 |
| **BA-05** | | | | | | | | | | | | | | | |
| August-08 | 14.20 | 7.40 | 6.80 | **6.36** | **<0.02** | <0.01 | **10.9** | 0.0440 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.20 | 8.65 | 5.55 | **6.32** | <0.004 | 0.000546 J | **8.16** | 0.0331 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.20 | 8.05 | 6.15 | **6.45** | <0.004 | <0.001 | **12.4** | 0.0441 | <0.002 | 0.00243 J | <0.001 | **14.2** | 0.0467 | <0.002 |
| May-09 | 14.20 | 7.17 | 7.03 | **6.17** | <0.004 | 0.000314 JN | **12.4** | 0.0492 N | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.20 | 8.35 | 5.85 | **6.23** | **<0.02** | 0.00101 | **9.62** | 0.0319 | 0.000938 J | 0.00236 J | 0.000630 J | **12.0** | 0.0410 | 0.000941 J |
| December-09 | 14.20 | 8.43 | 5.77 | **6.08** | <0.004 | <0.002 | **17.3** | 0.0554 | <0.002 | <0.004 | <0.002 | **16.3 E** | 0.0543 N | <0.002 |
| February-10 | 14.20 | 7.05 | 7.15 | **6.33** | <0.004 | <0.001 | **15.4** | 0.058 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.20 | 7.58 | 6.62 | **6.15** | 0.00195 J | 0.000365 J | **13.5** | 0.0517 | 0.00015 J | <0.004 | <0.001 | **14.1** | 0.0557 B | <0.002 |
| **BA-09A** | | | | | | | | | | | | | | | |
| August-08 | 11.10 | 1.94 | 9.16 | 6.76 | 0.00291 J | 0.000555 J | 0.0393 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 11.10 | 1.46 | 9.64 | 7.42 | 0.00329 J | 0.00126 | 0.0323 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 11.10 | 0.97 | 10.13 | 6.94 | <0.004 | 0.000846 J | 0.0314 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 11.10 | 0.88 | 10.22 | 6.69 | <0.004 | 0.00125 J | 0.0382 | 0.00160 J | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 11.10 | 1.79 | 9.31 | 6.50 | <0.004 | 0.00282 | 0.0372 | <0.002 | 0.000951 J | NA | NA | NA | NA | NA |
| December-09 | 11.10 | 0.90 | 10.20 | 6.82 | <0.004 | <0.002 | 0.0305 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 11.10 | 0.60 | 10.50 | 7.19 | <0.004 | 0.000504 J | 0.0234 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 11.10 | 1.23 | 9.87 | 6.92 | 0.00192 J | 0.000828 J | 0.0239 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

### Monitoring/Sampling Period: Past 8 Quarters

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **SECOND WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **BC-03** | | | | | | | | | | | | | | |
| August-08 | 16.32 | 6.91 | 9.41 | 6.92 | <0.004 | 0.00154 | 0.0274 | 0.00293 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 16.32 | 6.89 | 9.43 | 7.36 | 0.00309 J | 0.00136 | 0.0230 | 0.00298 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 16.32 | 5.43 | 10.89 | 7.55 | <0.004 | <0.001 | 0.0016 J | 0.000895 J | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 16.32 | 5.11 | 11.21 | 7.19 | <0.004 | 0.00218 | 0.0170 | 0.00352 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 16.32 | 7.51 | 8.81 | 7.15 | <0.004 | 0.000948 J | 0.0246 | 0.00147 J | 0.000937 J | NA | NA | NA | NA | NA |
| December-09 | 16.32 | 5.49 | 10.83 | 7.05 | <0.004 | <0.002 | 0.0124 N | 0.000822 JN | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 16.32 | 3.65 | 12.67 | 7.46 | <0.004 | 0.000221 J | 0.00138 JN | 0.00146 JN | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 16.32 | 4.45 | 11.87 | 7.17 | <0.004 | <0.002 | 0.000141 J | 0.000884 J | <0.002 | NA | NA | NA | NA | NA |
| **BC-07** | | | | | | | | | | | | | | |
| August-08 | 11.37 | 3.89 | 7.48 | 6.83 | <0.004 | 0.00129 | 0.0967 | 0.00200 J | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 11.37 | 4.12 | 7.25 | 7.20 | 0.00295 J | 0.00147 | 0.0504 | 0.00329 | 0.00179 J | NA | NA | NA | NA | NA |
| February-09 | 11.37 | 2.94 | 8.43 | 7.44 | <0.004 | <0.001 | 0.0310 | 0.00125 J | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 11.37 | 2.80 | 8.57 | 7.14 | <0.004 | <0.002 | 0.0852 | 0.00212 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 11.37 | 4.84 | 6.53 | 7.04 | <0.004 | 0.00104 | 0.0798 | 0.00179 J | 0.00127 J | NA | NA | NA | NA | NA |
| December-09 | 11.37 | 2.80 | 8.57 | 7.01 | <0.004 | <0.002 | 0.0451 N | 0.00130 JN | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 11.37 | 2.24 | 9.13 | 7.39 | <0.004 | 0.000163 J | 0.0129 N | 0.000783 JN | 0.000220 J | NA | NA | NA | NA | NA |
| April-10 | 11.37 | 2.92 | 8.45 | 7.19 | 0.0016 J | <0.002 | 0.0314 | 0.000742 J | <0.002 | NA | NA | NA | NA | NA |
| **BC-17** | | | | | | | | | | | | | | |
| August-08 | 15.18 | 4.64 | 10.54 | 6.81 | **<0.02** | **0.0767** | 0.280 | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 15.18 | 6.43 | 8.75 | 7.01 | 0.00589 | **0.0469** | 0.227 | 0.00329 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 15.18 | 4.55 | 10.63 | 6.95 | <0.004 | **0.0168** | 0.120 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.18 | 4.26 | 10.92 | 6.97 | <0.004 | **0.0165** | 0.298 | 0.00318 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.18 | 6.68 | 8.50 | 6.68 | 0.00282 J | **0.0296** | 0.354 | 0.00224 | 0.000956 J | NA | NA | NA | NA | NA |
| December-09 | 15.18 | 4.45 | 10.73 | 7.11 | <0.004 | **0.0232** | 0.0790 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 15.18 | 3.90 | 11.28 | 7.06 | <0.004 | **0.0209** | 0.0709 N | 0.00138 JN | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 15.18 | 4.30 | 10.88 | 6.69 | 0.00248 J | **0.0172** | 0.106 | 0.00169 J | <0.002 | NA | NA | NA | NA | NA |
| **BC-19** | | | | | | | | | | | | | | |
| August-08 | 13.85 | 5.60 | 8.25 | 6.72 | <0.004 | 0.000915 J | 0.0418 | 0.00324 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 13.85 | 5.56 | 8.29 | 7.19 | <0.004 | 0.00101 | 0.0400 | 0.00309 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 13.85 | 4.71 | 9.14 | 7.36 | <0.004 | <0.001 | 0.00225 | 0.00112 J | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 13.85 | 4.61 | 9.24 | 6.94 | <0.004 | <0.002 | 0.0132 | 0.00264 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 13.85 | 6.55 | 7.30 | 6.90 | <0.004 | 0.000885 J | 0.0345 | 0.00199 J | 0.000937 J | NA | NA | NA | NA | NA |
| December-09 | 13.85 | 4.95 | 8.90 | 7.06 | <0.004 | <0.002 | 0.0035 N | 0.00105 JN | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 13.85 | 4.02 | 9.83 | 7.26 | <0.004 | 0.000185 J | 0.00119 JN | 0.00104 JN | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 13.85 | 4.40 | 9.45 | 6.97 | <0.004 | <0.002 | 0.000316 J | 0.00134 J | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

**Monitoring/Sampling Period: Past 8 Quarters**

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **SECOND WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **BC-21R** | | | | | | | | | | | | | | |
| August-08 | 15.28 | 5.76 | 9.52 | 6.84 | **<0.02** | <0.01 | 0.160 | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 15.28 | 7.03 | 8.25 | 7.32 | <0.004 | 0.00088 J | 0.0446 | 0.00451 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 15.28 | 5.66 | 9.62 | 7.21 | <0.004 | <0.001 | 0.00717 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.28 | 4.88 | 10.40 | 6.81 | <0.004 | <0.002 | 0.00628 | 0.00252 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.28 | 7.92 | 7.36 | 6.75 | <0.004 | 0.000768 J | 0.0763 | 0.00265 | 0.000935 J | NA | NA | NA | NA | NA |
| December-09 | 15.28 | 5.56 | 9.72 | 7.03 | <0.004 | <0.002 | 0.00886 N | 0.000685 JN | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 15.28 | 4.01 | 11.27 | 7.24 | <0.004 | 0.000162 J | 0.00642 N | 0.000979 JN | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 15.28 | 4.67 | 10.61 | 6.83 | <0.004 | <0.002 | 0.00468 | 0.00123 J | <0.002 | NA | NA | NA | NA | NA |
| **BC-25** | | | | | | | | | | | | | | |
| August-08 | 15.73 | 6.88 | 8.85 | 7.01 | **<0.02** | <0.01 | 0.294 | <0.01 | <0.002 | **<0.02** | <0.01 | 0.307 | <0.01 | 0.000188 J |
| November-08 | 15.73 | 7.89 | 7.84 | 7.00 | 0.00172 J | 0.000529 J | 0.237 | 0.00118 J | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 15.73 | 6.74 | 8.99 | 7.10 | <0.004 | <0.001 | 0.0364 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.73 | 6.01 | 9.72 | 6.80 | <0.004 | <0.002 | **0.781** | 0.00321 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.73 | 8.74 | 6.99 | 6.95 | <0.004 | 0.000870 J | 0.202 | 0.00138 J | 0.000931 J | NA | NA | NA | NA | NA |
| December-09 | 15.73 | 6.71 | 9.02 | 6.95 | <0.004 | <0.002 | 0.181 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 15.73 | 5.02 | 10.71 | 7.32 | <0.004 | 0.000153 J | 0.00641 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 15.73 | 5.68 | 10.05 | 6.75 | <0.004 | <0.002 | 0.0277 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |
| **THIRD WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **BA-03A** | | | | | | | | | | | | | | |
| August-08 | 14.76 | 2.32 | 12.44 | 8.42 | **<0.02** | 0.00397 J | 0.0395 | <0.01 | <0.002 | <0.00323 | <0.00343 | 0.0369 | <0.00118 | 0.000346 J |
| November-08 | 14.76 | 2.20 | 12.56 | 8.43 | <0.004 | 0.00372 | 0.0388 | 0.00223 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.76 | 1.76 | 13.00 | **8.81** | <0.004 | 0.00191 | 0.0400 | <0.003 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.76 | 1.74 | 13.02 | 6.84 | <0.004 | **0.0640 N** | 0.166 | 0.00768 N | <0.002 | 0.00194 J | 0.000412 J | 0.0617 | <0.002 | <0.002 |
| August-09 | 14.76 | 3.00 | 11.76 | 8.18 | <0.004 | **0.0278** | 0.0836 | 0.00413 | 0.000997 J | 0.00157 J | 0.000824 J | 0.0529 | 0.000800 J | 0.000941 J |
| December-09 | 14.76 | 1.90 | 12.86 | 7.58 | <0.004 | <0.002 | 0.0366 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.76 | 1.80 | 12.96 | 8.39 | <0.004 | <0.001 | 0.0238 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.76 | 1.33 | 13.43 | 8.13 | <0.004 | 0.00119 J | 0.037 | 0.00163 J | <0.002 | NA | NA | NA | NA | NA |
| **BA-05A** | | | | | | | | | | | | | | |
| August-08 | 14.42 | 3.78 | 10.64 | 7.43 | **<0.02** | <0.01 | 0.0279 | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 14.42 | 3.69 | 10.73 | 7.50 | 0.00226 J | 0.000869 J | 0.0255 | 0.00162 J | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 14.42 | 3.29 | 11.13 | 7.52 | <0.004 | <0.001 | 0.00765 | <0.003 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 14.42 | 3.22 | 11.20 | 7.16 | <0.004 | <0.002 | 0.00258 | 0.00200 N | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 14.42 | 4.35 | 10.07 | 7.25 | <0.004 | 0.000936 J | 0.0275 | 0.000768 J | 0.000934 J | NA | NA | NA | NA | NA |
| December-09 | 14.42 | 3.32 | 11.10 | 6.82 | <0.004 | <0.002 | 0.0248 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 14.42 | 3.06 | 11.36 | 7.38 | <0.004 | <0.001 | 0.012 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 14.42 | 2.95 | 11.47 | 7.39 | 0.00238 J | 0.000326 J | 0.00985 | 0.00176 J | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

**Monitoring/Sampling Period: Past 8 Quarters**

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **THIRD WATER-BEARING ZONE** | | | | | | | | | | | | | | |
| **BB-01** | | | | | | | | | | | | | | |
| August-08 | 15.75 | 3.58 | 12.17 | **9.83** | <0.004 | 0.00920 | 0.00787 | 0.000939 JB | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 15.75 | 3.29 | 12.46 | **10.53** | 0.00626 | 0.00783 | 0.00576 | 0.00210 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 15.75 | 2.80 | 12.95 | **10.11** | 0.00282 J | 0.00738 | 0.00554 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.75 | 2.86 | 12.89 | **10.10** | 0.00319 J | 0.00499 | 0.00493 | 0.00281 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.75 | 4.10 | 11.65 | **9.66** | 0.00442 | 0.00952 | 0.00687 | 0.00201 | 0.000938 J | NA | NA | NA | NA | NA |
| December-09 | 15.75 | 2.96 | 12.79 | **9.75** | 0.00235 J | 0.00354 | 0.00384 | 0.000723 J | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 15.75 | 2.79 | 12.96 | **10.31** | 0.00319 J | 0.00591 | 0.00421 N | 0.00104 JN | <0.002 | NA | NA | NA | NA | NA |
| April-10 | 15.75 | 2.42 | 13.33 | **9.66** | 0.00518 | 0.00449 | 0.00489 | 0.000688 J | <0.002 | NA | NA | NA | NA | NA |
| **BA-01A** | | | | | | | | | | | | | | |
| August-08 | 15.03 | 4.81 | 10.22 | 7.18 | **<0.02** | <0.01 | 0.0173 | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | 15.03 | 4.84 | 10.19 | 7.45 | 0.00532 | 0.000817 J | 0.0248 | 0.00219 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | 15.03 | 4.33 | 10.70 | 7.58 | 0.00397 J | <0.001 | 0.00679 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | 15.03 | 4.26 | 10.77 | 7.29 | 0.00341 J | <0.002 | 0.00674 | 0.00129 J | <0.002 | NA | NA | NA | NA | NA |
| August-09 | 15.03 | 5.38 | 9.65 | 7.13 | 0.00451 | 0.000999 J | 0.0223 | <0.002 | 0.000930 J | NA | NA | NA | NA | NA |
| December-09 | 15.03 | 4.50 | 10.53 | 7.50 | 0.00490 | <0.002 | 0.0175 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | 15.03 | 4.12 | 10.91 | 7.65 | 0.00417 | 0.000339 J | 0.00660 N | <0.002 | 0.000237 J | NA | NA | NA | NA | NA |
| April-10 | 15.03 | 4.01 | 11.02 | 7.38 | 0.00638 | <0.002 | 0.00523 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |
| **WATER WELLS** | | | | | | | | | | | | | | |
| **Reagan Well** | | | | | | | | | | | | | | |
| August-08 | NA | NA | NA | 8.07 | <0.004 | 0.00290 | 0.0235 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | NA | NA | NA | **8.61** | 0.00217 J | 0.00279 | 0.0206 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | NA | NA | NA | 8.22 | <0.004 | 0.00191 | 0.0230 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | NA | NA | NA | 6.84 | <0.004 | 0.00167 J | 0.0209 | 0.00210 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | NA | NA | NA | 7.73 | <0.004 | 0.00327 | 0.0220 | 0.000961 J | 0.000934 J | NA | NA | NA | NA | NA |
| December-09 | NA | NA | NA | 7.81 | <0.004 | 0.00184 J | 0.0202 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | NA | NA | NA | **8.60** | <0.004 | 0.00292 | 0.0203 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | NA | NA | NA | 8.26 | 0.00171 J | 0.00177 J | 0.0249 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **WW-04** | | | | | | | | | | | | | | |
| August-08 | NA | NA | NA | **8.60** | 0.00129 J | 0.000383 J | 0.00292 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | NA | NA | NA | **9.32** | <0.004 | 0.000606 J | 0.00318 | 0.000701 J | <0.002 | NA | NA | NA | NA | NA |
| February-09 | NA | NA | NA | **8.73** | <0.004 | <0.001 | 0.00231 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | NA | NA | NA | **8.68** | <0.004 | 0.000549 J | 0.00217 | 0.00126 J | <0.002 | NA | NA | NA | NA | NA |
| August-09 | NA | NA | NA | 8.27 | <0.004 | 0.00177 | 0.00421 | <0.002 | 0.000931 J | NA | NA | NA | NA | NA |
| December-09 | NA | NA | NA | 7.73 | <0.004 | <0.002 | 0.00254 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | NA | NA | NA | **9.10** | <0.004 | <0.001 | 0.00297 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | NA | NA | NA | **8.72** | <0.004 | <0.002 | 0.00256 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

# TABLE 5
## HISTORICAL GROUNDWATER MONITORING SUMMARY
## DELATTE METALS SUPERFUND SITE
## PONCHATOULA, LOUSISANA
## AGENCY INTEREST NO. 2328

### Monitoring/Sampling Period: Past 8 Quarters

| Monitoring/ Sample Well No. & Date | Potentiometric Data | | | Groundwater Analytical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOC Elevation (ft-NGVD) | Depth to Water (feet) | Corrected GW Elev. (ft-NGVD) | pH Standard Unit | Total Metals | | | | | Dissolved | | | | |
| | | | | | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thallium (mg/L) | Arsenic (mg/L) | Lead (mg/L) | Manganese (mg/L) | Nickel (mg/L) | Thalluim (mg/L) |
| **WATER WELLS** | | | | | | | | | | | | | | |
| **WW-09** | | | | | | | | | | | | | | |
| August-08 | NA | NA | NA | 8.19 | 0.00182 J | 0.0103 | 0.0167 | 0.000775 JB | <0.002 | NA | NA | NA | NA | NA |
| November-08 | NA | NA | NA | **9.00** | <0.004 | 0.00102 | 0.0161 | 0.00216 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | NA | NA | NA | 7.61 | <0.004 | <0.001 | 0.0144 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | NA | NA | NA | **8.54** | <0.004 | <0.002 | 0.0163 | 0.00277 | <0.002 | NA | NA | NA | NA | NA |
| August-09 | NA | NA | NA | 8.03 | <0.004 | 0.00110 | 0.0177 | 0.00709 | 0.00131 J | NA | NA | NA | NA | NA |
| December-09 | NA | NA | NA | 7.18 | <0.004 | <0.002 | 0.0139 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | NA | NA | NA | 8.29 | <0.004 | 0.000381 J | 0.0144 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | NA | NA | NA | 7.94 | <0.004 | <0.002 | 0.017 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **North Well** | | | | | | | | | | | | | | |
| August-08 | NA | NA | NA | **9.23** | **<0.02** | <0.01 | 0.00214 J | <0.01 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | NA | NA | NA | **9.29** | <0.004 | 0.00147 | 0.00359 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | NA | NA | NA | **9.19** | <0.004 | <0.001 | 0.00272 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | NA | NA | NA | **9.06** | <0.004 | <0.002 | 0.00305 | 0.00123 J | <0.002 | NA | NA | NA | NA | NA |
| August-09 | NA | NA | NA | **8.75** | <0.004 | 0.00127 | 0.00455 | <0.002 | 0.000929 J | NA | NA | NA | NA | NA |
| December-09 | NA | NA | NA | 8.13 | <0.004 | <0.002 | 0.00268 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | NA | NA | NA | **9.10** | <0.004 | 0.000732 J | 0.00324 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | NA | NA | NA | **8.79** | <0.004 | 0.000872 J | 0.00457 | 0.0013 J | 0.000339 J | NA | NA | NA | NA | NA |
| **South Well** | | | | | | | | | | | | | | |
| August-08 | NA | NA | NA | **8.85** | 0.00197 J | 0.000583 J | 0.00334 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| November-08 | NA | NA | NA | **9.48** | <0.004 | 0.000665 J | 0.00382 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| February-09 | NA | NA | NA | **9.26** | <0.004 | <0.001 | 0.00307 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| May-09 | NA | NA | NA | **9.03** | <0.004 | <0.002 | 0.00316 | 0.00141 J | <0.002 | NA | NA | NA | NA | NA |
| August-09 | NA | NA | NA | **8.85** | <0.004 | 0.000807 J | 0.00479 | <0.002 | 0.000932 J | NA | NA | NA | NA | NA |
| December-09 | NA | NA | NA | **9.32** | <0.004 | <0.002 | 0.00378 N | <0.002 N | <0.002 | NA | NA | NA | NA | NA |
| February-10 | NA | NA | NA | **9.42** | <0.004 | 0.000213 J | 0.00364 N | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| April-10 | NA | NA | NA | **8.80** | <0.004 | <0.002 | 0.00378 | <0.002 | <0.002 | NA | NA | NA | NA | NA |
| **SITE CLEANUP or LDEQ RECAP SS** | | | | **6.5-8.5** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** | **0.010** | **0.015** | **0.51** | **0.073** | **0.0020** |

Notes:

1) Top-of-casing (TOC) elevation - (depth to fluid) = Corrected GROUNDWATER (GW) elevation

2) Site specific cleanup standards were found in previous reports for Lead and pH only. The additional screening standards are from the LDEQ RECAP Screening Standards (SS). Screening Standards were provided by the LDEQ.

3) The Site Cleanup Standard for pH = 7.0 s.u.; however EPA Drinking Water Standards for pH = 6.5-8.5 s.u. and the EPA Storm Water Discharge Standards for pH=6.0-9.0 s.u are being used for comparison purposes.

4) Bold Values Exceed Site Cleanup or RECAP SS

5) Reporting Limits from the analytical reports are used for non-detect results

Abrev.: NA = Not Applicable mg/L= milligrams per Liter NF = Not Found
NM = Not Measured NS=Not Sampled J = Flagged by lab due Estimated Value between MDL and PQL
D= Surrogate Recovery Unreportable due to Dilution B/V = Analyte Detected in the associated Method Blank above Rep. Limit
* = >MCL - Result Over Maximum Contamination Limit (MCL) E= Concentrations Exceeding Calibration Rand of Instrument
N = Recovery in the Matrix Spike and Matrix Spike Duplicate exceeded the control limit acceptance criteria

# FIGURES

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-03
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

**LEGEND**

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 12/17/07 | CHECKED BY | DRAWING # |
| | | APPROVED BY | FACILITY |

**FIGURE 1**

**FACILITY MAP**

DELATTE METALS SUPERFUND SITE
AI NO. 2328
PONCHATOULA, LOUISIANA
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
6.00
8.00
PW-04
(7.72)
MW-04
4.00
2.00
WW-09
DW-03
(6.01)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
BA-05
BA-05A
(0.90)
BA-09
BA-09A
TEPA9-H
MW-05
DW-02
(9.24)
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-03
BC-07
MW-A
DW-01
(2.26)
TEPA7-H
TEPA8-G
FORMER BUILDINGS
(BURNED DOWN)
MW-06
(8.56)
(7.74)
BA-03
BA-03A
TEPA-P14
MW-01
(1.27)
TEPA-6H
TEPA-P10
TEPA5-H
MW-02 (6.98)
TEPA-P9
BC-31
MW-07
TEPA2-H
TEPA-P6
TEPA-IH
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (2.26) GROUNDWATER ELEVATION (NGVD)
- 4.00 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER FLOW DIRECTION

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/001 |

**FIGURE 2A**
**FIRST WATER BEARING ZONE POTENTIOMETRIC MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(4.00)
WW-09
DW-03
BC-27
NORTH WELL
BC-17
(10.88)
BC-21R
(10.61)
BA-01
(8.77)
BA-01A
(6.62)
BA-05
BA-05A
DW-02
MW-03
(9.40)
BC-25
(10.05)
(9.45)
BC-19
DW-04
(10.09)
BC-11
BB-01
SOUTH WELL
BC-01
(11.87)
BC-03
BC-07
(8.45)
MW-05
BA-09
BA-09A
(9.87)
(NU)
DW-01
MW-A
(5.00)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
FORMER BUILDINGS
(BURNED DOWN)
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (0.09) GROUNDWATER ELEVATION (NGVD)
- 4.00 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER FLOW DIRECTION
- NU = NOT USED FOR CONTOURING

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/002 |

**FIGURE 2B**
**SECOND WATER BEARING ZONE POTENTIOMETRIC MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
AI NO. 2328
PONCHATULA, LOUISIANA
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(11.02)
BA-01A
BA-01
BA-05
BA-05A
(11.47)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-27
BC-21R
BC-25
11.00
12.00
NORTH WELL
BC-17
DW-04
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-03
(13.33)
BB-01
SOUTH WELL
BC-11
BC-01
BC-07
MW-06
BA-03
BA-03A
(13.43)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (13.43) GROUNDWATER ELEVATION (NGVD)
- 11.00 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER FLOW DIRECTION

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/003 |

**FIGURE 2C**
**THIRD WATER BEARING ZONE POTENTIOMETRIC MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(4.15)
PW-04
MW-04
WW-09
DW-03
(3.76)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
DW-04
MW-05
(3.71)
BA-09
TEPA9-H
BA-05
BA-05A
DW-02
(3.06)
MW-03
BC-25
BC-19
BA-09A
DW-01
(5.53)
5.00
MW-A
TEPA8-G
4.00
BC-07
TEPA7-H
TEPA-P14
MW-06
(3.90)
FORMER BUILDINGS
(BURNED DOWN)
BA-03
(4.58)
BA-03A
MW-01
(3.46)
TEPA-6H
TEPA-P10
TEPA5-H
MW-02
(3.39)
BC-31
MW-07
TEPA-P9
TEPA2-H
TEPA-IH
TEPA-P6
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (5.53) pH LEVEL IN STANDARD UNITS
- -3.00- pH CONTOUR

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.

150 0 150
SCALE IN FEET

| DRAWN BY | LDG 07/07/10 | CHECKED BY / APPROVED BY | DRAWING # 10/2ND QTR/004 |
|---|---|---|---|

**FIGURE 3A**
**FIRST WATER BEARING ZONE**
**pH CONTOUR MAP**
**(SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

PW-04

MW-04
(6.70)

WW-09

DW-03

6.00

BA-01A

BA-01
(5.94)

(6.15)
BA-05

BA-05A

DW-02

BA-09

BA-09A
(6.92)

DW-01

MW-A
(6.91)

MW-05

MW-03
(6.60)

BC-27

BC-21R
(6.83)

NORTH WELL

BC-17
(6.69)

BC-25
(6.75)

(6.97)
BC-19

DW-04
(7.51)

BC-11

BB-01

SOUTH WELL

BC-01

(7.17)
BC-03

BC-07
(7.19)

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

7.00

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (7.51) pH LEVEL IN STANDARD UNITS
- pH CONTOUR

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY JAH | DRAWING # 10/2ND QTR/005 |

**FIGURE 3B**
**SECOND WATER BEARING ZONE pH COUNTOUR MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(7.38)
BA-01A
BA-01
BA-05
BA-05A
(7.39)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
BC-27
8.00
BC-21R
NORTH WELL
BC-17
9.00
BC-03
(9.66)
BB-01
SOUTH WELL
BC-01
BC-11
DW-04
MW-03
BC-25
BC-19
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(8.13)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- .13) pH LEVEL IN STANDARD UNITS
- pH CONTOUR

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

| DRAWN BY | LDG 07/07/10 | CHECKED BY / APPROVED BY JAA | DRAWING # 10/2ND QTR/006 |
|---|---|---|---|

**FIGURE 3C**
**THIRD WATER BEARING ZONE**
**pH CONTOUR MAP**
**(SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

(8.72)
WW-04

PW-04

MW-04

WW-09
(7.94)

DW-03

BC-27

(8.79)
NORTH WELL

BC-17

BC-21R

BA-01A

BA-01

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

8.00

DW-01

MW-A

MW-03

BC-25

DW-04

BC-19

BC-11

BB-01

SOUTH WELL
(8.80)

BC-01

BC-03

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (..72) pH LEVEL IN STANDARD UNITS
- pH CONTOUR
- NU NOT USED FOR CONTOURING

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

| DRAWN BY | LDG 07/07/10 | CHECKED BY / APPROVED BY | DRAWING # 10/2ND QTR/007 |
|---|---|---|---|

**FIGURE 3D**
**WATER WELL**
**pH CONTOUR MAP**
**(SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(<0.002)
WW-09
DW-03
BA-01A
BA-01
(<0.001)
(<0.001)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(0.000828)
MW-A
(0.000271)
DW-01
BC-27
NORTH WELL
0.015
BC-17
(0.0172)
BC-21R
(<0.002)
MW-03
(0.0015)
BC-25
(<0.002)
(<0.002)
BC-19
DW-04
(<0.002)
BC-11
BB-01
SOUTH WELL
BC-01
(<0.002)
BC-03
BC-07
(<0.002)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- —0.015— CONCENTRATION CONTOUR (mg/L)
- mg/L MICROGRAMS PER LITER
- (<0.002) LEAD CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/008 |

**FIGURE 4B**
**SECOND WATER BEARING ZONE LEAD ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(<0.002)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(0.000326)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(0.00449)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(0.00119)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.002) LEAD CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE SITE CLEANUP STANDARDS FOR LEAD

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/009 |

**FIGURE 4C**
**THIRD WATER BEARING ZONE LEAD ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

(<0.002)
WW-04

PW-04

MW-04

WW-09
(<0.002)

DW-03

BA-01A

BA-01

BC-27

BC-21R

(0.000872)
NORTH WELL

BC-17

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.002)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- 0.015 CONCENTRATION CONTOUR (mg/L)
- mg/L MICROGRAMS PER LITER
- (<0.001) LEAD CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE SITE CLEANUP STANDARDS FOR LEAD

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/07/10 | CHECKED BY<br>APPROVED BY JAN | DRAWING # 10/2ND QTR/010 |

**FIGURE 4D**
**WATER WELL**
**LEAD ISOCONCENTRATION MAP**
**(SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
(<0.005)
MW-04
WW-09
DW-03
(0.035)
BA-01A
BA-01
BA-05
BA-05A
(0.0222)
BA-09
TEPA9-H
BA-09A
DW-02
(0.0407)
MW-A
DW-01
(0.041)
TEPA8-G
MW-05
TEPA7-H
0.010
TEPA-P14
BA-03
(0.004)
BA-03A
MW-01
(0.043)
TEPA-6H
TEPA5-H
TEPA-P10
MW-02
(0.0035)
TEPA-P9
TEPA2-H
TEPA-IH
TEPA-P6
BC-31
MW-07
MW-06
(<0.004)
MW-03
BC-27
BC-21R
BC-25
NORTH WELL
BC-17
DW-04
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
BC-07
WEINBERGER ROAD
SELSER'S CREEK

150 0 150
SCALE IN FEET

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- 0.010 — CONCENTRATION CONTOUR (mg/L)
- mg/L MICROGRAMS PER LITER
- (0.041) ARSENIC CONCENTRATIONS IN mg/L

NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR ARSENIC USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.

| DRAWN BY | LDG 07/08/10 | CHECKED BY / APPROVED BY | DRAWING # 10/2ND QTR/011 |
|---|---|---|---|

**FIGURE 5A**
**FIRST WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(<0.004)
WW-09
DW-03
BA-01A
BA-01
(0.0044)
(<0.004)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(0.00192)
DW-01
MW-A
(<0.004)
BC-27
BC-21R
(<0.004)
NORTH WELL
BC-17
(0.00248)
MW-03
(<0.004)
BC-25
(<0.004)
(<0.004)
BC-19
DW-04
(<0.004)
BC-11
BB-01
SOUTH WELL
BC-01
(<0.004)
BC-03
BC-07
(0.0016)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.004) ARSENIC CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR ARSENIC.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/08/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/012 |

**FIGURE 5B**
**SECOND WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(0.00638)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(0.00238)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(0.00518)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(<0.004)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.004) ARSENIC CONCETRATIONS IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3. NO WELLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ARSENIC

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/08/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/013 |

**FIGURE 5C**
**THIRD WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(<0.004)

PW-04

MW-04

WW-09
(<0.004)

DW-03

BA-01A

BA-01

BC-27

BC-21R

(<0.004)
NORTH WELL

BC-17

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.004)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.004) ARSENIC CONCETRATIONS IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3. NO WELLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ARSENIC

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/08/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/014 |

**FIGURE 5D**
**WATER WELL ARSENIC ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(0.931)
PW-04

MW-04

WW-09

DW-03
(6.73)

BA-01A

BA-01

BA-05

BA-05A

DW-02
(16.9)

MW-05

(4.08) BA-09

TEPA9-H

BA-09A

MW-A

DW-01
(3.82)

TEPA8-G

TEPA7-H

5.1

(2.23)
BA-03

BA-03A

TEPA-P14

MW-01
(5.6)

TEPA-6H

TEPA5-H

TEPA-P10

MW-02
(1.91)

TEPA-P9

TEPA2-H

TEPA-1H

TEPA-P6

BC-31

MW-07

MW-03

0.51

MW-06
(1.92)

BC-27

BC-21R

BC-25

NORTH WELL

BC-17

DW-04

BC-19

FORMER BUILDINGS
(BURNED DOWN)

BC-03

BB-01

SOUTH WELL

BC-11

BC-01

BC-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- 5.1 — CONCENTRATION CONTOUR
- mg/L MICROGRAMS PER LITER
- (3.82) MANGANESE CONCENTRATION IN mg/L

NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE USED LDEQ RECAP SCREENING STANDARDS OF 0.51 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/08/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/015 |

**FIGURE 6A**

**FIRST WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

PW-04

MW-04
(0.00843)

WW-09

DW-03

BA-01A

5.1

(14.1)
BA-05

BA-01
(1.42)

0.51

BA-05A

DW-02

MW-05

BA-09

BA-09A
(0.0239)

DW-01

MW-A
(0.00724)

MW-03
(0.677)

BC-27

(0.00468)
BC-21R

NORTH WELL

BC-17
(0.106)

(0.000141)
BC-03

BB-01

SOUTH WELL

BC-11

BC-01

(0.000316)
BC-19

DW-04
(<0.002)

BC-25
(0.0277)

BC-07
(0.0314)

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- —0.51— CONCENTRATION CONTOUR
- mg/L MICROGRAMS PER LITER
- (<0.002) MANGANESE CONCETRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE USED LDEQ RECAP SCREENING STANDARD OF 0.51 mg/L

150 0 150
SCALE IN FEET

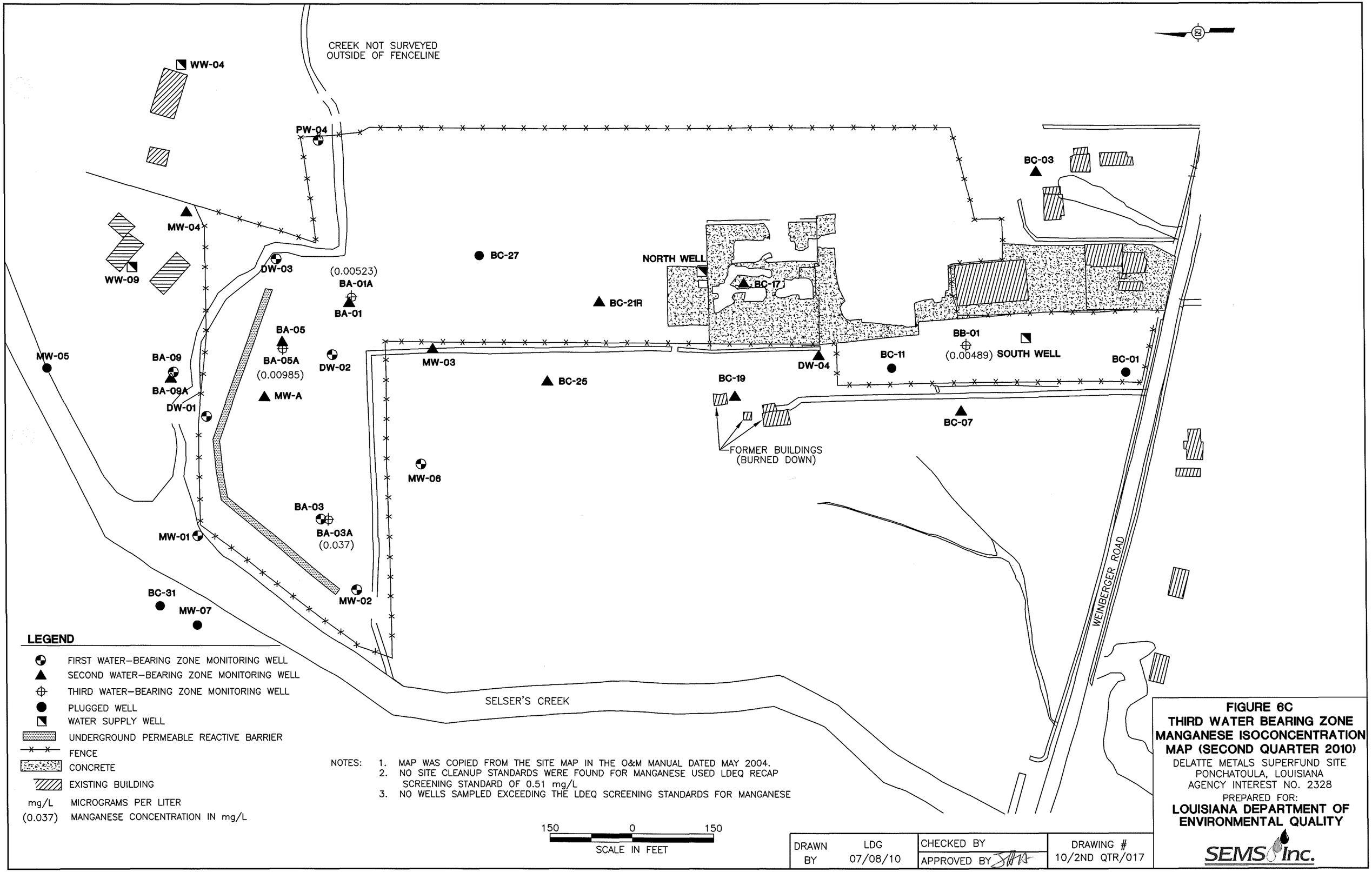
| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/08/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/016 |

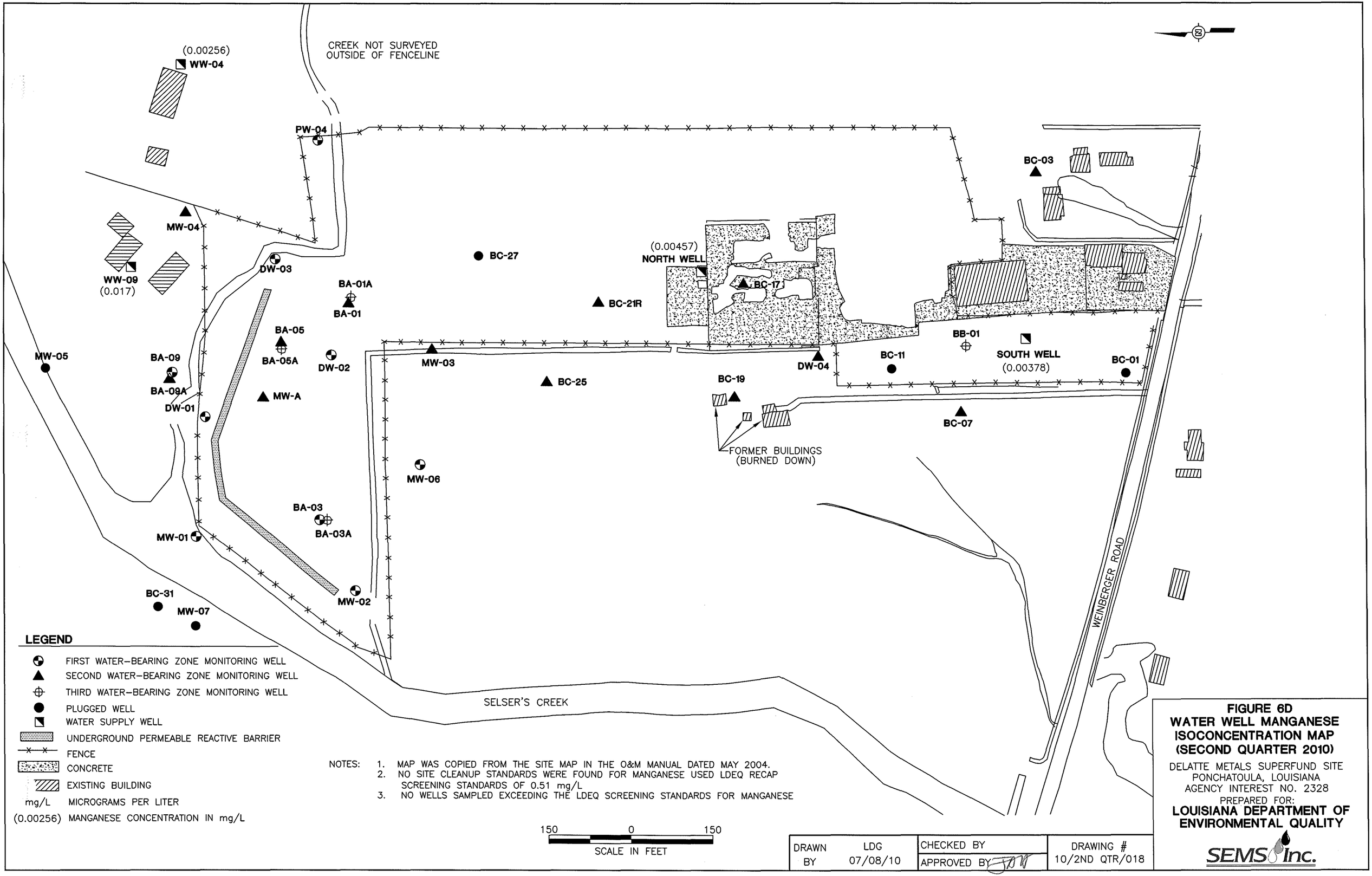
**FIGURE 6B**

**SECOND WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
PW-04
MW-04
WW-09
DW-03
(0.00523)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(0.00985)
DW-02
MW-A
MW-05
BA-09
BA-09A
DW-01
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(0.00489)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(0.037)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
mg/L MICROGRAMS PER LITER
(0.037) MANGANESE CONCENTRATION IN mg/L
NOTES: 1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE USED LDEQ RECAP SCREENING STANDARD OF 0.51 mg/L
3. NO WELLS SAMPLED EXCEEDING THE LDEQ SCREENING STANDARDS FOR MANGANESE
150 0 150
SCALE IN FEET
DRAWN BY LDG 07/08/10
CHECKED BY
APPROVED BY
DRAWING # 10/2ND QTR/017
FIGURE 6C
THIRD WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (SECOND QUARTER 2010)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.


(0.00256)
WW-04
CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
PW-04
MW-04
WW-09
(0.017)
DW-03
BA-01A
BA-01
BC-27
(0.00457)
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
(0.00378)
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
mg/L MICROGRAMS PER LITER
(0.00256) MANGANESE CONCENTRATION IN mg/L
NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE USED LDEQ RECAP SCREENING STANDARDS OF 0.51 mg/L
3. NO WELLS SAMPLED EXCEEDING THE LDEQ SCREENING STANDARDS FOR MANGANESE
150 0 150
SCALE IN FEET
DRAWN BY
LDG 07/08/10
CHECKED BY
APPROVED BY
DRAWING #
10/2ND QTR/018
FIGURE 6D
WATER WELL MANGANESE ISOCONCENTRATION MAP (SECOND QUARTER 2010)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(0.0237)
PW-04

MW-04

WW-09

DW-03
(0.178)

BA-01A

BA-01

BC-27

NORTH WELL

BC-17

BC-21R

BC-03

BA-05

BA-05A

(0.195)
BA-09

TEPA9-H

BA-09A

MW-05

DW-02
(0.824)

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL

BC-01

MW-A

DW-01
(0.0222)

TEPA8-G

TEPA7-H

0.073

MW-06
(0.0179)

BC-07

FORMER BUILDINGS
(BURNED DOWN)

(0.0899)
BA-03

BA-03A

TEPA-P14

MW-01
(0.239)

TEPA-6H

TEPA-P10

TEPA2-H

MW-02
(0.0801)

TEPA-P9

BC-31

TEPA2-H

MW-07

TEPA-IH

TEPA-P6

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- —0.073— (mg/L) – LDEQ RECAP TABLE 1 GW-SS*
- mg/L MICROGRAMS PER LITER
- (0.0222) NICKEL CONCENTRATION IN mg/L

NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS WERE FOUND FRO NICKEL USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.

150 0 150
SCALE IN FEET

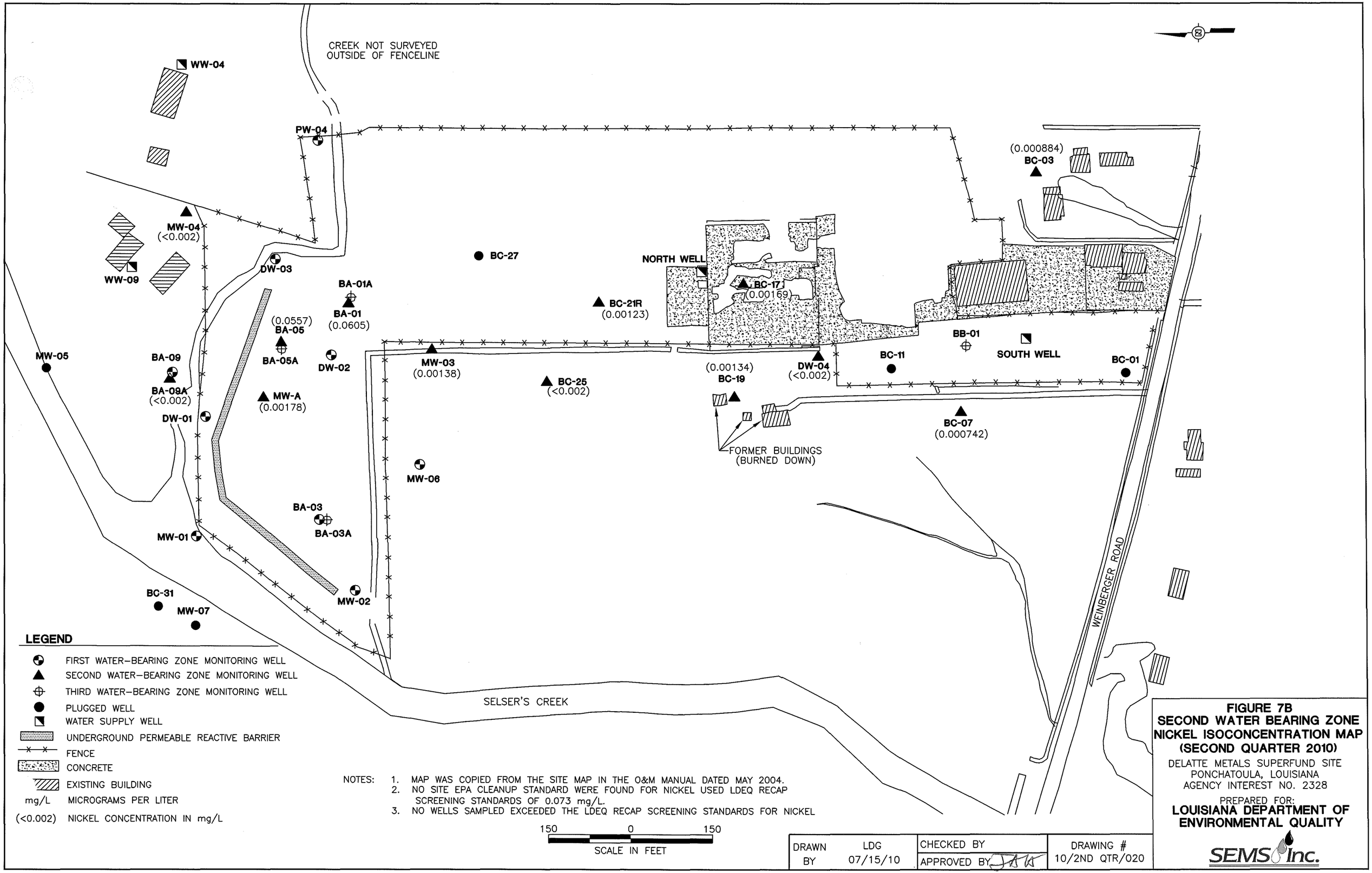
| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/08/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/019 |

**FIGURE 7A**

**FIRST WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
PW-04
MW-04
(<0.002)
WW-09
DW-03
BA-01A
BA-01
(0.0605)
(0.0557)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(<0.002)
DW-01
MW-A
(0.00178)
MW-03
(0.00138)
BC-25
(<0.002)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
BC-27
NORTH WELL
BC-21R
(0.00123)
BC-17
(0.00169)
(0.00134)
BC-19
DW-04
(<0.002)
FORMER BUILDINGS
(BURNED DOWN)
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
(0.000742)
(0.000884)
BC-03
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
mg/L MICROGRAMS PER LITER
(<0.002) NICKEL CONCENTRATION IN mg/L
NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARD WERE FOUND FOR NICKEL USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR NICKEL
150 0 150
SCALE IN FEET
DRAWN BY LDG 07/15/10
CHECKED BY
APPROVED BY
DRAWING # 10/2ND QTR/020
FIGURE 7B
SECOND WATER BEARING ZONE
NICKEL ISOCONCENTRATION MAP
(SECOND QUARTER 2010)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF
ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(<0.002)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(0.00176)
DW-02
MW-A
MW-05
BA-09
BA-09A
DW-01
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(0.000688)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(0.00163)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (0.00163) NICKEL CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARD WERE FOUND FROM NICKEL USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR NICKEL

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/15/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/021 |

**FIGURE 7C**
**THIRD WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(<0.002)

PW-04

MW-04

WW-09
(<0.002)

DW-03

BA-01A

BA-01

BC-27

(0.0013)
NORTH WELL

BC-17

BC-21R

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.002)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L — MICROGRAMS PER LITER
- (<0.002) — NICKEL CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARD WERE FOUND FOR NICKEL USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR NICKEL

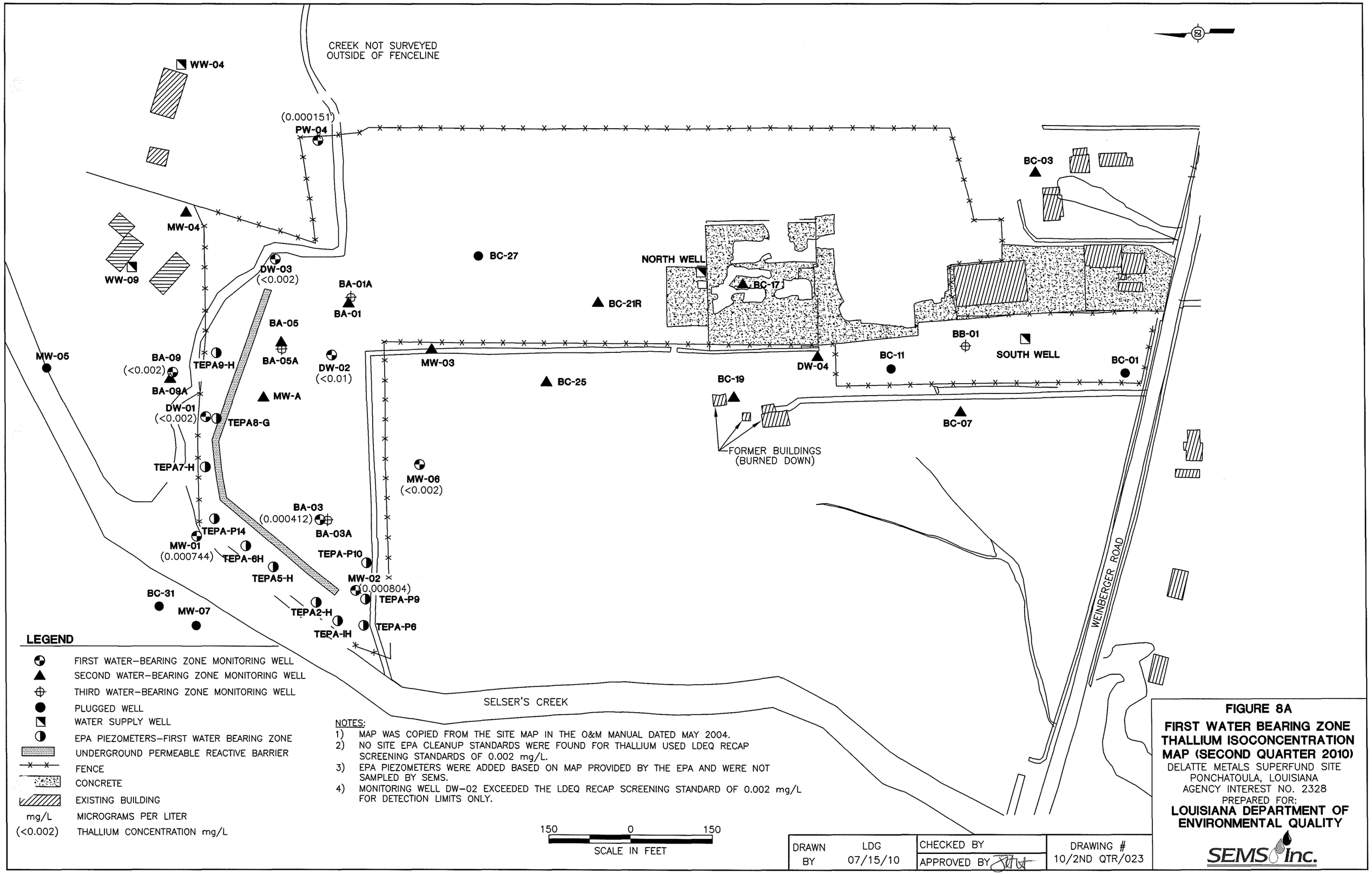
150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/15/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/022 |

**FIGURE 7D**
**WATER WELL**
**NICKEL ISOCONCENTRATION MAP**
**(SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
(0.000151)
PW-04
MW-04
WW-09
DW-03
(<0.002)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
DW-02
(<0.01)
MW-05
BA-09
(<0.002)
BA-09A
TEPA9-H
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
MW-A
DW-01
(<0.002)
TEPA8-G
BC-07
FORMER BUILDINGS
(BURNED DOWN)
TEPA7-H
MW-06
(<0.002)
BA-03
(0.000412)
BA-03A
TEPA-P14
MW-01
(0.000744)
TEPA-6H
TEPA-P10
TEPA5-H
MW-02
(0.000804)
TEPA-P9
BC-31
MW-07
TEPA2-H
TEPA-P6
TEPA-1H
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
EPA PIEZOMETERS-FIRST WATER BEARING ZONE
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
mg/L MICROGRAMS PER LITER
(<0.002) THALLIUM CONCENTRATION mg/L
NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR THALLIUM USED LDEQ RECAP SCREENING STANDARDS OF 0.002 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.
4) MONITORING WELL DW-02 EXCEEDED THE LDEQ RECAP SCREENING STANDARD OF 0.002 mg/L FOR DETECTION LIMITS ONLY.
150 0 150
SCALE IN FEET
DRAWN BY LDG 07/15/10
CHECKED BY
APPROVED BY
DRAWING # 10/2ND QTR/023
FIGURE 8A
FIRST WATER BEARING ZONE THALLIUM ISOCONCENTRATION MAP (SECOND QUARTER 2010)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(<0.002)
WW-09
DW-03
BA-01A
BA-01
(<0.002)
BA-05
(<0.002)
BA-05A
DW-02
MW-05
BA-09
BA-09A
(<0.002)
DW-01
MW-A
(0.00015)
BA-03
BA-03A
MW-01
BC-31
MW-07
MW-02
MW-06
MW-03
(<0.002)
BC-25
(<0.002)
BC-27
BC-21R
(<0.002)
NORTH WELL
BC-17
(<0.002)
BC-19
(<0.002)
FORMER BUILDINGS
(BURNED DOWN)
DW-04
(<0.002)
BC-03
(<0.002)
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
(<0.002)
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.002) THALLIUM CONCENTRATION mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR THALLIUM USED LDEQ RECAP SCREENING STANDARDS OF 0.002 mg/L
3. NO WELLS SAMPLED EXCEEDED THE LDEQ SCREENING STANDARDS FOR THALLIUM.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/15/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/024 |

**FIGURE 8B**

**SECOND WATER BEARING ZONE THALLIUM ISOCONCENTRATION MAP (SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(<0.002)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(<0.002)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(<0.002)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(<0.002)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.002) THALLIUM CONCENTRATION mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR THALLIUM USED LDEQ RECAP SS OF 0.002 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ SCREENING STANDARDS FOR THALLIUM.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/15/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/025 |

**FIGURE 8C**
**THIRD WATER BEARING ZONE THALLIUM ISOCONCENTRATION MAP (SECOND QUARTER 2010)**

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(<0.002)

PW-04

MW-04

WW-09
(<0.002)

DW-03

BA-01A

BA-01

BC-27

(0.000339)
NORTH WELL

BC-17

BC-21R

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.002)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MICROGRAMS PER LITER
- (<0.002) THALLIUM CONCENTRATION mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR THALLIUM USED LDEQ RECAP SCREENING STANDARDS OF 0.002 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ SCREENING STANDARDS FOR THALLIUM.

150 0 150
SCALE IN FEET

| | | | |
|---|---|---|---|
| DRAWN BY | LDG 07/15/10 | CHECKED BY<br>APPROVED BY | DRAWING # 10/2ND QTR/026 |

**FIGURE 8D**
**WATER WELLS**
**THALLIUM ISOCONCENTRATION MAP (SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(0.00109)
PW-04

MW-04

WW-09

DW-03
(0.0846)

BA-01A

BA-01

0.015

BA-05

BA-05A

DW-02
(0.0114)

MW-05

BA-09
(0.000272)

TEPA9-H

BA-09A

DW-01
(0.000628)

TEPA8-G

MW-A

0.015

TEPA7-H

BA-03
(0.144)

BA-03A

MW-01
(0.00261)

TEPA-P14

TEPA-6H

TEPA-P10

TEPA5-H

MW-02
(0.00418)

TEPA-P9

BC-31

MW-07

TEPA2-H

TEPA-1H

TEPA-P6

BC-27

BC-21R

NORTH WELL

BC-17

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06
(<0.002)

BC-03

WEINBERGER ROAD

SELSER'S CREEK

## LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- —0.015— CONCENTRATION CONTOUR (mg/L)
- mg/L MICROGRAMS PER LITER
- (0.000628) LEAD CONCENTRATION IN mg/kg

NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.

150 0 150
SCALE IN FEET

| DRAWN BY | LDG 07/15/10 | CHECKED BY | DRAWING # 10/2ND QTR/027 |
|---|---|---|---|
| | | APPROVED BY JAH | |

**FIGURE 4A**
**FIRST WATER BEARING ZONE**
**LEAD ISOCONCENTRATION MAP**
**(SECOND QUARTER 2010)**
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

SEMS Inc.

# ATTACHMENT A

# FIELD DATA SHEETS & WASTE MANIFESTS

# DELATTE METALS SUPERFUND SITE OPERATION AND MAINTENANCE ACTIVITY LOG



## PROJECT GENERAL INFORMATION

Client: LDEQ

Date: 4/5/10 - 4/7/10

Facility #: Delatte Metals Superfund Site

Activities: Notify facility of arrival. Inspect facility monitoring wells and PRB for integrity. Gauge, and sample appropriate wells.

Address: Weinberger Road, Ponchatoula, LA

Project #: N-207-0006

## SEMS ACTIVITY DOCUMENTATION (Continued On Back)

| Time (Military) | Notes & Observations |
|---|---|
| 4/5/10 - LSA ~~SDA~~ Arrived ~~7~~00 ) ↓ 1545 | Notified facility personnel of arrival : (YES) NO — Have H&S plan : (YES) NO |
| 4/6/10 - 8AM ↓ 1530 | EPA ADA labs on site TUE+WED. They are using our/LDEQ Drums for purge water |
| 4/7/10 7AM ↓ 1230 | Potentiometric data collection procedur equilibration, inspect/document well inte Measure wells from least contaminated<br>Well purging procedures: Use low flow When water quality characteristics stabi water to on-site 55-gallon drums for cor<br>Groundwater sample collection procedu micro purge methods after water quality container (on ice) for transport to the de with completed chain-of-custody docum |
| Departed : ( ) | |

## SEMS EQUIPMENT & MATERIALS USED

| Task | Description | Accounting Code | Unit | Quantity |
|---|---|---|---|---|
| 0002 ~~005~~ | Operation, maintenance and related activities per well. | | each | 31 |
| 006 | Quarterly reports preparation | | each | |
| 007 | Plugging and Abandoning 0-30 ft bgs | | foot | |
| 008 | Plugging and Abandoning 31-60 ft bgs | | foot | |
| 009 | Plugging and Abandoning 61-100 ft bgs | | foot | |
| 0010 | Well labels | | each | |
| 0008 ~~0011~~ | Well Locks | | each | 1 |
| 0012 | Concrete Pad | | each | |
| 0013 | Well cover | | each | |

## SEMS PERSONNEL INFORMATION

Employee Name: Jesse Hoppes

Employee Signature:

**SEMS, Inc.**

# DELATTE METALS SUPERFUND SITE OPERATION AND MAINTENANCE ACTIVITY LOG



**SEMS EQUIPMENT & MATERIALS USED**

| Task | Description | Accounting Code | Unit | Quantity |
|---|---|---|---|---|
| 0014 | Repainting | | each | |
| 0015 | Post Replacement | | each | |
| 0016 | Installation of new well 0-30 ft bgs | | foot | |
| 0017 | Installation of new well 31-60 ft bgs | | foot | |
| 0018 | Installation of new well 61-100ft bgs | | foot | |
| 0019 | Clearing access to wells | | each | |
| 0020 | Characterization, profiling related to disposal | | each | |
| 0021 | Disposal of decon water and purge water, Haz | | gallon | |
| 0022 | Disposal of decon water and purge water, Non-Haz | | gallon | |
| 0023 | Disposal of PPE, and sampling equipment, Haz | | Drum | |
| 0024 | Disposal of PPE, and sampling equipment, Non-Haz | | Drum | |
| 135 | Generator Daily Rental (DO NOT BILL ) | | Day | |
| 59 | Grundfous Pump (DO NOT BILL) | | Day | |
| 37 | 100' Roll of tubingl (DO NOT BILL ) | | Roll | |
| 04A | Truck Day Rate (DO NOT BILL ) | | Day | |
| | | | | |
| | | | | |

Employee Name: Jesse Hoppes Employee Signature:

***SEMS, Inc.***

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-09A
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JAH + LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 42.0 ft.
Static Depth to Groundwater (DTW): 1.23 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 31.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** 180 mL/min ~~gpm~~ _____ liter/min
**Volume Purged:** 1 gal. _____ liters
**Date/Time of Sample:** 4/5/10 Date 814 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/-3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 756 | 180 mL/min | — | — | — | — | — | — | 1.23 |
| 802 | 180 mL/min | 19.50 | 0.243 | 1.61 | 6.74 | 43 | ~~7.8~~ pH 1.6 | 2.30 |
| 806 | " | 19.64 | 0.243 | 0.98 | 6.88 | 43 | 1.1 | 2.71 |
| 810 | " | 19.70 | 0.243 | 0.91 | 6.91 | 42 | 0.4 | 2.85 |
| 814 | " | 19.72 | 0.243 | 0.82 | 6.92 | 41 | 0.6 | 3.20 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-09
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JOH + LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 18 ft.
Static Depth to Groundwater (DTW): 8.56 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 7.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** 240 mL/min ~~gpm~~ _____ liter/min
**Volume Purged:** 1 gal. _____ liters
**Date/Time of Sample:** 4/5/10 Date 837 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 825 | 200 mL/min | – | – | – | – | – | – | 8.56 |
| 829 | 240 mL/min | 18.52 | 3.52 | 4.16 | 3.72 | 141 | 2.1 | 8.71 |
| 833 | " | 18.46 | 3.58 | 5.24 | 3.72 | 115 | 6.8 | 8.70 |
| 837 | " | 18.~~[illegible]~~ | 3.57 | 4.86 | 3.71 | 73 | 1.3 | 8.71 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** MW-4
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JDH + LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 24 ft.
Static Depth to Groundwater (DTW): 13.38 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 13.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** 180 mL/min ~~gpm~~ _____ liter/min
**Volume Purged:** 1.5 gal. _____ liters
**Date/Time of Sample:** 4/5/10 Date 921 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/-3% | +/- 10% | +/- 0.1 | +/- 10% | +/-10% (if >10 NTU or FTU) | ≤0.3 ft. or Top of Screen |
| 240 ~~849~~ | ~~180 mL/min~~ | — | — | — | — | — | — | 13.38 |
| 854 | 180 mL/min | 18.69 | 0.617 | 5.62 | 6.04 | -52 | 11.3 | 14.54 |
| 858 | " | 18.73 | 0.559 | 5.35 | 6.39 | -49 | 3.5 | 14.69 |
| 902 | " | 18.65 | 0.543 | 5.18 | 6.50 | -37 | 4.0 | 14.80 |
| 906 | " | 18.91 | 0.513 | 4.81 | 6.55 | -28 | 3.9 | 14.93 |
| 910 | " | 19.15 | 0.489 | 4.43 | 6.62 | -23 | 4.2 | 14.98 |
| 914 | " | 19.16 | 0.456 | 4.08 | 6.63 | -16 | 3.8 | 15.02 |
| 918 | " | 19.45 | 0.436 | 3.88 | 6.67 | -13 | 3.0 | 15.10 |
| 921 | " | 19.64 | 0.401 | 3.49 | 6.70 | -10 | 3.9 | 15.12 |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** WW-09
**Date Purged/Sampled:** 4/5/10 920 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 60 ft.
Static Depth to Groundwater (DTW): UNK ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): UNK ft.

**Purge Flow Rate:** X gpm X liter/min
**Volume Purged:** X gal. X liters
**Date/Time of Sample:** 4/5/10 Date 920 Time

## WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 20 minutes

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 920 | — | ~~20.63~~ 19.58 | 0.260 | 2.71 | 7.94 | -90 | 0.5 | — |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** WW-04
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JBH & LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): UNK ft.
Static Depth to Groundwater (DTW): UNK ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): UNK ft.

**Purge Flow Rate:** X gpm X liter/min
**Volume Purged:** X gal. ___ liters
**Date/Time of Sample:** 4/5/10 Date 1010 Time

## WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) ___ gal. (1 well volume) ___ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) ___ gal. (1 well volume) ___ gal. (3 well volumes)
☐ Other: ___

## PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 20 minutes

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1010 | — | 21.25 | 0.269 | 1.67 | 8.72 | -138 | 0.0 | — |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** (b) (6) Well
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JAW & LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): UNK ft.
Static Depth to Groundwater (DTW): UNK ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): UNK ft.

**Purge Flow Rate:** ✓ gpm ✓ liter/min
**Volume Purged:** ✓ gal. ✓ liters
**Date/Time of Sample:** 4/5/10 Date 1015 Time

## WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 20 minutes

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if>10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1015 | — | 20.93 | 0.267 | 2.87 | 8.26 | -88 | 0.0 | — |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BC-03
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JAH & LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 28.0 ft.
Static Depth to Groundwater (DTW): 4.45 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 17.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** — gpm 180 mL ~~liter~~/min
**Volume Purged:** 0.5 gal. — liters
**Date/Time of Sample:** 4/5/10 Date 1044 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1033 | 180 mL/m | — | — | — | — | — | — | 4.45 |
| 1038 | " | 21.06 | 3.28 | 2.15 | 7.17 | -33 | 0.6 | 5.97 |
| 1041 | " | 20.91 | 3.29 | 2.03 | 7.17 | -31 | 0.0 | 6.39 |
| 1044 | " | 21.35 | 3.28 | 2.03 | 7.17 | -27 | 0.0 | 6.60 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

MS/MSD #1

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BC-07
**Date Purged/Sampled:** 4/5/10 **Sampled By:** BM + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 18.5 ft.
Static Depth to Groundwater (**DTW**): 2.92 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 8.0 ft.
Height of Water Column (**H=TD-DTW**): ____ ft.

**Purge Flow Rate:** ____ gpm 220 mL liter/min
**Volume Purged:** 0.5 gal. ____ liters
**Date/Time of Sample:** 4/5/10 Date 1138 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1126 | ~~150 mL/min~~ 240 mL/min | – | – | – | – | – | – | 2.92 |
| 1130 | " | 17.92 | 2.41 | 1.29 | 7.16 | 282 | 4.9 | 4.46 |
| 1134 | 220 mL/min | 17.58 | 2.41 | 1.03 | 7.14 | 337 | 2.1 | 5.06 |
| 1138 | " | 17.42 | 2.41 | 0.80 | 7.19 | 379 | 0.8 | 5.62 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** DW-04
**Date Purged/Sampled:** 4/5/10 1302 **Sampled By:** BA + SAM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 38 ft.
Static Depth to Groundwater (DTW): 4.12 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 27.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm 195 mL ~~liter~~/min
**Volume Purged:** 0.75 gal. _____ liters
**Date/Time of Sample:** 4/5/10 Date 1302 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1249 | 240 mL/min | — | — | — | — | — | — | 4.12 |
| 1254 | 195 mL/min | 20.70 | 1.82 | 6.88 | 7.51 | 379 | 0.0 | 4.75 |
| 1257 | " | 20.71 | 1.83 | 6.92 | 7.51 | 390 | 0.3 | 4.81 |
| 1302 | " | 20.76 | 1.83 | 6.92 | 7.51 | 408 | 0.0 | 4.88 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BC-19
**Date Purged/Sampled:** 4/5/10 1328 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 22.5 ft.
Static Depth to Groundwater (**DTW**): 4.40 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 12.0 ft.
Height of Water Column (**H=TD-DTW**): ____ ft.

**Purge Flow Rate:** ____ gpm 240 ~~liter~~ mL/min
**Volume Purged:** 1 gal. ____ liters
**Date/Time of Sample:** 4/5/10 Date 1328 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if>10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1314 | | — | — | — | — | — | — | 4.40 |
| ~~1319~~ | | ~~1319~~ | ~~2072~~ | ~~2.79~~ | ~~2.16~~ | ~~6.98~~ | ~~1~~ | |
| 1319 | 240 mL/min | 2072 | 2.79 | 2.16 | 6.98 | 167 | 0.0 | 5.71 |
| 1324 | " | 2057 | 2.79 | 1.54 | 6.97 | 158 | 0.1 | ~~6.14~~ 6.25 |
| 1328 | | 2070 | 2.79 | 1.49 | 6.97 | 179 | 0.4 | 6.52 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

2.5 m

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1 DUPLICATE #1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BC-25
**Date Purged/Sampled:** 4/5/10 1400 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 32.0 ft.
Static Depth to Groundwater (DTW): 5.68 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 21.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 160 mL ~~liter~~/min
**Volume Purged:** 0.5 gal. ____ liters
**Date/Time of Sample:** 4/5/10 Date 1400 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1346 | 210 ml/min | — | — | — | — | — | — | 5.68 |
| 1352 | " | 20.74 | 1.256 | 1.42 | 6.78 | 375 | 6.6 | 5.98 |
| 1356 | " | 20.56 | 1.284 | 1.33 | 6.77 | 418 | 6.5 | 5.94 |
| 1400 | 160 ml/min | 20.74 | 1.285 | 1.25 | 6.75 | 431 | 3.6 | 5.93 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** MW-3
**Date Purged/Sampled:** 4/5/10 **Sampled By:** Kym + Sam

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 27.5 ft.
Static Depth to Groundwater (DTW): 5.40 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 17.0 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 240 ~~liter~~ mL/min
**Volume Purged:** 1 gal. ____ liters
**Date/Time of Sample:** 4/5/10 Date 1426 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1414 | 270 mL/min | — | — | — | — | — | — | 5.40 |
| 1418 | " | 19.50 | 1.93 | 0.33 | 6.64 | 196 | 4.5 | 6.19 |
| 1422 | 240 mL/min | 19.57 | 1.93 | 0.27 | 6.61 | 192 | 3.1 | 6.27 |
| 1426 | " | 19.88 | 1.93 | 0.24 | 6.60 | 184 | 1.6 | 6.38 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF ____

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** MW-6
**Date Purged/Sampled:** 4/5/10 **Sampled By:** JAH + LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 16.5 ft.
Static Depth to Groundwater (DTW): 8.21 ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm 225 ~~liter~~ mL/min
**Volume Purged:** 1 gal. _____ liters
**Date/Time of Sample:** 4/5/10 Date 1505 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1450 | 225 mL/min | — | — | — | — | — | — | 8.21 |
| 1456 | " | 17.45 | 0.461 | 0.53 | 4.08 | 261 | 6.2 | 8.69 |
| 1459 | " | 17.37 | 0.466 | 0.44 | 3.95 | 292 | 4.5 | 8.70 |
| 1502 | " | 17.23 | 0.469 | 0.44 | 3.92 | 315 | 3.6 | 8.75 |
| 1505 | " | 17.17 | 0.479 | 0.36 | 3.90 | 329 | 3.0 | 8.75 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BB-01
**Date Purged/Sampled:** 4/6/10 **Sampled By:** ISM + TAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 96.0 ft.
Static Depth to Groundwater (DTW): 2.42 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 85.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm 270 mL ~~liter~~/min
**Volume Purged:** 1.0 gal. _____ liters
**Date/Time of Sample:** 4/6/10 Date 1031 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1013 | 300 mL/min | — | — | — | — | — | — | 2.42 |
| 1017 | 270 " | 20.14 | 0.269 | 2.61 | 9.07 | 55 | 2.4 | 2.69 |
| 1020 | " | 20.26 | 0.274 | 1.18 | 9.54 | 37 | 3.1 | 2.70 |
| 1024 | " | 20.28 | 0.277 | 0.69 | 9.64 | 39 | 3.0 | 2.70 |
| 1028 | " | 20.40 | 0.278 | 0.55 | 9.70 | 34 | 4.7 | 2.70 |
| 1031 | " | 20.51 | 0.279 | 0.49 | 9.66 | 40 | 5.7 | 2.70 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** South well
**Date Purged/Sampled:** 4/6/10 **Sampled By:** Ism + Jeff

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): UNK ft.
Static Depth to Groundwater (DTW): UNK ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): UNK ft.

**Purge Flow Rate:** X gpm X liter/min
**Volume Purged:** X gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1045 Time

## WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 20 minutes

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if>10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1045 | — | 21.61 | 0.236 | 2.90 | 8.80 | -65 | 0.0 | — |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BC-17
**Date Purged/Sampled:** 4/6/10 **Sampled By:** GM + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 28.0 ft.
Static Depth to Groundwater (DTW): 4.30 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 17.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 180 mL ~~liter~~/min
**Volume Purged:** 0.5 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1115 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1105 | 315 mL/min | — | — | — | — | — | — | 4.30 |
| 1109 | 240 " | 22.04 | 2.07 | 0.57 | 6.70 | 85 | 2.0 | 6.10 |
| 1112 | " | 21.63 | 2.08 | 0.41 | 6.69 | 103 | 1.5 | 6.73 |
| 1115 | 180 " | 21.44 | 2.08 | 0.38 | 6.69 | 125 | 3.8 | 7.18 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

Duplicate #2

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** North Well
**Date Purged/Sampled:** 4/6/10 **Sampled By:** Lsm & Tay

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): UNK ft.
Static Depth to Groundwater (DTW): UNK ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): UNK ft.

**Purge Flow Rate:** X gpm — liter/min
**Volume Purged:** X gal. — liters
**Date/Time of Sample:** 4/4/10 Date 1120 Time

## WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 20 minutes

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft or Top of Screen |
| 1120 | — | 22.26 | 0.69 | 1.71 | 8.79 | -48 | 0.1 | — |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF _____

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BC-21R
**Date Purged/Sampled:** 4/6/10 **Sampled By:** ISM + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 17.5 ft.
Static Depth to Groundwater (DTW): 4.67 ft.
Screen Length (SL) from Boring Logs: 5 ft.
Depth to Top of Well Screen (TD-SL): 12.0 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 240 mL ~~liter~~/min
**Volume Purged:** 1 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1148 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1136 | 270 | – | – | – | – | – | – | 4.67 |
| 1141 | 240 | 19.04 | 1.310 | 2.63 | 6.84 | 306 | 0.3 | 5.63 |
| 1144 | " | 19.29 | 1.309 | 2.50 | 6.84 | 390 | 1.4 | 6.05 |
| 1148 | " | 19.39 | 1.309 | 2.45 | 6.83 | 445 | 0.2 | 6.34 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-01A
**Date Purged/Sampled:** 4/6/10 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 46.0 ft.
Static Depth to Groundwater (DTW): 4.01 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 35.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 240 mL ~~liter~~/min
**Volume Purged:** 0.5 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1208 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☑ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1159 ~~1129~~ | 240 mL/m | — | — | — | — | — | — | 4.01 |
| 1202 | " | 21.38 | 0.259 | 3.76 | 7.40 | 242 | 1.8 | 5.25 |
| 1205 | " | 21.82 | 0.251 | 3.69 | 7.40 | 243 | 2.15 | 5.55 |
| 1208 | " | 21.82 | 0.251 | 3.59 | 7.38 | 239 | 0.9 | 5.89 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-01
**Date Purged/Sampled:** 4/6/10 **Sampled By:** CM + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 26.0 ft.
Static Depth to Groundwater (DTW): 5.80 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 15.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 180 mL ~~liter~~/min
**Volume Purged:** 0.5 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1225 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1203 | 240 mL/min | — | — | — | — | — | — | 5.80 |
| 1216 | " | 21.53 | 2.48 | 1.24 | 6.02 | 25 | 305 | 6.45 |
| 1219 | 180 mL/min | 21.52 | 2.67 | 0.52 | 5.93 | 24 | 362 | 6.58 |
| 1222 | " | 21.72 | 2.67 | 0.42 | 5.93 | 20 | 365 | 6.69 |
| 1225 | " | 21.86 | 2.65 | 0.36 | 5.94 | 18 | 390 | 6.80 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | X |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** DW-3
**Date Purged/Sampled:** 4/6/10 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 16 ft.
Static Depth to Groundwater (DTW): 5.58 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 5.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm 270 ~~liter~~ mL/min
**Volume Purged:** 1.0 gal. _____ liters
**Date/Time of Sample:** 4/6/10 Date 1258 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☑ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☑ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1243 | 270 mL/min | — | — | — | — | — | — | 5.58 |
| 1246 | " | 19.04 | 0.404 | 2.61 | 4.05 | 254 | 78.4 | 5.71 |
| 1249 | " | 18.70 | 2.30 | 0.34 | 3.79 | 239 | 10.6 | 5.71 |
| 1252 | " | 18.55 | 2.77 | 0.26 | 3.80 | 31 | 7.1 | 5.71 |
| 1255 | " | 18.53 | 2.81 | 0.23 | 3.78 | -1 | 5.1 | 5.72 |
| 1258 | " | 18.74 | 2.84 | 0.22 | 3.76 | -4 | 3.2 | 5.73 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** PW-4
**Date Purged/Sampled:** 4/6/10 **Sampled By:** SM + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 19.5 ft.
Static Depth to Groundwater (DTW): 4.50 ft.
Screen Length (SL) from Boring Logs: UNK ft.
Depth to Top of Well Screen (TD-SL): UNK ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 255 ~~liter~~ mL/min
**Volume Purged:** 0.5 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1308 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1309 | 380 mL/min | — | — | — | — | — | — | ~~5.40~~ 4.50 |
| 1312 | 255 " | 18.68 | 0.709 | 0.40 | 4.20 | 275 | 6.1 | 5.12 |
| 1315 | " | 18.82 | 0.704 | 0.30 | 4.19 | 283 | 3.8 | 5.15 |
| 1318 | " | 18.55 | 0.706 | 0.24 | 4.15 | 293 | 3.2 | 5.19 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

* TREE BRANCH NO LONGER OVER WELL

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** DW-2
**Date Purged/Sampled:** 4/6/10 **Sampled By:** ISA + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 11 ft.
Static Depth to Groundwater (DTW): 4.88 ft.
Screen Length (SL) from Boring Logs: 5 ft.
Depth to Top of Well Screen (TD-SL): 5.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 300 mL ~~liter~~/min
**Volume Purged:** 1.0 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1352 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1339 | 270 mL/min | — | — | — | — | — | — | 4.88 |
| 1340 | " | 19.15 | 9.88 | 0.69 | 3.11 | 105 | 2.8 | 5.03 |
| 1343 | " | 18.67 | 7.82 | 0.43 | 3.09 | 102 | 2.8 | 5.01 |
| 1346 | 300 mL/min | 18.59 | 7.53 | 0.64 | 3.08 | 167 | 2.3 | 5.03 |
| 1349 | " | 18.50 | 7.53 | 0.79 | 3.07 | 181 | 2.4 | 5.03 |
| 1352 | " | 14.50 | 7.48 | 0.91 | 3.06 | 183 | 2.4 | 5.03 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

*DUPLICATE #3

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-05A
**Date Purged/Sampled:** 4/6/10 **Sampled By:** JAH & LSM

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 54.0 ft.
Static Depth to Groundwater (DTW): 2.95 ft.
Screen Length (SL) from Boring Logs: 5 ft.
Depth to Top of Well Screen (TD-SL): 36.0 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 210 mL ~~liter~~/min
**Volume Purged:** 1.5 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1425 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if>10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1403 | 240 mL/min | — | — | — | — | — | — | 2.95 |
| 1410 | " | 22.06 | 0.252 | 5.51 | 7.04 | -94 | 1.9 | 5.10 |
| 1413 | 210 mL/min | 22.58 | 0.252 | 5.54 | 7.20 | -90 | 2.0 | 5.55 |
| 1416 | " | 21.91 | 0.253 | 5.61 | 7.29 | -84 | 1.5 | 5.68 |
| 1419 | " | 22.13 | 0.252 | 5.57 | 7.34 | -80 | 1.2 | 5.86 |
| 1422 | " | 21.76 | 0.252 | 5.54 | 7.40 | -73 | 1.9 | 6.04 |
| 1425 | " | 21.78 | 0.252 | 4.93 | 7.39 | -75 | 1.4 | 6.22 |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-05
**Date Purged/Sampled:** 4/6/10 **Sampled By:** USMT JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 18.5 ft.
Static Depth to Groundwater (DTW): 7.58 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 8.0 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 240 mL ~~liter~~/min
**Volume Purged:** 1.0 gal. ____ liters
**Date/Time of Sample:** 4/6/10 Date 1445 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1430 | 270 mL/min | — | — | — | — | — | | 7.58 |
| 1436 | " | 19.86 | 5.70 | 0.56 | 6.13 | -23 | 66.4 | 8.98 |
| 1439 | " | 19.65 | 5.71 | 0.39 | 6.13 | -25 | 47.7 | 9.43 |
| 1442 | " | 19.92 | 5.71 | 0.32 | 6.15 | -27 | 37.7 | 9.72 |
| 1445 | 240 mL/min | 20.12 | 5.70 | 0.33 | 6.15 | -27 | 31.8 | 9.85 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | X |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** MW-A
**Date Purged/Sampled:** 4/7/10 **Sampled By:** ISM + Jeff

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 27 ft.
Static Depth to Groundwater (DTW): 10.12 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 16.5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 240 mL ~~liter~~/min
**Volume Purged:** 1.0 gal. ____ liters
**Date/Time of Sample:** 4/7/10 Date 754 Time

## WELL CASING VOLUME CALCULATIONS

- [x] 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
- [ ] 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
- [ ] Other: ____

## PURGING METHOD

- [x] Peristaltic Pump
- [ ] Low-flow Submersible Pump
- [ ] Water Well
- [ ] Other (Specify)

## METHOD OF SAMPLE COLLECTION

- [x] Peristaltic Pump
- [ ] Low-flow Submersible Pump
- [ ] Bailer [ ] Dedicated [ ] Disposable
- [ ] Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/-1°C | +/-3% | +/-10% | +/-0.1 | +/-10% | +/-10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 740 | 480 mL/min | — | — | — | — | — | — | 10.12 |
| 745 | 240 " | 19.30 | 0.724 | 2.16 | 6.70 | 90 | 2.3 | 11.40 |
| 748 | " | 19.42 | 0.723 | 2.03 | 6.81 | 83 | 1.0 | 11.38 |
| 751 | " | 19.56 | 0.723 | 1.92 | 6.87 | 78 | 1.8 | 11.38 |
| 754 | " | 19.68 | 0.722 | 1.82 | 6.91 | 74 | 2.0 | 11.38 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** DW-1
**Date Purged/Sampled:** 4/19/10 **Sampled By:** BM x JATT

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 19 ft.
Static Depth to Groundwater (DTW): 11.10 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 8.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm 180 mL ~~liter~~/min
**Volume Purged:** 1.5 gal. _____ liters
**Date/Time of Sample:** 4/19/10 Date 839 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☑ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☑ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/-3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 810 | 240 mL/min | – | – | – | – | – | – | 11.10 |
| 814 | " | 18.21 | 0.393 | 1.90 | 6.04 | 87 | 135 | 11.46 |
| 817 | 180 mL/min | 18.16 | 0.414 | 0.75 | 5.74 | 101 | 89.2 | 11.46 |
| 820 | " | 18.22 | 0.436 | 0.72 | 5.71 | 120 | 58.9 | 11.46 |
| 823 | " | 18.24 | 0.458 | 0.64 | 5.66 | 125 | 46.0 | 11.46 |
| 827 | " | 18.27 | 0.497 | 0.56 | 5.62 | 128 | 35.7 | 11.48 |
| 830 | " | 18.24 | 0.522 | 0.53 | 5.59 | 129 | 31.2 | 11.46 |
| 833 | " | 18.32 | 0.547 | 0.50 | 5.59 | 128 | 28.8 | 11.48 |
| 836 | " | 18.39 | 0.582 | 0.49 | 5.55 | 129 | 26.9 | 11.48 |
| 839 | " | 18.40 | 0.604 | 0.45 | 5.53 | 129 | 24.8 | 11.50 |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | X |
|---|---|---|---|

SHEET 1 OF _____

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** MW-2
**Date Purged/Sampled:** 4/7/10 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 10.5 ft.
Static Depth to Groundwater (DTW): 7.25 ft.
Screen Length (SL) from Boring Logs: 5 ft.
Depth to Top of Well Screen (TD-SL): 5 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 150mL liter/min
**Volume Purged:** 1.0 gal. ____ liters
**Date/Time of Sample:** 4/7/10 Date 1015 Time

## WELL CASING VOLUME CALCULATIONS

- [x] 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
- [ ] 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
- [ ] Other: ____

## PURGING METHOD

- [x] Peristaltic Pump
- [ ] Low-flow Submersible Pump
- [ ] Water Well
- [ ] Other (Specify)

## METHOD OF SAMPLE COLLECTION

- [x] Peristaltic Pump
- [ ] Low-flow Submersible Pump
- [ ] Bailer [ ] Dedicated [ ] Disposable
- [ ] Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/-3% | +/- 10% | +/- 0.1 | +/-10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 945950 | 240 mL/min | – | – | – | – | – | – | 7.25 |
| 953953 | " | 18.75 | 1.385 | 0.68 | 3.47 | 202 | 1.1 | 7.85 |
| 956957 | 150 mL/min | 18.70 | 1.262 | 0.50 | 3.43 | 313 | 0.2 | 7.77 |
| 1000 | " | 18.00 | 1.274 | 0.44 | 3.45 | 317 | 1.1 | 7.77 |
| 1003 | " | 18.94 | 1.305 | 0.40 | 3.42 | 321 | 0.9 | 7.77 |
| 1006 | " | 18.76 | 1.390 | 0.37 | 3.40 | 323 | 0.2 | 7.77 |
| 1009 | " | 18.11 | 1.467 | 0.35 | 3.41 | 322 | 0.4 | 7.77 |
| 1012 | " | 18.84 | 1.55 | 0.34 | 3.38 | 322 | 0.5 | 7.77 |
| 1015 | | 18.97 | 1.62 | 0.32 | 3.39 | 320 | 0.6 | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF ____

DUPLICATE #4

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** MW-1
**Date Purged/Sampled:** 4/5/10 **Sampled By:** KM + JAH

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 28.5 ft.
Static Depth to Groundwater (DTW): 13.81 ft.
Screen Length (SL) from Boring Logs: 15 ft.
Depth to Top of Well Screen (TD-SL): 13 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm _____ liter/min
**Volume Purged:** 1.0 gal. _____ liters
**Date/Time of Sample:** 4/5/10 Date 922 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 907 | 255 ml/min | — | 19.22 4.95 | — | — | — | — | 13.81 |
| 910 | " | ~~19.22~~ | ~~4.95~~ | ~~2.26~~ ~~3.62~~ | 3.62 | 33 | 0.5 | 13.90 |
| 915 | " | 19.17 | 5.01 | 0.91 | 3.52 | 31 | 0.6 | 13.88 |
| 918 | " | 19.14 | 5.01 | 0.65 | 3.48 | 19 | 0.8 | 13.86 |
| 922 | " | 19.19 | 5.08 | 0.43 | 3.46 | 7 | 0.1 | 13.90 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-03A
**Date Purged/Sampled:** 4/7/10 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 100 ft.
Static Depth to Groundwater (DTW): 1.33 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 89.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

**Purge Flow Rate:** _____ gpm _____ liter/min
**Volume Purged:** 2.0 gal. _____ liters
**Date/Time of Sample:** 4/7/10 Date 1107 Time

## WELL CASING VOLUME CALCULATIONS

☑ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

## PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

## METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1040 | | — | — | — | — | — | — | 1.33 |
| 1043 | 255 ml/m | 22.06 | 0.284 | 3.10 | 7.12 | -76 | 1.1 | 1.34 |
| 1046 | " | 22.13 | 0.284 | 2.35 | 7.22 | -82 | 2.0 | 1.34 |
| 1049 | " | 22.04 | 0.285 | 1.72 | 7.41 | -110 | 3.2 | 1.35 |
| 1052 | " | 22.00 | 0.286 | 1.36 | 7.70 | -123 | 2.7 | 1.35 |
| 1055 | " | 21.65 | 0.287 | 1.06 | 7.94 | -130 | 2.3 | 1.35 |
| 1058 | " | 21.34 | 0.287 | 0.87 | 8.03 | -133 | 1.7 | 1.35 |
| 1101 | " | 21.90 | 0.287 | 0.78 | 8.11 | -135 | 1.3 | 1.35 |
| 1107 | " | 22.06 | 0.287 | 0.61 | 8.13 | -140 | 2.1 | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF _____

LOW-FLOW GROUNDWATER SAMPLING LOG

**Project:** Delatte Metals Superfund Site
**Project No.:** N-207-0006
**Site Location:** Ponchatoula, Louisiana
**Monitor Well No.:** BA-03
**Date Purged/Sampled:** 4/7/10 **Sampled By:** [illegible]

## MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 13.5 ft.
Static Depth to Groundwater (DTW): 6.83 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 3 ft.
Height of Water Column (H=TD-DTW): ____ ft.

**Purge Flow Rate:** ____ gpm 240 mL liter/min
**Volume Purged:** 1.5 gal. ____ liters
**Date/Time of Sample:** 4/7/10 Date 1135 Time

## WELL CASING VOLUME CALCULATIONS

- [x] 2" Well (H x 0.163 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
- [ ] 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
- [ ] Other: ____

## PURGING METHOD

- [x] Peristaltic Pump
- [ ] Low-flow Submersible Pump
- [ ] Water Well
- [ ] Other (Specify)

## METHOD OF SAMPLE COLLECTION

- [x] Peristaltic Pump
- [ ] Low-flow Submersible Pump
- [ ] Bailer [ ] Dedicated [ ] Disposable
- [ ] Other (Specify) ____

## LOW-FLOW MONITORING PARAMETERS

| Time | Volume Purged | Temp. | Specific Conductivity | Dissolved Oxygen | pH | ORP | Turbidity | DTW |
|---|---|---|---|---|---|---|---|---|
| hr/min | Gal (cumulative) | °C | mS/sec | mg/L | Standard Units | Eh | NTU or FTU | feet |
| Targets | 0.1 to 0.5 L/min or: 0.026 to 0.132 gpm | +/- 1°C | +/- 3% | +/- 10% | +/- 0.1 | +/- 10% | +/- 10% (if >10 NTU or FTU) | <0.3 ft. or Top of Screen |
| 1115 | 240 mL/min | — | — | — | — | — | — | 6.83 |
| 1120 | " | 19.58 | 1.261 | 0.40 | 4.70 | 136 | 4.8 | 6.85 |
| 1123 | " | 18.90 | 1.416 | 0.32 | 4.57 | 181 | 4.5 | 6.85 |
| 1126 | " | 19.44 | 1.54 | 0.32 | 4.52 | 234 | 3.1 | 6.87 |
| 1129 | " | 19.3 | 1.59 | 0.48 | 4.49 | 266 | 2.8 | 6.87 |
| 1132 | " | 18.92 | 1.61 | 1.03 | 4.52 | 284 | 1.8 | 6.87 |
| 1135 | " | 19.43 | 1.62 | 1.87 | 4.58 | 277 | 1.7 | 6.87 |
| | | | | | | | | |
| | | | | | | | | |

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

| Total Metals Collected | X | Dissolved Metals Collected | |
|---|---|---|---|

SHEET 1 OF 1

# Delatte Metals O&M Well Inspection Checklist



SEMS Project #: N-207-0006
Field Crew: T. HODGES
L. MEAUX

| Well No. | Date Inspected | Wells Labeled | Wells Locked | Post Condition | Paint Needed | Pad Condition | Well Access | Standing/ Ponded Water | Collision Damage | Frost Heaving | Casing Degradation | Well Subsidence | Photos Taken | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-09A | 4/5/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BA-09 | | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| MW-4 | | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| NW09 | | NA | NA | NA | NA | NA | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| NW09 | | NA | NA | NA | NA | NA | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| (b) (6) WEL | | NA | NA | NA | NA | NA | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | ~~COVER CHANGED~~ JAB |
| BC-03 | | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | Lock changed |
| BC-07 | | Y | Y | ✓ | ✓ JAB | X | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | PAD COVERED WITH DIRT, ~~[illegible]~~ JAB |
| DW-04 | | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BC-19 | | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BC-25 | | Y | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| MW-3 | ✓ | Y | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |

✓ = No Deficiency  X = No  X = Noted Issue

# Delatte Metals O&M Well Inspection Checklist



SEMS Project #: N-207-0006
Field Crew: J. Hopkes
L. Meraz

| Well No. | Date Inspected | Wells Labeled | Wells Locked | Post Condition | Paint Needed | Pad Condition | Well Access | Standing/ Ponded Water | Collision Damage | Frost Heaving | Casing Degradation | Well Subsidence | Photos Taken | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 4/5/10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BB-01 | 4/6/10 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| SOUTH WELL | | NA | NA | NA | NA | NA | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BG-19 | | ✓ | ✓ | * | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | [redacted] BENT POST (OK) |
| NORTH WELL | | NA | NA | NA | NA | NA | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BL-MR | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BA-01 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BA-01A | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| DW-3 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| DW-4 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| DW-2 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BA-03AW | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |

# Delatte Metals O&M Well Inspection Checklist



SEMS Project #: N-207-0006
Field Crew: J. HOPPES
L. McBride

| Well No. | Date Inspected | Wells Labeled | Wells Locked | Post Condition | Paint Needed | Pad Condition | Well Access | Standing/ Ponded Water | Collision Damage | Frost Heaving | Casing Degradation | Well Subsidence | Photos Taken | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-05 | 4/4/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| MW-A | 4/5/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| OW-01 | 4/7/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| MW-02 | 4/7/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| MW01 | 4/7/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BA-03A | 4/7/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| BA-03 | 4/7/10 | Y | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

# TAILGATE SAFETY MEETING

## GENERAL INFORMATION

Company: SEMS, Inc.

Date: 4/5/10 Time: 1000 Job Number: 207-0006

Customer: LDEQ Address: Delatte Metals Weinberger Rd.

Job Location: Ponchatoula, LA

Type of Work: GW Sampling

Protective Clothing/Equipment: Level D

## SAFETY TOPICS

Chemical Hazards: Metals & Low pH (Acidic GW)

Physical Hazards: Blades, lifting, snakes, heat, SUD, Trip, Fall

Emergency Procedures: Call 911 or proceed to hospital
meet @ front Enterance if problems occur

Hospital/Clinic: North Oaks Phone:

Hospital Address: 15790 Paul Vega, Hammond, LA

Special Equipment: Level D

Other:

## ATTENDEES

| NAME PRINTED | SIGNATURE |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| L. McDaxx | [illegible] |
| Jesse Hoppes | [illegible] |

SITE SUPERVISOR SIGNATURE

# TAILGATE SAFETY MEETING

| GENERAL INFORMATION | |
|---|---|
| Company | SEMS, Inc. |
| Date 4/6/10 | Time 1052 |
| Job Number | 207-0006 |
| Customer | LDEQ |
| Address | Delatte Metals Weinberger Rd. |
| Job Location | Ponchatoula, LA |
| Type of Work | GW Sampling |
| Protective Clothing/Equipment | Level D |

| SAFETY TOPICS | |
|---|---|
| Chemical Hazards | Metals & Low pH (Acidic GW) |
| Physical Hazards | Blades, lifting, snakes, heat, SLIP, TRIP, FALL |
| Emergency Procedures | Call 911 or proceed to hospital meet @ front Enterance if problems occur |
| Hospital/Clinic | North OAKS |
| Phone | |
| Hospital Address | 15790 Paul Vega, Hammond, LA |
| Special Equipment | Level D |
| Other | |

| ATTENDEES | |
|---|---|
| NAME PRINTED | SIGNATURE |
| L. MEADIX | [signature] |
| J. HOPPES | [signature] |
| SITE SUPERVISOR | SIGNATURE |

# TAILGATE SAFETY MEETING

## GENERAL INFORMATION

Company: SEMS, Inc.

Date: 4/7/10 Time: 700 Job Number: 207-0006

Customer: LDEQ Address: Delatte Metals Weinberger Rd.

Job Location: Ponchatoula, LA

Type of Work: GW Sampling

Protective Clothing/Equipment: Level D

## SAFETY TOPICS

Chemical Hazards: Metals & Low pH (Acidic GW)

Physical Hazards: Blades, lifting, snakes, heat

Emergency Procedures: Call 911 or proceed to hospital
meet @ front Enterance if problems occur

Hospital/Clinic: North OAKS Phone:

Hospital Address: 15790 Paul Vega, Hammond, LA

Special Equipment: Level D

Other:

## ATTENDEES

| NAME PRINTED | SIGNATURE |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| Lance Meaux | [illegible] |
| Jesse Hoppes | [illegible] |

SITE SUPERVISOR SIGNATURE

# Delatte Metals O&M PRB Inspection Checklist



SEMS Project #: N-207-0006
Field Crew: Jesse Hoppes
Lance Meaux

Date Inspected 4/7/10

| Is the soil overlying the PRB cracked, eroded, or show any other pathways that could allow for surface water to enter the subsurface? | |
|---|---|
| PRB Cleared | yes, light vegitation 1-2' could use update but visable |
| PRB Accessible | yes |
| PRB Cracks Identified | some, but soil is dry mostly seen near MW-02 in low area |
| PRB Erosion Identified | Low spots near MW-02 & TEPA-14 (downgradient side) |
| Photos Taken | yes of cracks |
| NOTES: | |

PRB=Permeable reactive barrier

# Delatte Metals O&M QA/QC Checklist



SEMS Project #: N-207-0006
Field Crew: Jesse Hoppes
Lance Meange

MS/MSD (Every 20 Samples)
Field Duplicate (Every 10 Samples)

| MS/ MSD | Field Duplicate | Sample ID on COC | Sample Location ID of Original Sample (Field Duplicate) | Date | Time | Notes |
|---|---|---|---|---|---|---|
| X | | BC-03 | BC-03 | 4/5/10 | 1044 | |
| | X | ~~BC-19~~ | BC-19 | 4/5/10 | 1328 | |
| | | ~~DUPLICATE#1~~ | | | | |
| | X | DUPLICATE#2 | BC-17 | 4/6/10 | 1115 | |
| X | | NORTH WELL | NORTH WELL | 4/6/10 | 1120 | |
| | X | DUPLICATE#3 | DW-2 | 4/6/10 | 1352 | |
| | X | Duplicate#4 | MW-02 | 4/7/10 | 1015 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

# SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 301935

page 1 of 4

Client Name: [illegible]
Address: 3701 N. Causeway Blvd [illegible]
City [illegible] State LA Zip [illegible]
Phone/Fax: [illegible]
Client Contact: [illegible] Email: [illegible]
Project Name/No.: [illegible]
Site Name: [illegible]
Site Location: [illegible]
Invoice To: [illegible] Ph: [illegible]

| SAMPLE ID | DATE | TIME | comp | grab | matrix (W=water S=soil O=oil A=air SL=sludge E=encore X=other) | bottle (P=plastic A=amber glass G=glass V=vial X=other) | size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other) | pres. (1=HCl 2=HNO3 3=H2SO4 X=other) | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | MS/MSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-07A | 4/5/10 | 814 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| BA-09 | " | 830 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MW-04 | " | 931 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| WW-09 | " | 920 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| WW-04 | " | 1010 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| (b) (6) | " | 1015 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| DC-03 | " | 1144 | | X | W | P | 1 | 2 | 3 | X | | X | | | | | | |
| DC-07 | " | 1138 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| DC-04 | " | 1022 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| SC-14 | " | 1325 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |

Client/Consultant Remarks: [illegible]

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp:

## Requested TAT

☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☐ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: [illegible] | date 4/2[illegible] | time 1300 | 2. Received by: |
| 3. Relinquished by: | date | time | 4. Received by: |
| 5. Relinquished by: | date | time | 6. Received by Laboratory: |


☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 304081

page 2 of 4

Client Name: SENSTINE
Address:
City State Zip
Phone/Fax:
Client Contact: Email:
Project Name/No.:
Site Name:
Site Location:
Invoice To: Ph:

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SC-05 | 4/6/10 | 14:30 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MW-03 | 4/6/10 | 1426 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MW-06 | 4/6/10 | 1505 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| SB-01 | 4/6/10 | 1031 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| [illegible] | 4/6/10 | 1245 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| SC-17 | [illegible] | 1115 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| [illegible] | [illegible] | 1120 | | X | W | P | 1 | 2 | 3 | X | | X | | | | | | |
| SC-18R | [illegible] | [illegible] | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MW-01A | | 1204 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| SA-01 | [illegible] | 1225 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | |

Client/Consultant Remarks: [illegible]

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp:

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1700 | 2. Received by: |
| 3. Relinquished by: | date | time | 4. Received by: |
| 5. Relinquished by: | date | time | 6. Received by Laboratory: |


☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

# SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 298844

page 3 of 4

Client Name:
Address:
City State Zip
Phone/Fax:
Client Contact: Email:
Project Name/No.:
Site Name:
Site Location:
Invoice To: Ph:

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Requested Analysis | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-03 | [illegible] | 1256 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| PW-04 | [illegible] | 1314 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| DW-02 | | 1352 | | | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MA-05A | | 1425 | | | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MA-05 | | 1442 | | | W | P | 1 | 2 | 2 | X | X | | | | | | | |
| MW-1A | [illegible] | 1224 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MW-3 | | 1237 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | |
| MW-02 | | 1245 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MW-01 | | 1322 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |
| MA-07A | | 1407 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | |

Client/Consultant Remarks:

Laboratory remarks:

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp:

## Requested TAT

☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☐ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 11/9/10 | time 1500 | 2. Received by: |
| 3. Relinquished by: | date | time | 4. Received by: |
| 5. Relinquished by: | date | time | 6. Received by Laboratory: |


☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

# SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 298845

page 4 of 4

Client Name:

Address:

City State Zip

Phone/Fax:

Client Contact: Email:

Project Name/No.:

Site Name:

Site Location:

Invoice To: Ph:

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other

bottle: P=plastic A=amber glass G=glass V=vial X=other

size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other

pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Requested Analysis | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | 4/7/10 | | | X | W | P | | | 1 | X | | | | | | | | |
| [illegible] | 4/6/10 | | | X | | | | | 1 | X | | | | | | | | |
| [illegible] | [illegible] | | | X | | | | | 1 | X | | | | | | | | |
| [illegible] | 4/4/10 | | | X | | | | | 1 | X | | | | | | | | |
| [illegible] | 4/7/10 | | | X | | | | | 1 | X | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Client/Consultant Remarks:

Laboratory remarks:

Intact? ☐ Y ☐ N

Ice? ☐ Y ☐ N

Temp:

## Requested TAT

☐ 1 Business Day ☐ Contract

☐ 2 Business Days ☐ Standard

☐ 3 Business Days

☐ Other

Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐

Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time [illegible] | 2. Received by: |
| 3. Relinquished by: | date | time | 4. Received by: |
| 5. Relinquished by: | date | time | 6. Received by Laboratory: |


☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

# ATTACHMENT B

# LABORATORY ANALYTICAL REPORT

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

## Case Narrative for:

# SEMS, INC.

## Certificate of Analysis Number:

## 10040344

| Report To: | | Project Name: | N-207-0006 |
|---|---|---|---|
| SEMS, INC. | | Site: | DELATTE METALS |
| JESSE HOPPES | | Site Address: | |
| 11628 S. CHOCTAW DRIVE | | | PONCHATOULA LA |
| BATON ROUGE | | PO Number: | |
| LA | | State: | Louisiana |
| 70815- | | State Cert. No.: | 02048 |
| ph: (225) 924-2002 | fax: | Date Reported: | 5/26/2010 |

NOTE: The method 6010 Arsenic analyses for field samples BA-09, BA-01, DW-03, PW-04, DW-02, MW-02, MW-01, BA-03, Duplicate #3 and Duplicate #4 were performed by SPL-Houston laboratory. The report as submitted by SPL-Houston is included in its entirety as an attachment to this report.

I. SAMPLE RECEIPT

A. All samples were received intact. The internal ice chest temperatures were measured upon receipt and recorded on the Sample Receipt Checklist included in this data package.

II. ANALYSIS

A. Holding Times: All analyses were completed within the recommended holding time.

B. Measurement Basis: "J" values may be presented for the analyses in this report. Programmatically, "J" values are those confirmed values for components detected less than the "Rep. Limit" but greater than the laboratory method detection limit (MDL). Thus, it should be noted that positive values may appear on quantitation reports but not on Form I if those values are below the MDL.

C. Analytical Exceptions:

Method 6020 Lab batch 88810-Target analyte Nickel was detected above the laboratory reporting limit in the method blank sample. Associated field sample results are reported with a "B" qualifier. The amount of this analyte in the method blank was less than ten percent of the amount in the samples indicating a negligible effect on the sample results. The sample selected for use in SPL's quality control program had Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries that were outside of the advisable quality control limits for Arsenic due to possible matrix interference. Other samples of like matrix collected from this site also may be affected. A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were within quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

III. QUALITY CONTROL

A. Analytical Protocol and Deliverables: The samples were analyzed in accordance with the protocol requirements.

B. Initial and Continuing Calibrations: All QA acceptance criteria were met for initial and continuing calibration samples.

C. Blanks: Method and calibration blanks met the method criteria.

NOTE: This data package was produced using software base on CLP type deliverables. The forms and documentation in this data package are to be considered "CLP-like" and may not meet all the criteria specified in the CLP protocols. The data are reported based on the method requirements.

5/26/2010

Amy K. Jackson — Date
Project Manager

Test results meet all requirements of NELAC, unless specified in the narrative.

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Case Narrative for:**

# SEMS, INC.

**Certificate of Analysis Number:**

**10040344**

CERTIFICATION:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

5/26/2010

Amy K. Jackson
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# SEMS, INC.

## Certificate of Analysis Number:

## 10040344

**Report To:** SEMS, INC.
JESSE HOPPES
11628 S. CHOCTAW DRIVE

BATON ROUGE
LA
70815-
ph: (225) 924-2002 fax: (225) 924-2004

**Fax To:**

**Project Name:** N-207-0006
**Site:** DELATTE METALS
**Site Address:**
PONCHATOULA LA
**PO Number:**
**State:** Louisiana
**State Cert. No.:** 02048
**Date Reported:** 5/26/2010

| Client Sample ID | Lab Sample ID | Matrix | Date Collected | Date Received | COC ID | HOLD |
|---|---|---|---|---|---|---|
| BA-09A | 10040344-01 | Water | 04/05/2010 8:14 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA-09 | 10040344-02 | Water | 04/05/2010 8:37 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| MW-04 | 10040344-03 | Water | 04/05/2010 9:21 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| WW-09 | 10040344-04 | Water | 04/05/2010 9:20 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| WW-04 | 10040344-05 | Water | 04/05/2010 10:10 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| (b) (6) [redacted] WELL | 10040344-06 | Water | 04/05/2010 10:15 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-03 | 10040344-07 | Water | 04/05/2010 10:44 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-03MS | 10040344-07MS | Water | 04/05/2010 10:44 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-03MSD | 10040344-07MSD | Water | 04/05/2010 10:44 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-07 | 10040344-08 | Water | 04/05/2010 11:38 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DW-04 | 10040344-09 | Water | 04/05/2010 13:02 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-19 | 10040344-10 | Water | 04/05/2010 13:28 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-25 | 10040344-11 | Water | 04/05/2010 14:00 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| MW-03 | 10040344-12 | Water | 04/05/2010 14:26 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| MW-06 | 10040344-13 | Water | 04/05/2010 15:05 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BB-01 | 10040344-14 | Water | 04/06/2010 10:31 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| SOUTH WELL | 10040344-15 | Water | 04/06/2010 10:45 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-17 | 10040344-16 | Water | 04/06/2010 11:15 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| NORTH WELL | 10040344-17 | Water | 04/06/2010 11:20 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| NORTH WELLMS | 10040344-17MS | Water | 04/06/2010 11:20 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| NORTH WELLMSD | 10040344-17MSD | Water | 04/06/2010 11:20 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BC-21R | 10040344-18 | Water | 04/06/2010 11:48 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA-01A | 10040344-19 | Water | 04/06/2010 12:08 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA-01 | 10040344-20 | Water | 04/06/2010 12:25 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |

5/26/2010

Amy K. Jackson
Project Manager

Date

Ron Benjamin
Laboratory Director

Tristan Davis
Quality Assurance Officer

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# SEMS, INC.

## Certificate of Analysis Number:

## 10040344

**Report To:** SEMS, INC.
JESSE HOPPES
11628 S. CHOCTAW DRIVE

BATON ROUGE
LA
70815-
ph: (225) 924-2002 fax: (225) 924-2004

**Fax To:**

**Project Name:** N-207-0006
**Site:** DELATTE METALS
**Site Address:**
PONCHATOULA LA
**PO Number:**
**State:** Louisiana
**State Cert. No.:** 02048
**Date Reported:** 5/26/2010

| Client Sample ID | Lab Sample ID | Matrix | Date Collected | Date Received | COC ID | HOLD |
|---|---|---|---|---|---|---|
| DW-03 | 10040344-21 | Water | 04/06/2010 12:58 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| PW-04 | 10040344-22 | Water | 04/06/2010 13:18 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DW-02 | 10040344-23 | Water | 04/06/2010 13:52 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA-05A | 10040344-24 | Water | 04/06/2010 14:25 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA05 | 10040344-25 | Water | 04/06/2010 14:45 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| MW-A | 10040344-26 | Water | 04/07/2010 7:54 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DW-01 | 10040344-27 | Water | 04/07/2010 8:39 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| MW-02 | 10040344-28 | Water | 04/07/2010 10:15 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| MW-01 | 10040344-29 | Water | 04/07/2010 9:22 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA-03A | 10040344-30 | Water | 04/07/2010 11:07 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| BA-03 | 10040344-31 | Water | 04/07/2010 11:35 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DUPLICATE #1 | 10040344-32 | Water | 04/05/2010 0:00 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DUPLICATE #2 | 10040344-33 | Water | 04/06/2010 0:00 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DUPLICATE #3 | 10040344-34 | Water | 04/06/2010 0:00 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |
| DUPLICATE #4 | 10040344-35 | Water | 04/07/2010 0:00 | 4/8/2010 4:40:00 PM | ,304081,298844, | ☐ |

5/26/2010

Amy K. Jackson
Project Manager

Date

Ron Benjamin
Laboratory Director

Tristan Davis
Quality Assurance Officer

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-09A **Collected:** 04/05/2010 8:14 **SPL Sample ID:** 10040344-01

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00192 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:42 | RJD | 3553735 |
| Lead | 0.000828 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:42 | RJD | 3553735 |
| Manganese | 0.0239 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:42 | RJD | 3553735 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:42 | RJD | 3553735 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:42 | RJD | 3553735 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-09 **Collected:** 04/05/2010 8:37 **SPL Sample ID:** 10040344-02

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.000272 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:44 | RJD | 3553736 |
| Manganese | 4.08 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:44 | RJD | 3553736 |
| **Nickel** | **0.195** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/26/10 22:44** | **RJD** | **3553736** |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:44 | RJD | 3553736 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** MW-04 **Collected:** 04/05/2010 9:21 **SPL Sample ID:** 10040344-03

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:47 | RJD | 3553737 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:47 | RJD | 3553737 |
| Manganese | 0.00843 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:47 | RJD | 3553737 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:47 | RJD | 3553737 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:47 | RJD | 3553737 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** WW-09 **Collected:** 04/05/2010 9:20 **SPL Sample ID:** 10040344-04

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:50 | RJD | 3553738 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:50 | RJD | 3553738 |
| Manganese | 0.017 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:50 | RJD | 3553738 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:50 | RJD | 3553738 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:50 | RJD | 3553738 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** WW-04 **Collected:** 04/05/2010 10:10 **SPL Sample ID:** 10040344-05

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:52 | RJD | 3553739 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:52 | RJD | 3553739 |
| Manganese | 0.00256 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:52 | RJD | 3553739 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:52 | RJD | 3553739 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:52 | RJD | 3553739 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** (b) (6) [redacted] WELL **Collected:** 04/05/2010 10:15 **SPL Sample ID:** 10040344-06

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00171 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:55 | RJD | 3553740 |
| Lead | 0.00177 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:55 | RJD | 3553740 |
| Manganese | 0.0249 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:55 | RJD | 3553740 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:55 | RJD | 3553740 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:55 | RJD | 3553740 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BC-03 **Collected:** 04/05/2010 10:44 **SPL Sample ID:** 10040344-07

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:17 | RJD | 3553727 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:17 | RJD | 3553727 |
| Manganese | 0.000141 | J | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:17 | RJD | 3553727 |
| Nickel | 0.000884 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:17 | RJD | 3553727 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:17 | RJD | 3553727 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BC-07 **Collected:** 04/05/2010 11:38 **SPL Sample ID:** 10040344-08

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.0016 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 22:58 | RJD | 3553741 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 22:58 | RJD | 3553741 |
| Manganese | 0.0314 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 22:58 | RJD | 3553741 |
| Nickel | 0.000742 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 22:58 | RJD | 3553741 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 22:58 | RJD | 3553741 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DW-04 **Collected:** 04/05/2010 13:02 **SPL Sample ID:** 10040344-09

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:01 | RJD | 3553742 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:01 | RJD | 3553742 |
| Manganese | ND | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:01 | RJD | 3553742 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:01 | RJD | 3553742 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:01 | RJD | 3553742 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BC-19 **Collected:** 04/05/2010 13:28 **SPL Sample ID:** 10040344-10

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:03 | RJD | 3553743 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:03 | RJD | 3553743 |
| Manganese | 0.000316 | J | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:03 | RJD | 3553743 |
| Nickel | 0.00134 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:03 | RJD | 3553743 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:03 | RJD | 3553743 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BC-25 **Collected:** 04/05/2010 14:00 **SPL Sample ID:** 10040344-11

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:06 | RJD | 3553744 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:06 | RJD | 3553744 |
| Manganese | 0.0277 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:06 | RJD | 3553744 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:06 | RJD | 3553744 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:06 | RJD | 3553744 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** MW-03 **Collected:** 04/05/2010 14:26 **SPL Sample ID:** 10040344-12

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:16 | RJD | 3553747 |
| Lead | 0.0015 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:16 | RJD | 3553747 |
| Manganese | 0.677 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:16 | RJD | 3553747 |
| Nickel | 0.00138 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:16 | RJD | 3553747 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:16 | RJD | 3553747 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** MW-06 **Collected:** 04/05/2010 15:05 **SPL Sample ID:** 10040344-13

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:18 | RJD | 3553748 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:18 | RJD | 3553748 |
| Manganese | 1.92 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:18 | RJD | 3553748 |
| Nickel | 0.0179 | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:18 | RJD | 3553748 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:18 | RJD | 3553748 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BB-01 **Collected:** 04/06/2010 10:31 **SPL Sample ID:** 10040344-14

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00518 | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:21 | RJD | 3553749 |
| Lead | 0.00449 | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:21 | RJD | 3553749 |
| Manganese | 0.00489 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:21 | RJD | 3553749 |
| Nickel | 0.000688 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:21 | RJD | 3553749 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:21 | RJD | 3553749 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** SOUTH WELL **Collected:** 04/06/2010 10:45 **SPL Sample ID:** 10040344-15

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:24 | RJD | 3553750 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:24 | RJD | 3553750 |
| Manganese | 0.00378 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:24 | RJD | 3553750 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:24 | RJD | 3553750 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:24 | RJD | 3553750 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BC-17 **Collected:** 04/06/2010 11:15 **SPL Sample ID:** 10040344-16

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00248 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:26 | RJD | 3553751 |
| **Lead** | **0.0172** | **>MCL** | **0.000137** | **0.002** | **0.015** | **1** | **04/26/10 23:26** | **RJD** | **3553751** |
| Manganese | 0.106 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:26 | RJD | 3553751 |
| Nickel | 0.00169 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:26 | RJD | 3553751 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:26 | RJD | 3553751 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** NORTH WELL **Collected:** 04/06/2010 11:20 **SPL Sample ID:** 10040344-17

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 0:25 | RJD | 3545036 |
| Lead | 0.000872 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 0:25 | RJD | 3545036 |
| Manganese | 0.00457 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 0:25 | RJD | 3545036 |
| Nickel | 0.0013 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 0:25 | RJD | 3545036 |
| Thallium | 0.000339 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 0:25 | RJD | 3545036 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BC-21R **Collected:** 04/06/2010 11:48 **SPL Sample ID:** 10040344-18

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:29 | RJD | 3553752 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:29 | RJD | 3553752 |
| Manganese | 0.00468 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:29 | RJD | 3553752 |
| Nickel | 0.00123 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:29 | RJD | 3553752 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:29 | RJD | 3553752 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-01A **Collected:** 04/06/2010 12:08 **SPL Sample ID:** 10040344-19

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00638 | | 0.00145 | 0.004 | 0.01 | 1 | 04/26/10 23:32 | RJD | 3553753 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:32 | RJD | 3553753 |
| Manganese | 0.00523 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:32 | RJD | 3553753 |
| Nickel | ND | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:32 | RJD | 3553753 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:32 | RJD | 3553753 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-01 **Collected:** 04/06/2010 12:25 **SPL Sample ID:** 10040344-20

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP/MS** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | ND | | 0.000137 | 0.001 | 0.015 | 1 | 04/23/10 12:41 | RJD | 3549907 |
| Manganese | 1.42 | | 9.14E-05 | 0.002 | | 1 | 04/23/10 12:41 | RJD | 3549907 |
| Nickel | 0.0605 | B | 0.000678 | 0.002 | 0.073 | 1 | 04/27/10 0:48 | RJD | 3553767 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/23/10 12:41 | RJD | 3549907 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005 | 04/14/2010 15:05 | SA | 1.00 |

| METALS BY METHOD 6020 (ICP/MS), TOTAL | | | | | MCL | | SW6020 Units: mg/L | | |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.00105 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/26/10 23:34 | RJD | 3553754 |
| Manganese | 1.51 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:34 | RJD | 3553754 |
| Nickel | 0.0612 | | 0.000678 | 0.002 | 0.073 | 1 | 04/26/10 23:34 | RJD | 3553754 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:34 | RJD | 3553754 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DW-03 **Collected:** 04/06/2010 12:58 **SPL Sample ID:** 10040344-21

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| **Lead** | **0.0846** | **>MCL** | **0.000137** | **0.002** | **0.015** | **1** | **04/26/10 23:37** | **RJD** | **3553755** |
| Manganese | 6.73 | | 9.14E-05 | 0.002 | | 1 | 04/26/10 23:37 | RJD | 3553755 |
| **Nickel** | **0.178** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/26/10 23:37** | **RJD** | **3553755** |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/26/10 23:37 | RJD | 3553755 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** PW-04 **Collected:** 04/06/2010 13:18 **SPL Sample ID:** 10040344-22

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.00109 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 0:48 | RJD | 3545044 |
| Manganese | 0.931 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 0:48 | RJD | 3545044 |
| Nickel | 0.0237 | | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 0:48 | RJD | 3545044 |
| Thallium | 0.000151 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 0:48 | RJD | 3545044 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DW-02 **Collected:** 04/06/2010 13:52 **SPL Sample ID:** 10040344-23

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.0114 | | 0.000687 | 0.01 | 0.015 | 5 | 04/21/10 0:58 | RJD | 3545045 |
| Manganese | 16.9 | | 0.000457 | 0.01 | | 5 | 04/21/10 0:58 | RJD | 3545045 |
| **Nickel** | **0.824** | **>MCL** | **0.00339** | **0.01** | **0.073** | **5** | **04/21/10 0:58** | **RJD** | **3545045** |
| Thallium | ND | | 0.000735 | 0.01 | 0.002 | 5 | 04/21/10 0:58 | RJD | 3545045 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-05A **Collected:** 04/06/2010 14:25 **SPL Sample ID:** 10040344-24

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00238 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 1:03 | RJD | 3545046 |
| Lead | 0.000326 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 1:03 | RJD | 3545046 |
| Manganese | 0.00985 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:03 | RJD | 3545046 |
| Nickel | 0.00176 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 1:03 | RJD | 3545046 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:03 | RJD | 3545046 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA05 **Collected:** 04/06/2010 14:45 **SPL Sample ID:** 10040344-25

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP/MS** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/23/10 13:06 | RJD | 3549915 |
| Lead | ND | | 0.000137 | 0.001 | 0.015 | 1 | 04/23/10 13:06 | RJD | 3549915 |
| Manganese | 14.1 | | 9.14E-05 | 0.002 | | 1 | 04/23/10 13:06 | RJD | 3549915 |
| Nickel | 0.0557 | B | 0.000678 | 0.002 | 0.073 | 1 | 04/27/10 1:13 | RJD | 3553775 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/23/10 13:06 | RJD | 3549915 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005 | 04/14/2010 15:05 | SA | 1.00 |

| METALS BY METHOD 6020 (ICP/MS), TOTAL | | | | | MCL | | SW6020 Units: mg/L | | |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.00195 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 1:05 | RJD | 3545047 |
| Lead | 0.000365 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 1:05 | RJD | 3545047 |
| Manganese | 13.5 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:05 | RJD | 3545047 |
| Nickel | 0.0517 | | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 1:05 | RJD | 3545047 |
| Thallium | 0.00015 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:05 | RJD | 3545047 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** MW-A **Collected:** 04/07/2010 7:54 **SPL Sample ID:** 10040344-26

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 1:08 | RJD | 3545048 |
| Lead | 0.000271 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 1:08 | RJD | 3545048 |
| Manganese | 0.00724 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:08 | RJD | 3545048 |
| Nickel | 0.00178 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 1:08 | RJD | 3545048 |
| Thallium | 0.00015 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:08 | RJD | 3545048 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DW-01 **Collected:** 04/07/2010 8:39 **SPL Sample ID:** 10040344-27

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP/MS** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| **Arsenic** | **0.041** | **>MCL** | **0.00145** | **0.004** | **0.01** | **1** | **04/23/10 13:09** | **RJD** | **3549916** |
| Lead | 0.000628 | J | 0.000137 | 0.001 | 0.015 | 1 | 04/23/10 13:09 | RJD | 3549916 |
| Manganese | 3.82 | | 9.14E-05 | 0.002 | | 1 | 04/23/10 13:09 | RJD | 3549916 |
| Nickel | 0.0222 | B | 0.000678 | 0.002 | 0.073 | 1 | 04/27/10 1:15 | RJD | 3553776 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/23/10 13:09 | RJD | 3549916 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005 | 04/14/2010 15:05 | SA | 1.00 |

| METALS BY METHOD 6020 (ICP/MS), TOTAL | | | | | MCL | | SW6020 Units: mg/L | | |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.12** | **>MCL** | **0.00145** | **0.004** | **0.01** | **1** | **04/21/10 1:11** | **RJD** | **3545049** |
| Lead | 0.00254 | | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 1:11 | RJD | 3545049 |
| Manganese | 4.72 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:11 | RJD | 3545049 |
| Nickel | 0.0254 | | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 1:11 | RJD | 3545049 |
| Thallium | 0.000324 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:11 | RJD | 3545049 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** MW-02 **Collected:** 04/07/2010 10:15 **SPL Sample ID:** 10040344-28

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.00418 | | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 1:13 | RJD | 3545050 |
| Manganese | 1.91 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:13 | RJD | 3545050 |
| **Nickel** | **0.0801** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/21/10 1:13** | **RJD** | **3545050** |
| Thallium | 0.000804 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:13 | RJD | 3545050 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** MW-01 **Collected:** 04/07/2010 9:22 **SPL Sample ID:** 10040344-29

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.00261 | J | 0.000687 | 0.01 | 0.015 | 5 | 04/21/10 2:46 | RJD | 3545069 |
| Manganese | 5.6 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:47 | RJD | 3545054 |
| **Nickel** | **0.239** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/21/10 1:47** | **RJD** | **3545054** |
| Thallium | 0.000744 | J | 0.000735 | 0.01 | 0.002 | 5 | 04/21/10 2:46 | RJD | 3545069 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-03A **Collected:** 04/07/2010 11:07 **SPL Sample ID:** 10040344-30

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 1:53 | RJD | 3545056 |
| Lead | 0.00119 | J | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 1:53 | RJD | 3545056 |
| Manganese | 0.037 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:53 | RJD | 3545056 |
| Nickel | 0.00163 | J | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 1:53 | RJD | 3545056 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:53 | RJD | 3545056 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** BA-03 **Collected:** 04/07/2010 11:35 **SPL Sample ID:** 10040344-31

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| **Lead** | **0.144** | **>MCL** | **0.000137** | **0.002** | **0.015** | **1** | **04/21/10 1:56** | **RJD** | **3545057** |
| Manganese | 2.23 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 1:56 | RJD | 3545057 |
| **Nickel** | **0.0899** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/21/10 1:56** | **RJD** | **3545057** |
| Thallium | 0.000412 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 1:56 | RJD | 3545057 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DUPLICATE #1 **Collected:** 04/05/2010 0:00 **SPL Sample ID:** 10040344-32

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00176 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 2:02 | RJD | 3545059 |
| Lead | ND | | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 2:02 | RJD | 3545059 |
| Manganese | 0.0024 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 2:02 | RJD | 3545059 |
| Nickel | 0.00276 | | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 2:02 | RJD | 3545059 |
| Thallium | ND | | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 2:02 | RJD | 3545059 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DUPLICATE #2 **Collected:** 04/06/2010 0:00 **SPL Sample ID:** 10040344-33

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00286 | J | 0.00145 | 0.004 | 0.01 | 1 | 04/21/10 2:05 | RJD | 3545060 |
| Lead | 0.0137 | | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 2:05 | RJD | 3545060 |
| Manganese | 0.0976 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 2:05 | RJD | 3545060 |
| Nickel | 0.00326 | | 0.000678 | 0.002 | 0.073 | 1 | 04/21/10 2:05 | RJD | 3545060 |
| Thallium | 0.000154 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 2:05 | RJD | 3545060 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DUPLICATE #3 **Collected:** 04/06/2010 0:00 **SPL Sample ID:** 10040344-34

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.0134 | | 0.000687 | 0.01 | 0.015 | 5 | 04/21/10 2:49 | RJD | 3545070 |
| Manganese | 11.7 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 2:07 | RJD | 3545061 |
| **Nickel** | **0.526** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/21/10 2:07** | **RJD** | **3545061** |
| Thallium | ND | | 0.000735 | 0.01 | 0.002 | 5 | 04/21/10 2:49 | RJD | 3545070 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

**Client Sample ID:** DUPLICATE #4 **Collected:** 04/07/2010 0:00 **SPL Sample ID:** 10040344-35

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | MCL | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.00325 | | 0.000137 | 0.002 | 0.015 | 1 | 04/21/10 2:13 | RJD | 3545063 |
| Manganese | 2.04 | | 9.14E-05 | 0.002 | | 1 | 04/21/10 2:13 | RJD | 3545063 |
| **Nickel** | **0.0826** | **>MCL** | **0.000678** | **0.002** | **0.073** | **1** | **04/21/10 2:13** | **RJD** | **3545063** |
| Thallium | 0.000777 | J | 0.000147 | 0.002 | 0.002 | 1 | 04/21/10 2:13 | RJD | 3545063 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 04/09/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

# *Quality Control Documentation*

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** **Metals by Method 6020 (ICP/MS), Total** **WorkOrder:** **10040344**
**Method:** **SW6020** **Lab Batch ID:** **88671-I**

### Method Blank

RunID: ICPMS_100426G-3553725 Units: mg/L
Analysis Date: 04/26/2010 22:10 Analyst: RJD
Preparation Date: 04/09/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.004 | 0.00145 |
| Lead | ND | | 0.002 | 0.000137 |
| Manganese | 0.00127 | J | 0.002 | 0.0000914 |
| Nickel | ND | | 0.002 | 0.000678 |
| Thallium | ND | | 0.002 | 0.000147 |

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10040344-01A | BA-09A |
| 10040344-02A | BA-09 |
| 10040344-03A | MW-04 |
| 10040344-04A | WW-09 |
| 10040344-05A | WW-04 |
| 10040344-06A | (b) (6) WELL |
| 10040344-07A | BC-03 |
| 10040344-08A | BC-07 |
| 10040344-09A | DW-04 |
| 10040344-10A | BC-19 |
| 10040344-11A | BC-25 |
| 10040344-12A | MW-03 |
| 10040344-13A | MW-06 |
| 10040344-14A | BB-01 |
| 10040344-15A | SOUTH WELL |
| 10040344-16A | BC-17 |
| 10040344-18A | BC-21R |
| 10040344-19A | BA-01A |
| 10040344-20A | BA-01 |
| 10040344-21A | DW-03 |

### Laboratory Control Sample (LCS)

RunID: ICPMS_100426G-3553726 Units: mg/L
Analysis Date: 04/26/2010 22:13 Analyst: RJD
Preparation Date: 04/09/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1146 | 114.6 | | 80 | 120 |
| Lead | 0.1000 | 0.1105 | 110.5 | | 80 | 120 |
| Manganese | 0.1000 | 0.1121 | 112.1 | | 80 | 120 |
| Nickel | 0.1000 | 0.1104 | 110.4 | | 80 | 120 |
| Thallium | 0.1000 | 0.1123 | 112.3 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** **Metals by Method 6020 (ICP/MS), Total** **WorkOrder:** **10040344**
**Method:** **SW6020** **Lab Batch ID:** **88671-I**

Sample Spiked: 10040344-07
RunID: ICPMS_100426G-3553729 Units: mg/L
Analysis Date: 04/26/2010 22:22 Analyst: RJD
Preparation Date: 04/09/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.1006 | 100.6 | | 0.1 | 0.09009 | 90.09 | | 11.01 | | 20 | 75 | 125 |
| Lead | ND | | 0.1 | 0.09460 | 94.60 | | 0.1 | 0.08407 | 84.07 | | 11.79 | | 20 | 75 | 125 |
| Manganese | 0.0001412 | JB | 0.1 | 0.09539 | 95.24 | | 0.1 | 0.08317 | 83.03 | | 13.68 | | 20 | 75 | 125 |
| Nickel | 0.0008838 | J | 0.1 | 0.09096 | 90.08 | | 0.1 | 0.07975 | 78.87 | | 13.13 | | 20 | 75 | 125 |
| Thallium | ND | | 0.1 | 0.09622 | 96.22 | | 0.1 | 0.08653 | 86.53 | | 10.61 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:32:32 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Metals by Method 6020 (ICP/MS), Total
**Method:** SW6020
**WorkOrder:** 10040344
**Lab Batch ID:** 88672-I

### Method Blank

RunID: ICPMS_100420I-3545034 Units: mg/L
Analysis Date: 04/21/2010 0:19 Analyst: RJD
Preparation Date: 04/09/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.004 | 0.00145 |
| Lead | ND | | 0.002 | 0.000137 |
| Manganese | 0.00156 | J | 0.002 | 0.0000914 |
| Nickel | 0.00112 | J | 0.002 | 0.000678 |
| Thallium | ND | | 0.002 | 0.000147 |

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10040344-17A | NORTH WELL |
| 10040344-22A | PW-04 |
| 10040344-23A | DW-02 |
| 10040344-24A | BA-05A |
| 10040344-25A | BA05 |
| 10040344-26A | MW-A |
| 10040344-27A | DW-01 |
| 10040344-28A | MW-02 |
| 10040344-29A | MW-01 |
| 10040344-30A | BA-03A |
| 10040344-31A | BA-03 |
| 10040344-32A | DUPLICATE #1 |
| 10040344-33A | DUPLICATE #2 |
| 10040344-34A | DUPLICATE #3 |
| 10040344-35A | DUPLICATE #4 |

### Laboratory Control Sample (LCS)

RunID: ICPMS_100420I-3545035 Units: mg/L
Analysis Date: 04/21/2010 0:21 Analyst: RJD
Preparation Date: 04/09/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1044 | 104.4 | | 80 | 120 |
| Lead | 0.1000 | 0.1077 | 107.7 | | 80 | 120 |
| Manganese | 0.1000 | 0.1089 | 108.9 | | 80 | 120 |
| Nickel | 0.1000 | 0.1057 | 105.7 | | 80 | 120 |
| Thallium | 0.1000 | 0.1071 | 107.1 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10040344-17
RunID: ICPMS_100420I-3545038 Units: mg/L
Analysis Date: 04/21/2010 0:30 Analyst: RJD
Preparation Date: 04/09/2010 17:00 Prep By: SA Method SW3010A

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** **Metals by Method 6020 (ICP/MS), Total** **WorkOrder:** **10040344**
**Method:** **SW6020** **Lab Batch ID:** **88672-I**

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.09312 | 93.12 | | 0.1 | 0.08803 | 88.03 | | 5.616 | | 20 | 75 | 125 |
| Lead | 0.0008717 | J | 0.1 | 0.09145 | 90.58 | | 0.1 | 0.08763 | 86.76 | | 4.270 | | 20 | 75 | 125 |
| Manganese | 0.004567 | B | 0.1 | 0.09348 | 88.91 | | 0.1 | 0.09232 | 87.75 | | 1.248 | | 20 | 75 | 125 |
| Nickel | 0.001295 | JB | 0.1 | 0.08899 | 87.69 | | 0.1 | 0.08808 | 86.79 | | 1.021 | | 20 | 75 | 125 |
| Thallium | 0.0003394 | J | 0.1 | 0.09239 | 92.05 | | 0.1 | 0.08796 | 87.62 | | 4.914 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:32:33 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** **Dissolved Metals by ICP/MS** **WorkOrder:** **10040344**
**Method:** **SW6020** **Lab Batch ID:** **88810-I**

**Method Blank**

RunID: ICPMS_100426G-3553765 Units: mg/L
Analysis Date: 04/27/2010 0:42 Analyst: RJD
Preparation Date: 04/14/2010 15:05 Prep By: SA Method SW3005

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10040344-20B | BA-01 |
| 10040344-25B | BA05 |
| 10040344-27B | DW-01 |

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Nickel | 0.00216 | | 0.002 | 0.000678 |

**Laboratory Control Sample (LCS)**

RunID: ICPMS_100426G-3553766 Units: mg/L
Analysis Date: 04/27/2010 0:45 Analyst: RJD
Preparation Date: 04/14/2010 15:05 Prep By: SA Method SW3005

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Nickel | 0.1000 | 0.1016 | 101.6 | | 80 | 120 |

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Sample Spiked: 10040344-20
RunID: ICPMS_100426G-3553769 Units: mg/L
Analysis Date: 04/27/2010 0:54 Analyst: RJD
Preparation Date: 04/14/2010 15:05 Prep By: Method SW3005

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel | 0.06054 | B | 0.1 | 0.1496 | 89.02 | | 0.1 | 0.1461 | 85.60 | | 2.309 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:32:34 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Dissolved Metals by ICP/MS
**Method:** SW6020
**WorkOrder:** 10040344
**Lab Batch ID:** 88810-I

### Method Blank

RunID: ICPMS_100423C-3549905 Units: mg/L
Analysis Date: 04/23/2010 12:34 Analyst: RJD
Preparation Date: 04/14/2010 15:05 Prep By: SA Method SW3005

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10040344-20B | BA-01 |
| 10040344-25B | BA05 |
| 10040344-27B | DW-01 |

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.004 | 0.00145 |
| Lead | ND | | 0.001 | 0.000137 |
| Manganese | 0.000755 | J | 0.002 | 0.0000914 |
| Thallium | ND | | 0.002 | 0.000147 |

### Laboratory Control Sample (LCS)

RunID: ICPMS_100423C-3549906 Units: mg/L
Analysis Date: 04/23/2010 12:37 Analyst: RJD
Preparation Date: 04/14/2010 15:05 Prep By: SA Method SW3005

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1081 | 108.1 | | 80 | 120 |
| Lead | 0.1000 | 0.1083 | 108.3 | | 80 | 120 |
| Manganese | 0.1000 | 0.09999 | 99.99 | | 80 | 120 |
| Thallium | 0.1000 | 0.1094 | 109.4 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10040344-20
RunID: ICPMS_100423C-3549909 Units: mg/L
Analysis Date: 04/23/2010 12:46 Analyst: RJD
Preparation Date: 04/14/2010 15:05 Prep By: SA Method SW3005

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.04905 | 49.05 | * | 0.1 | 0.04774 | 47.74 | * | 2.713 | | 20 | 75 | 125 |
| Lead | ND | | 0.1 | 0.08970 | 89.70 | | 0.1 | 0.08923 | 89.23 | | 0.5222 | | 20 | 75 | 125 |
| Manganese | 1.421 | B | 0.1 | 1.464 | N/C | | 0.1 | 1.477 | N/C | | N/C | | 20 | 75 | 125 |
| Thallium | ND | | 0.1 | 0.08849 | 88.49 | | 0.1 | 0.08876 | 88.76 | | 0.3078 | | 20 | 75 | 125 |

### Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:32:34 AM

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** **Dissolved Metals by ICP/MS** **WorkOrder:** **10040344**
**Method:** **SW6020** **Lab Batch ID:** **88810-I**

Sample Spiked: 10040344-20
RunID: ICPMS_100423C-3549911 Units: mg/L
Analysis Date: 04/23/2010 12:51 Analyst: RJD

| Analyte | Sample Result | PDS Spike Added | PDS Result | PDS % Recovery | PDSD Spike Added | PDSD Result | PDSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.5 | 0.395 | 79.00 | 0.5 | 0.4086 | 81.73 | 3.395 | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:32:34 AM

*Sample Receipt Checklist*

*And*

*Chain of Custody*

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

## Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Workorder: | **10040344** | Received By: | **EMB** |
| Date and Time Received: | **4/8/2010 4:40:00 PM** | Carrier name: | **SPL-Driver-Other** |
| Temperature: | **3°C** | Chilled by: | **Water Ice** |

| | | | | |
|---|---|---|---|---|
| 1. | **Shipping container/cooler in good condition?** | Yes ☑ | No ☐ | Not Present ☐ |
| 2. | **Custody seals intact on shippping container/cooler?** | Yes ☑ | No ☐ | Not Present ☐ |
| 3. | **Custody seals intact on sample bottles?** | Yes ☐ | No ☐ | Not Present ☑ |
| 4. | **Chain of custody present?** | Yes ☑ | No ☐ | |
| 5. | **Chain of custody signed when relinquished and received?** | Yes ☑ | No ☐ | |
| 6. | **Chain of custody agrees with sample labels?** | Yes ☑ | No ☐ | |
| 7. | **Samples in proper container/bottle?** | Yes ☑ | No ☐ | |
| 8. | **Sample containers intact?** | Yes ☑ | No ☐ | |
| 9. | **Sufficient sample volume for indicated test?** | Yes ☑ | No ☐ | |
| 10. | **All samples received within holding time?** | Yes ☑ | No ☐ | |
| 11. | **Container/Temp Blank temperature in compliance?** | Yes ☑ | No ☐ | |
| 12. | **Water - VOA vials have zero headspace?** | Yes ☐ | No ☐ | VOA Vials Not Present ☑ |
| 13. | **Water - Preservation checked upon receipt (except VOA*)?** | Yes ☑ | No ☐ | Not Applicable ☐ |

***VOA Preservation Checked After Sample Analysis**

**SPL Representative:** _____ **Contact Date & Time:** _____

**Client Name Contacted:** _____

**Non Conformance Issues:** _____

**Client Instructions:** _____

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 301935
10040344 page 1 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 225-924-2002

| SAMPLE ID | DATE | TIME | comp | grab | matrix (W=water S=soil O=oil A=air SL=sludge E=encore X=other) | bottle (P=plastic A=amber glass G=glass V=vial X=other) | size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other) | pres. (1=HCl 2=HNO3 3=H2SO4 X=other) | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | MS/MSD | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-09A | 4/5/10 | 814 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| BA-09 | 4/5/10 | 837 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| MW-04 | 4/5/10 | 921 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| WW-09 | 4/5/10 | 920 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| WW-04 | 4/5/10 | 1010 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| (b) (6) well | 4/5/10 | 1015 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| BC-03 | 4/5/10 | 1044 | | X | W | P | 1 | 2 | 3 | X | | X | | | | | | | 3 |
| BC-07 | 4/5/10 | 1138 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| DW-04 | 4/5/10 | 1302 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |
| BC-19 | 4/5/10 | 1328 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | | 1 |

Client/Consultant Remarks: Metals: Arsenic, Lead, Manganese, Nickel & Thallium

Laboratory remarks: CS02 SPLP/L (3W) PH12

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 3.0 (5)

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/8/10 | time 845 | 4. Received by: |
| 5. Relinquished by: | date 4-8-10 | time 1540 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 304081

page 2 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph:

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | MS/MSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-25 | 4/5/10 | 1400 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-03 | 4/5/10 | 1426 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-06 | 4/5/10 | 1505 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BB-01 | 4/6/10 | 1031 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| South Well | 4/6/10 | 1045 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BC-17 | 4/6/10 | 1115 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Northwell | 4/6/10 | 1120 | | X | W | P | 1 | 2 | 3 | X | | X | | | | | | 3 |
| BC-21R | 4/6/10 | 1148 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-01A | 4/6/10 | 1208 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-01 | 4/6/10 | 1225 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | 2 |

Client/Consultant Remarks: Metals: Arsenic, Lead, Manganese, Nickel & Thallium

Laboratory remarks: CS 02

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 3 no CS

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/8/10 | time 845 | 4. Received by: Robert Trillo |
| 5. Relinquished by: Robert Trillo | date 4-8-10 | time 1640 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 298844

page 3 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc Ph: 225-929-2002

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

**Requested Analysis**

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-03 | 4/6/10 | 1258 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| PW-04 | 4/6/10 | 1318 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| DW-02 | 4/6/10 | 1352 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-05A | 4/6/10 | 1425 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-05 | 4/6/10 | 1445 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | 2 |
| MW-A | 4/7/10 | 754 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| DW-01 | 4/7/10 | 839 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | 2 |
| MW-02 | 4/7/10 | 1015 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-01 | 4/7/10 | 922 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-03A | 4/7/10 | 1107 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks: Metals: Arsenic, Lead, Manganese, Nickel, & Thallium

Laboratory remarks: CS 02

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 3.2 (5)

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/8/10 | time 945 | 4. Received by: |
| 5. Relinquished by: | date 4-8-10 | time 1640 | 6. Received by Laboratory: |

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 298845

page 4 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 225-924-2002

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-03 | 4/7/10 | 1135 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #1 | 4/5/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #2 | 4/6/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #3 | 4/6/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #4 | 4/7/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks:
Metals: Arsenic, Lead, Manganese, Nickel, Thallium

Laboratory remarks: CS QC

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 3.0 (C)

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/9/10 | time 845 | 4. Received by: |
| 5. Relinquished by: | date 4-8-10 | time 1640 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

## Case Narrative for:

# SPL, Inc.

## Certificate of Analysis Number:

## 10050082

| Report To: | | Project Name: | SEMS, INC. |
|---|---|---|---|
| SPL, Inc. | | Site: | Louisiana |
| Kitty Davis Baudoin | | Site Address: | |
| 500 Ambassador Caffery Parkway | | | |
| | | PO Number: | 10040344 |
| Scott | | State: | Louisiana |
| LA | | State Cert. No.: | 02029 |
| 70583-8544 | | Date Reported: | 5/21/2010 |
| ph (337) 237-4775 | fax: | | |

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II: ANALYSIS AND EXCEPTIONS:

Dissolved and Total Metals Method 6010:

There were no exceptions noted.

III. GENERAL REPORTING COMMENTS:

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

Alisha C. Rodriguez

5/26/2010

Alisha C. Rodriguez
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

# SPL, Inc.

## Certificate of Analysis Number:

## 10050082

**Report To:** SPL, Inc.
Kitty Davis Baudoin
500 Ambassador Caffery Parkway

Scott
LA
70583-8544
ph (337) 237-4775 fax: (337) 237-8005

**Fax To:**

**Project Name:** SEMS, INC.
**Site:** Louisiana
**Site Address:**

**PO Number:** 10040344
**State:** Louisiana
**State Cert. No.:** 02029
**Date Reported:** 5/21/2010

| Client Sample ID | Lab Sample ID | Matrix | Date Collected | Date Received | COC ID | HOLD |
|---|---|---|---|---|---|---|
| BA-09 | 10050082-01 | Water | 04/05/2010 8:37 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| BA-01 | 10050082-02 | Water | 04/06/2010 12:25 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| DW-03 | 10050082-03 | Water | 04/06/2010 12:58 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| PW-04 | 10050082-04 | Water | 04/06/2010 13:18 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| DW-02 | 10050082-05 | Water | 04/06/2010 13:52 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| MW-02 | 10050082-06 | Water | 04/07/2010 10:15 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| MW-01 | 10050082-07 | Water | 04/07/2010 9:22 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| BA-03 | 10050082-08 | Water | 04/07/2010 11:35 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| DUPLICATE #3 | 10050082-09 | Water | 04/06/2010 0:00 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |
| DUPLICATE #4 | 10050082-10 | Water | 04/07/2010 0:00 | 5/4/2010 3:00:00 PM | 10040344 | ☐ |

Alisha C. Rodriguez

5/26/2010

Alisha C. Rodriguez
Project Manager

Date

Kesavalu M. Bagawandoss Ph.D., J.D.
Laboratory Director

Ted Yen
Quality Assurance Officer

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** BA-09 **Collected:** 04/05/2010 8:37 **SPL Sample ID:** 10050082-01

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0222 | | 0.0014 | 0.005 | 1 | 05/06/10 21:36 | EG | 5477862 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** BA-01 **Collected:** 04/06/2010 12:25 **SPL Sample ID:** 10050082-02

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, DISSOLVED** | | | | **MCL** | | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0044 | J | 0.0014 | 0.005 | 1 | 05/10/10 10:02 | EG | 5479718 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005A | 05/06/2010 14:00 | M_W | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | **MCL** | | **SW6010B Units: mg/L** | | |
| Arsenic | 0.015 | | 0.0014 | 0.005 | 1 | 05/06/10 22:55 | EG | 5477875 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

Alisha C. Rodriguez

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** DW-03 **Collected:** 04/06/2010 12:58 **SPL Sample ID:** 10050082-03

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.035 | | 0.0014 | 0.005 | 1 | 05/06/10 23:01 | EG | 5477876 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** PW-04 **Collected:** 04/06/2010 13:18 **SPL Sample ID:** 10050082-04

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | ND | | 0.0014 | 0.005 | 1 | 05/06/10 23:07 | EG | 5477877 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

5/26/2010 9:10:43 AM

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** DW-02 **Collected:** 04/06/2010 13:52 **SPL Sample ID:** 10050082-05

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0407 | | 0.0014 | 0.005 | 1 | 05/06/10 23:13 | EG | 5477878 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

Alisha C. Rodriguez

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** MW-02 **Collected:** 04/07/2010 10:15 **SPL Sample ID:** 10050082-06

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0035 | J | 0.0014 | 0.005 | 1 | 05/06/10 23:19 | EG | 5477879 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

Alisha C. Rodriguez

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

5/26/2010 9:10:44 AM

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** MW-01 **Collected:** 04/07/2010 9:22 **SPL Sample ID:** 10050082-07

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.043 | | 0.0014 | 0.005 | 1 | 05/06/10 23:25 | EG | 5477880 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** BA-03 **Collected:** 04/07/2010 11:35 **SPL Sample ID:** 10050082-08

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.004 | J | 0.0014 | 0.005 | 1 | 05/06/10 23:32 | EG | 5477881 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

Alisha C. Rodriguez

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** DUPLICATE #3 **Collected:** 04/06/2010 0:00 **SPL Sample ID:** 10050082-09

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0384 | | 0.0014 | 0.005 | 1 | 05/06/10 23:38 | EG | 5477882 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

Alisha C. Rodriguez

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

**Client Sample ID** DUPLICATE #4 **Collected:** 04/07/2010 0:00 **SPL Sample ID:** 10050082-10

**Site: Louisiana**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6010B, TOTAL** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0035 | J | 0.0014 | 0.005 | 1 | 05/06/10 23:44 | EG | 5477883 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 05/05/2010 9:50 | F_S | 1.00 |

Alisha C. Rodriguez

**Alisha C. Rodriguez**
**Project Manager**

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

# *Quality Control Documentation*

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

# Quality Control Report

## SPL, Inc.

**SEMS, INC.**

**Analysis:** Metals by Method 6010B, Total
**Method:** SW6010B
**WorkOrder:** 10050082
**Lab Batch ID:** 99584

### Method Blank

RunID: ICP2_100506A-5477860 Units: mg/L
Analysis Date: 05/06/2010 21:25 Analyst: EG
Preparation Date: 05/05/2010 9:50 Prep By: F_S Method SW3010A

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.005 | 0.0014 |

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10050082-01A | BA-09 |
| 10050082-02A | BA-01 |
| 10050082-03A | DW-03 |
| 10050082-04A | PW-04 |
| 10050082-05A | DW-02 |
| 10050082-06A | MW-02 |
| 10050082-07A | MW-01 |
| 10050082-08A | BA-03 |
| 10050082-09A | DUPLICATE #3 |
| 10050082-10A | DUPLICATE #4 |

### Laboratory Control Sample (LCS)

RunID: ICP2_100506A-5477861 Units: mg/L
Analysis Date: 05/06/2010 21:31 Analyst: EG
Preparation Date: 05/05/2010 9:50 Prep By: F_S Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1000 | 100.0 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10050082-01
RunID: ICP2_100506A-5477863 Units: mg/L
Analysis Date: 05/06/2010 21:42 Analyst: EG
Preparation Date: 05/05/2010 9:50 Prep By: F_S Method SW3010A

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.02220 | | 0.1 | 0.09770 | 75.50 | | 0.1 | 0.09730 | 75.10 | | 0.4103 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:10:45 AM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

# Quality Control Report

## SPL, Inc.

**SEMS, INC.**

**Analysis:** Metals by Method 6010B, Dissolved
**Method:** SW6010B
**WorkOrder:** 10050082
**Lab Batch ID:** 99609

### Method Blank

RunID: ICP2_100509B-5479707 Units: mg/L
Analysis Date: 05/10/2010 8:57 Analyst: EG
Preparation Date: 05/06/2010 14:00 Prep By: M_ Method SW3005A

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10050082-02B | BA-01 |

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.005 | 0.0014 |

### Laboratory Control Sample (LCS)

RunID: ICP2_100509B-5479708 Units: mg/L
Analysis Date: 05/10/2010 9:02 Analyst: EG
Preparation Date: 05/06/2010 14:00 Prep By: M_ Method SW3005A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1072 | 107.2 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10050088-03
RunID: ICP2_100509B-5479710 Units: mg/L
Analysis Date: 05/10/2010 9:14 Analyst: EG
Preparation Date: 05/06/2010 14:00 Prep By: M_ Method SW3005A

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.1129 | 112.9 | | 0.1 | 0.1122 | 112.2 | | 0.6219 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

5/26/2010 9:10:45 AM

# *Sample Receipt Checklist*
# *And*
# *Chain of Custody*

**HOUSTON LABORATORY**
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

## Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Workorder: | **10050082** | Received By: | **AMV** |
| Date and Time Received: | **5/4/2010 3:00:00 PM** | Carrier name: | **SPL** |
| Temperature: | **3.0°C** | Chilled by: | **Water Ice** |

| | | | | |
|---|---|---|---|---|
| 1. | **Shipping container/cooler in good condition?** | Yes ☑ | No ☐ | Not Present ☐ |
| 2. | **Custody seals intact on shippping container/cooler?** | Yes ☐ | No ☐ | Not Present ☑ |
| 3. | **Custody seals intact on sample bottles?** | Yes ☐ | No ☐ | Not Present ☑ |
| 4. | **Chain of custody present?** | Yes ☑ | No ☐ | |
| 5. | **Chain of custody signed when relinquished and received?** | Yes ☑ | No ☐ | |
| 6. | **Chain of custody agrees with sample labels?** | Yes ☑ | No ☐ | |
| 7. | **Samples in proper container/bottle?** | Yes ☑ | No ☐ | |
| 8. | **Sample containers intact?** | Yes ☑ | No ☐ | |
| 9. | **Sufficient sample volume for indicated test?** | Yes ☑ | No ☐ | |
| 10. | **All samples received within holding time?** | Yes ☑ | No ☐ | |
| 11. | **Container/Temp Blank temperature in compliance?** | Yes ☑ | No ☐ | |
| 12. | **Water - VOA vials have zero headspace?** | Yes ☐ | No ☐ | VOA Vials Not Present ☑ |
| 13. | **Water - Preservation checked upon receipt (except VOA*)?** | Yes ☑ | No ☐ | Not Applicable ☐ |

***VOA Preservation Checked After Sample Analysis**

**SPL Representative:** _____ **Contact Date & Time:** _____

**Client Name Contacted:** _____

**Non Conformance Issues:** _____

**Client Instructions:** _____

10050082

**SPL, Inc.**
500 Ambassador Caffery Parkway

Scott, LA 70583-8544
(337) 237-4775

# CHAIN-OF-CUSTODY RECORD



| | |
|---|---|
| Company | SEMS, INC. |
| Project Manager | Jackson, Amy K. |
| Project Name | N-207-0006 |
| QC Level | LVL4 |
| Requested State | Louisiana |

**Subcontractor:**

SPL - Houston
8880 Interchange Dr

Houston, Texas 77054

TEL: (713) 660-0901
FAX: (713) 660-8975

Acct #: INTERCOMPANY

**03-May-10**

| Sample ID | Client Sample | Matrix | Collection Date | Due Date | Requested Tests | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | SW6010B | | | | | | |
| 10040344-02A | BA-09 | Water | 04/05/10 8:37 | 04/24/10 | 1 | Total As 0.015 mg/L | | | | | |
| 10040344-20A | BA-01 | Water | 04/06/10 12:25 | 04/24/10 | 1 | | | | | | |
| 10040344-20B | BA-01 | Water | 04/06/10 12:25 | 04/24/10 | 1 | Dissolved As 0.015 mg/L | | | | | |
| 10040344-21A | DW-03 | Water | 04/06/10 12:58 | 04/24/10 | 1 | Total As 0.015 mg/L | | | | | |
| 10040344-22A | PW-04 | Water | 04/06/10 13:18 | 04/24/10 | 1 | | | | | | |
| 10040344-23A | DW-02 | Water | 04/06/10 13:52 | 04/24/10 | 1 | | | | | | |
| 10040344-28A | MW-02 | Water | 04/07/10 10:15 | 04/24/10 | 1 | | | | | | |
| 10040344-29A | MW-01 | Water | 04/07/10 9:22 | 04/24/10 | 1 | | | | | | |
| 10040344-31A | BA-03 | Water | 04/07/10 11:35 | 04/24/10 | 1 | | | | | | |
| 10040344-34A | DUPLICATE #3 | Water | 04/06/10 0:00 | 04/24/10 | 1 | | | | | | |
| 10040344-35A | DUPLICATE #4 | Water | 04/07/10 0:00 | 04/24/10 | 1 | | | | | | |

CHECKED MAY 08 2010

**Comments:** Method 6010 for Arsenic only. Need reporting limit of 0.015 mg/L (please use mg/L units), Level 4 report using OMEGA only. If possible, report by 5/14/10. Please do not analyze by 6020.

Needs Level 4 EDD. Will send example via email.

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| Relinquished by: | Jennifer Mallet | 5/3/10 1700 | Received by: | | 5-04-10 12:30 |
| Relinquished by: | | 5-4-10 15:00 | Received by: | Amanda Vicernain | 5/4/10 15:0 |

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 10040344

301935

page 1 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 225-924-2002

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | MS/MSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-09A | 4/5/10 | 814 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-09 | 4/5/10 | 837 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-04 | 4/5/10 | 921 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| WW-09 | 4/5/10 | 920 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| WW-04 | 4/5/10 | 1010 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| (b) (6) well | 4/5/10 | 1015 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BC-03 | 4/5/10 | 1044 | | X | W | P | 1 | 2 | 3 | X | | X | | | | | | 3 |
| BC-07 | 4/5/10 | 1138 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| DW-04 | 4/5/10 | 1302 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BC-19 | 4/5/10 | 1328 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks: Metals: Arsenic, Lead, Manganese, Nickel & Thallium

Laboratory remarks: CSR SPLplu (3w) PH 12

Intact? Y N
Ice? Y N
Temp: 3.0C (5)

**Requested TAT**
- ☐ 1 Business Day
- ☐ 2 Business Days
- ☐ 3 Business Days
- ☐ Contract
- ☒ Standard
- ☐ Other
- Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/8/10 | time 845 | 4. Received by: |
| 5. Relinquished by: | date 4-8-10 | time 1540 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 304081

page 2 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@sems.inc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph:

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix (W=water S=soil O=oil A=air SL=sludge B=encore X=other) | bottle (P=plastic A=amber glass G=glass V=vial X=other) | size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other) | pres. (1=HCl 2=HNO3 3=H2SO4 X=other) | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | MS/MSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-25 | 4/5/10 | 1400 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-03 | 4/5/10 | 1426 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-06 | 4/5/10 | 1505 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BB-01 | 4/6/10 | 1031 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| South Well | 4/6/10 | 1045 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BC-17 | 4/6/10 | 1115 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Northwell | 4/6/10 | 1120 | | X | W | P | 1 | 2 | 3 | X | | X | | | | | | 3 |
| BC-21R | 4/6/10 | 1148 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-01A | 4/6/10 | 1208 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-01 | 4/6/10 | 1225 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | 2 |

Client/Consultant Remarks: Metals: Arsenic, Lead, Manganese, Nickel & Thallium

Laboratory remarks: CS OR

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 3.0°C (5.2)

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | date | time | | date | time |
|---|---|---|---|---|---|
| 1. Relinquished by Sampler: | 4/7/10 | 1300 | 2. Received by: | | |
| 3. Relinquished by: | 4/8/10 | 845 | 4. Received by: Roland Trillo | | |
| 5. Relinquished by: Roland Trillo | 4-8-10 | 1640 | 6. Received by Laboratory: | | |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 298844

page 3 of 4

Client Name: SEMS, Inc
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc Ph: 225-909-2002

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Tot. Metals 6020 | Dissolved Metals 6020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-03 | 4/6/10 | 1258 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| PW-04 | 4/6/10 | 1318 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| DW-02 | 4/6/10 | 1352 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-05A | 4/6/10 | 1425 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-05 | 4/6/10 | 1445 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | 2 |
| MW-A | 4/7/10 | 754 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| DW-01 | 4/7/10 | 839 | | X | W | P | 1 | 2 | 2 | X | X | | | | | | | 2 |
| MW-02 | 4/7/10 | 1015 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| MW-01 | 4/7/10 | 922 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| BA-03A | 4/7/10 | 1107 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks: Metals: Arsenic, Lead, Manganese, Nickel, & Thallium

Laboratory remarks: CS 02

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 3.6 (9)

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/8/10 | time 945 | 4. Received by: |
| 5. Relinquished by: | date 4-8-10 | time 1640 | 6. Received by Laboratory: |

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 298845

page 4 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delate Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 225-924-2002

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix (W=water S=soil O=oil A=air SL=sludge E=encore X=other) | bottle (P=plastic A=amber glass G=glass V=vial X=other) | size (1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other) | pres. (1=HCl 2=HNO3 3=H2SO4 X=other) | Number of Containers | Total Metals 6020 | Dissolved Metals 6020 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-03 | 4/7/10 | 1135 | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #1 | 4/5/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| ~~Duplicate #2~~ | ~~4/6/10~~ | ~~—~~ | | ~~X~~ | ~~W~~ | ~~P~~ | ~~1~~ | ~~2~~ | ~~1~~ | ~~X~~ | | | | | | | | ~~1~~ |
| Duplicate #3 | 4/6/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #4 | 4/7/10 | — | | X | W | P | 1 | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks:
Metals: Arsenic, Lead, Manganese, Nickel, Thallium

Laboratory remarks: CS QC

Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 3.0 (R)

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 4/7/10 | time 1300 | 2. Received by: |
| 3. Relinquished by: | date 4/9/10 | time 815 | 4. Received by: |
| 5. Relinquished by: | date 4-8-10 | time 1640 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

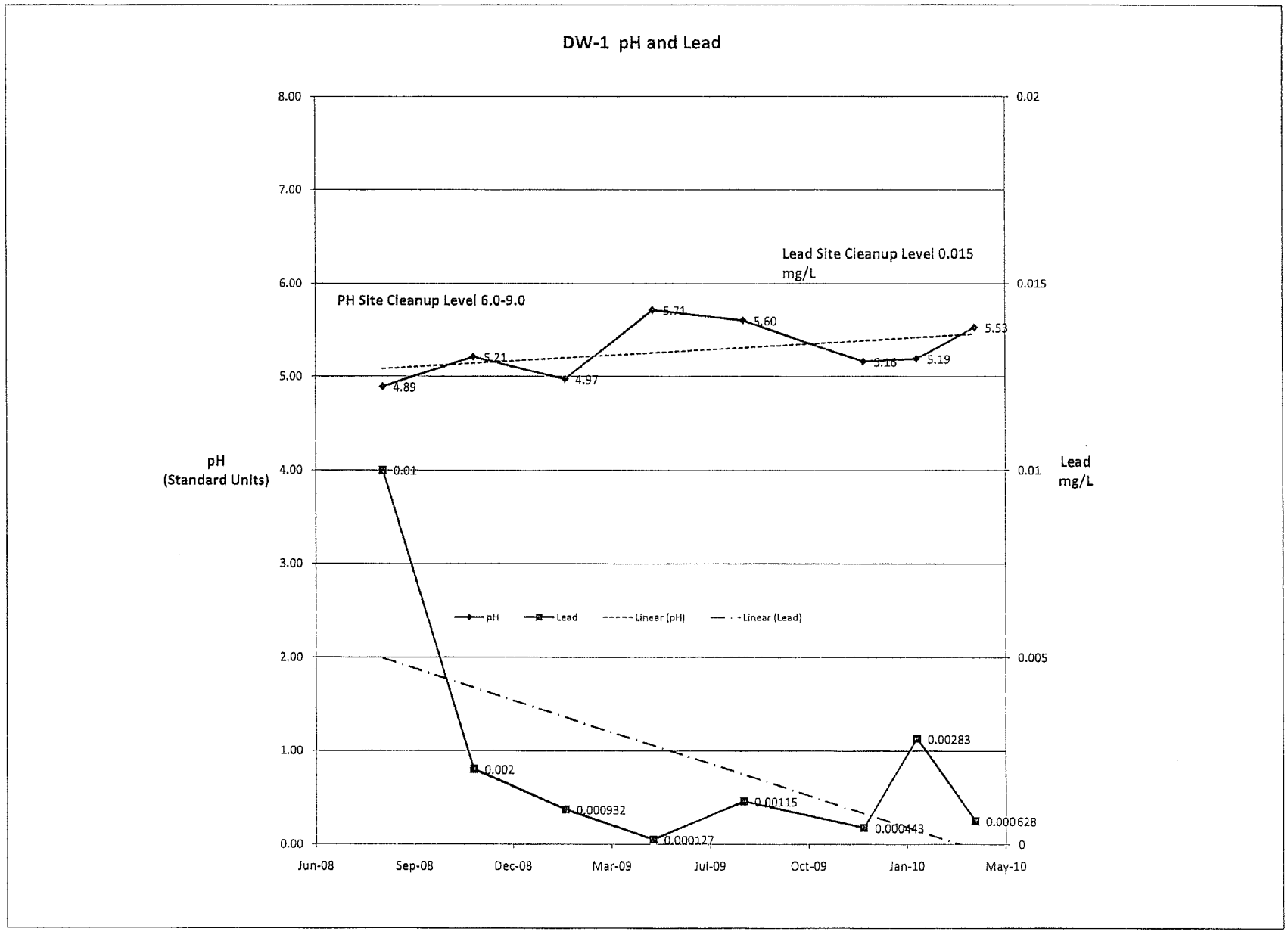
☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

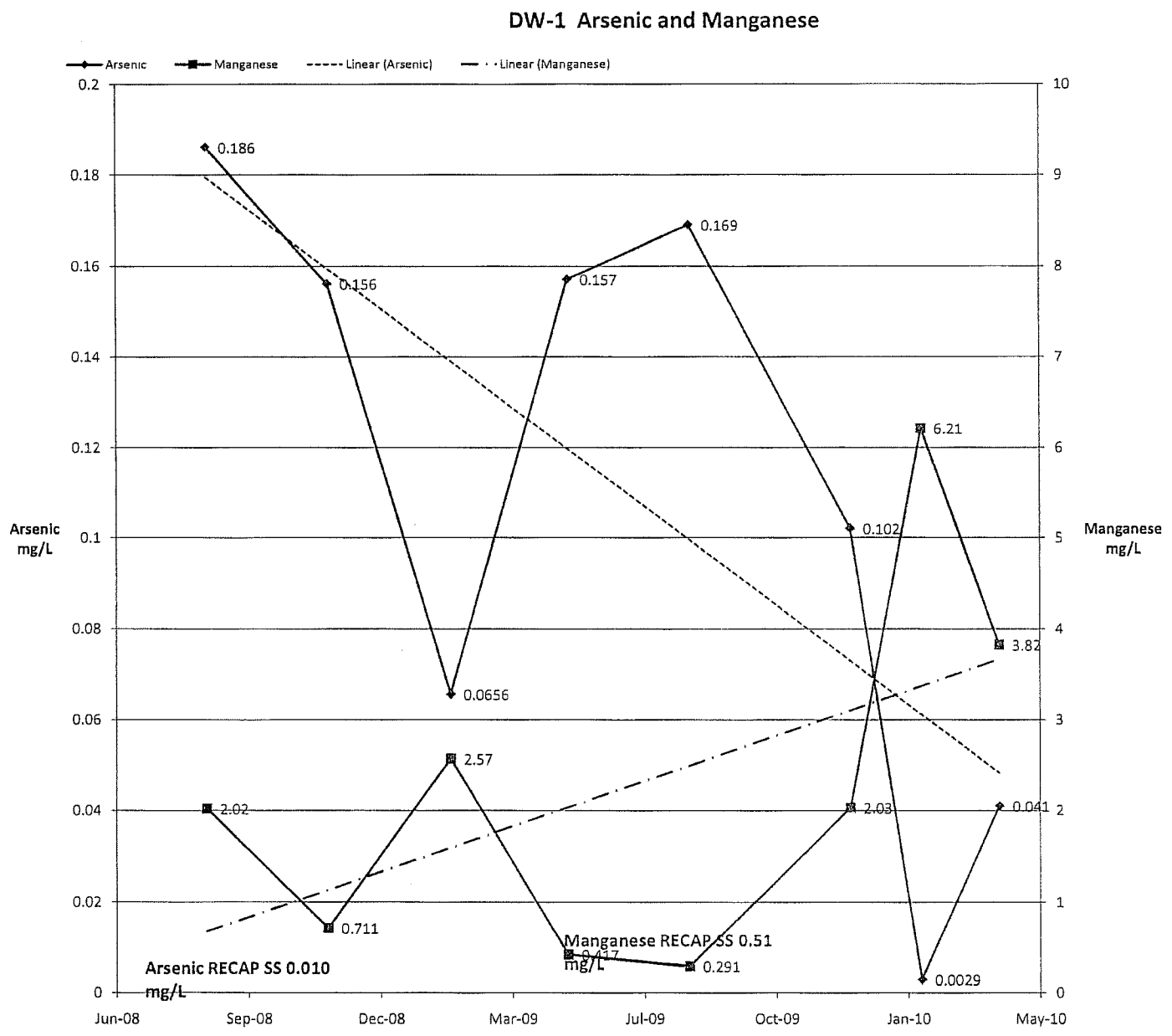
# ATTACHMENT C

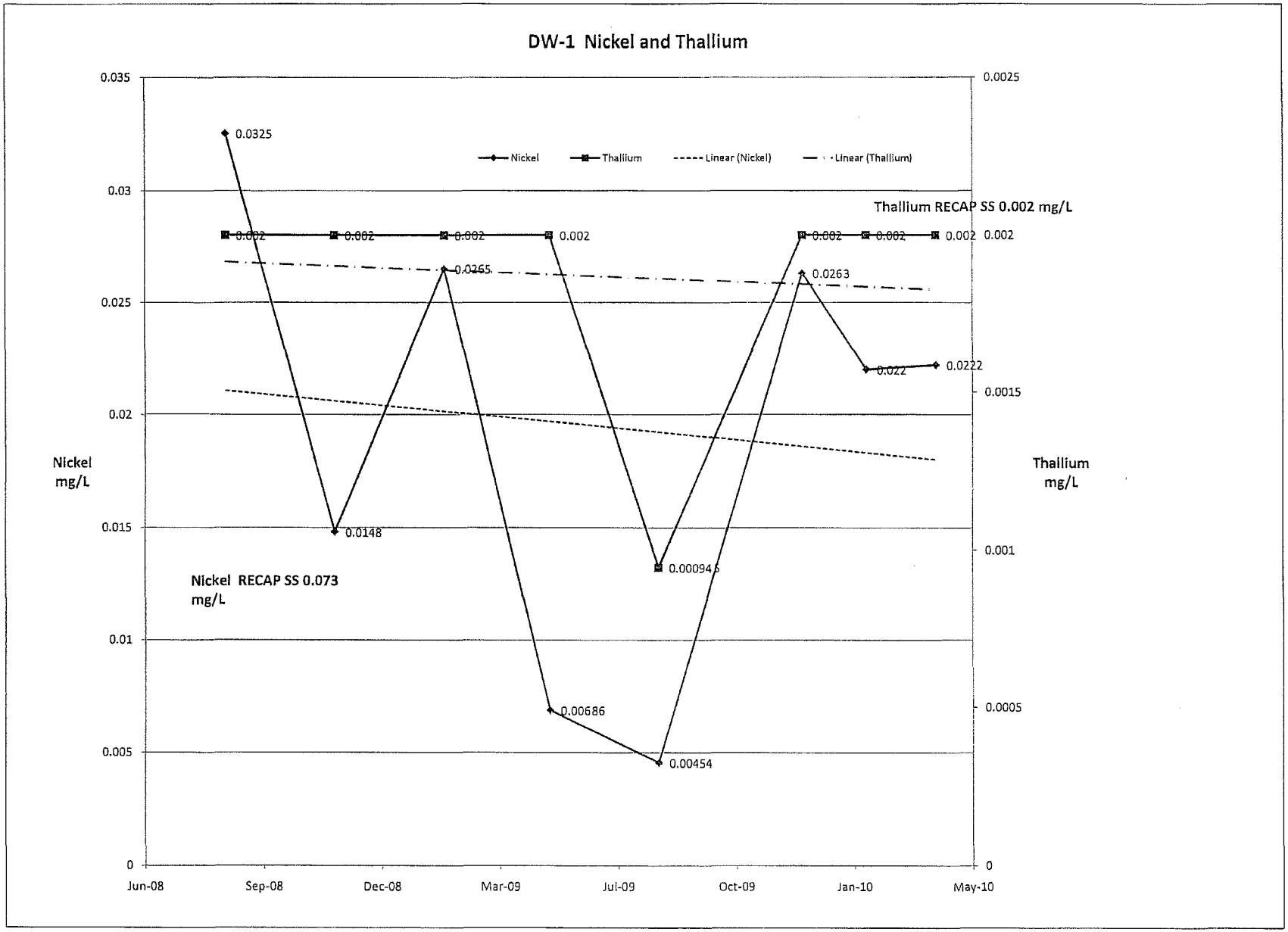
## HISTORICAL CONCENTRATION
## VS.
## TIME GRAPHS

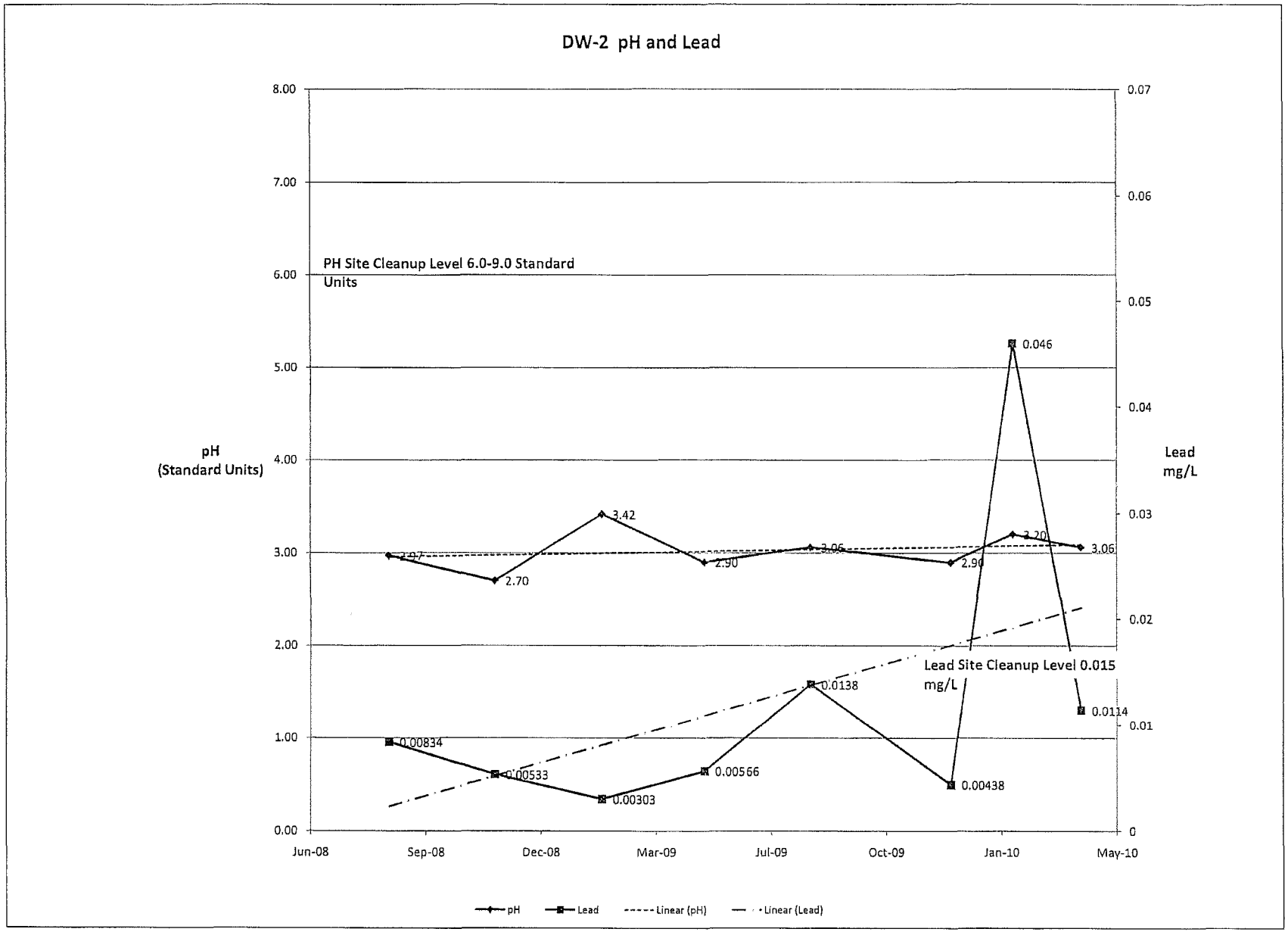
## (PAST EIGHT QUARTERS)

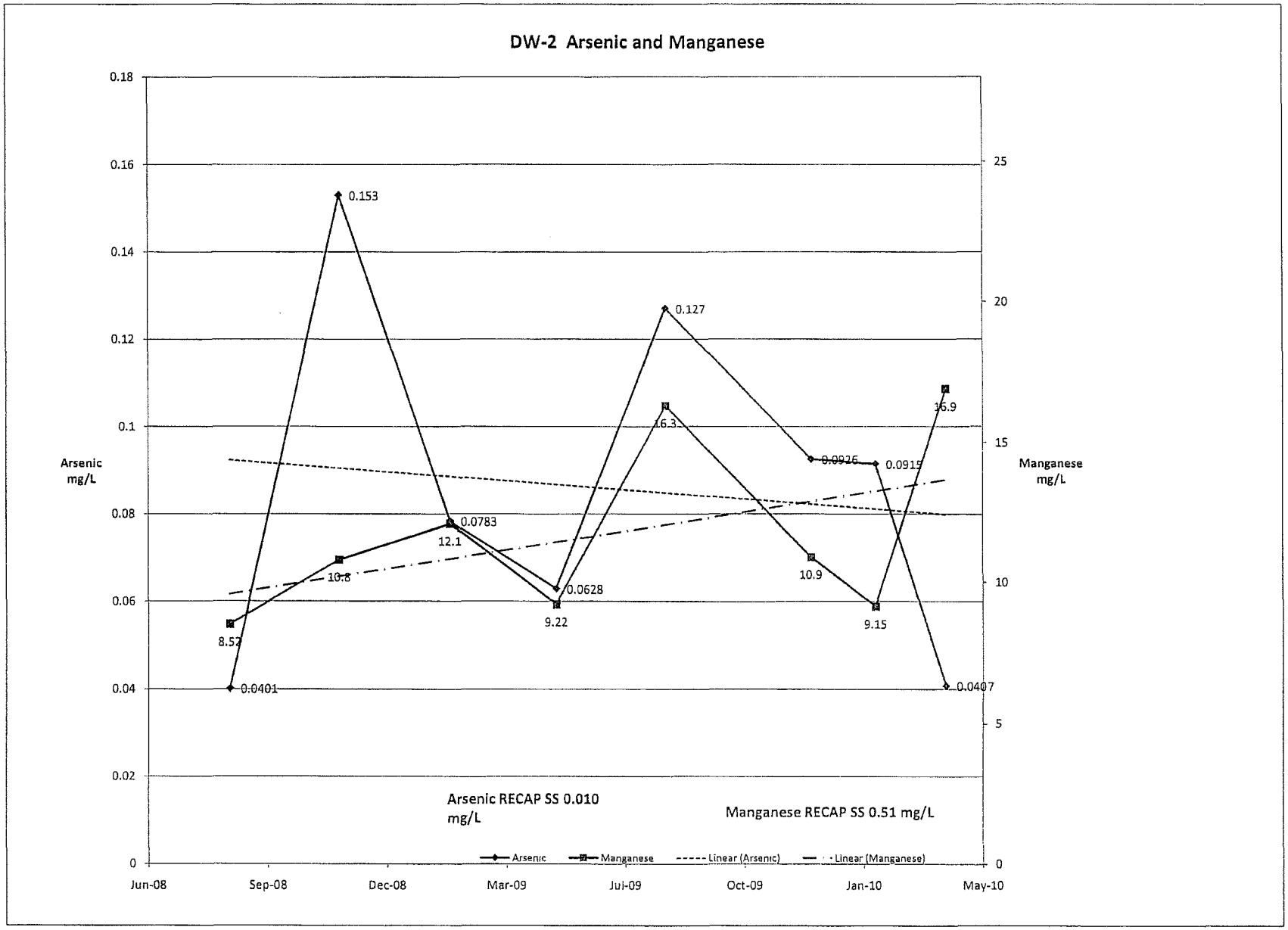
# FIRST WATER BEARING ZONE

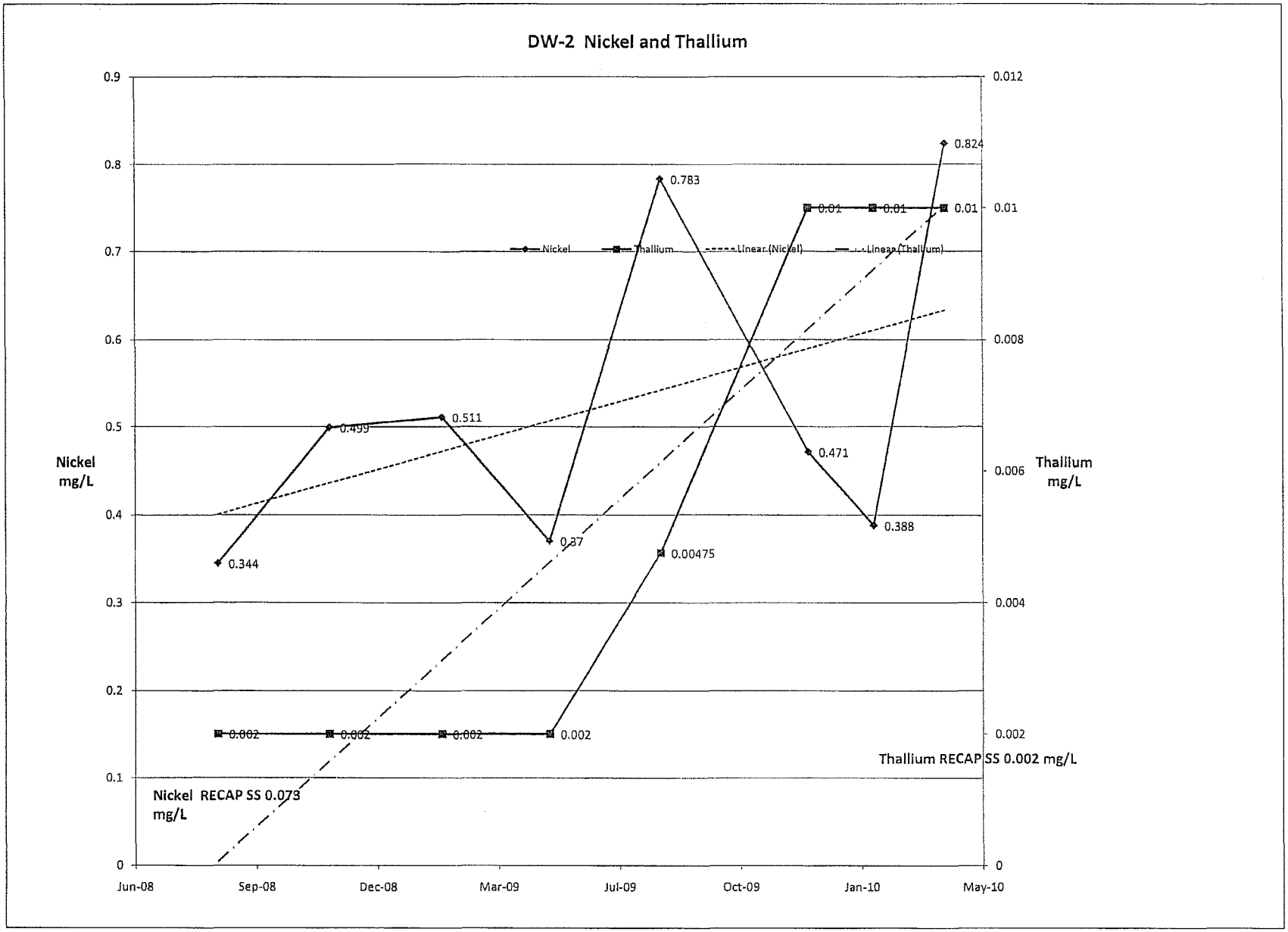

DW-1 pH and Lead
pH
(Standard Units)
Lead
mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.0-9.0
4.89
5.21
4.97
5.71
5.60
5.16
5.19
5.53
0.01
0.002
0.000932
0.000127
0.00115
0.000443
0.00283
0.000628
pH
Lead
Linear (pH)
Linear (Lead)
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

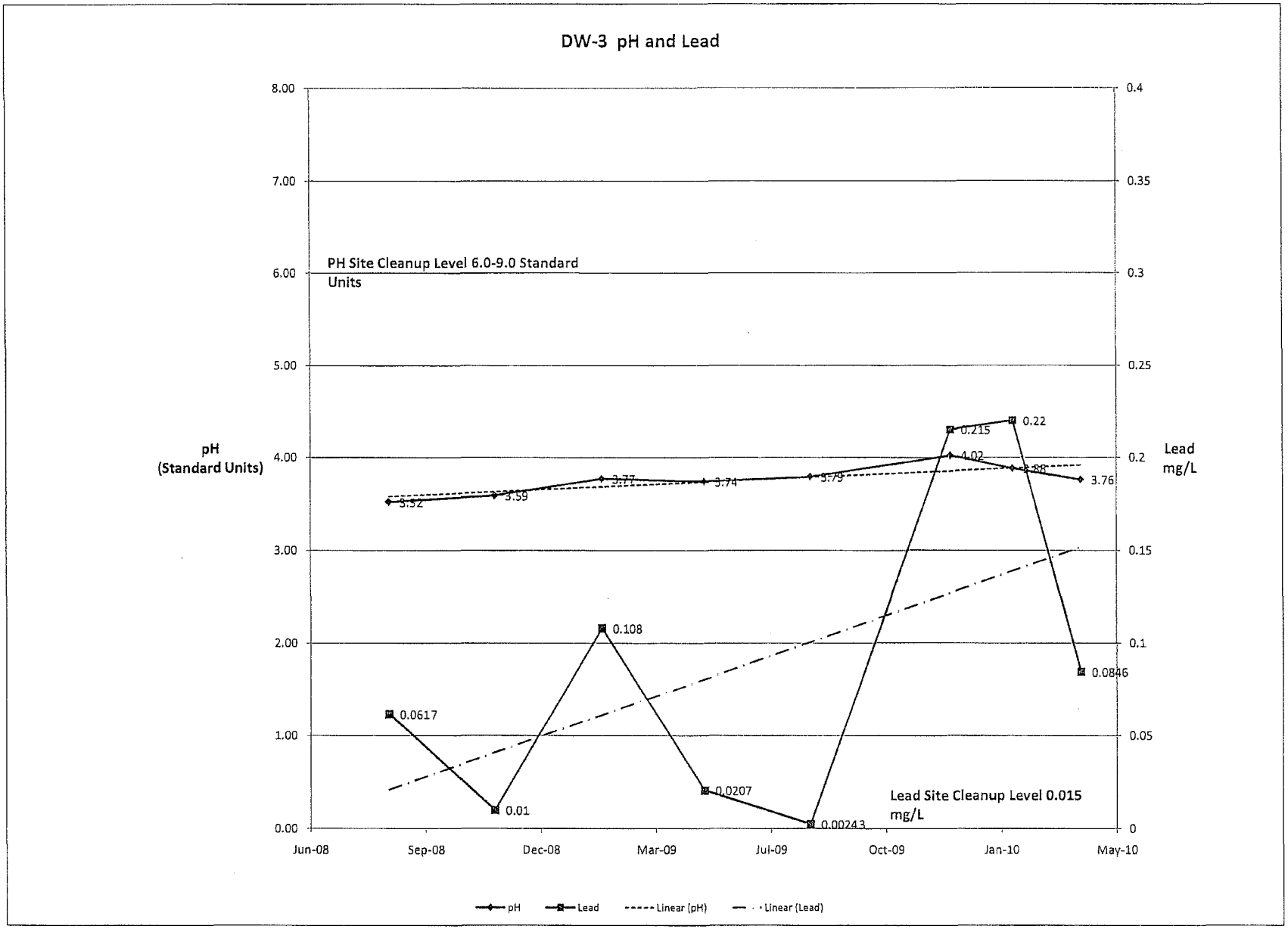

DW-1 Arsenic and Manganese
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Arsenic mg/L
Manganese mg/L
0.186
0.156
0.0656
0.157
0.169
0.102
0.0029
0.041
2.02
0.711
2.57
0.417
0.291
2.03
6.21
3.82
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

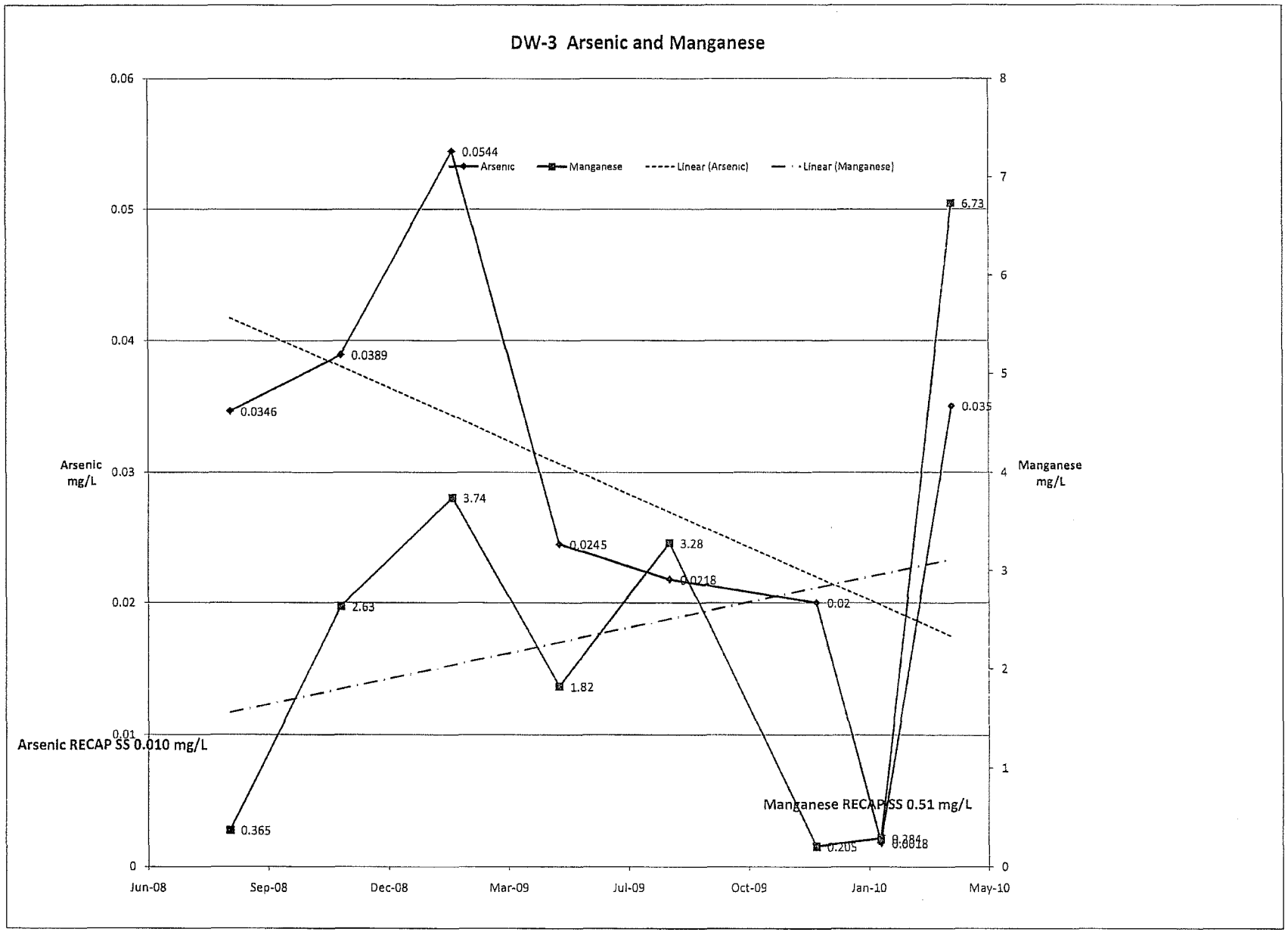

DW-1 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.0325
0.0148
0.0265
0.00686
0.00454
0.00094
0.0263
0.022
0.0222
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

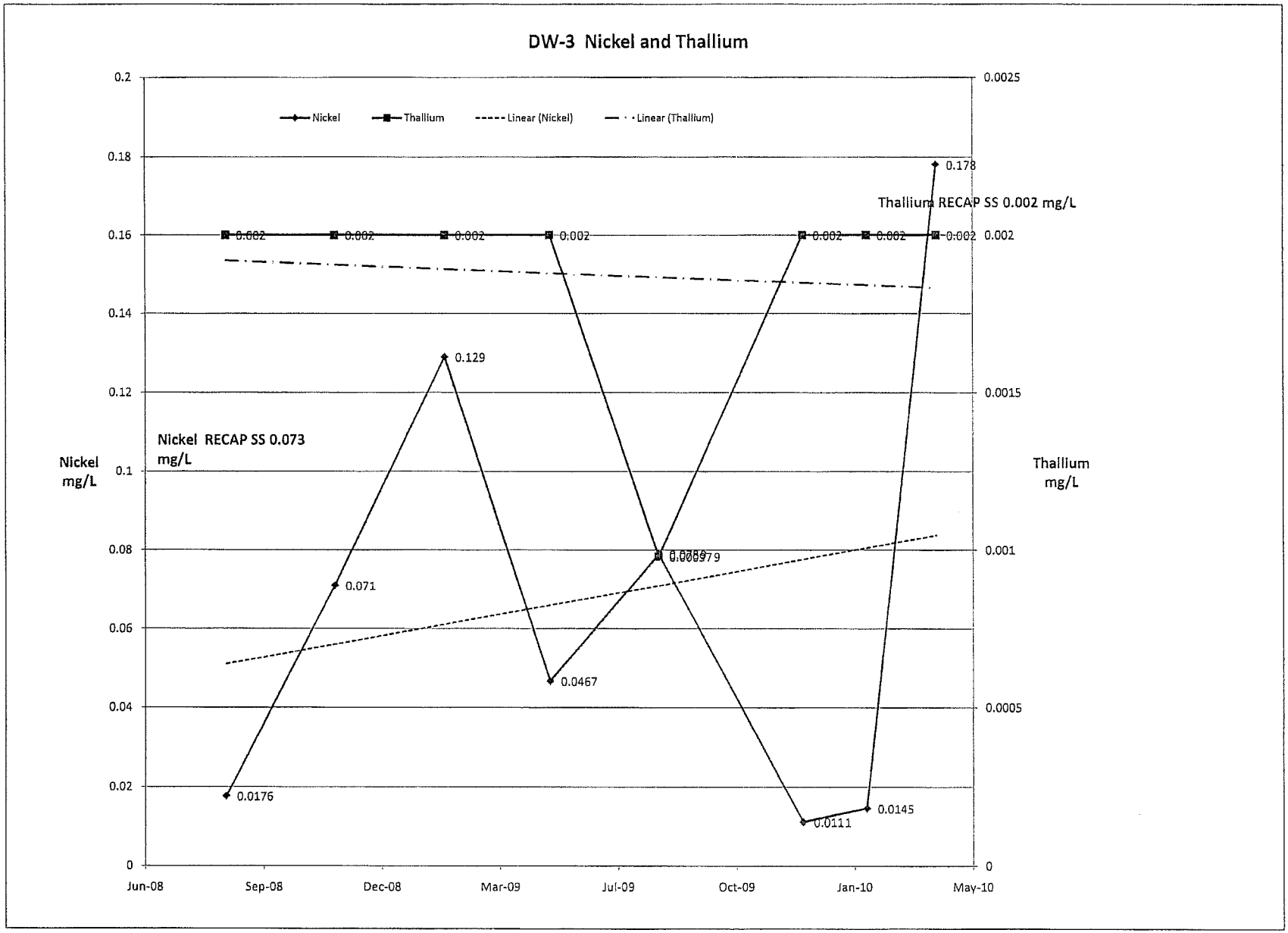

DW-2 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
2.97
2.70
3.42
2.90
3.06
2.90
3.20
3.06
0.046
0.0114
0.00834
0.00533
0.00303
0.00566
0.0138
0.00438
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

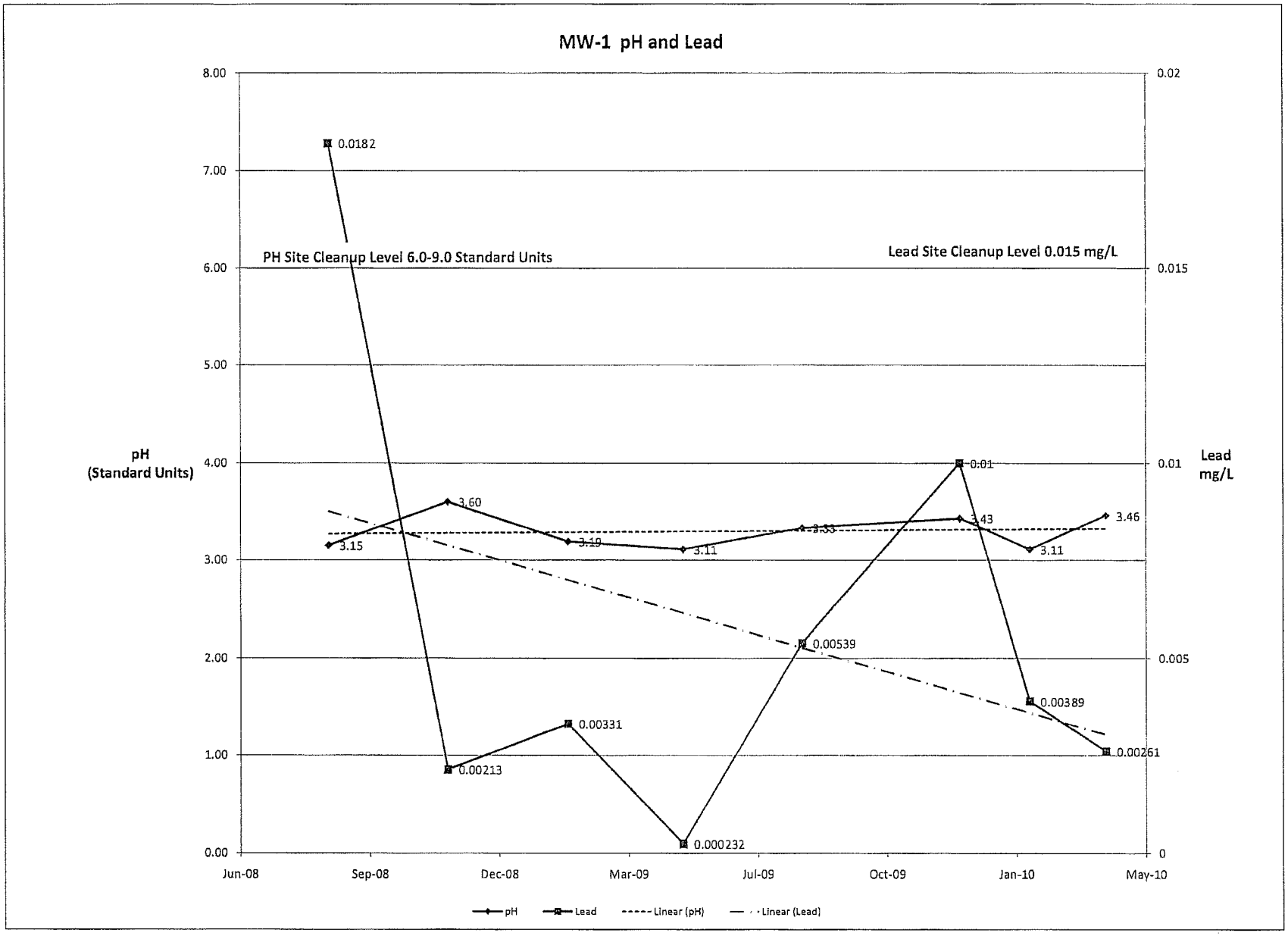

DW-2 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
25
20
15
10
5
0
0.153
0.127
0.0783
0.0628
0.0401
0.0407
0.0926
0.0915
8.52
10.8
12.1
9.22
16.3
10.9
9.15
16.9
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

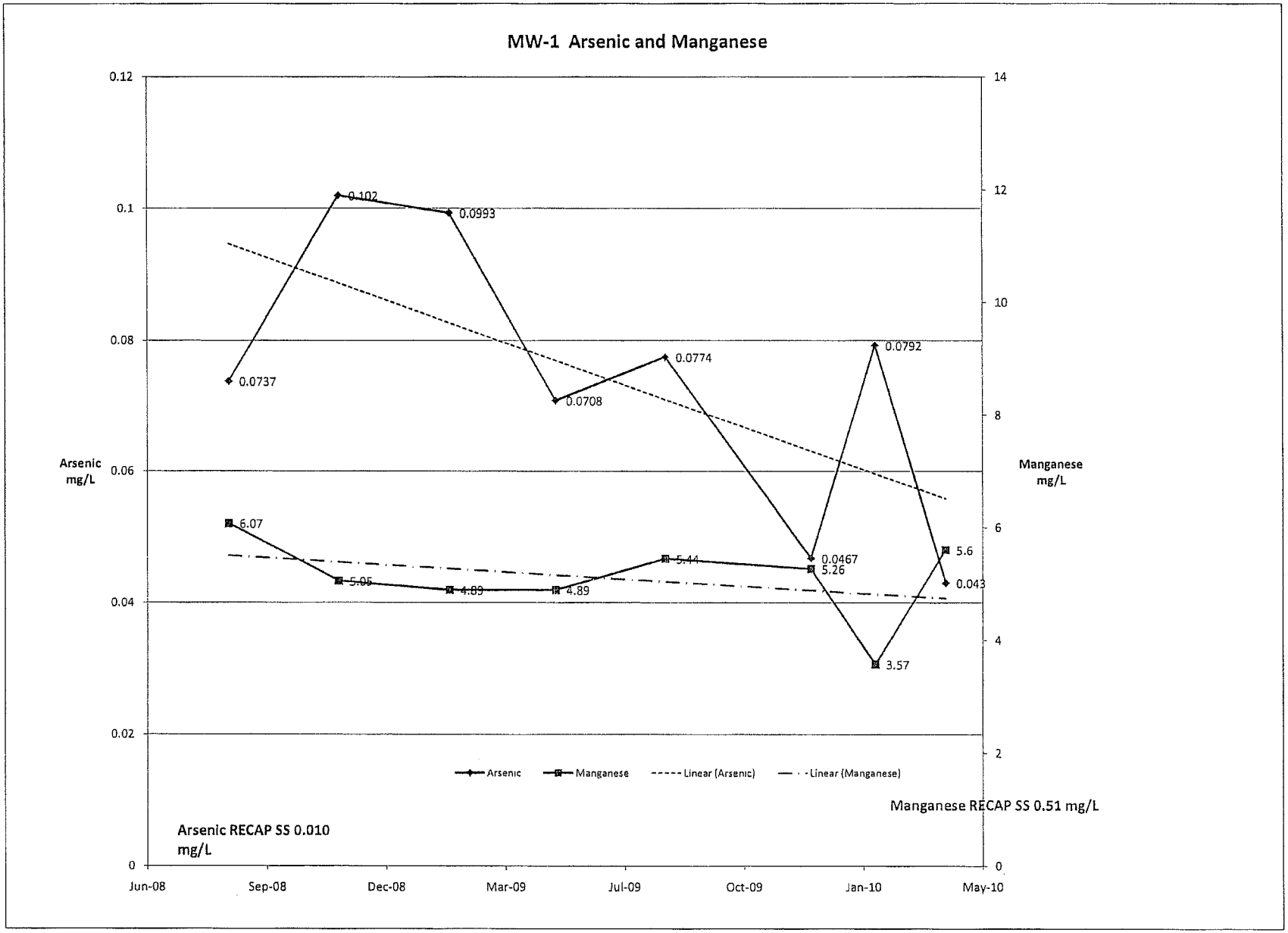

DW-2 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Nickel mg/L
Thallium mg/L
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.012
0.01
0.008
0.006
0.004
0.002
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.344
0.499
0.511
0.37
0.783
0.471
0.388
0.824
0.002
0.002
0.002
0.002
0.00475
0.01
0.01
0.01
Nickel RECAP SS 0.079 mg/L
Thallium RECAP SS 0.002 mg/L

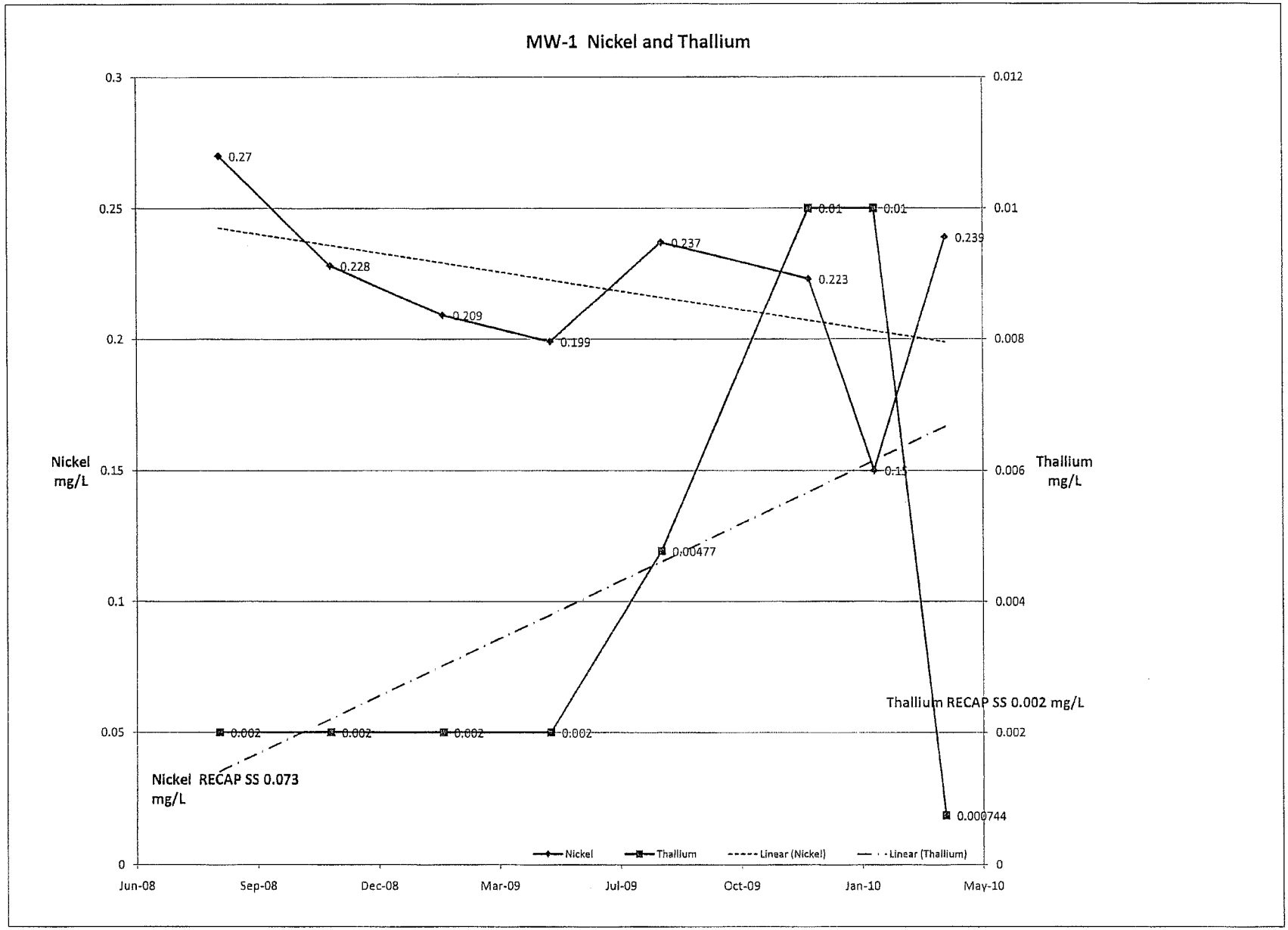

DW-3 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
3.52
3.59
3.77
3.74
3.79
4.02
3.88
3.76
0.0617
0.01
0.108
0.0207
0.00243
0.215
0.22
0.0846
pH
Lead
Linear (pH)
Linear (Lead)

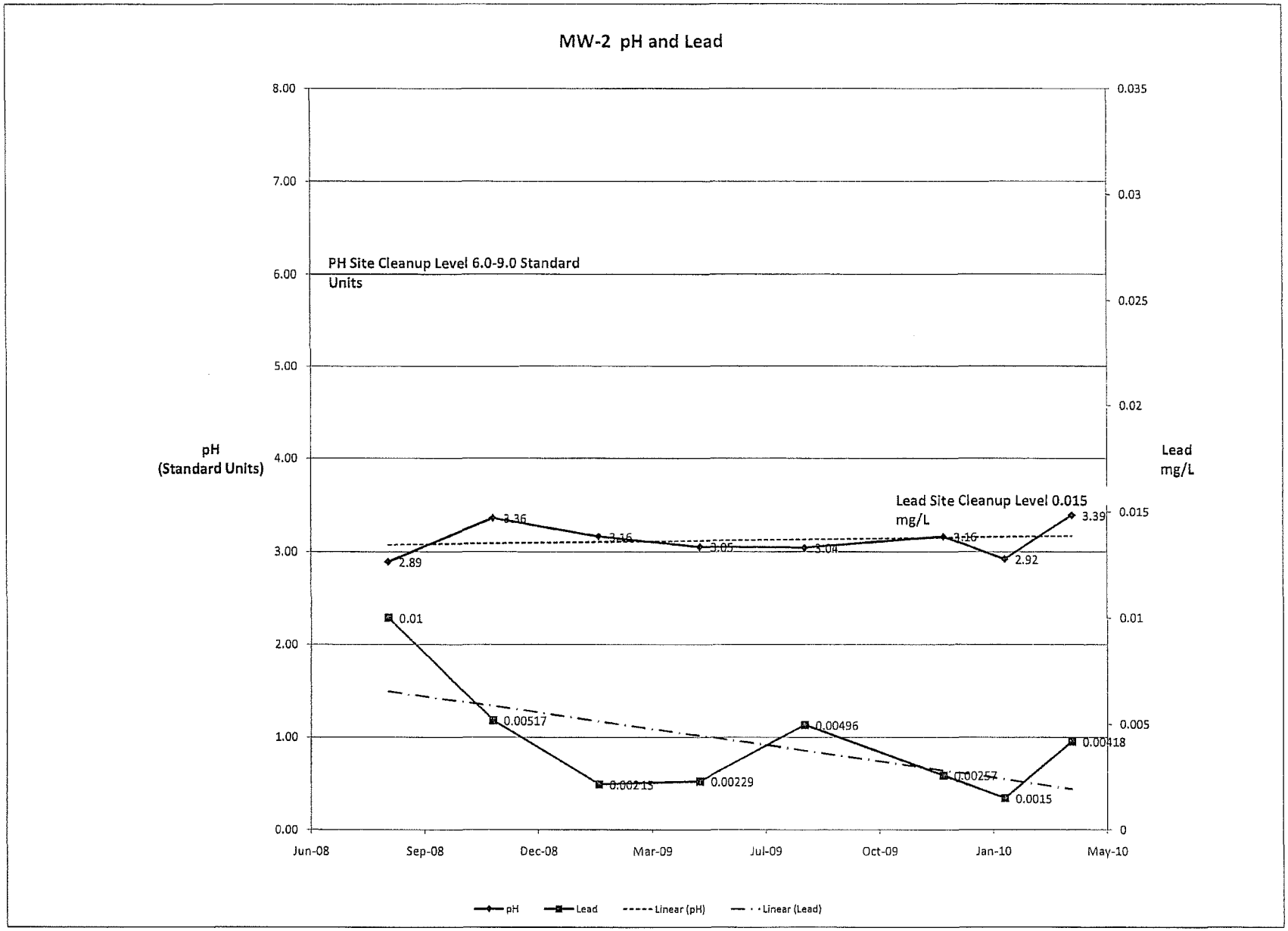

DW-3 Arsenic and Manganese
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Arsenic mg/L
Manganese mg/L
0.06
0.05
0.04
0.03
0.02
0.01
0
8
7
6
5
4
3
2
1
0
0.0544
0.0389
0.0346
0.0245
0.0218
0.02
0.035
6.73
3.74
3.28
2.63
1.82
0.365
0.205
0.284
0.0818
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

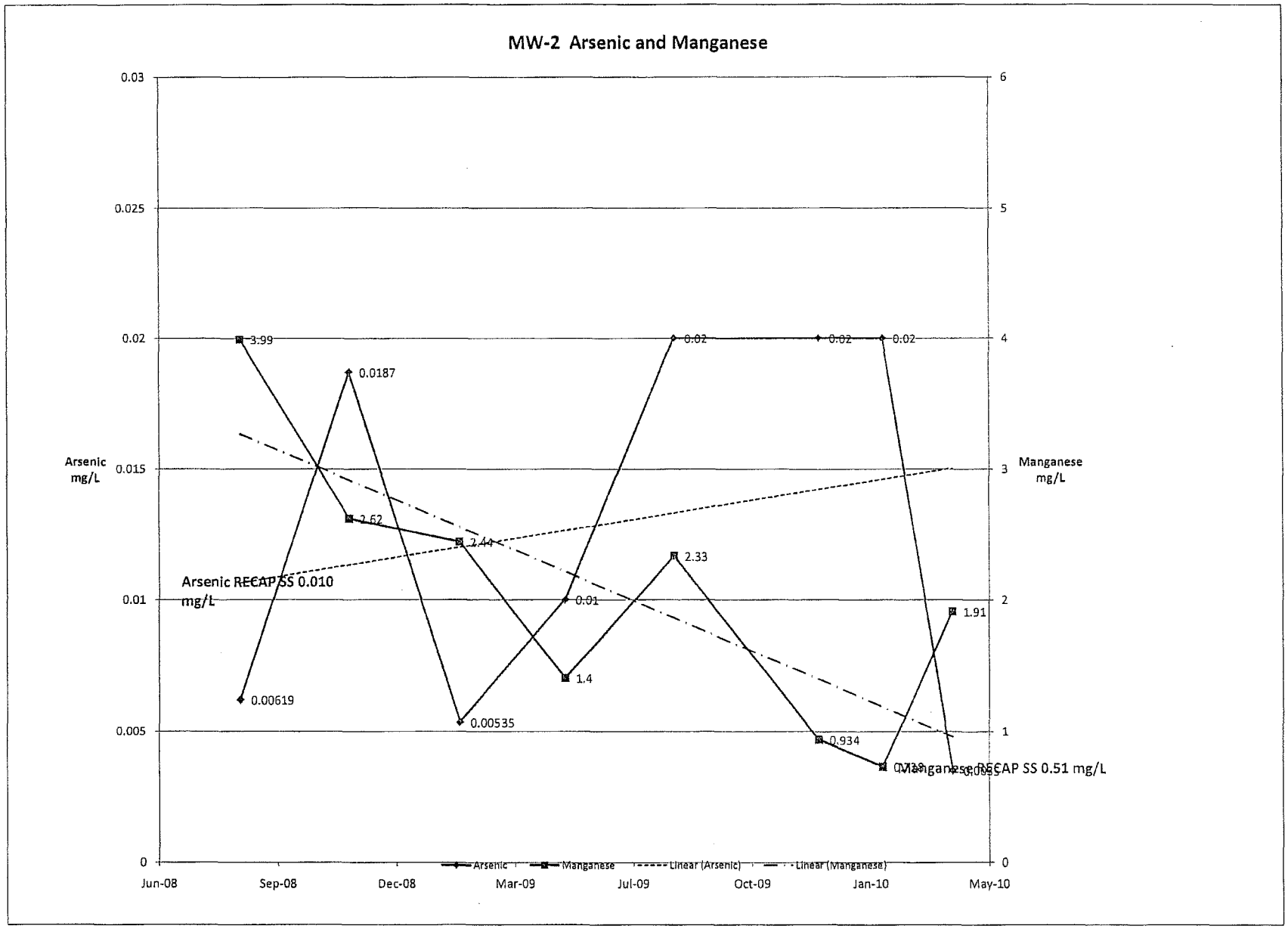

DW-3 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Nickel mg/L
Thallium mg/L
Nickel RECAP SS 0.073 mg/L
Thallium RECAP SS 0.002 mg/L
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.129
0.071
0.0467
0.0176
0.0111
0.0145
0.178
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

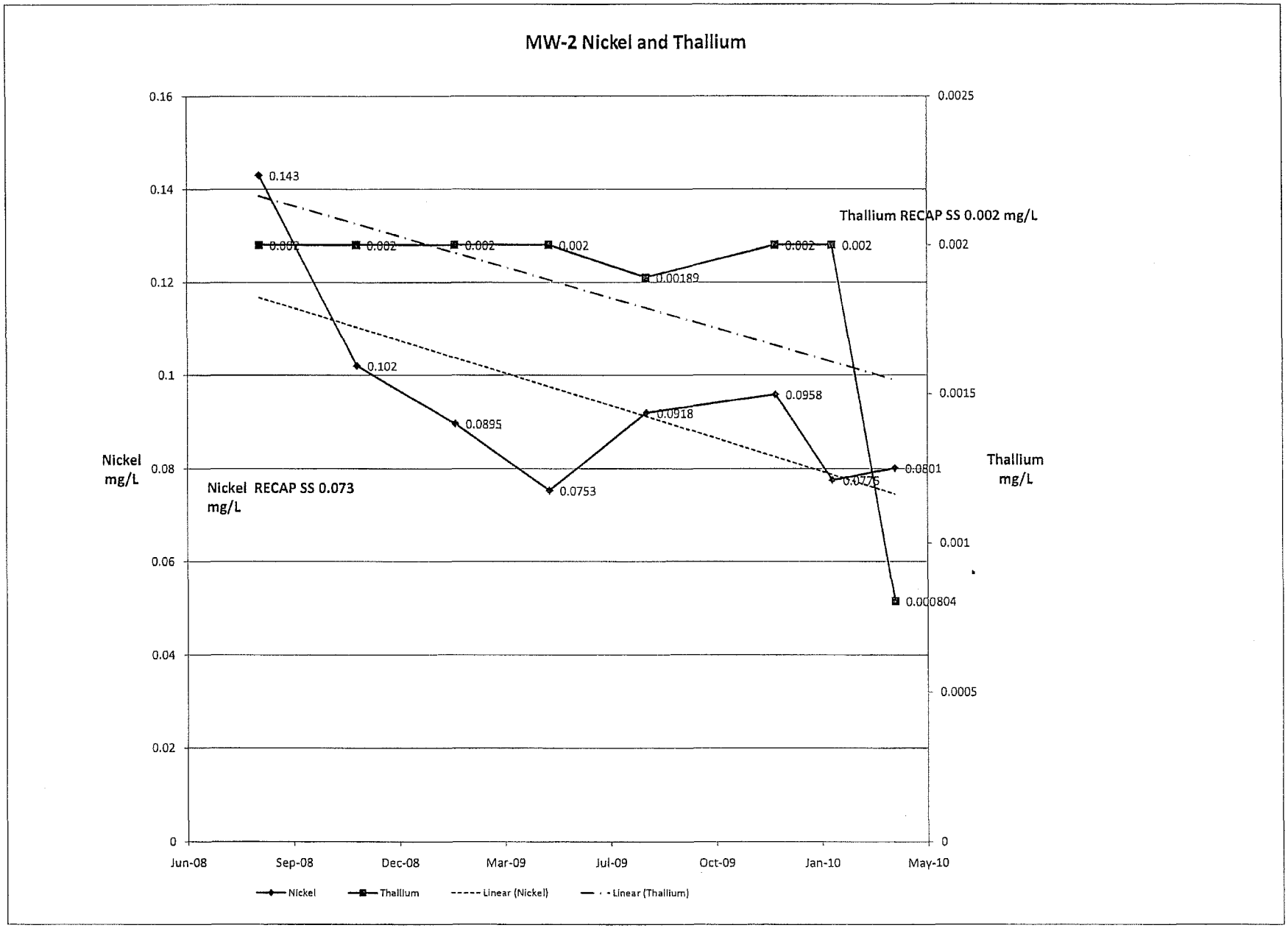

MW-1 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.0182
0.01
3.60
3.15
3.19
3.11
3.33
3.43
3.11
3.46
0.00539
0.00389
0.00331
0.00261
0.00213
0.000232
pH
Lead
Linear (pH)
Linear (Lead)

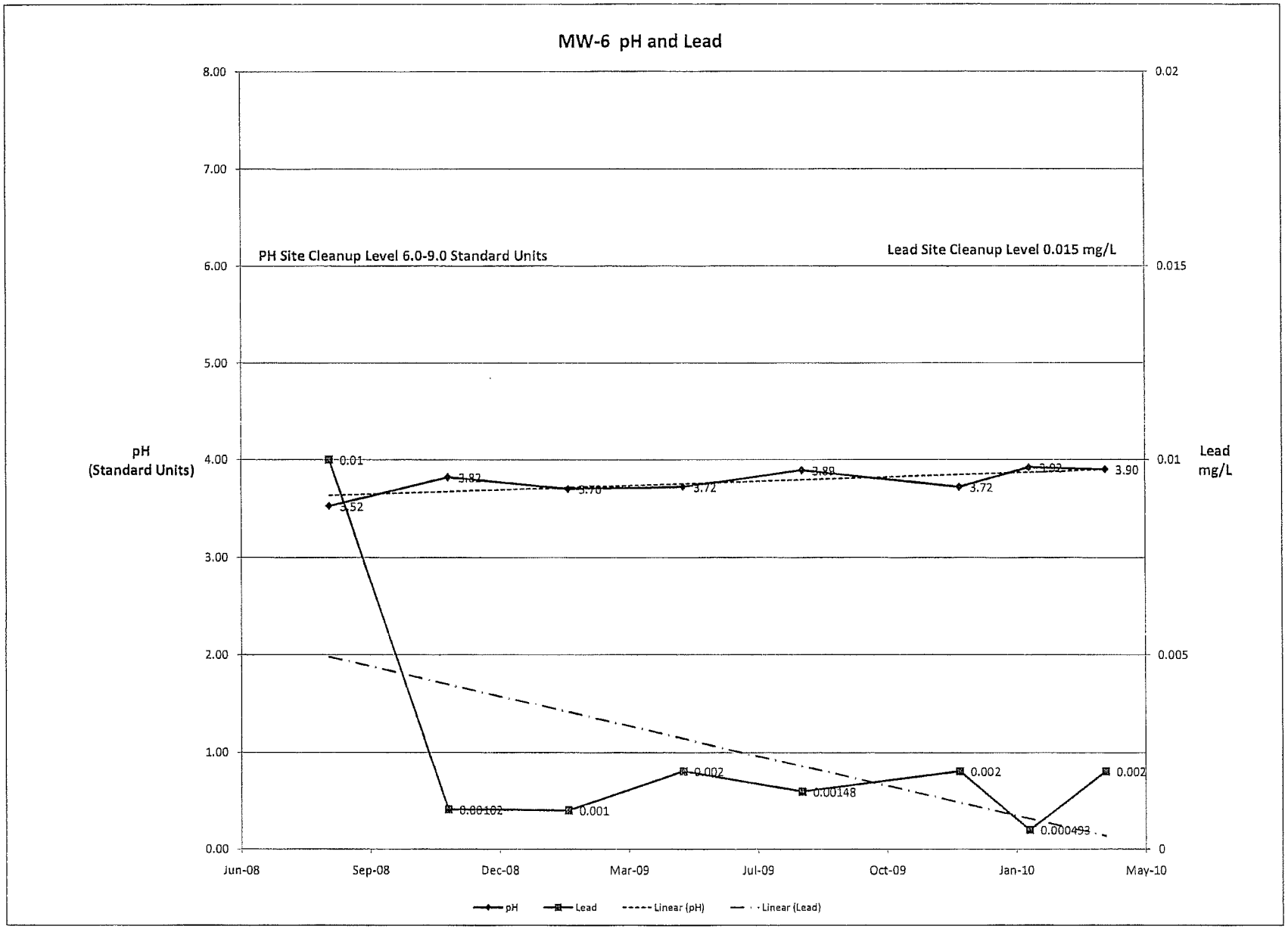

MW-1 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.12
0.1
0.08
0.06
0.04
0.02
0
14
12
10
8
6
4
2
0
0.102
0.0993
0.0737
0.0708
0.0774
0.0792
0.0467
0.043
6.07
5.05
4.89
4.89
5.44
5.26
3.57
5.6
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

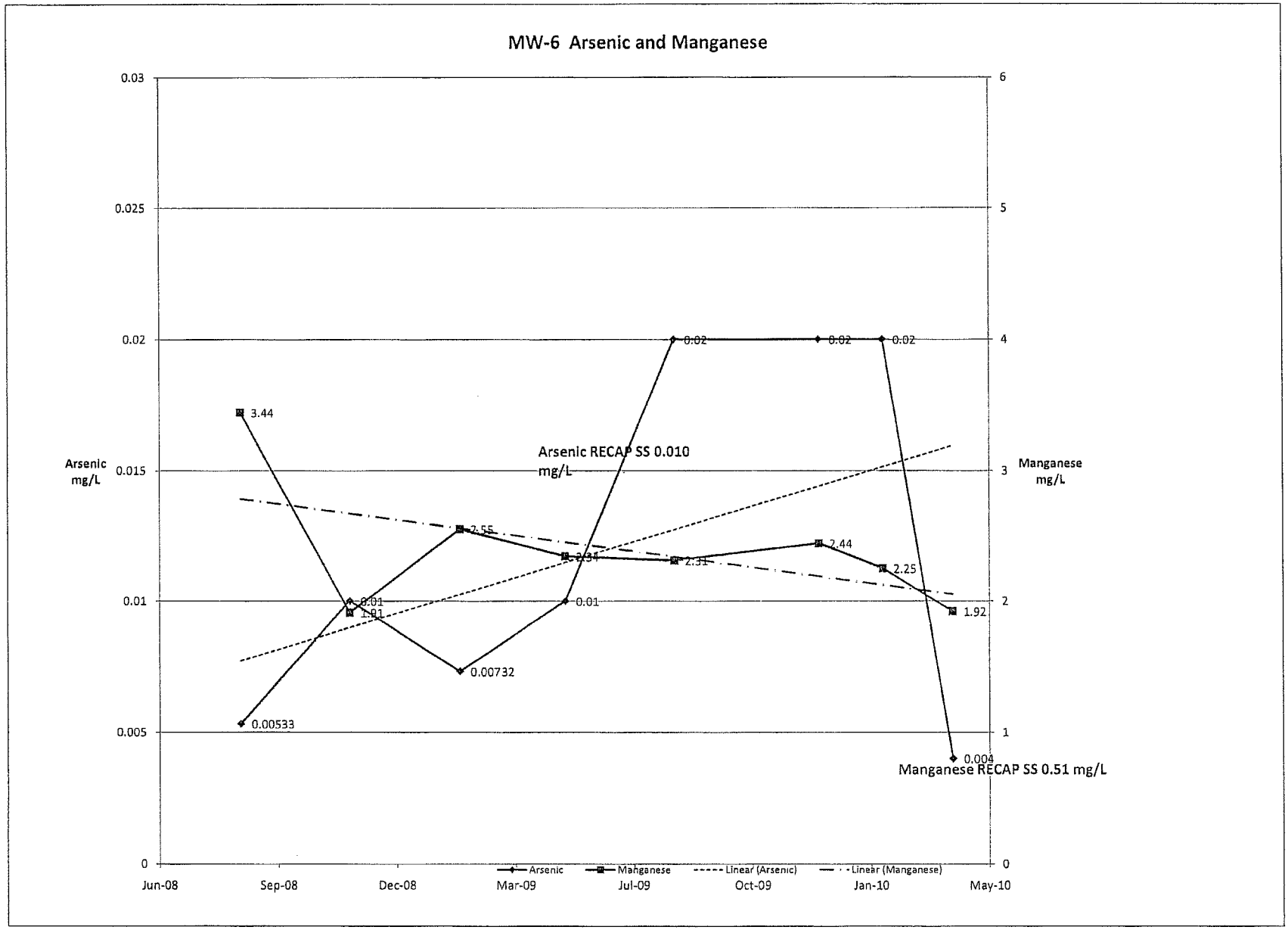

MW-1 Nickel and Thallium
Nickel mg/L
Thallium mg/L
0.3
0.25
0.2
0.15
0.1
0.05
0
0.012
0.01
0.008
0.006
0.004
0.002
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.27
0.228
0.209
0.199
0.237
0.223
0.15
0.239
0.01
0.01
0.00477
0.002
0.002
0.002
0.002
0.000744
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)

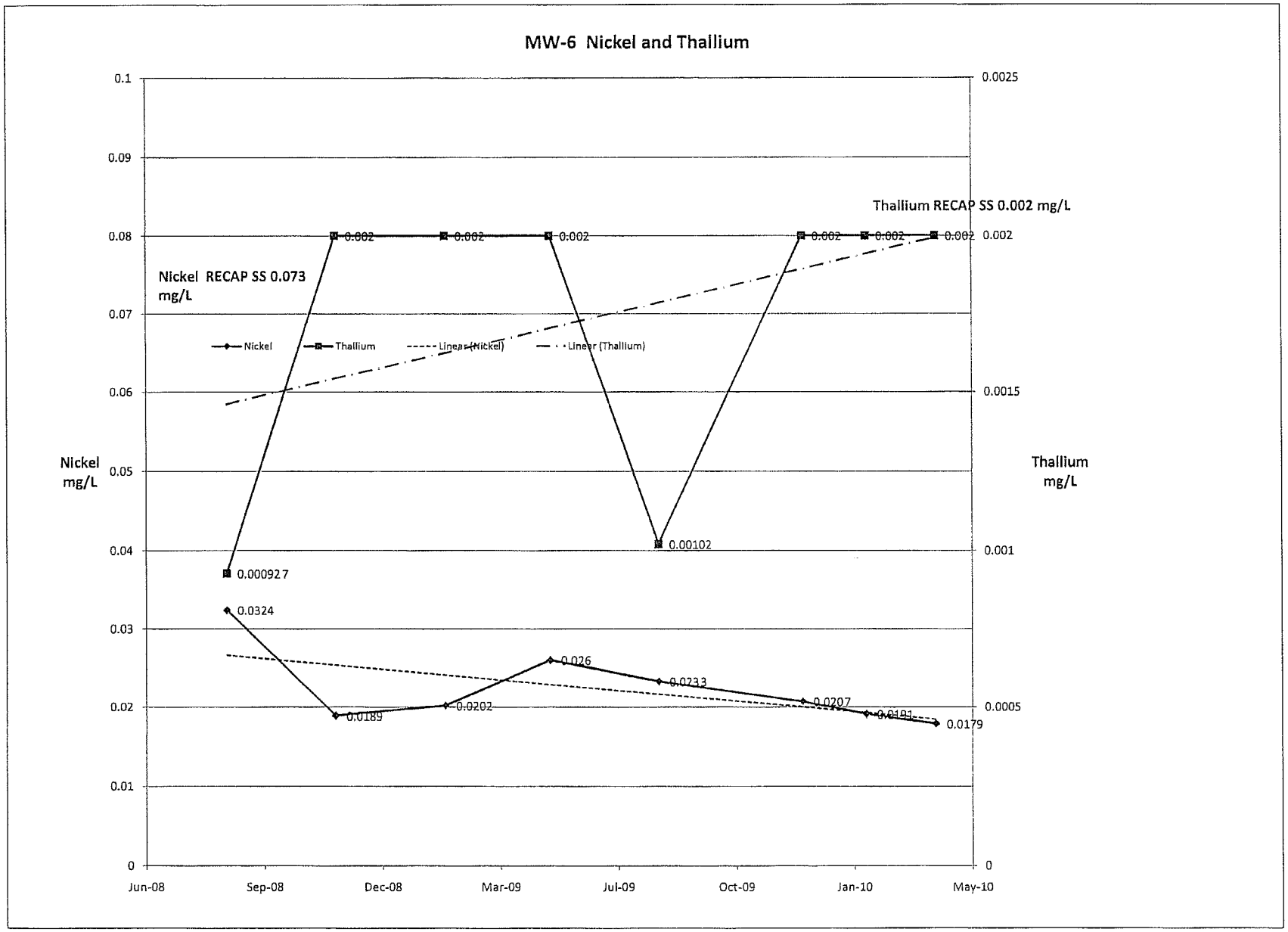

MW-2 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
2.89
3.36
3.16
3.05
3.04
3.16
2.92
3.39
0.01
0.00517
0.00215
0.00229
0.00496
0.00257
0.0015
0.00418
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

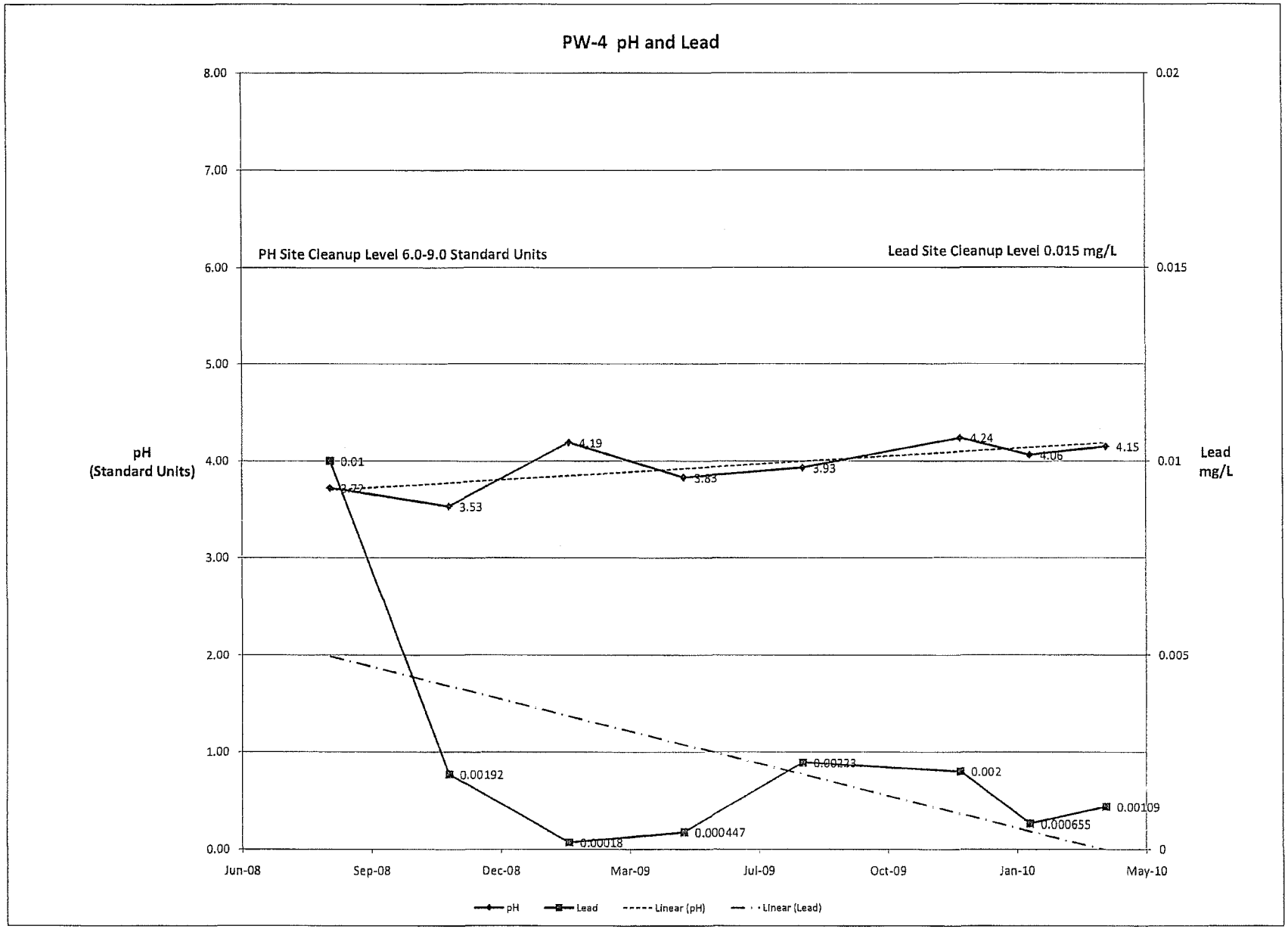

MW-2 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.03
0.025
0.02
0.015
0.01
0.005
0
6
5
4
3
2
1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
3.99
0.0187
2.62
2.44
0.02
0.02
0.02
2.33
0.01
1.91
1.4
0.00619
0.00535
0.934
0.723
0.0055
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

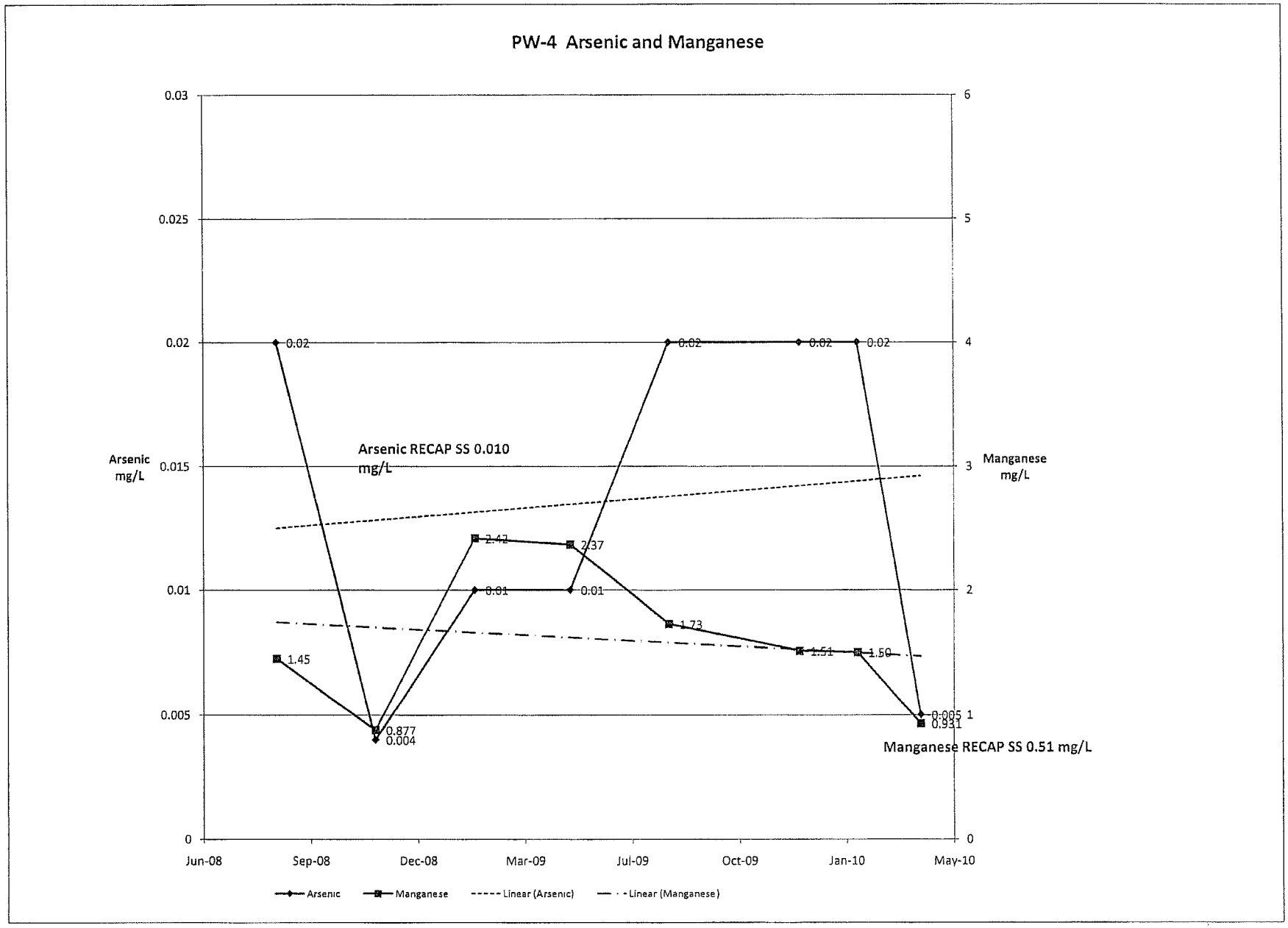

MW-2 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.143
0.102
0.0895
0.0753
0.0918
0.0958
0.0776
0.0801
0.002
0.00189
0.000804
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)

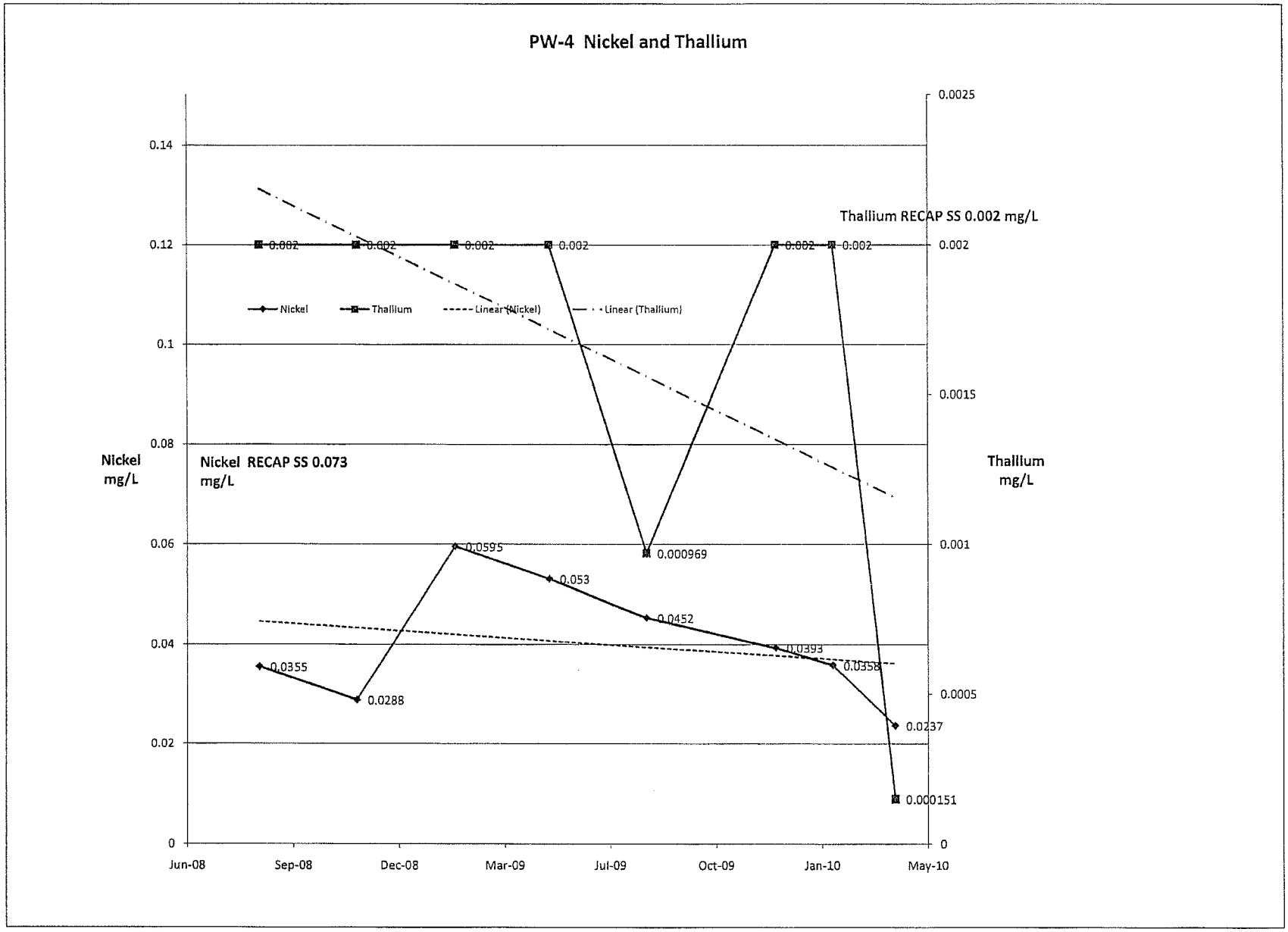

MW-6 pH and Lead
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
pH
(Standard Units)
Lead
mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.01
3.52
3.87
0.00102
3.70
0.001
3.72
0.002
3.89
0.00148
3.72
0.002
3.92
0.000493
3.90
0.002
pH
Lead
Linear (pH)
Linear (Lead)

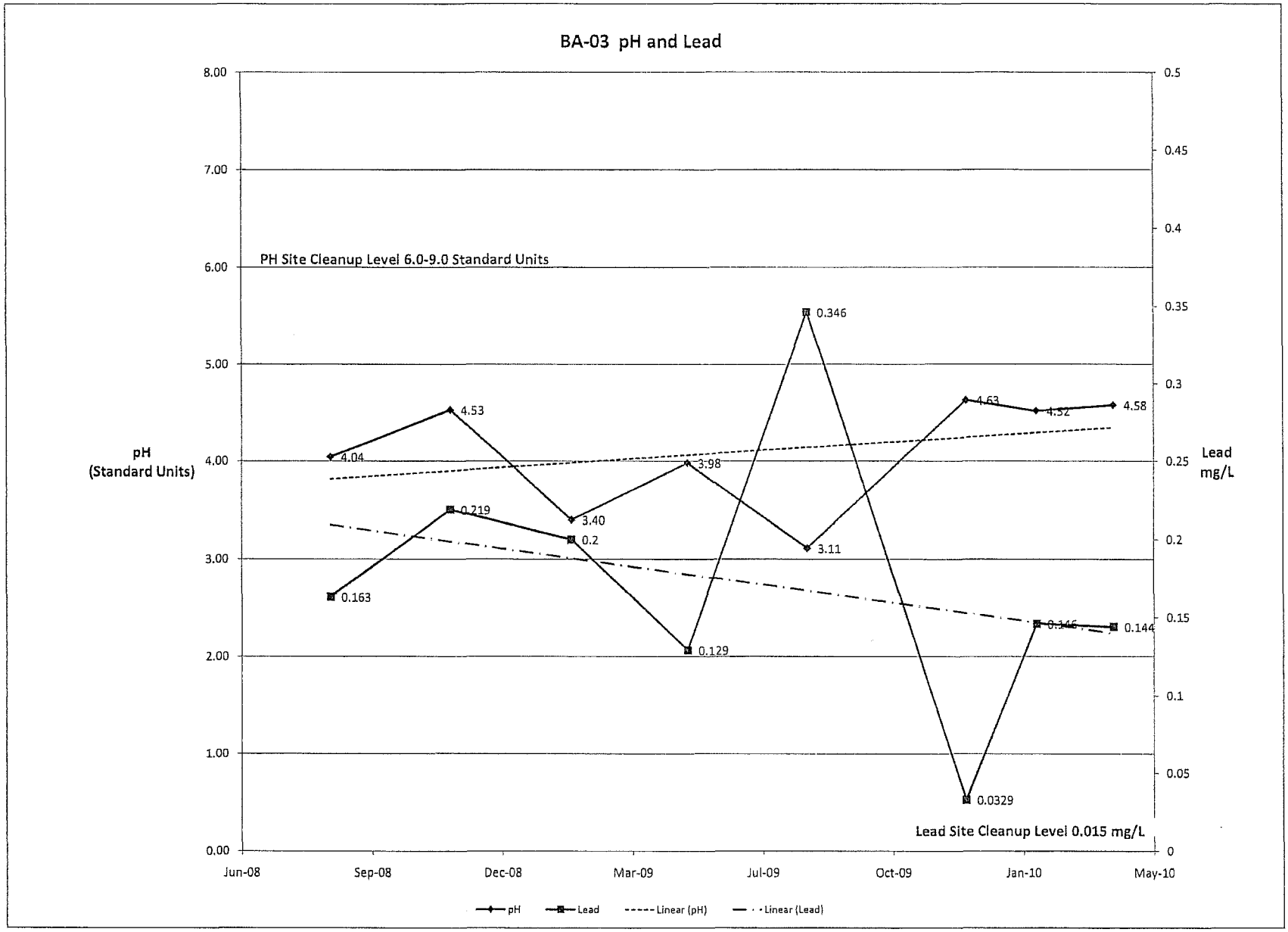

MW-6 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.03
0.025
0.02
0.015
0.01
0.005
0
6
5
4
3
2
1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
3.44
0.01
1.91
0.00533
2.55
0.00732
2.34
0.01
0.02
2.31
0.02
2.44
0.02
2.25
1.92
0.004
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

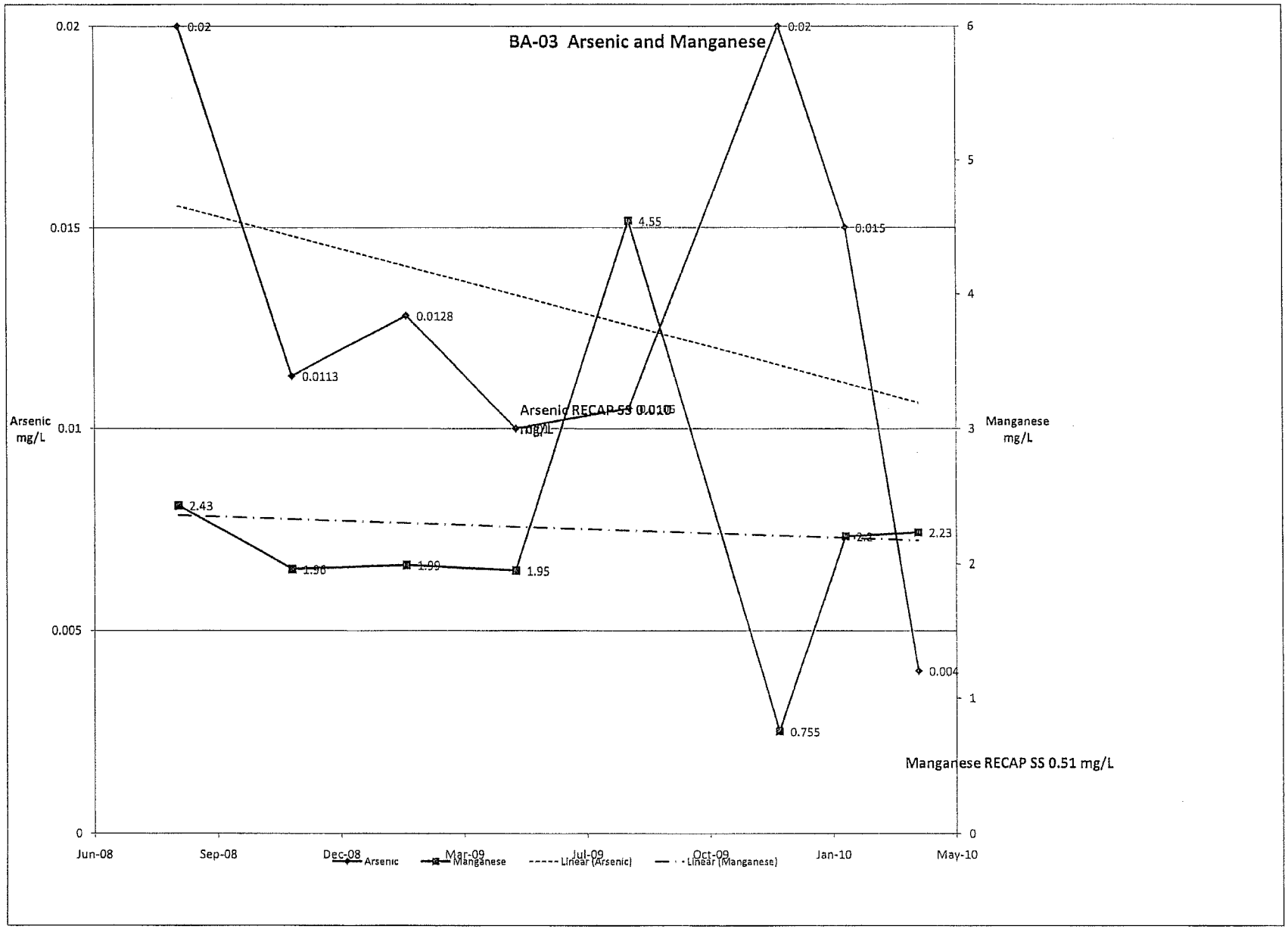

MW-6 Nickel and Thallium
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.002
0.002
0.002
0.002
0.002
0.000927
0.00102
0.0324
0.0189
0.0202
0.026
0.0233
0.0207
0.0191
0.0179
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

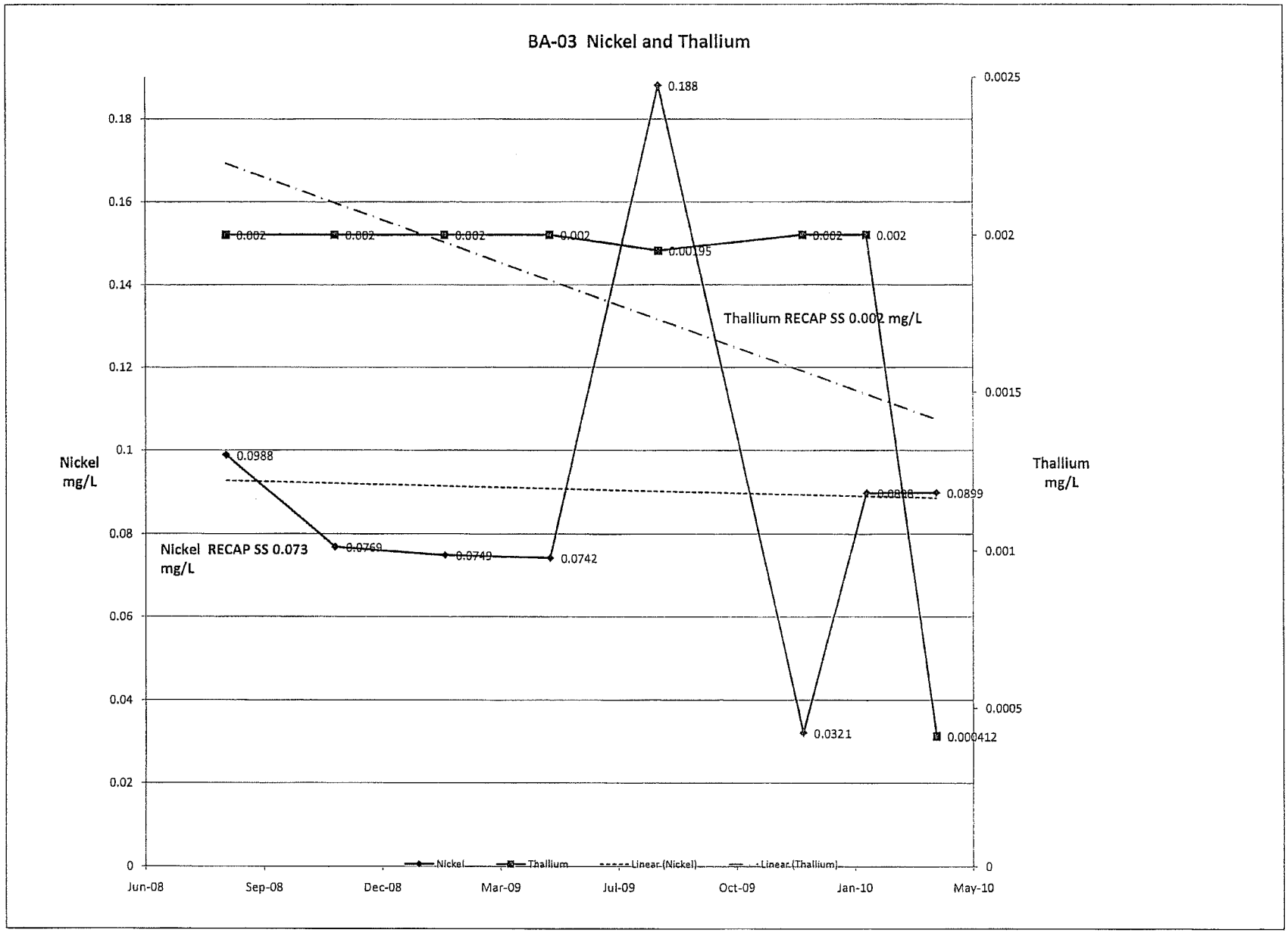

PW-4 pH and Lead
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
pH
(Standard Units)
Lead
mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.01
3.72
3.53
4.19
3.83
3.93
4.24
4.06
4.15
0.00192
0.00018
0.000447
0.00173
0.002
0.000655
0.00109
pH
Lead
Linear (pH)
Linear (Lead)

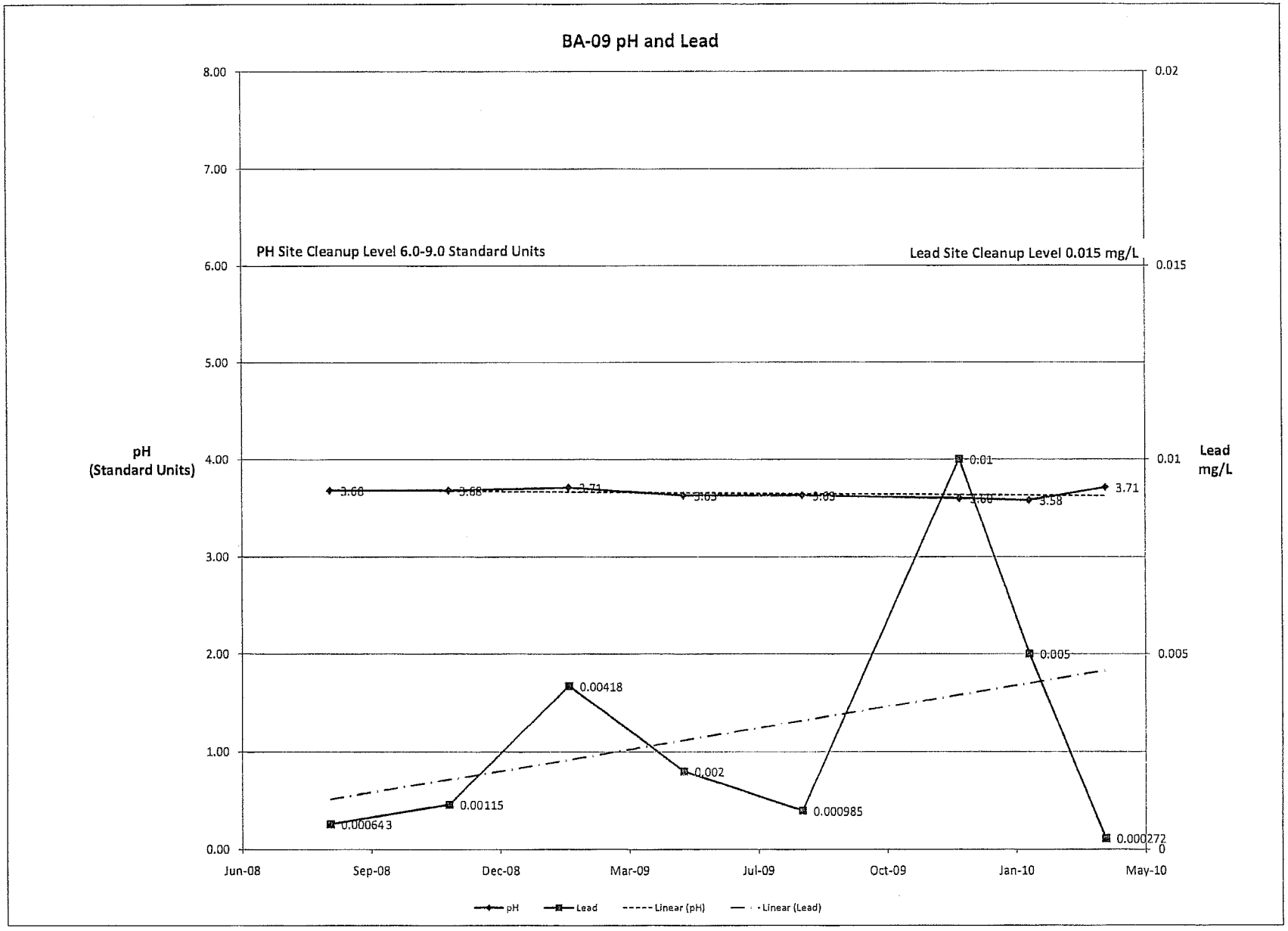

PW-4 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.03
0.025
0.02
0.015
0.01
0.005
0
6
5
4
3
2
1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.02
0.02
0.02
2.42
2.37
0.01
0.01
1.73
1.45
1.51
1.50
0.005
0.931
0.877
0.004
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

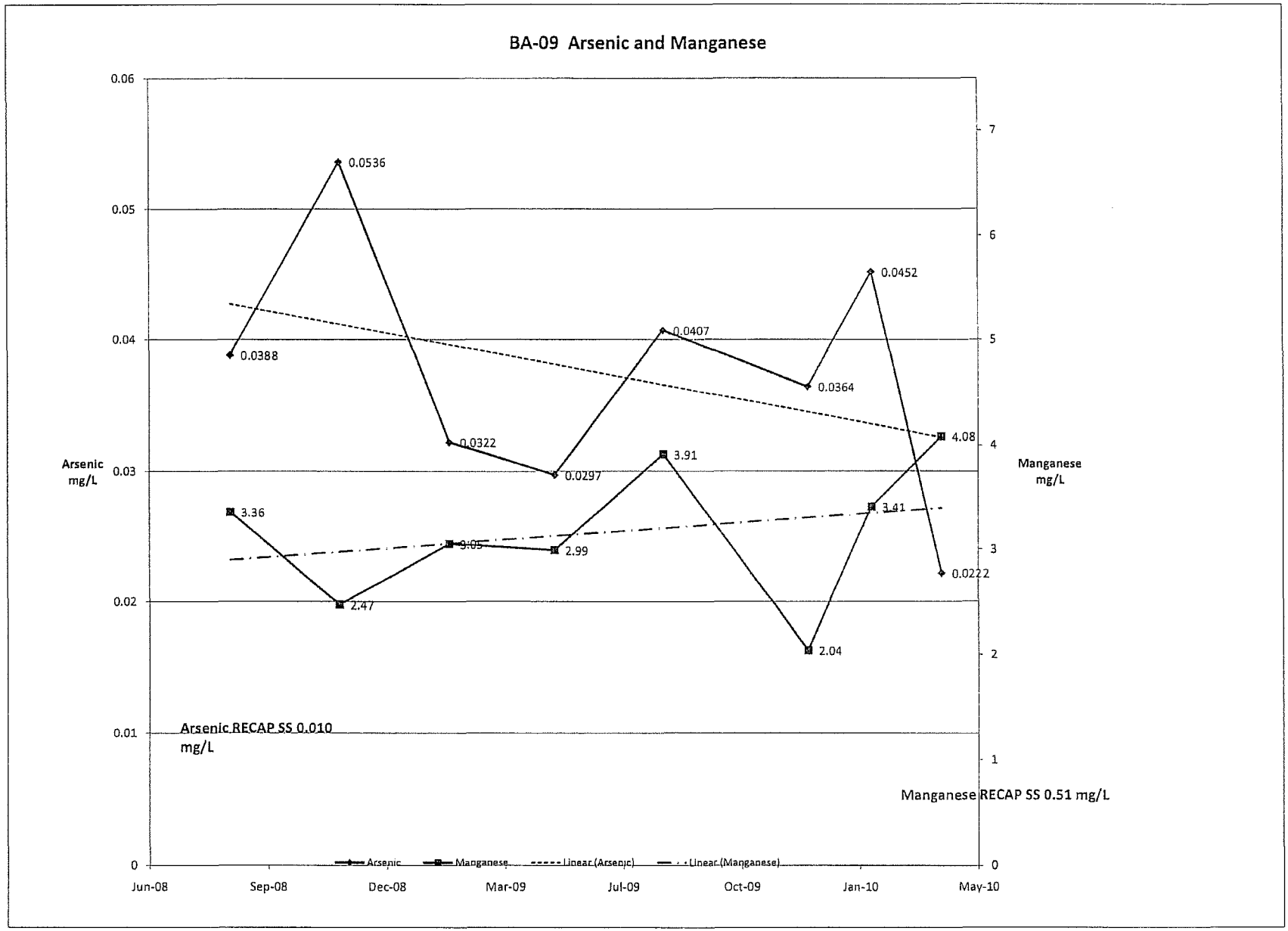

PW-4 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.0355
0.0288
0.0595
0.053
0.0452
0.0393
0.0358
0.0237
0.000969
0.000151
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

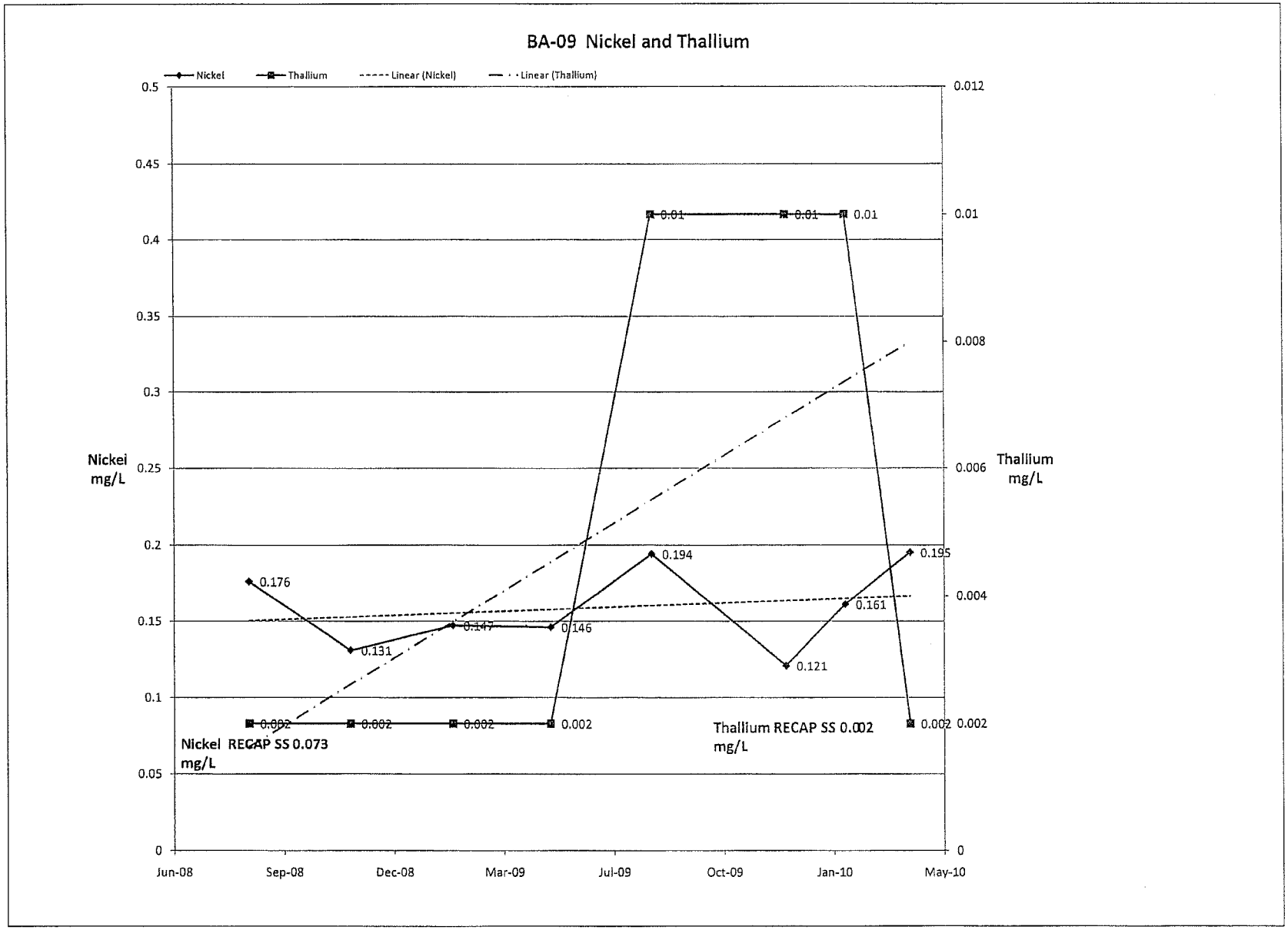

BA-03 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
4.04
4.53
3.40
3.98
3.11
4.63
4.52
4.58
0.163
0.219
0.2
0.129
0.346
0.0329
0.146
0.144
pH
Lead
Linear (pH)
Linear (Lead)


BA-03 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
6
5
4
3
2
1
0
0.02
0.0113
0.0128
0.01
0.015
0.004
2.43
1.96
1.99
1.95
4.55
0.755
2.2
2.23
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

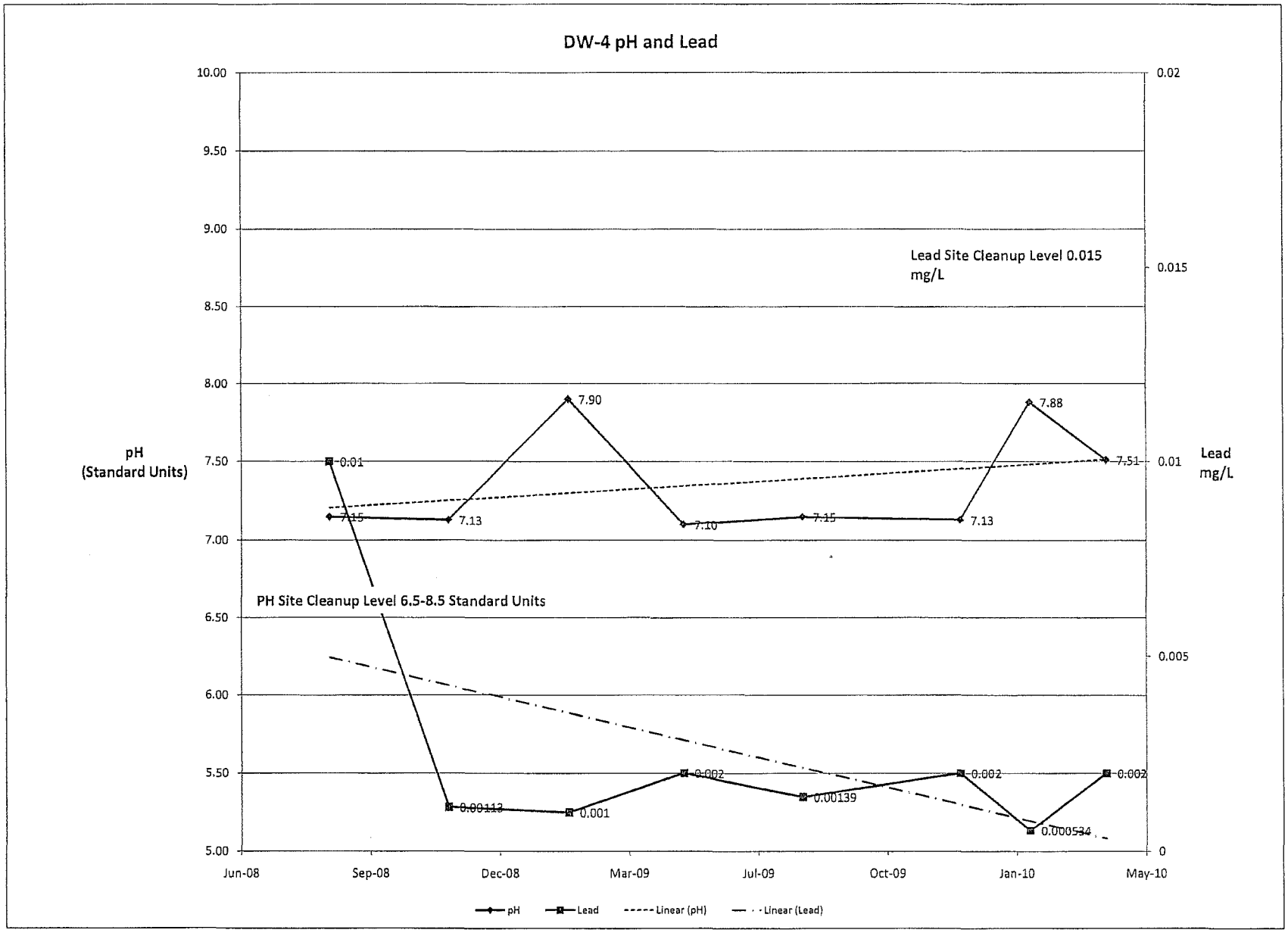

BA-03 Nickel and Thallium
Nickel mg/L
Thallium mg/L
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.188
0.002
0.002
0.002
0.002
0.00195
0.002
0.002
Thallium RECAP SS 0.002 mg/L
0.0988
0.0899
0.0769
0.0749
0.0742
Nickel RECAP SS 0.073 mg/L
0.0321
0.000412
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)

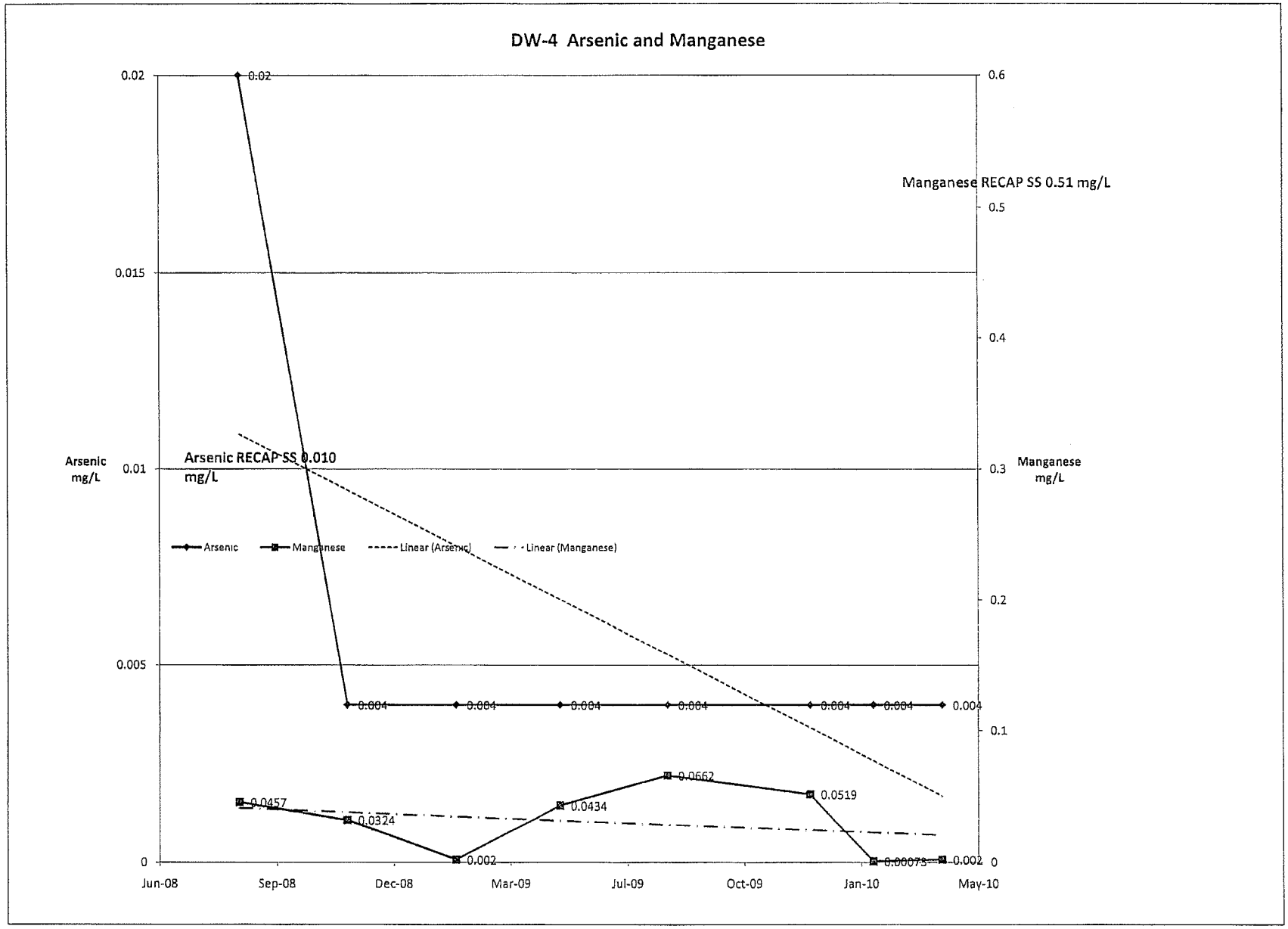

BA-09 pH and Lead
PH Site Cleanup Level 6.0-9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
pH
(Standard Units)
Lead
mg/L
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.02
0.015
0.01
0.005
0
3.68
3.68
3.71
3.63
3.69
3.60
3.58
3.71
0.01
0.005
0.00418
0.002
0.00115
0.000643
0.000985
0.000272
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

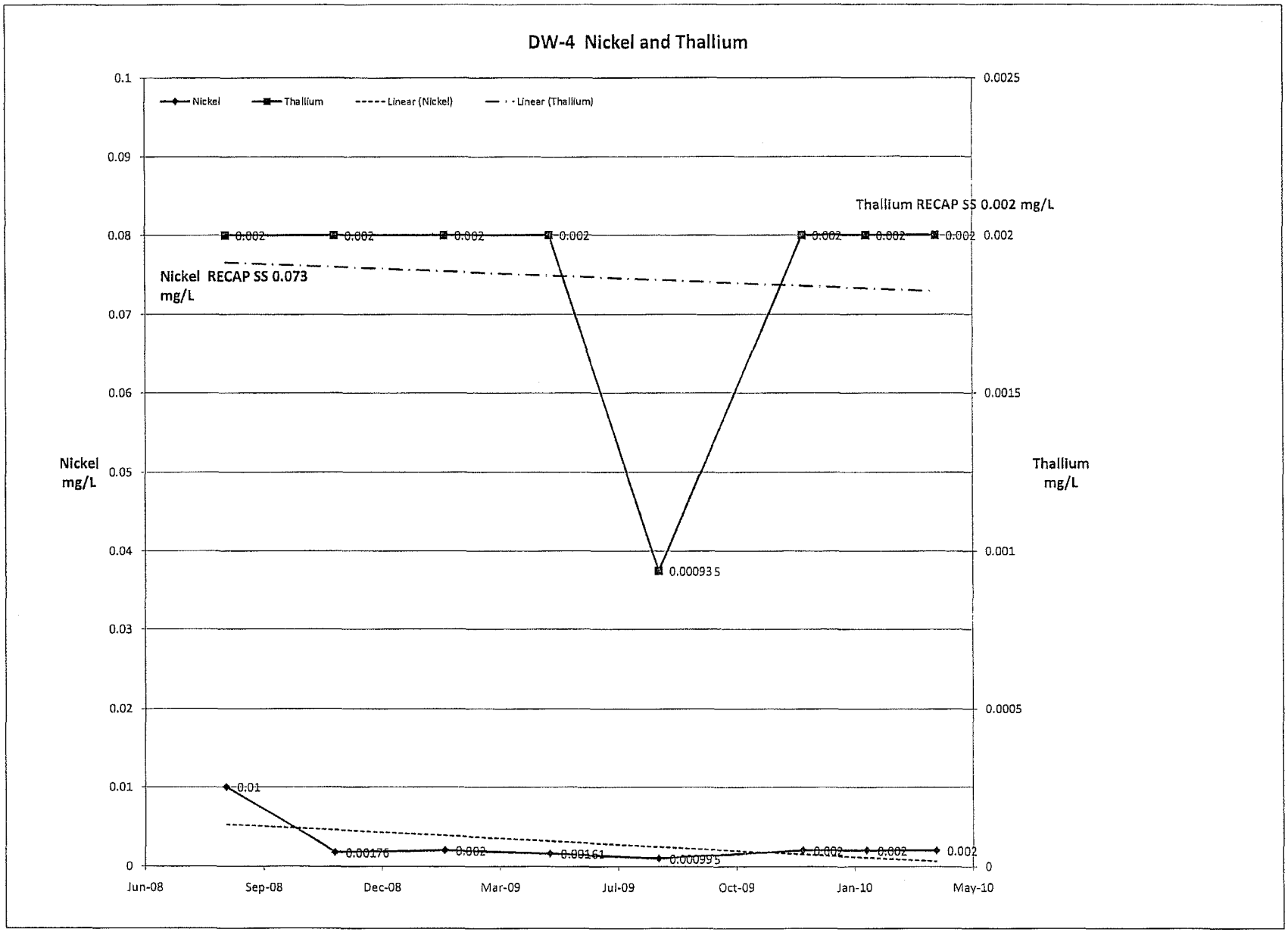

BA-09 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.06
0.05
0.04
0.03
0.02
0.01
0
7
6
5
4
3
2
1
0
0.0536
0.0388
0.0322
0.0297
0.0407
0.0364
0.0452
0.0222
3.36
2.47
3.05
2.99
3.91
2.04
3.41
4.08
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

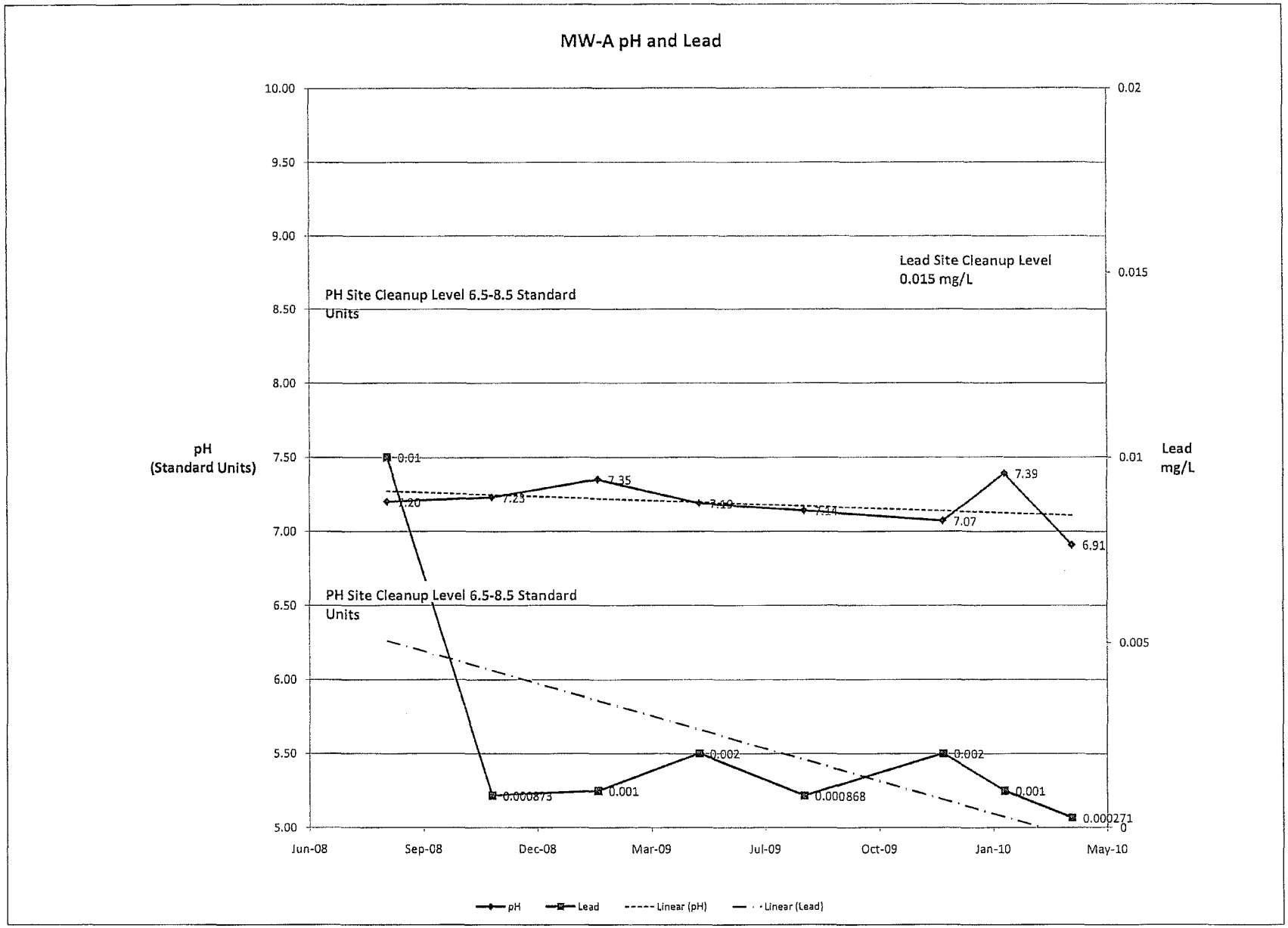

BA-09 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Nickel mg/L
Thallium mg/L
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0.012
0.01
0.008
0.006
0.004
0.002
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.176
0.131
0.147
0.146
0.194
0.121
0.161
0.195
0.002
0.002
0.002
0.002
0.01
0.01
0.01
0.002
Nickel RECAP SS 0.073 mg/L
Thallium RECAP SS 0.002 mg/L

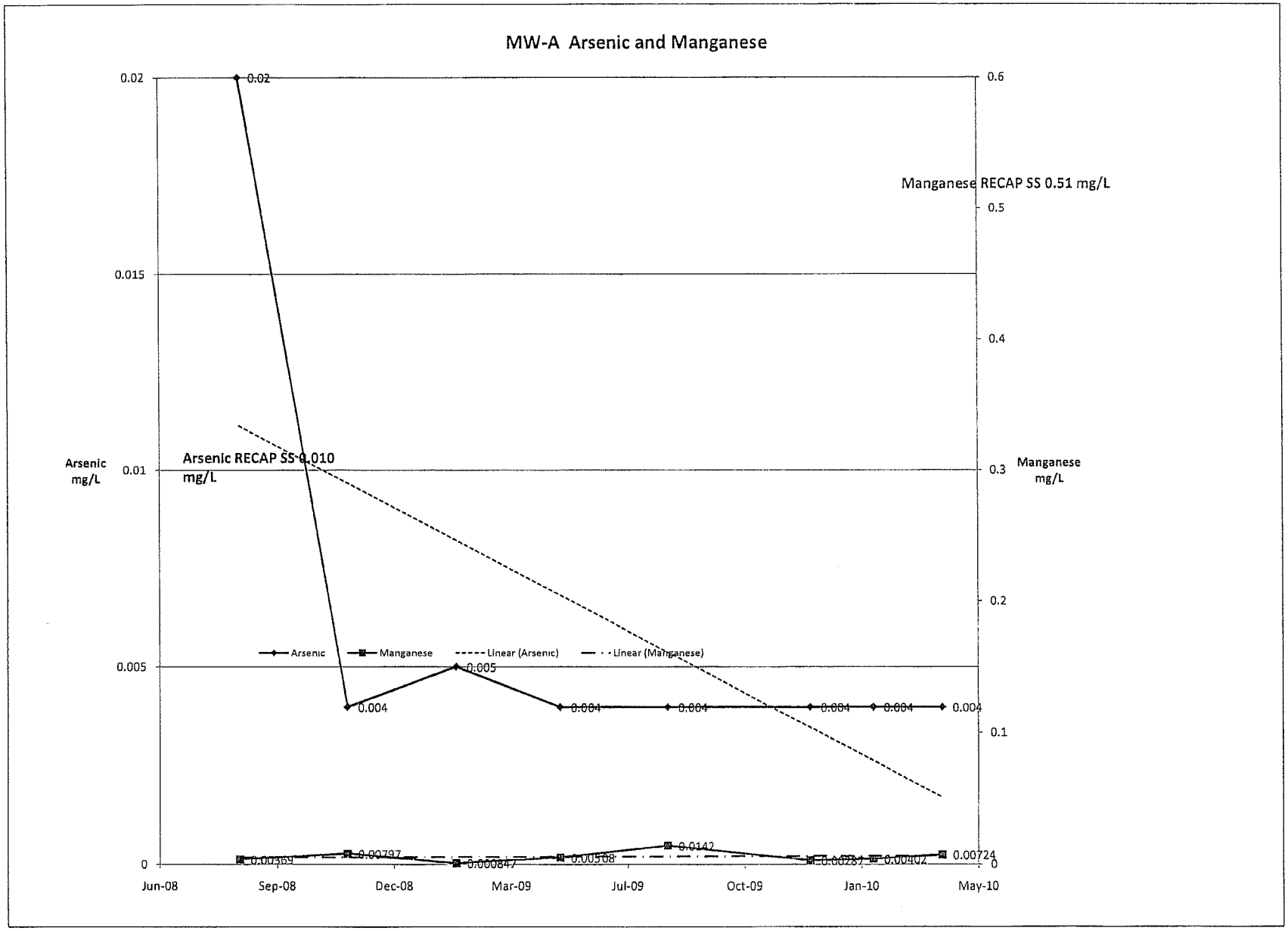
# SECOND WATER BEARING ZONE

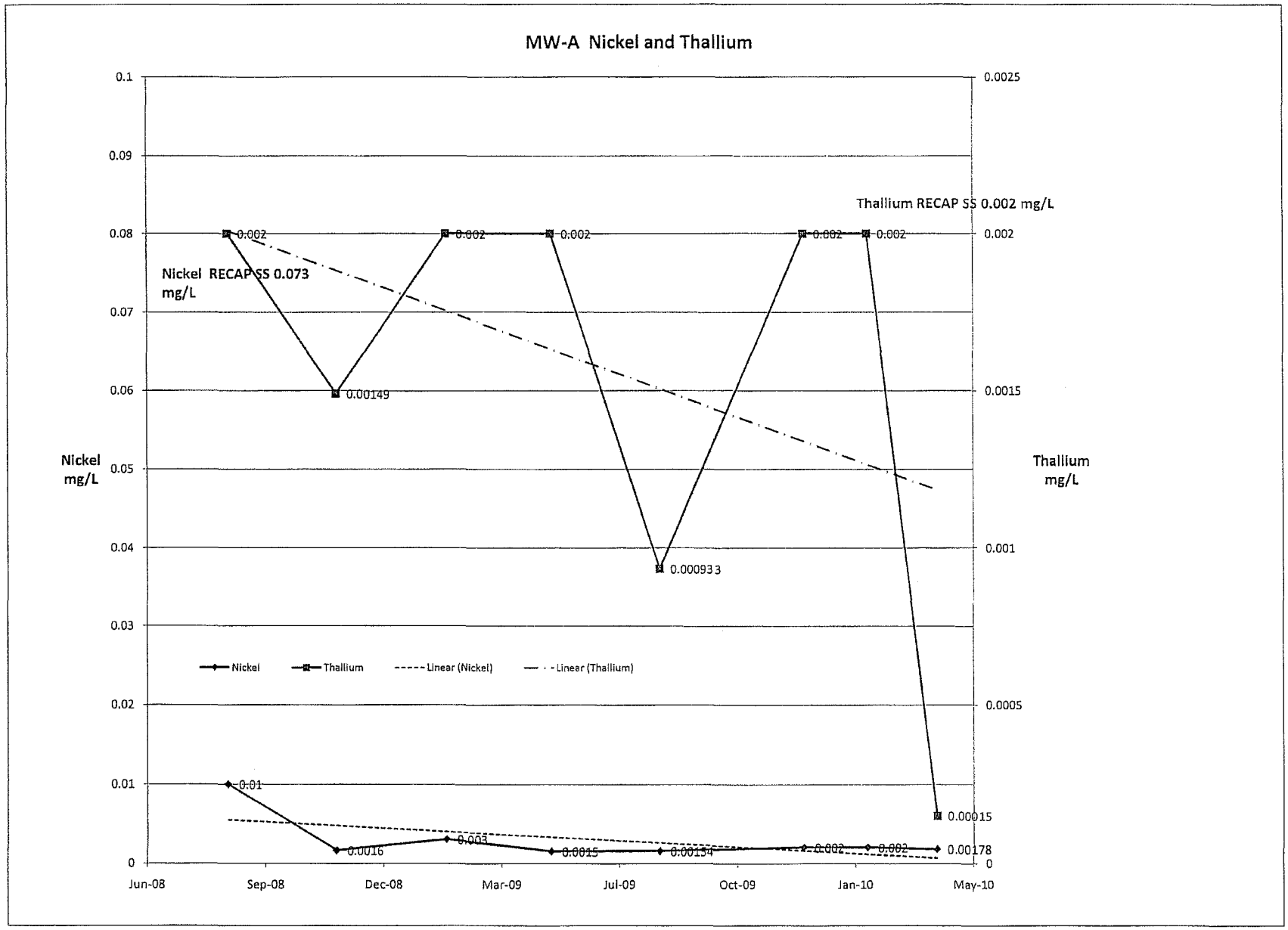

DW-4 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
7.15
7.13
7.90
7.10
7.15
7.13
7.88
7.51
0.01
0.00113
0.001
0.002
0.00139
0.002
0.000534
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

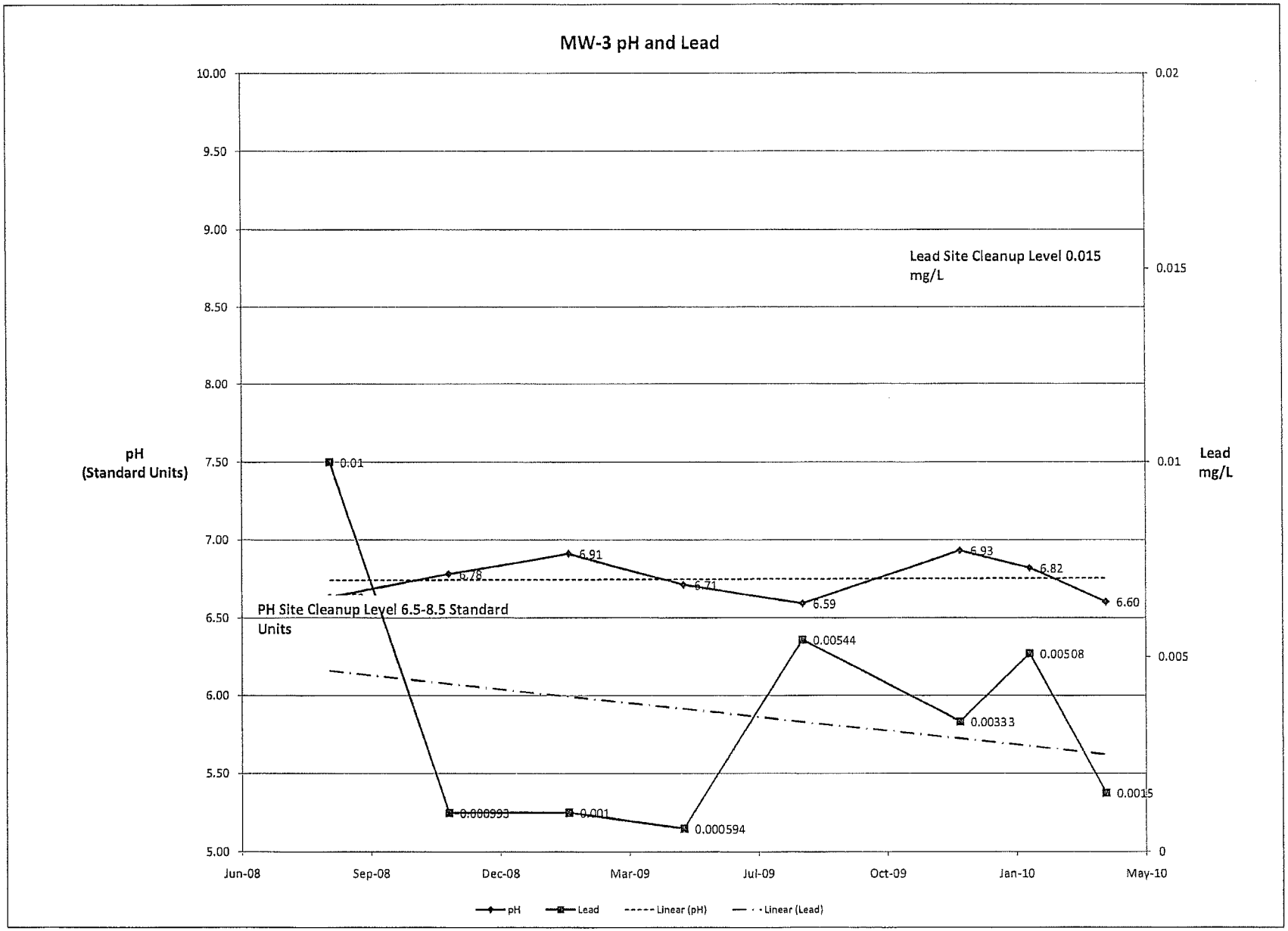

DW-4 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.02
0.004
0.0457
0.0324
0.002
0.0434
0.0662
0.0519
0.00073
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

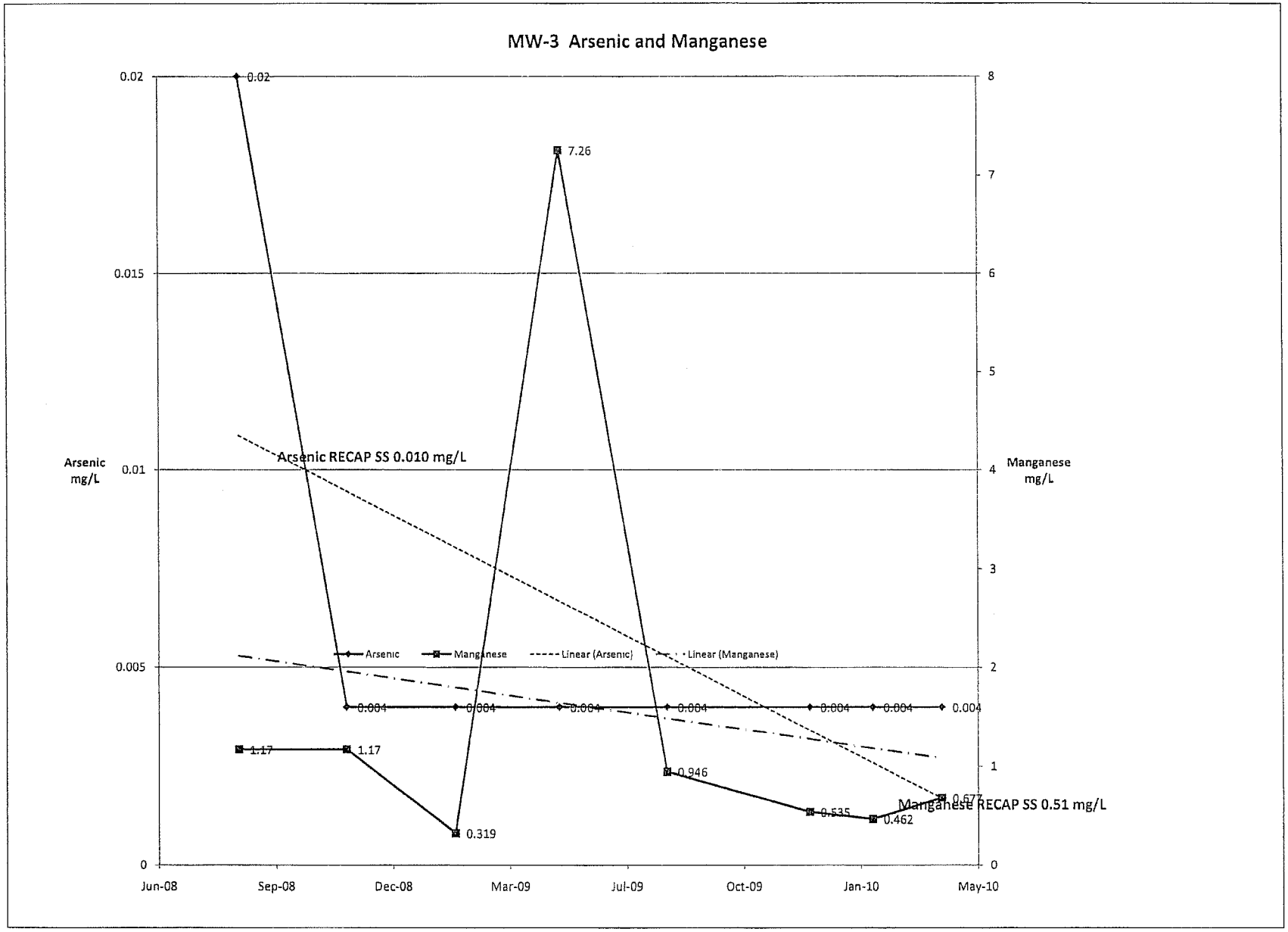

DW-4 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.01
0.00176
0.002
0.00161
0.000995
0.000935
0.002
0.002
0.002
0.002
0.002
0.002
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

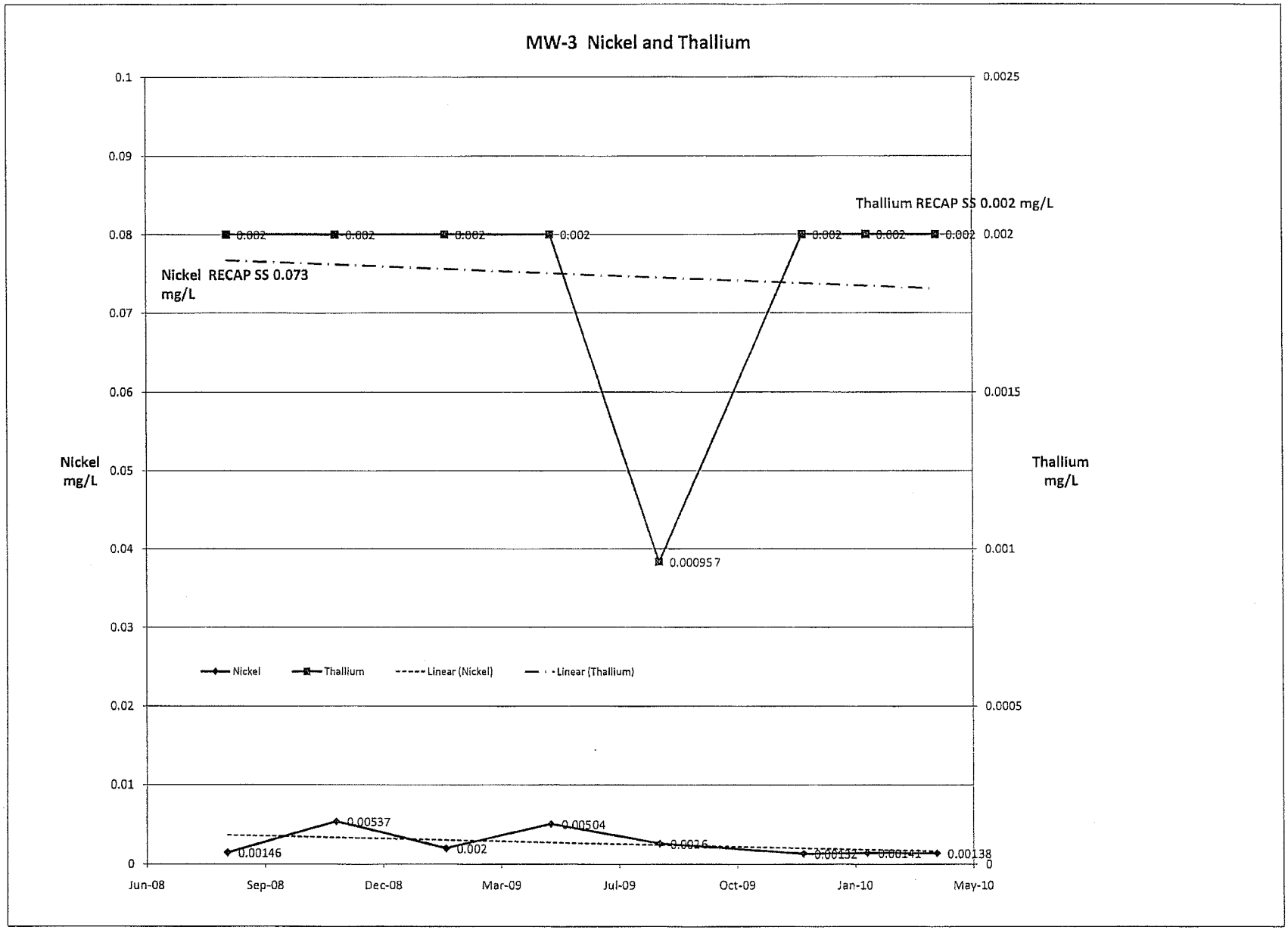

MW-A pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
0.01
7.20
7.25
7.35
7.19
7.14
7.07
7.39
6.91
0.000873
0.001
0.002
0.000868
0.002
0.001
0.000271
pH
Lead
Linear (pH)
Linear (Lead)

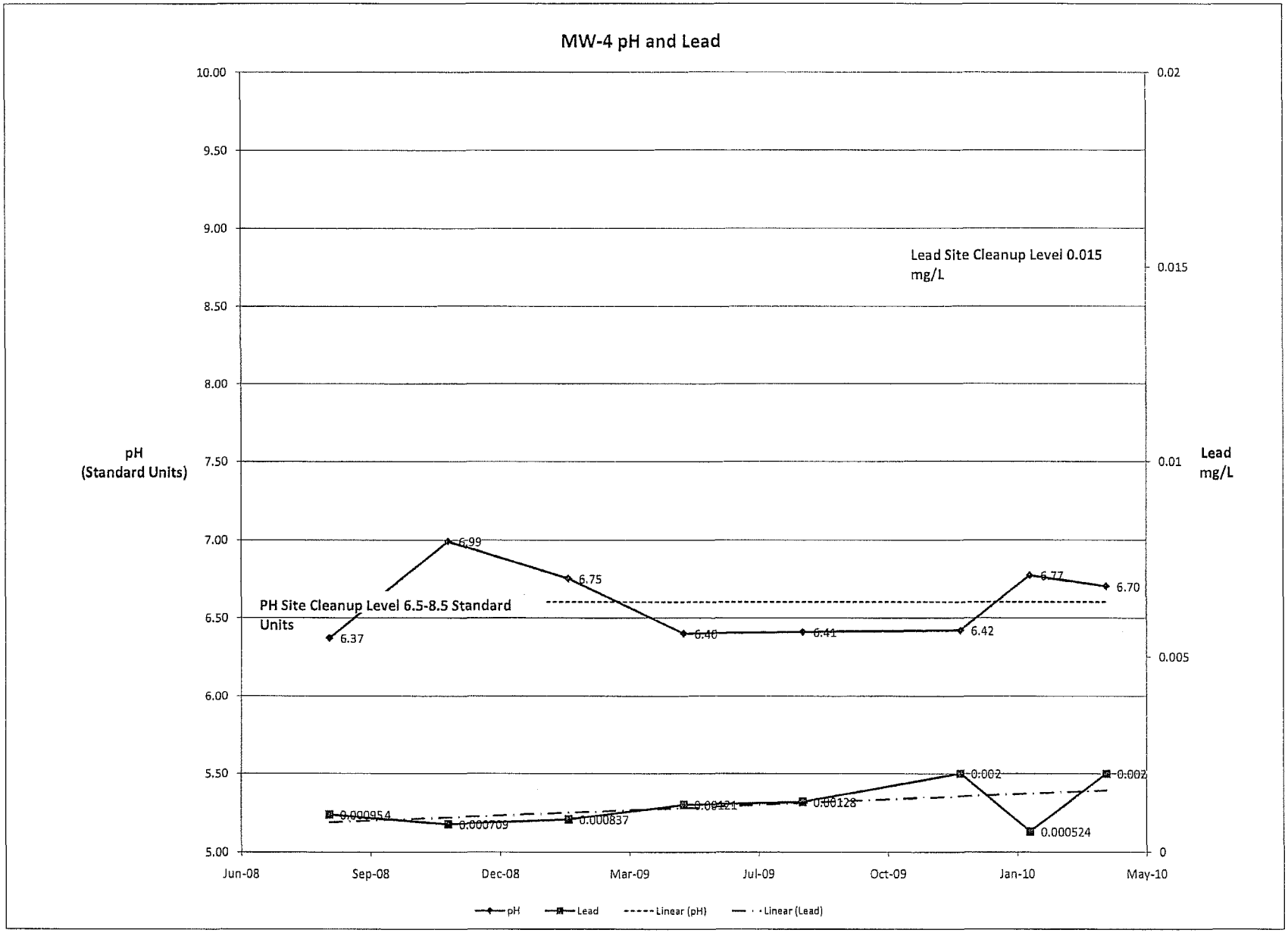

MW-A Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.004
0.005
0.004
0.004
0.004
0.004
0.004
0.004
0.00369
0.00797
0.000847
0.00508
0.0142
0.00284
0.00402
0.00724

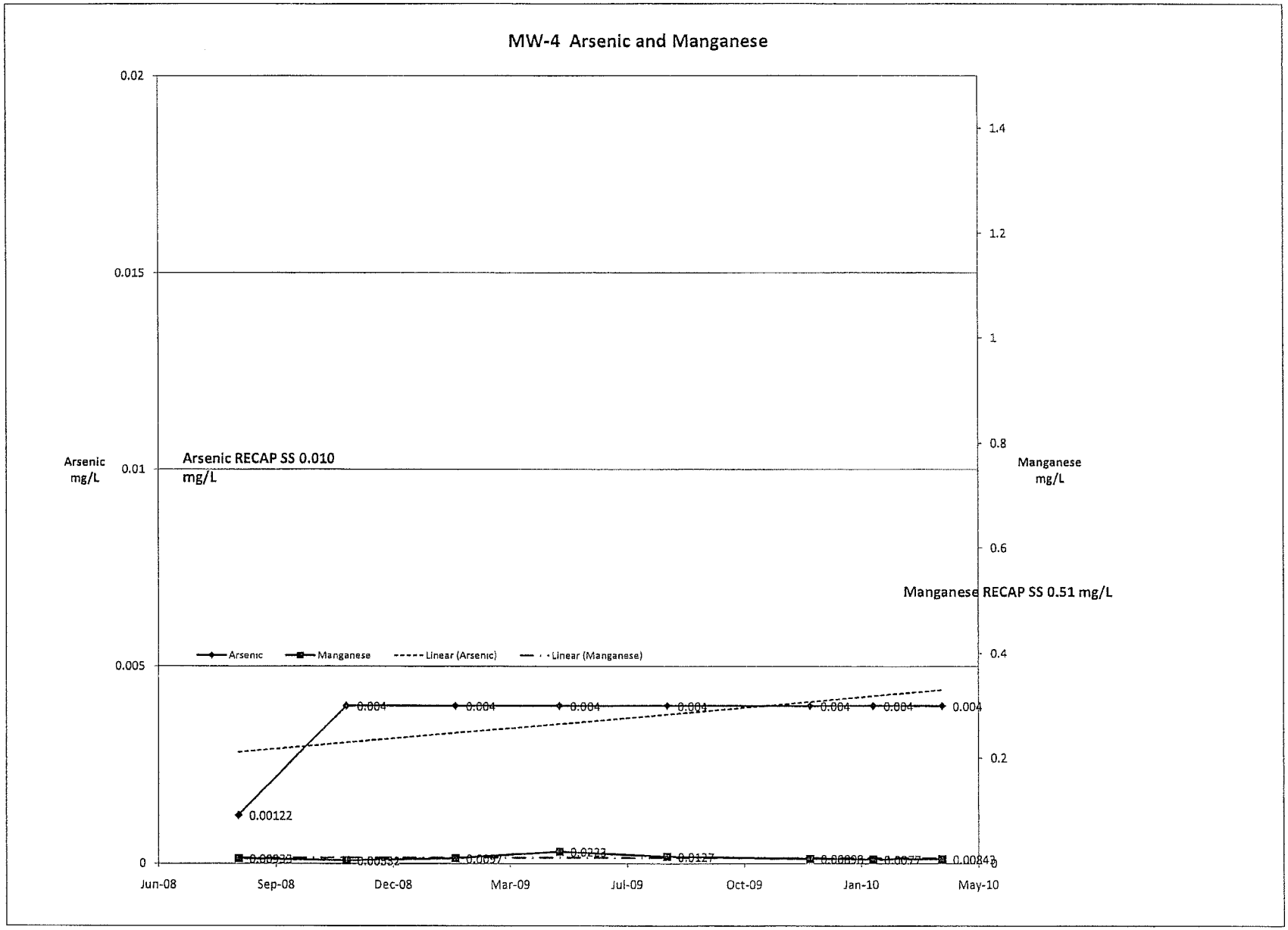

MW-A Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00149
0.002
0.002
0.000933
0.002
0.002
0.00015
0.01
0.0016
0.003
0.0015
0.00134
0.002
0.002
0.00178
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

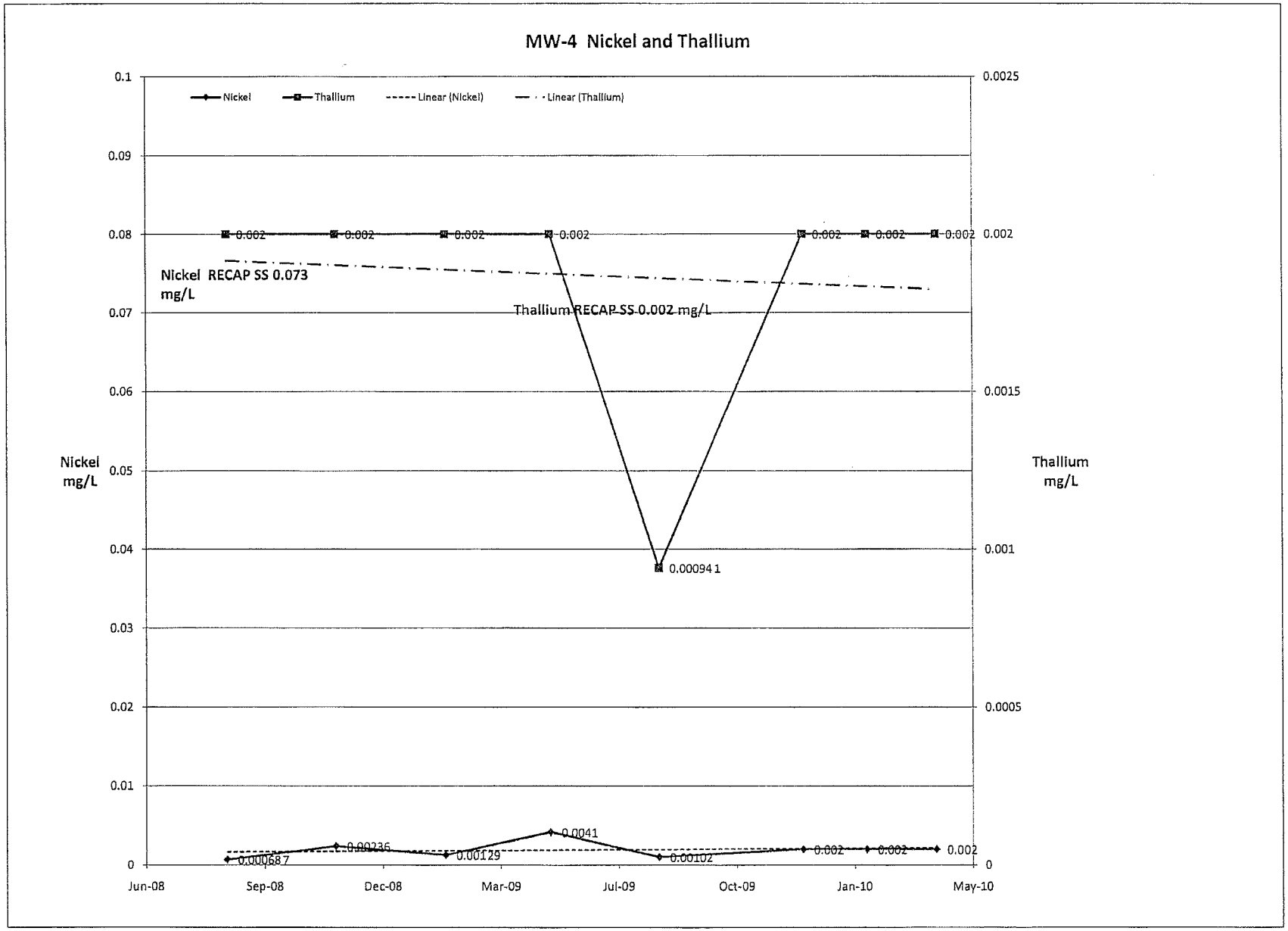

MW-3 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
0.01
0.000993
0.001
0.000594
0.00544
0.00333
0.00508
0.0015
6.78
6.91
6.71
6.59
6.93
6.82
6.60
pH
Lead
Linear (pH)
Linear (Lead)

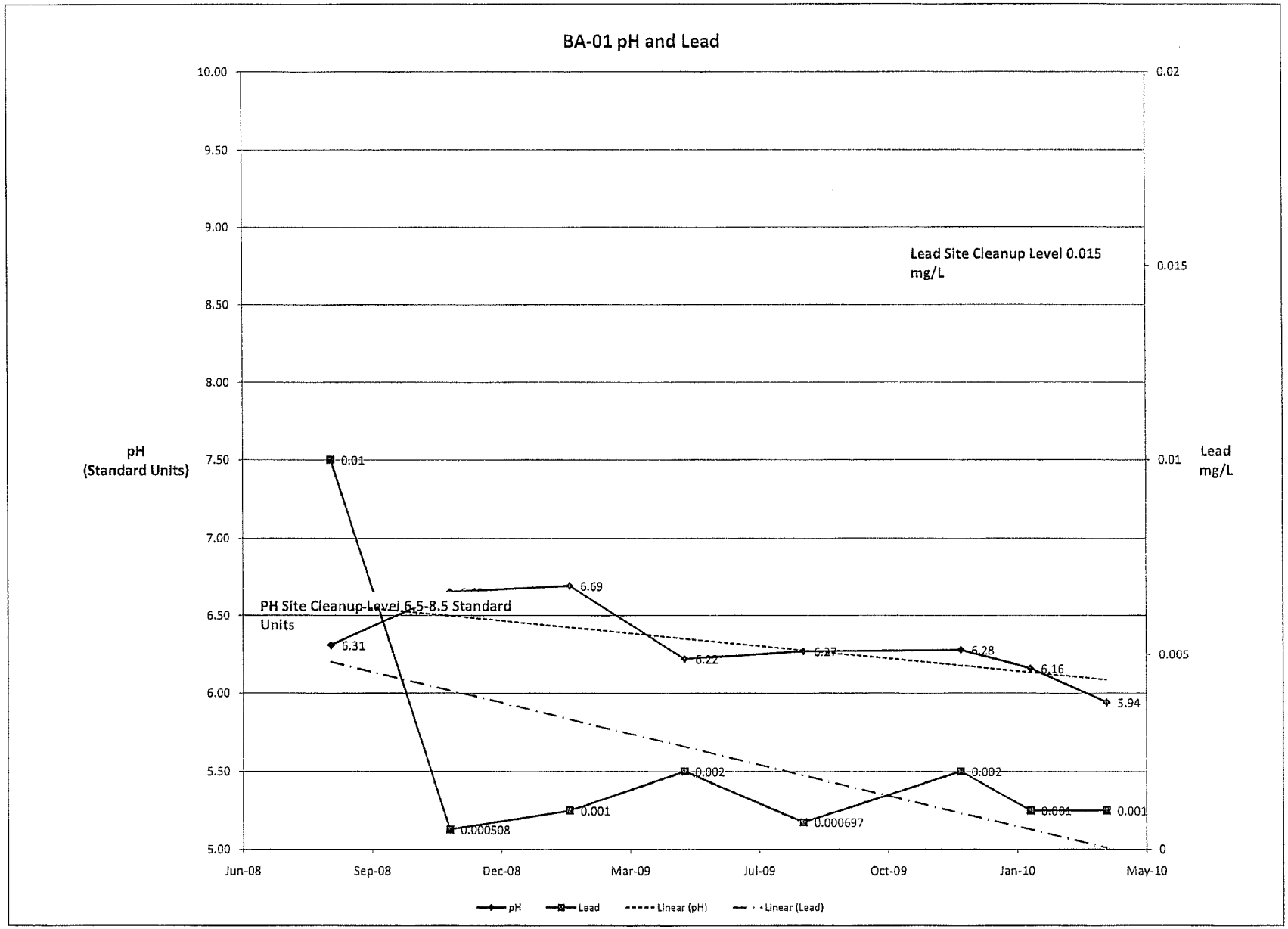

MW-3 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
8
7
6
5
4
3
2
1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
7.26
0.004
0.004
0.004
0.004
0.004
0.004
0.004
1.17
1.17
0.319
0.946
0.535
0.462
0.677

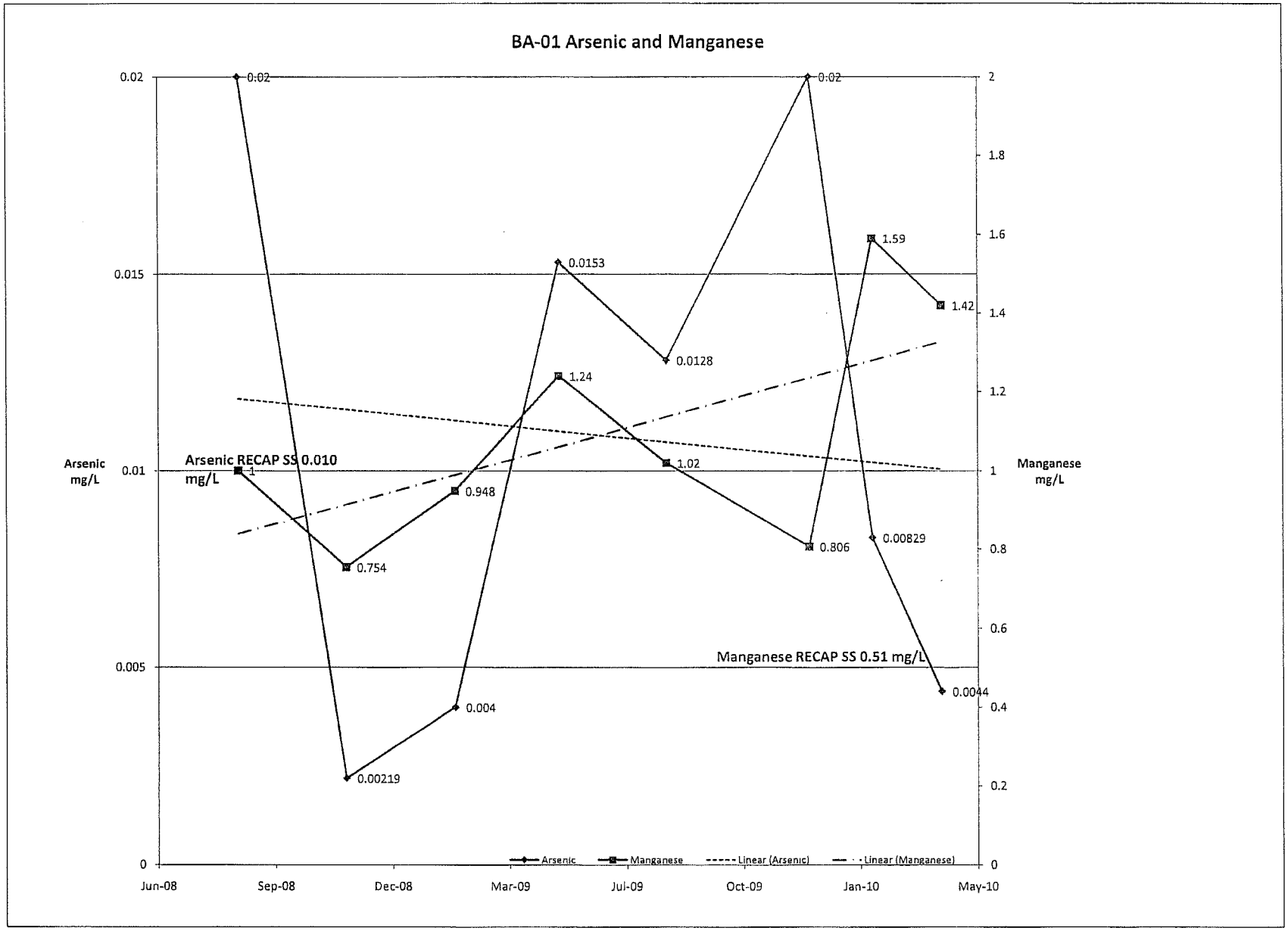

MW-3 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.000957
0.00537
0.00504
0.00146
0.00138
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

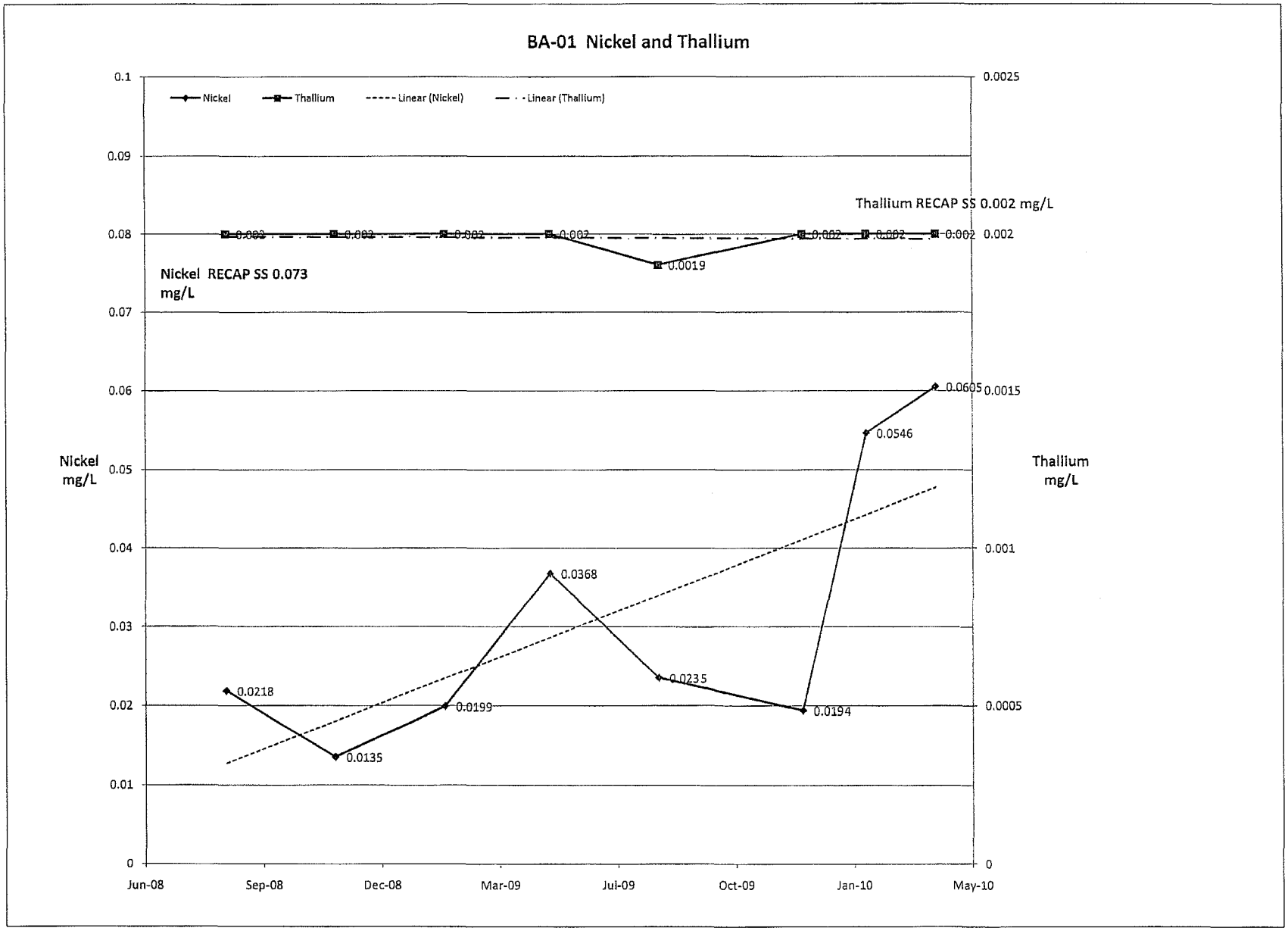

MW-4 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
6.37
6.99
6.75
6.40
6.41
6.42
6.77
6.70
0.000954
0.000709
0.000837
0.00121
0.00128
0.002
0.000524
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

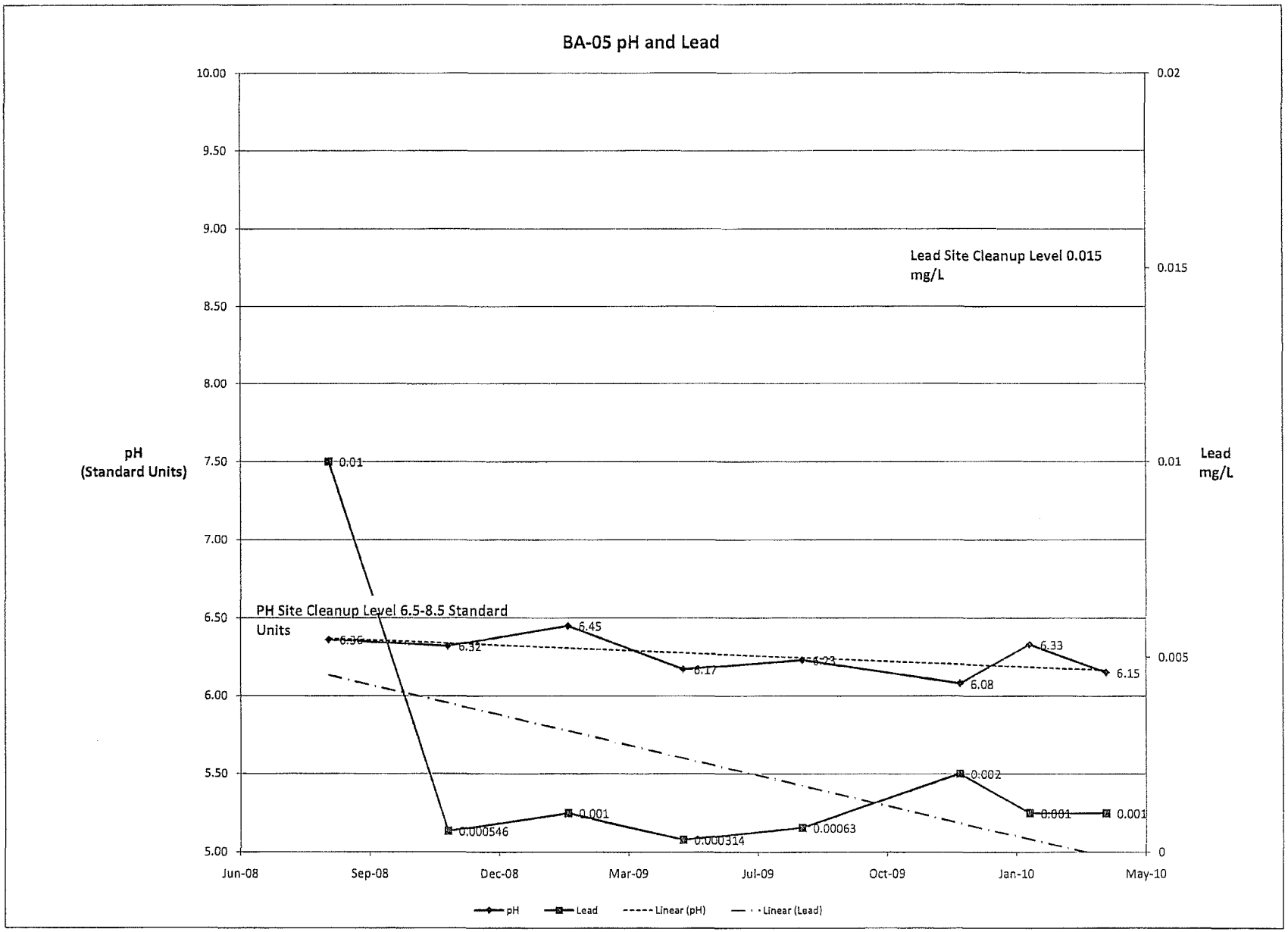

MW-4 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.00122
0.004
0.0127
0.00843
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

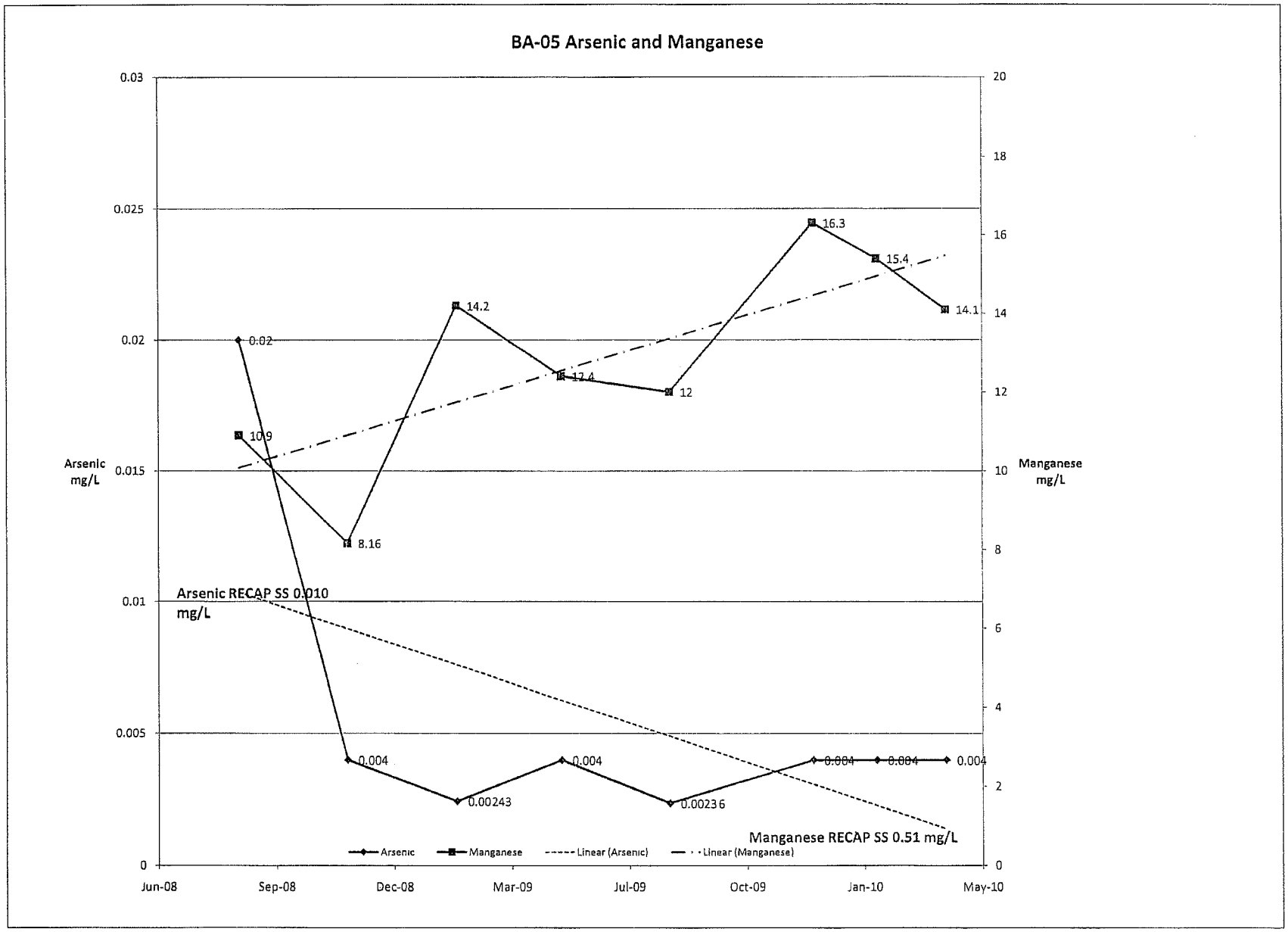

MW-4 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Nickel mg/L
Thallium mg/L
Nickel RECAP SS 0.073 mg/L
Thallium RECAP SS 0.002 mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.000941
0.0041
0.00236
0.00129
0.00102
0.000687
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

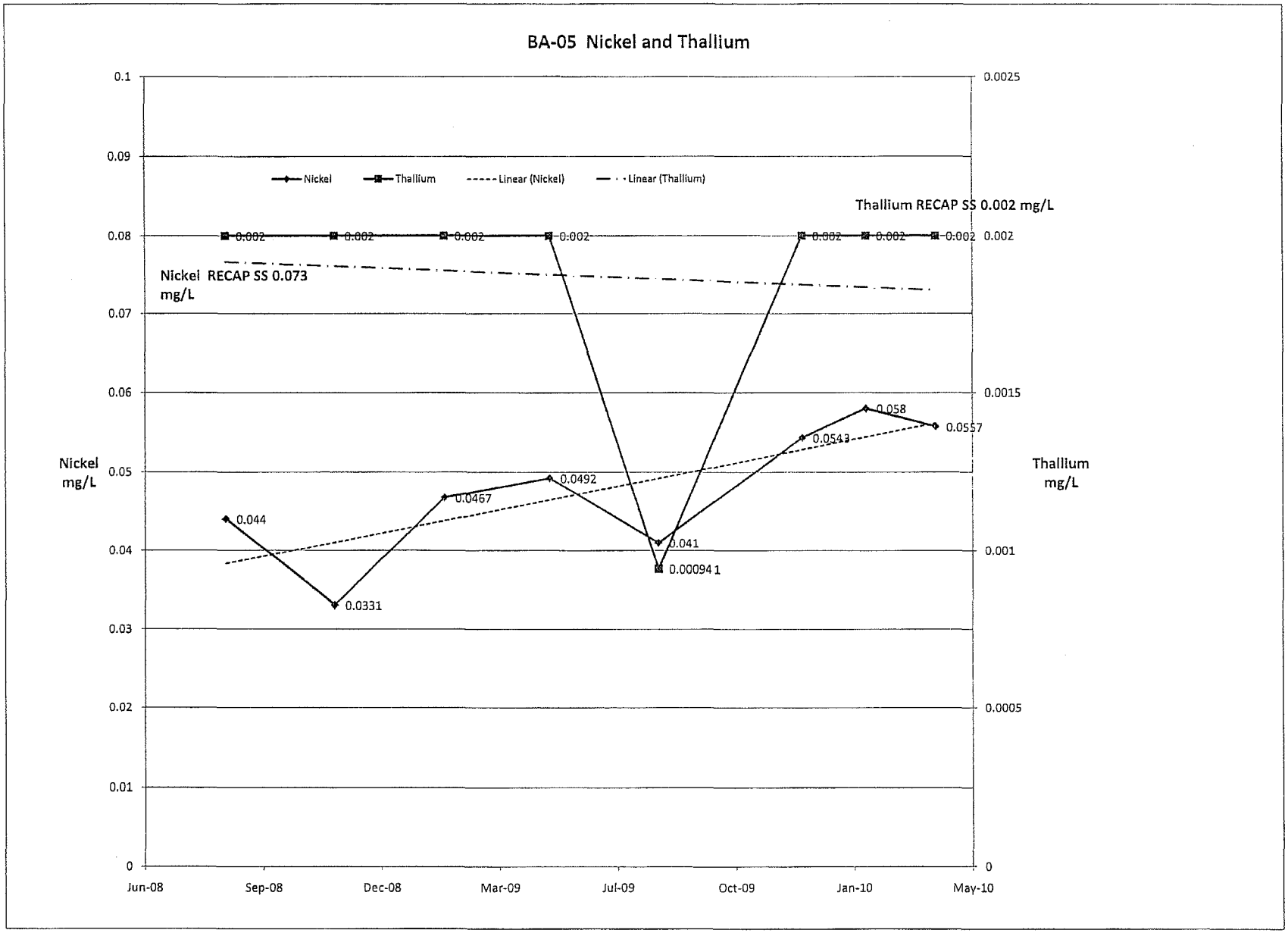

BA-01 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
0.01
6.31
6.69
6.22
6.27
6.28
6.16
5.94
0.000508
0.001
0.002
0.000697
0.002
0.001
0.001
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

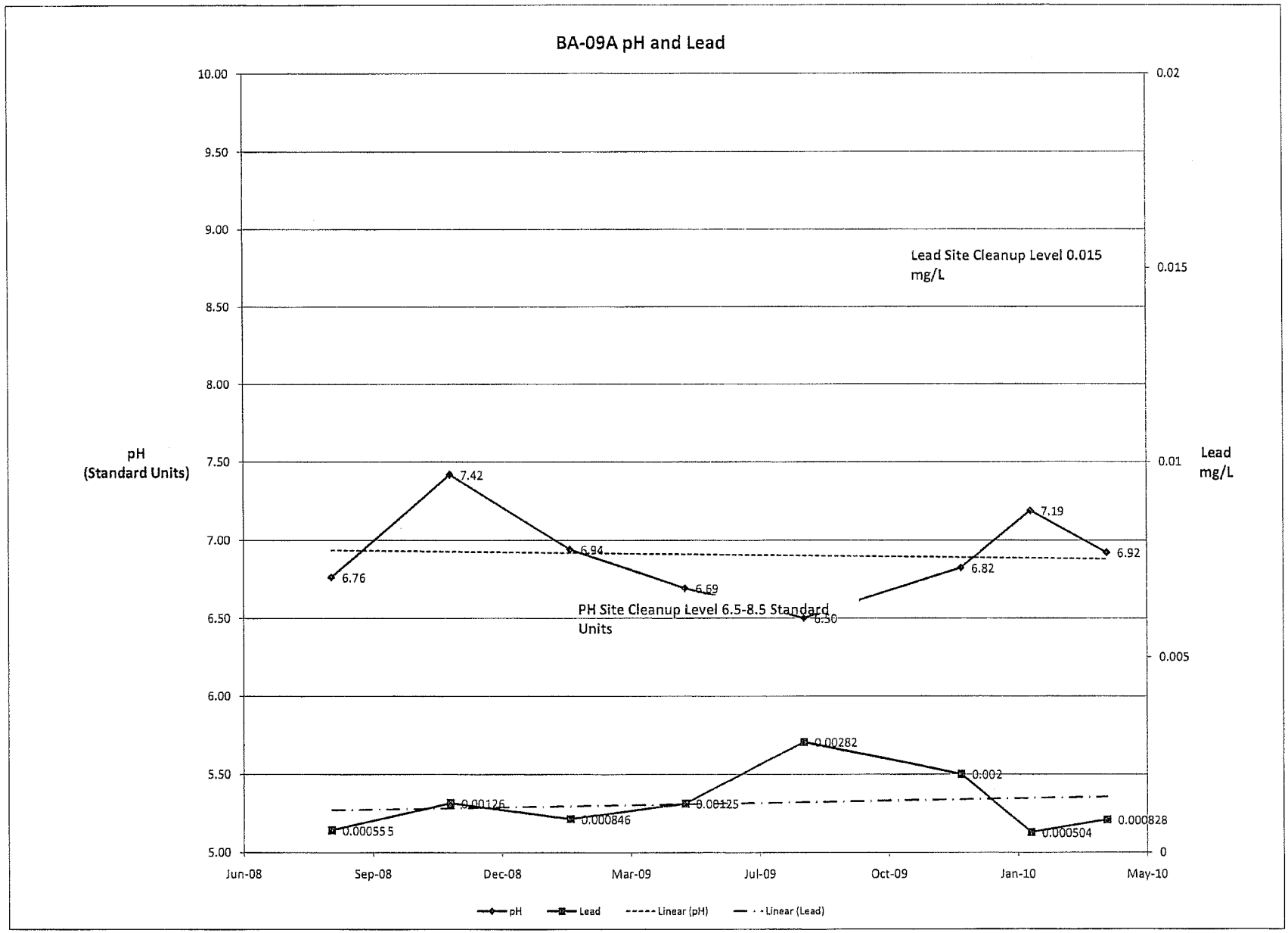

BA-01 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.00219
0.004
0.0153
0.0128
0.02
0.00829
0.0044
1
0.754
0.948
1.24
1.02
0.806
1.59
1.42
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

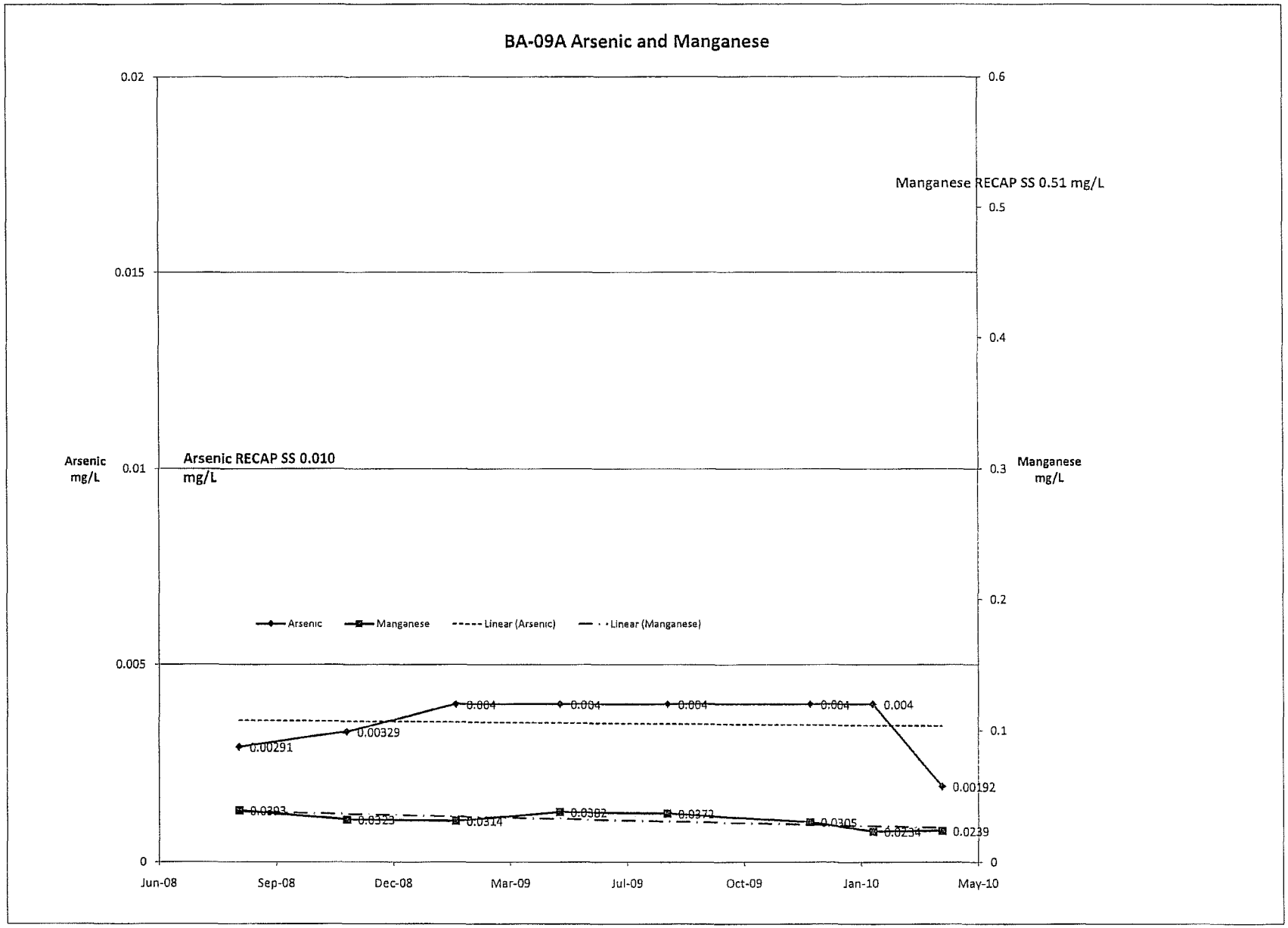

BA-01 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.0019
0.0605
0.0546
0.0368
0.0235
0.0218
0.0199
0.0194
0.0135
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

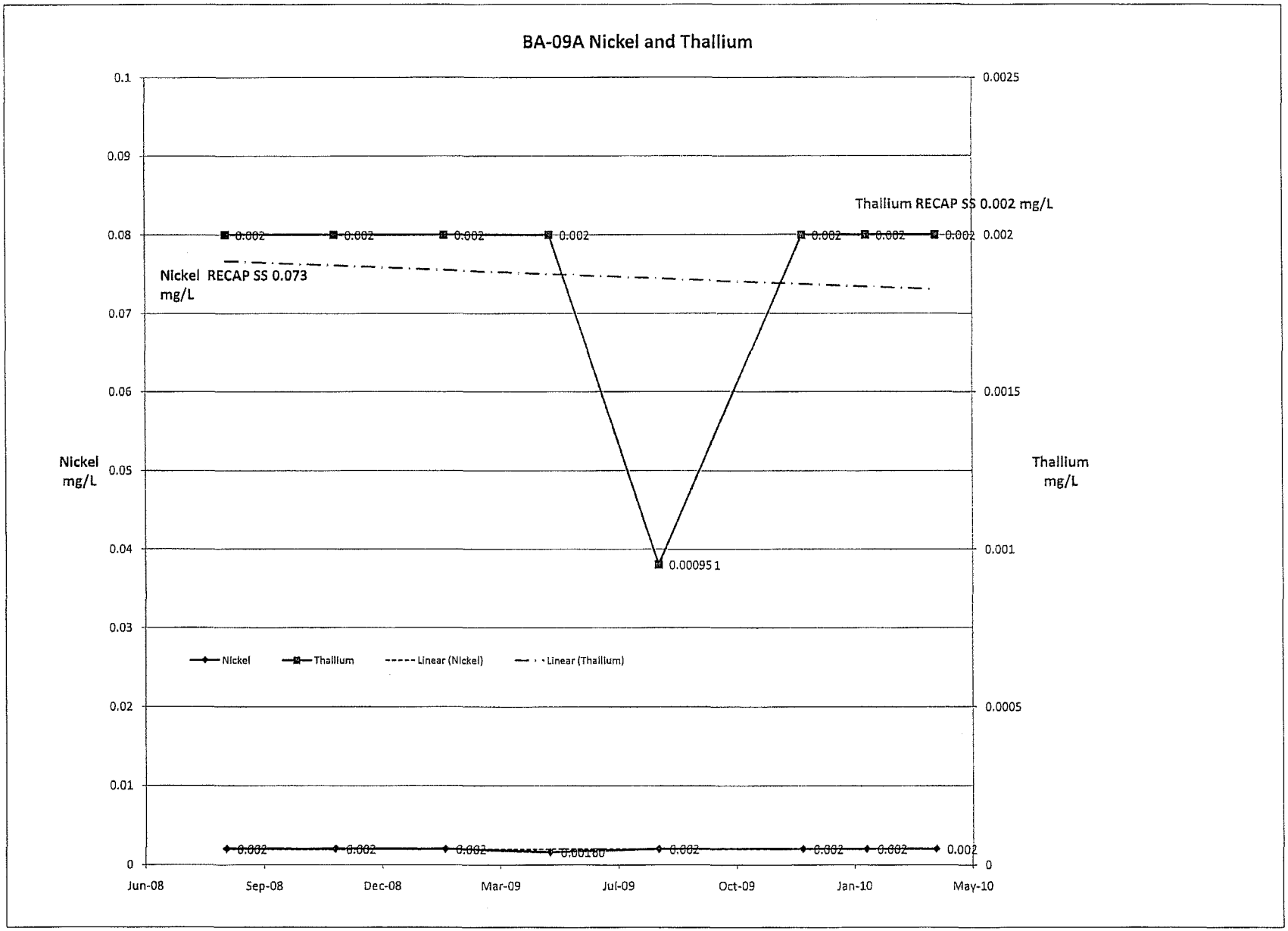

BA-05 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
0.01
6.36
6.32
6.45
6.17
6.23
6.08
6.33
6.15
0.000546
0.001
0.000314
0.00063
0.002
0.001
0.001
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

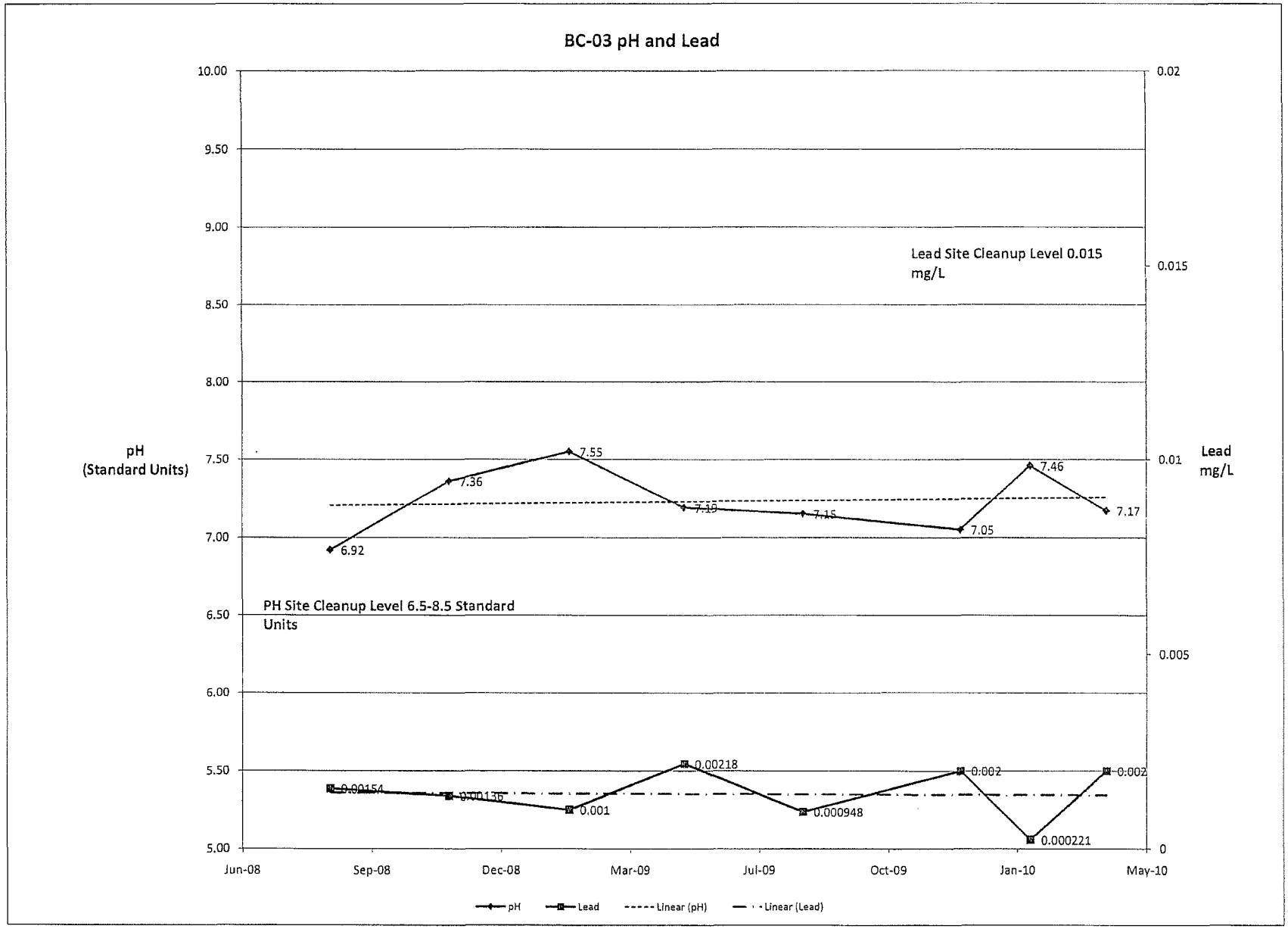

BA-05 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.03
0.025
0.02
0.015
0.01
0.005
0
20
18
16
14
12
10
8
6
4
2
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.02
10.9
8.16
14.2
12.4
12
16.3
15.4
14.1
0.004
0.00243
0.004
0.00236
0.004
0.004
0.004
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

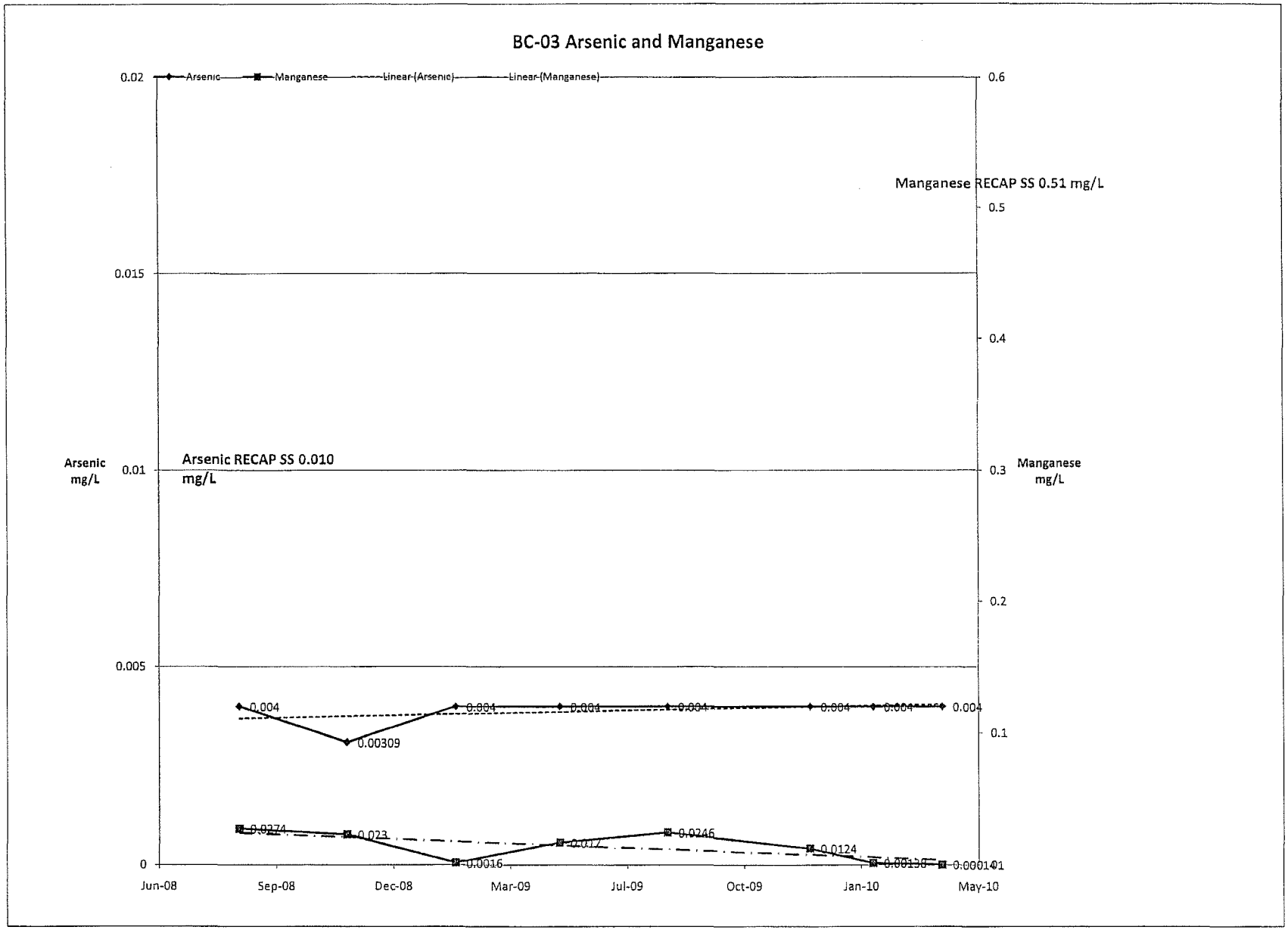

BA-05 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.044
0.0331
0.0467
0.0492
0.041
0.00094 1
0.0543
0.058
0.0557
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

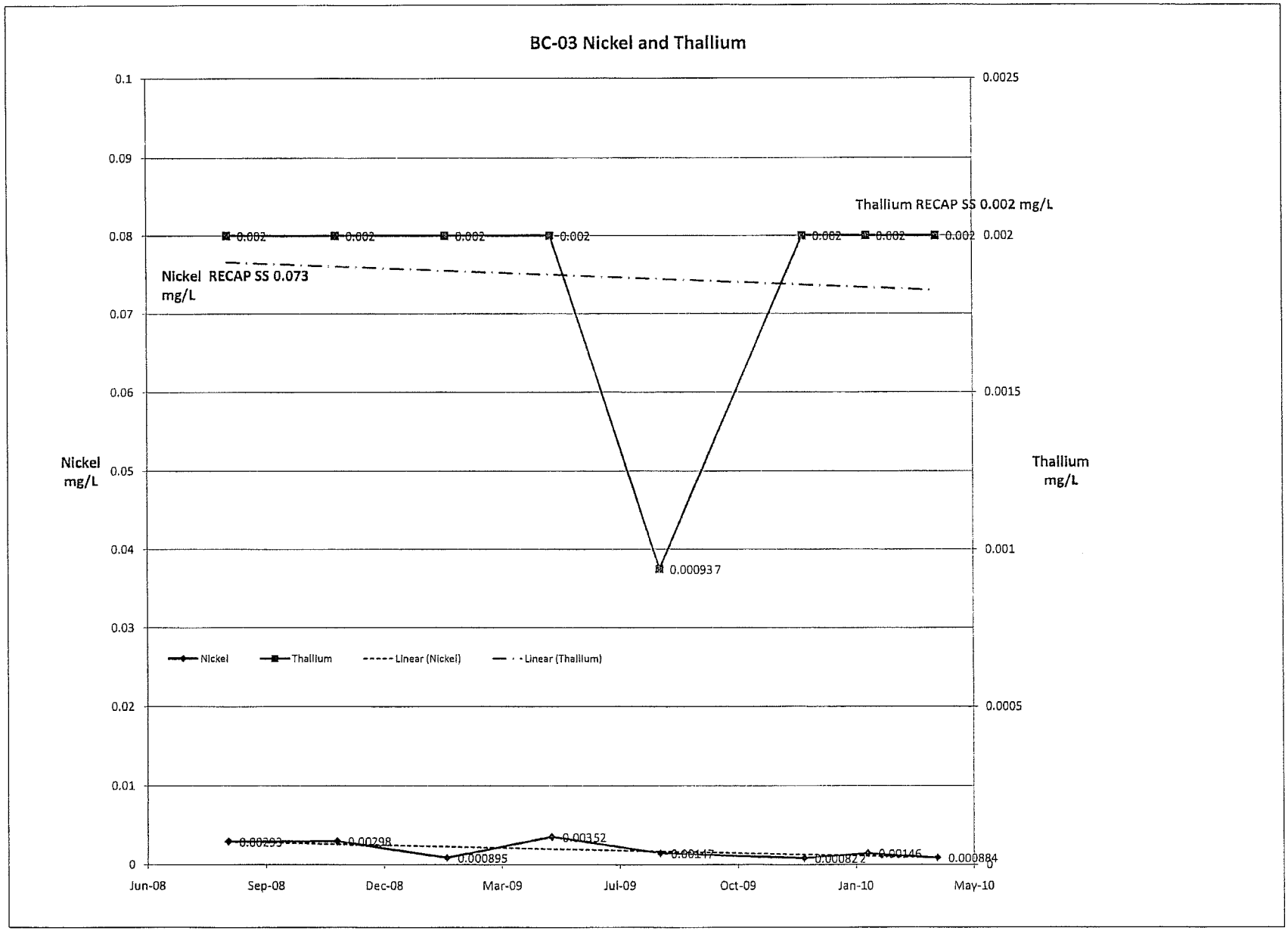

BA-09A pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
7.42
6.76
6.94
6.69
6.50
7.19
6.82
6.92
0.00282
0.002
0.00126
0.000846
0.00125
0.000555 5
0.000504
0.000828
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

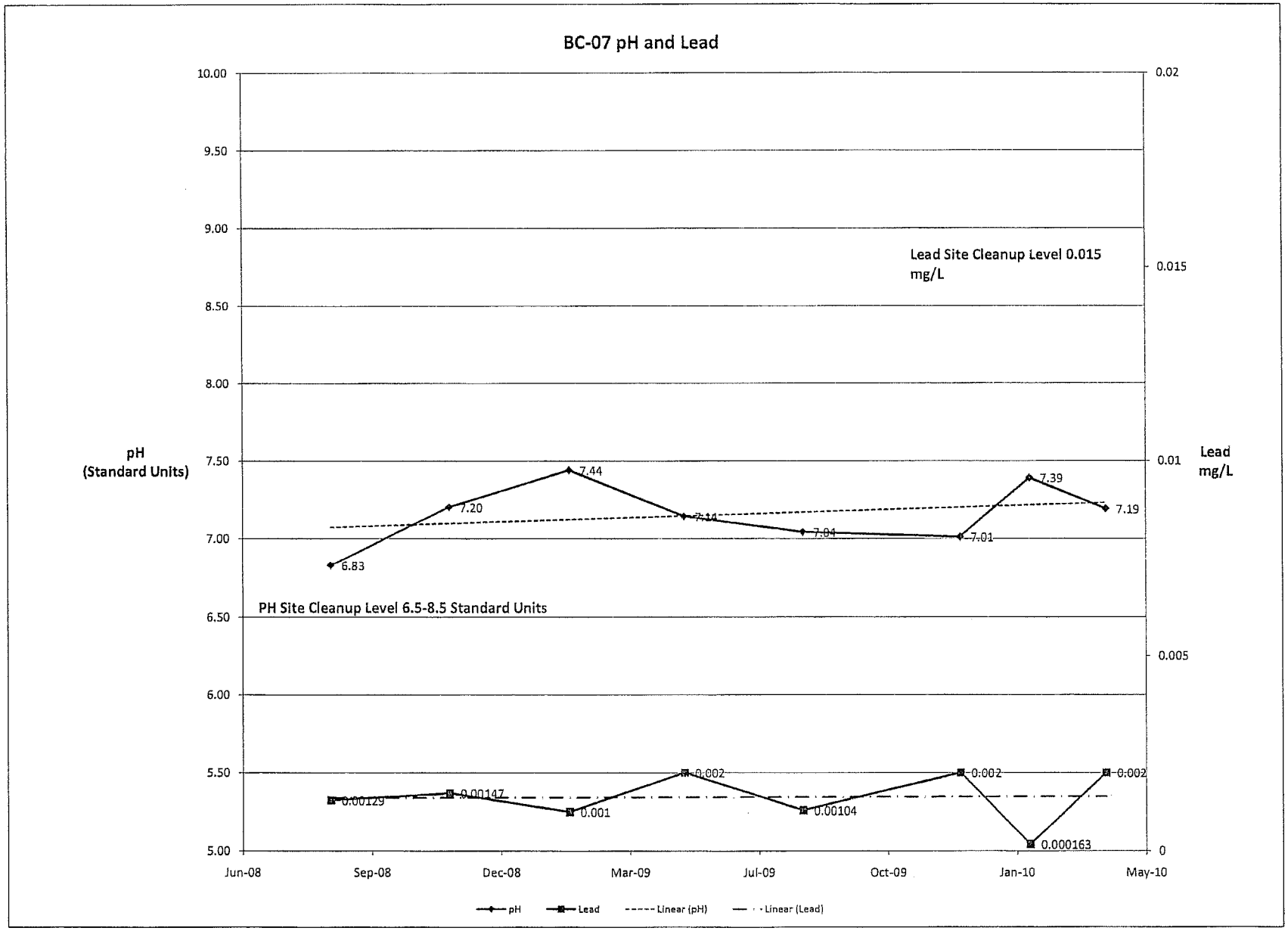

BA-09A Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.00291
0.00329
0.004
0.004
0.004
0.004
0.004
0.00192
0.0293
0.0323
0.0314
0.0382
0.0372
0.0305
0.0234
0.0239
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

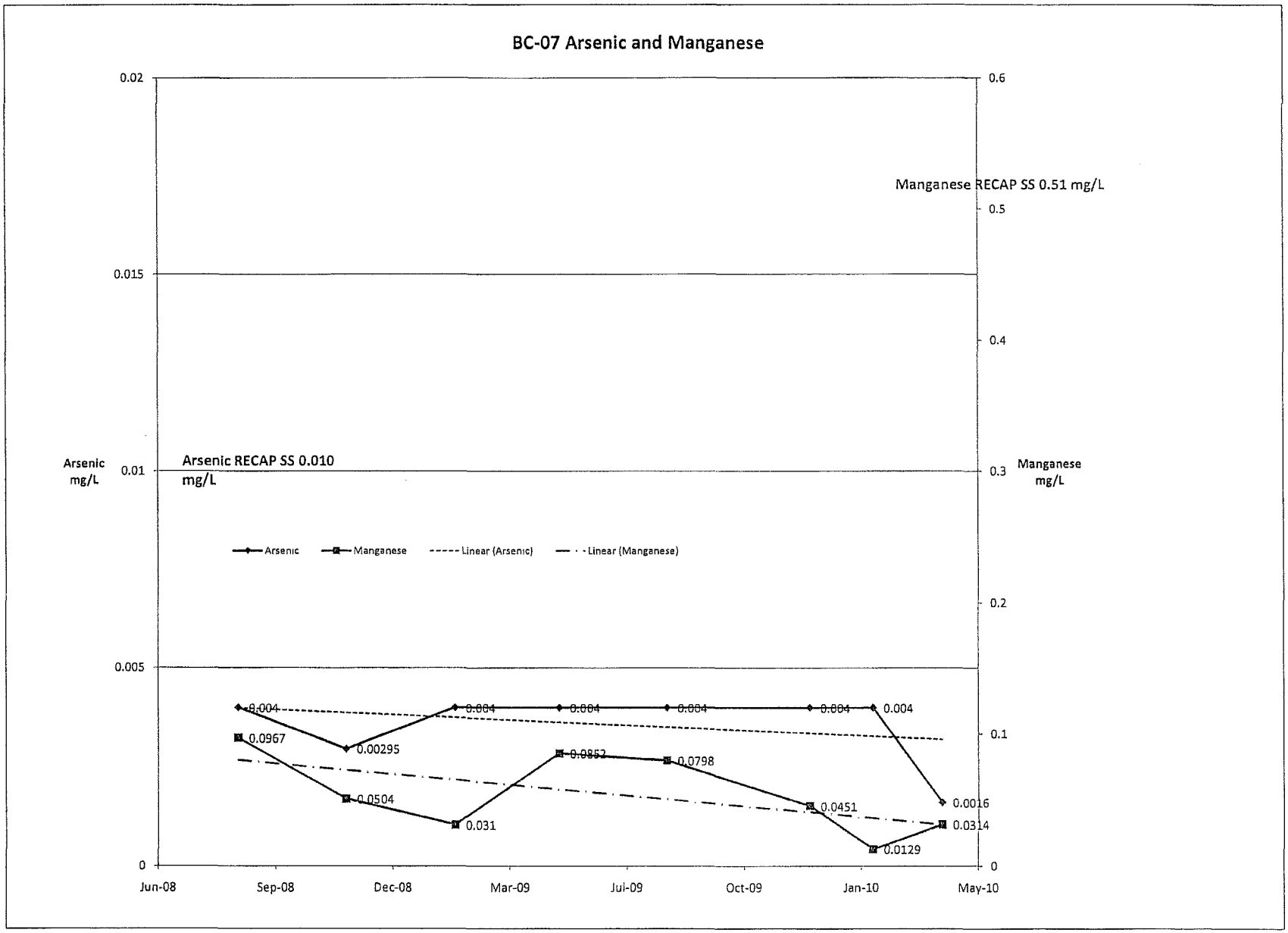

BA-09A Nickel and Thallium
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00095 1
0.00160
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

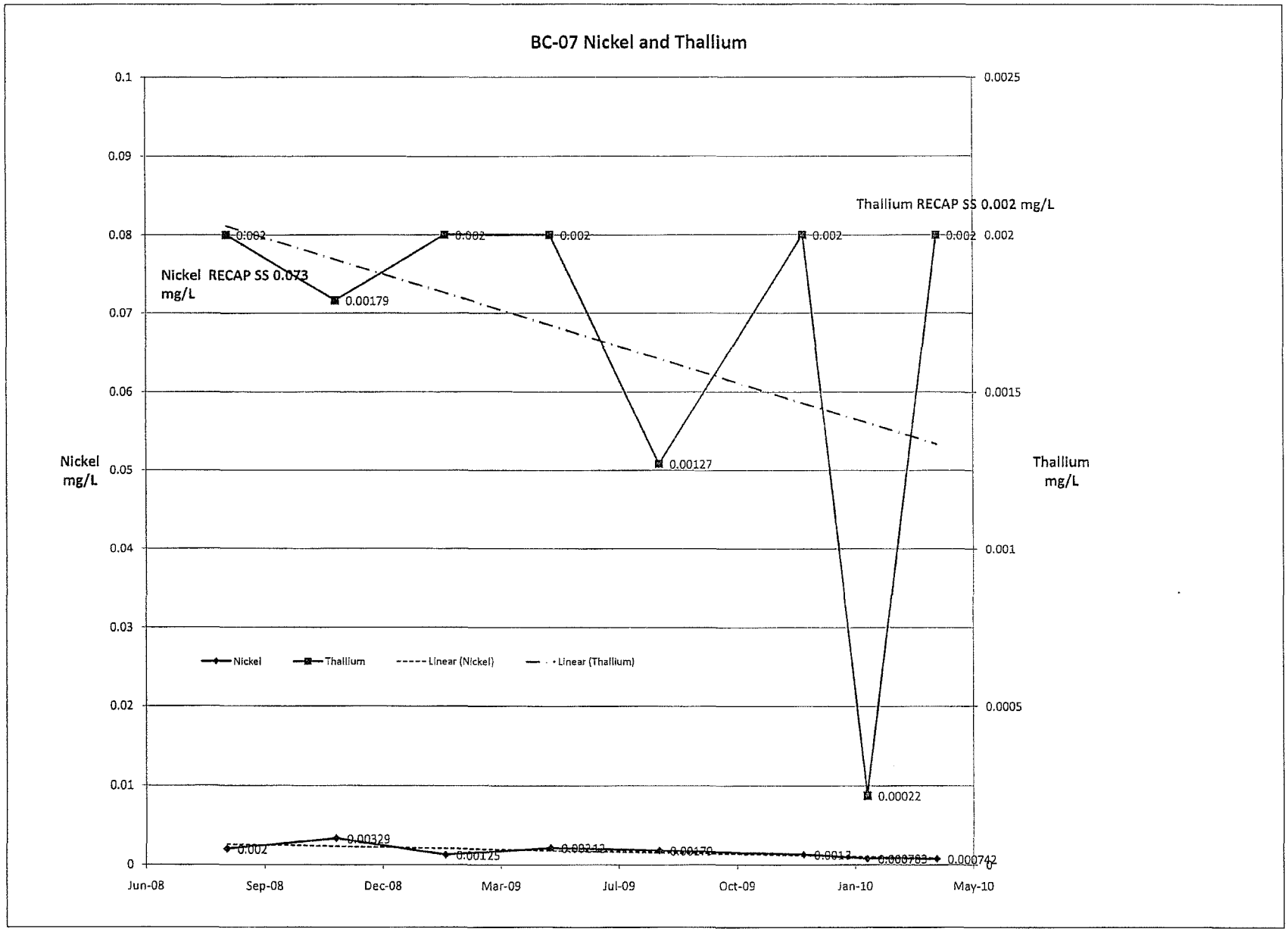

BC-03 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
6.92
7.36
7.55
7.19
7.15
7.05
7.46
7.17
0.00154
0.00136
0.001
0.00218
0.000948
0.002
0.000221
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

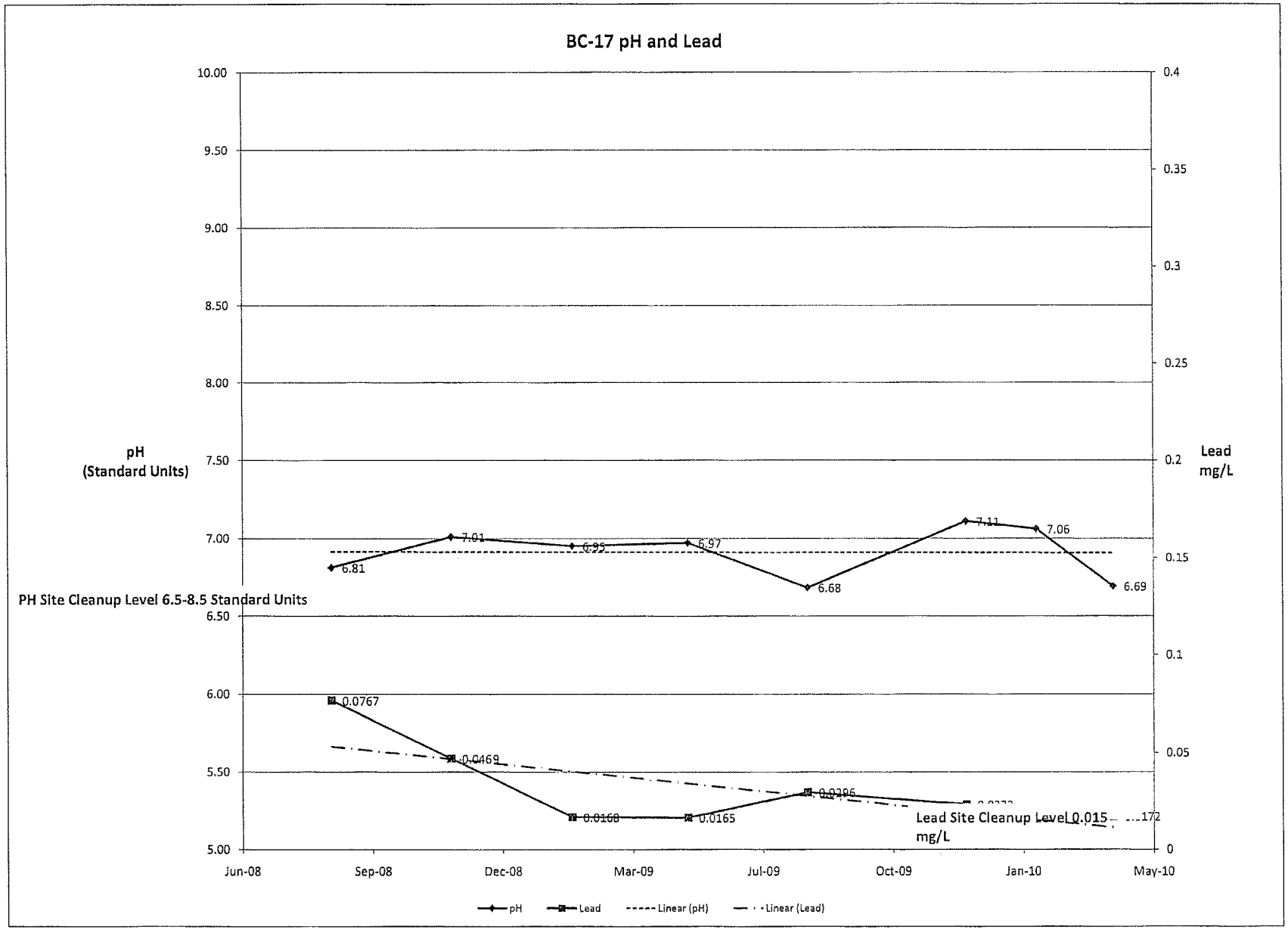

BC-03 Arsenic and Manganese
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0.004
0.00309
0.0274
0.023
0.0016
0.017
0.0246
0.0124
0.00130
0.000141
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

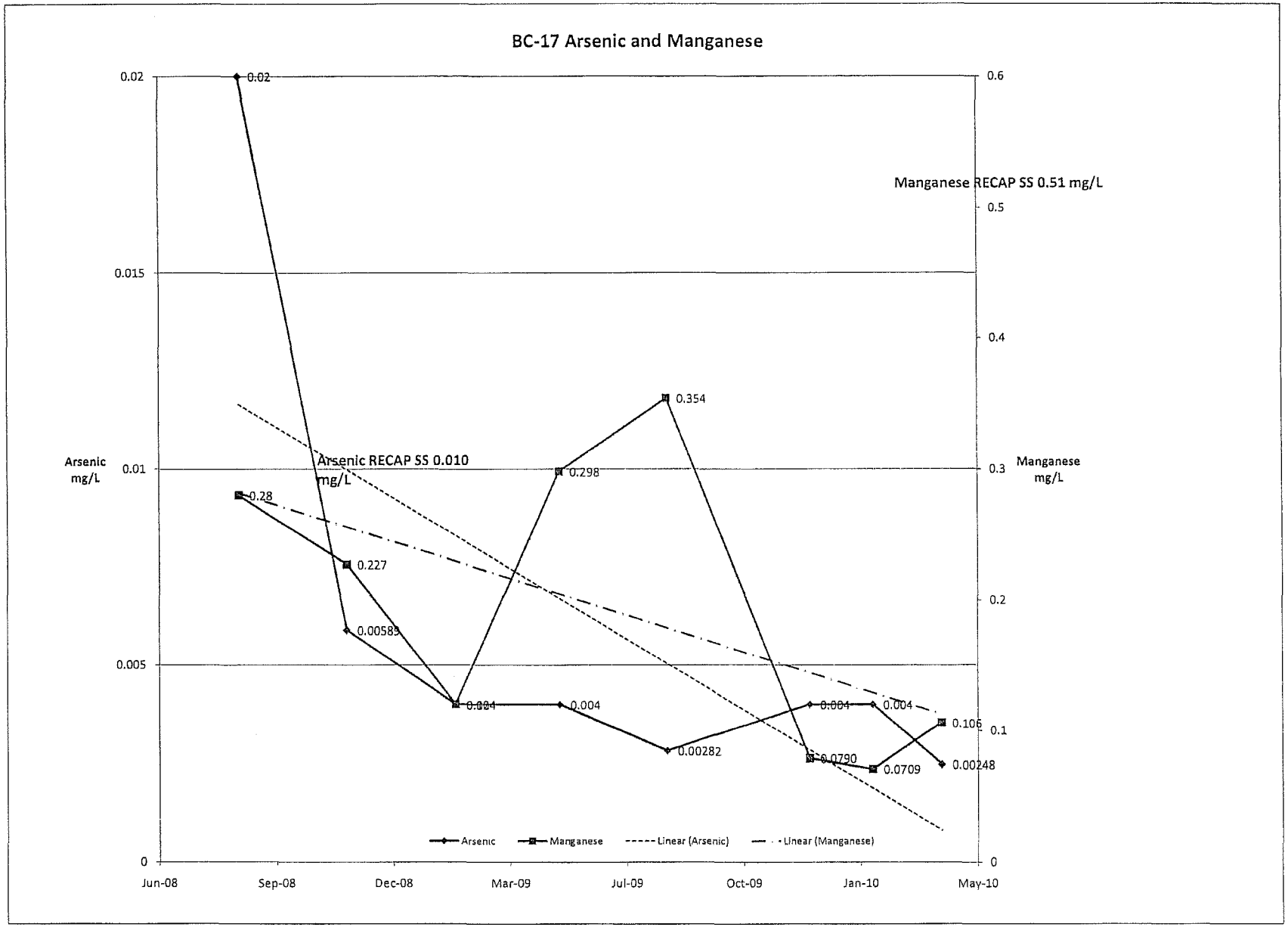

BC-03 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.000937
0.00293
0.00298
0.000895
0.00352
0.00147
0.000822
0.00146
0.000884
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

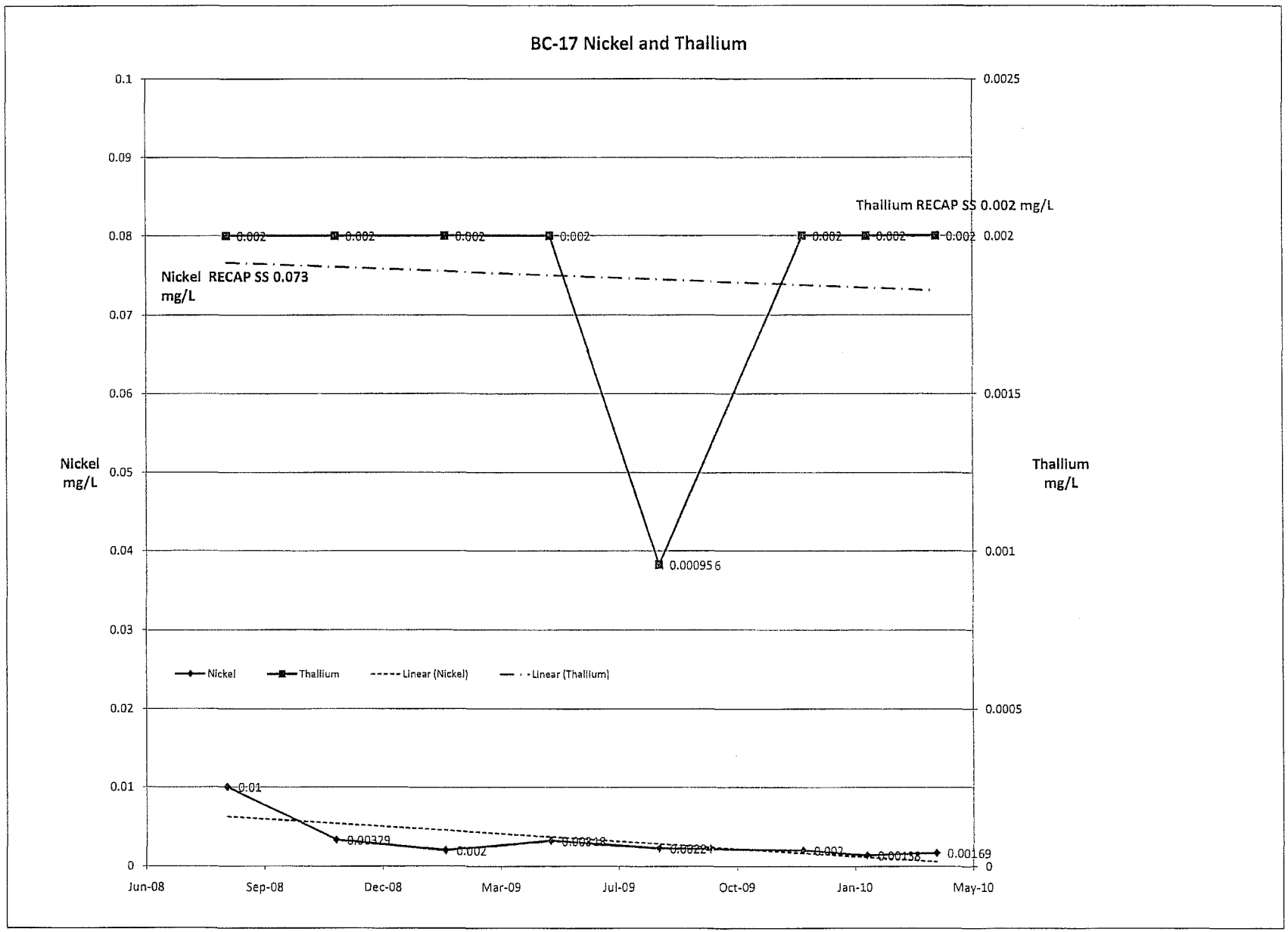

BC-07 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
6.83
7.20
7.44
7.14
7.04
7.01
7.39
7.19
0.00129
0.00147
0.001
0.002
0.00104
0.002
0.000163
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

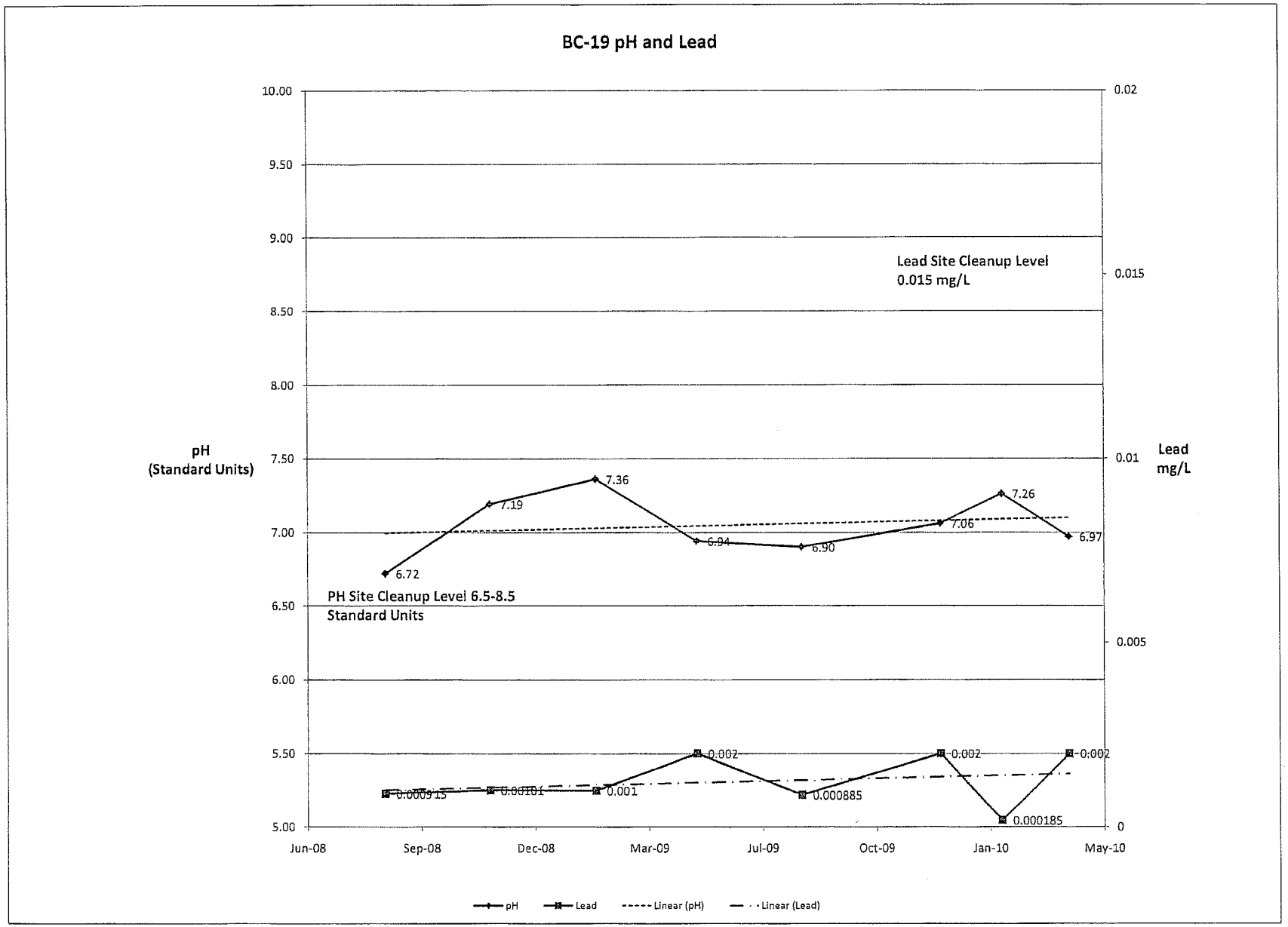

BC-07 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.004
0.004
0.004
0.004
0.004
0.004
0.004
0.0967
0.00295
0.0504
0.031
0.0852
0.0798
0.0451
0.0129
0.0016
0.0314

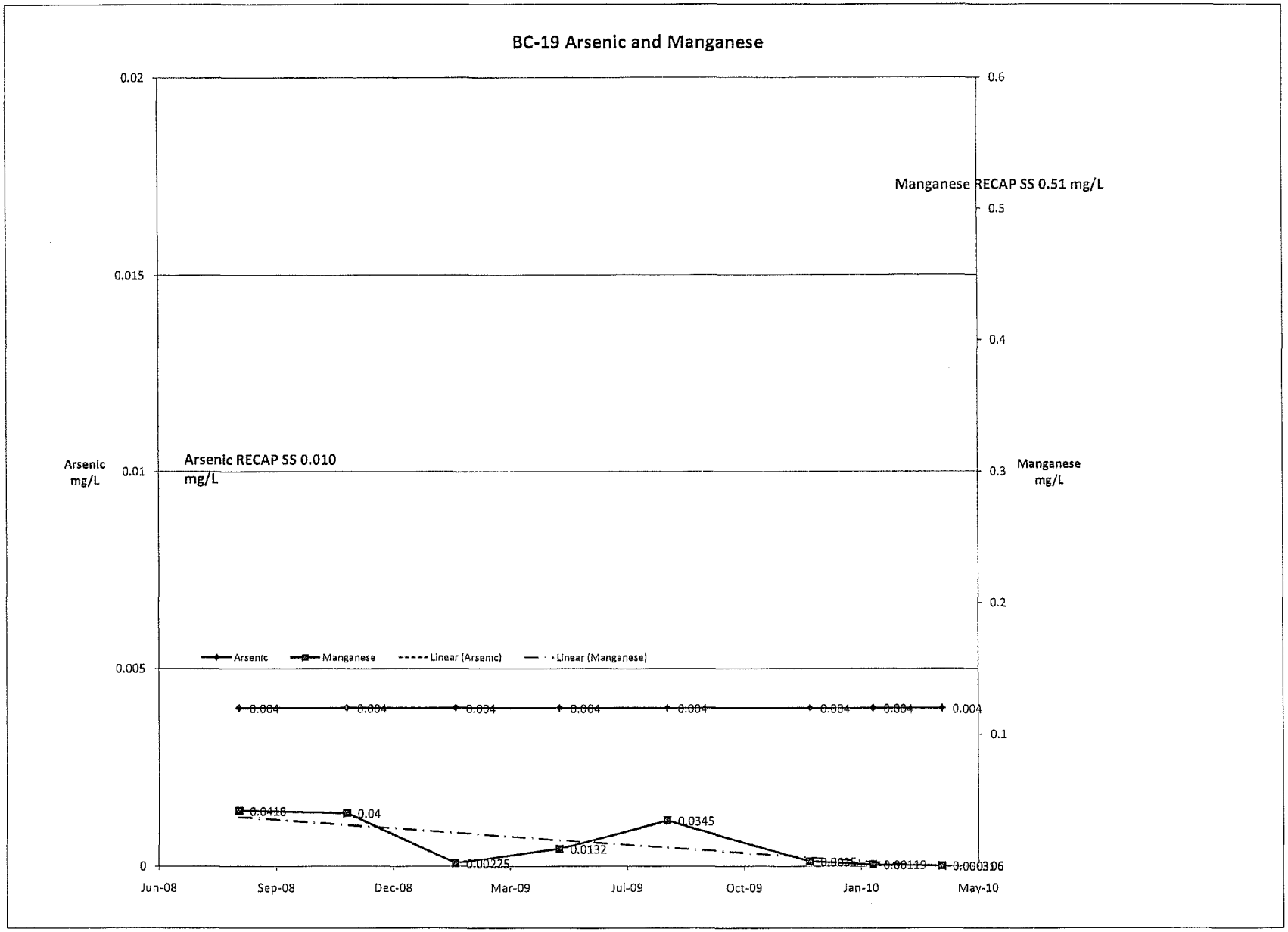

BC-07 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00179
0.002
0.002
0.00127
0.002
0.00022
0.002
0.002
0.00329
0.00125
0.00212
0.00176
0.0017
0.000783
0.000742
0
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

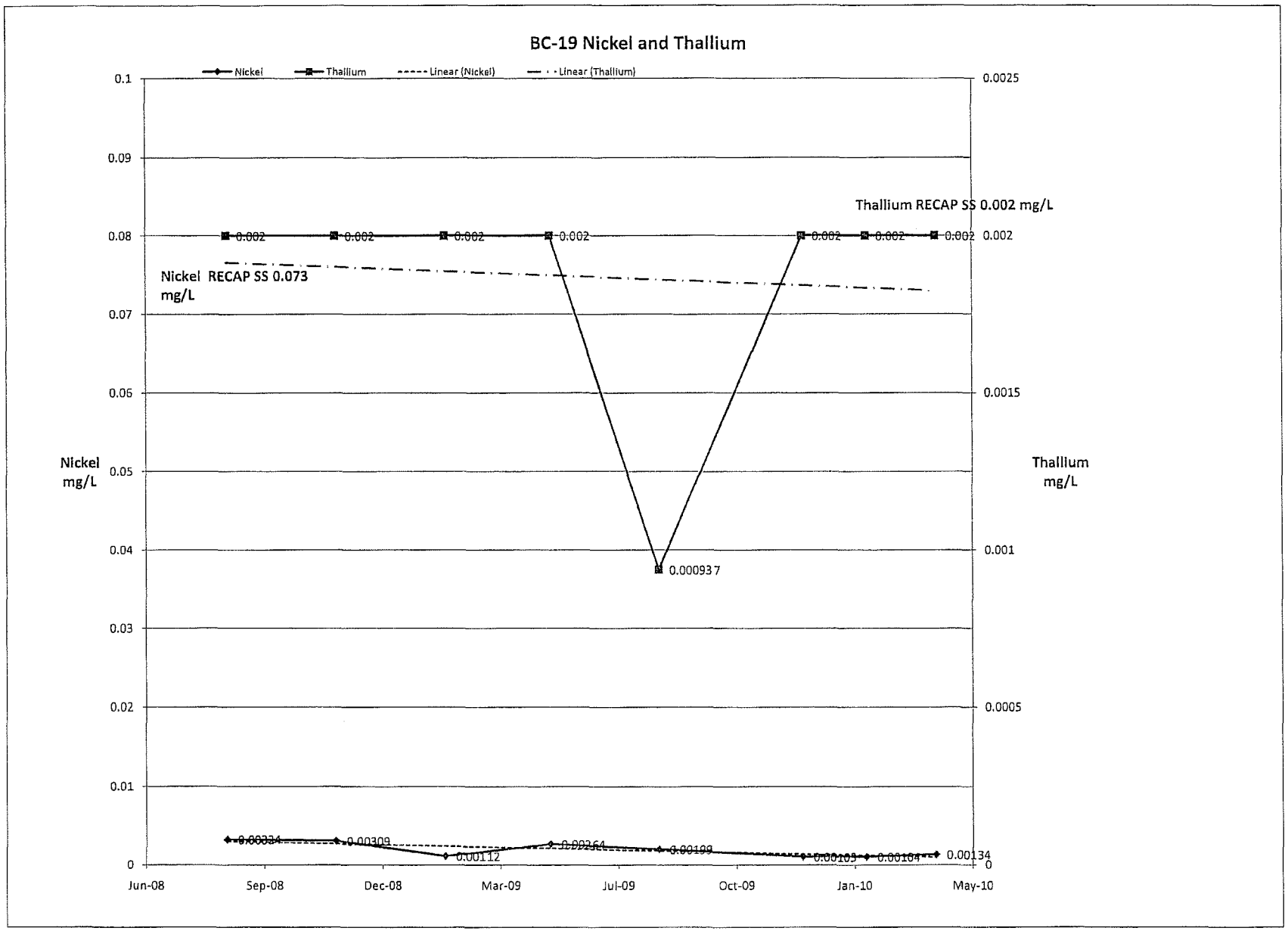

BC-17 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
6.81
7.01
6.95
6.97
6.68
7.11
7.06
6.69
0.0767
0.0469
0.0168
0.0165
0.0296
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

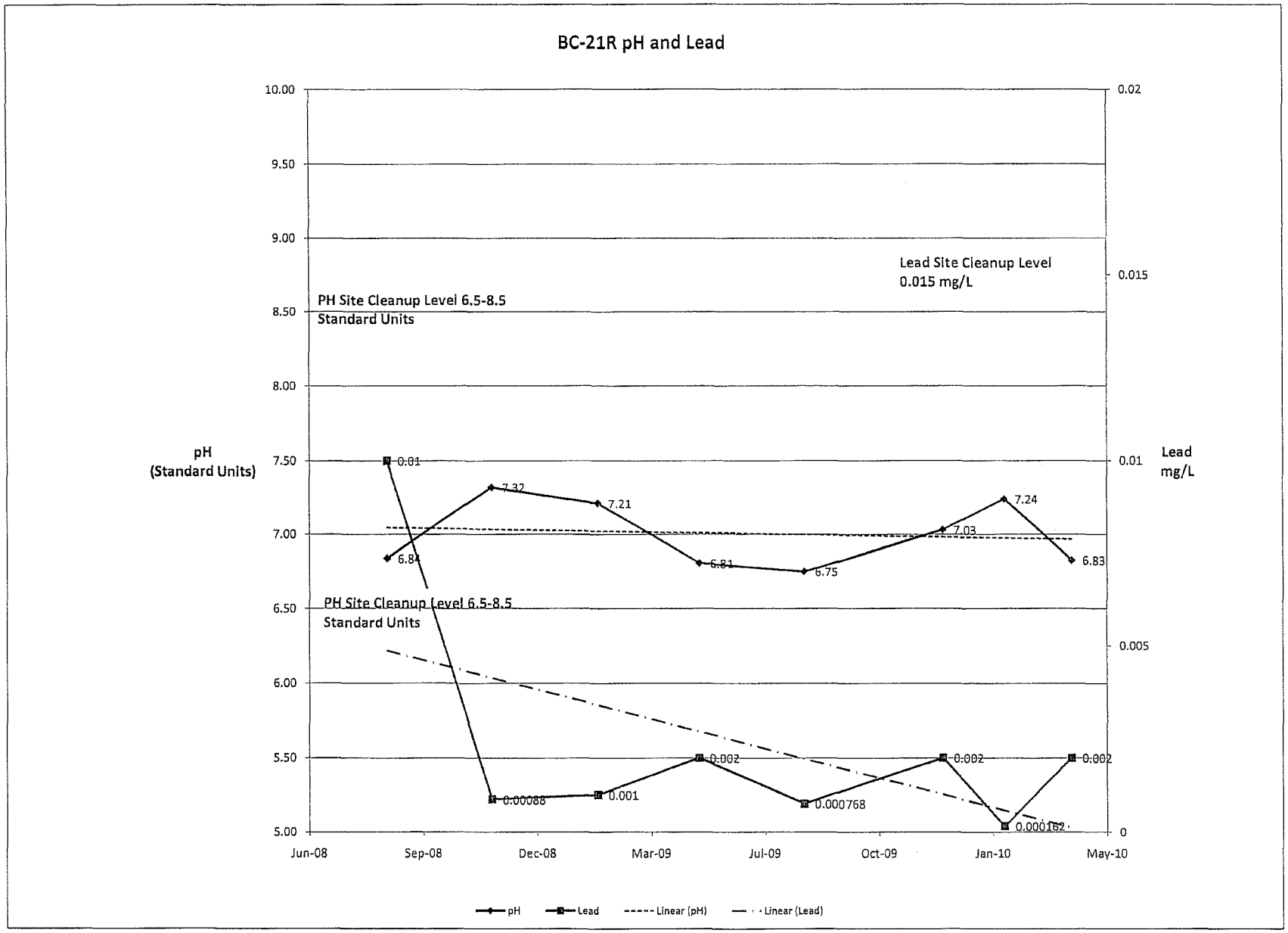

BC-17 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.02
0.28
0.227
0.00583
0.004
0.004
0.298
0.354
0.00282
0.0790
0.0709
0.004
0.004
0.106
0.00248
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

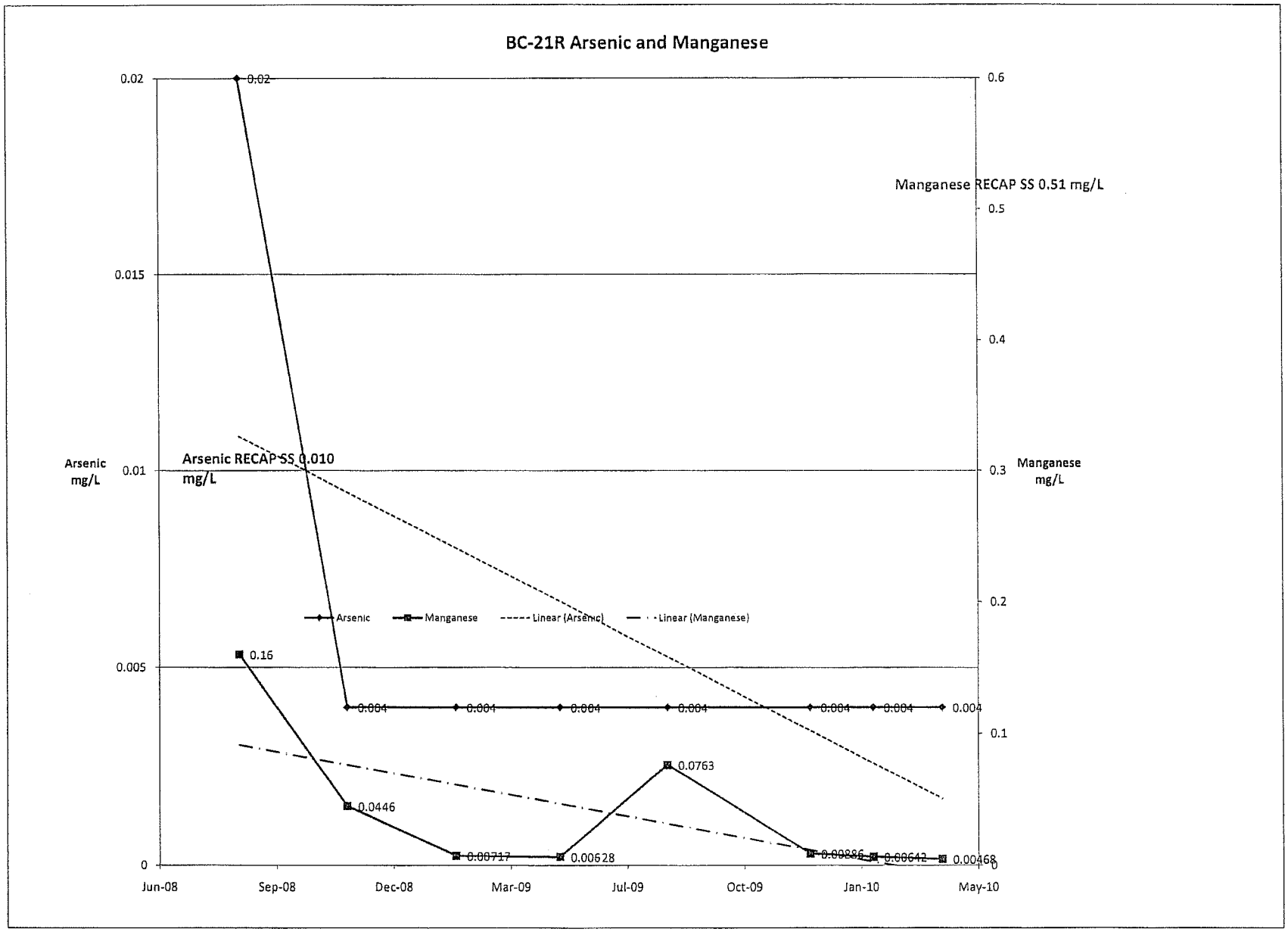

BC-17 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00095 6
0.01
0.00379
0.002
0.00818
0.00224
0.002
0.00158
0.00169
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

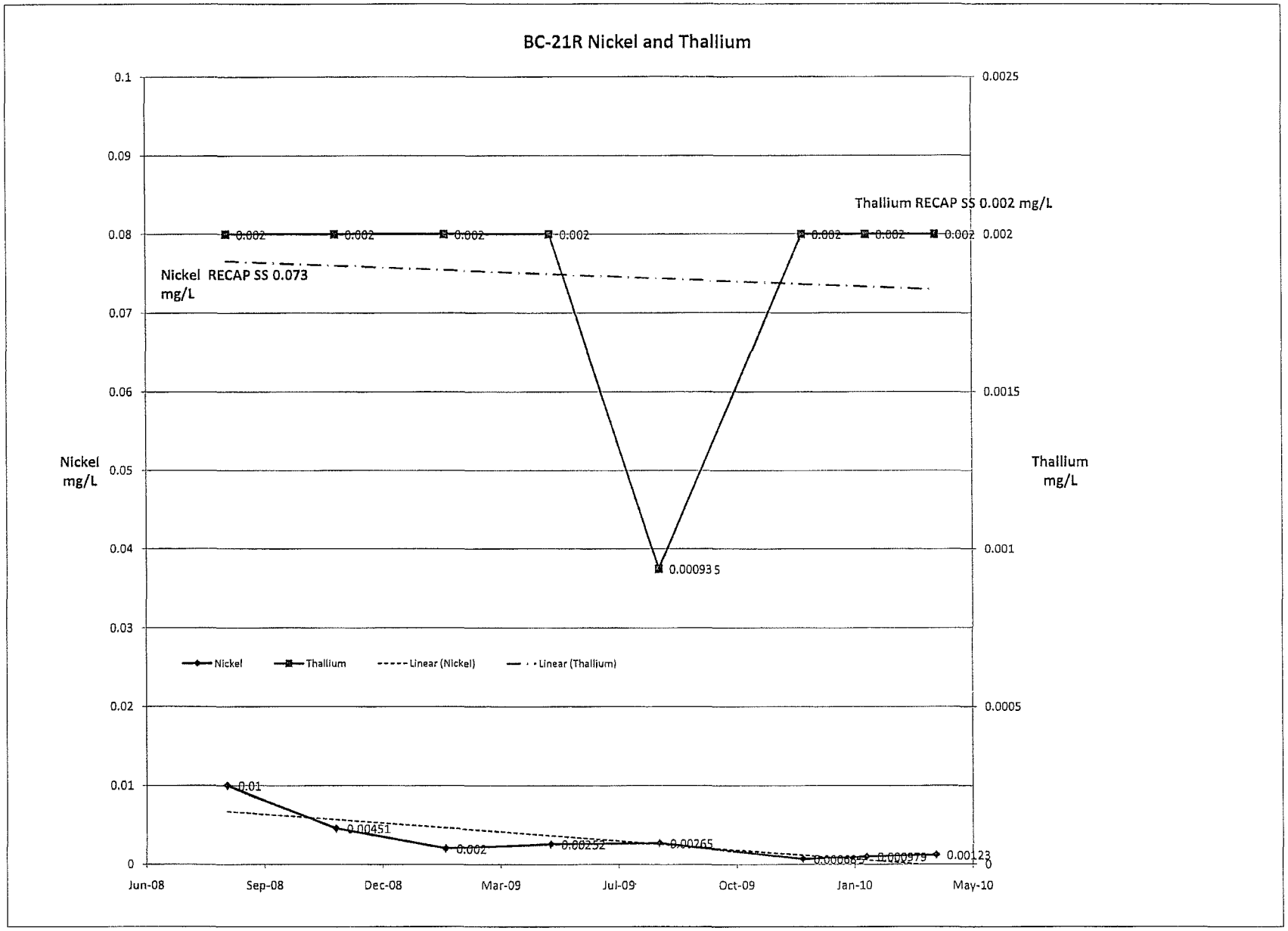

BC-19 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level 6.5-8.5
Standard Units
6.72
7.19
7.36
6.94
6.90
7.06
7.26
6.97
0.000915
0.00101
0.001
0.002
0.000885
0.002
0.000185
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

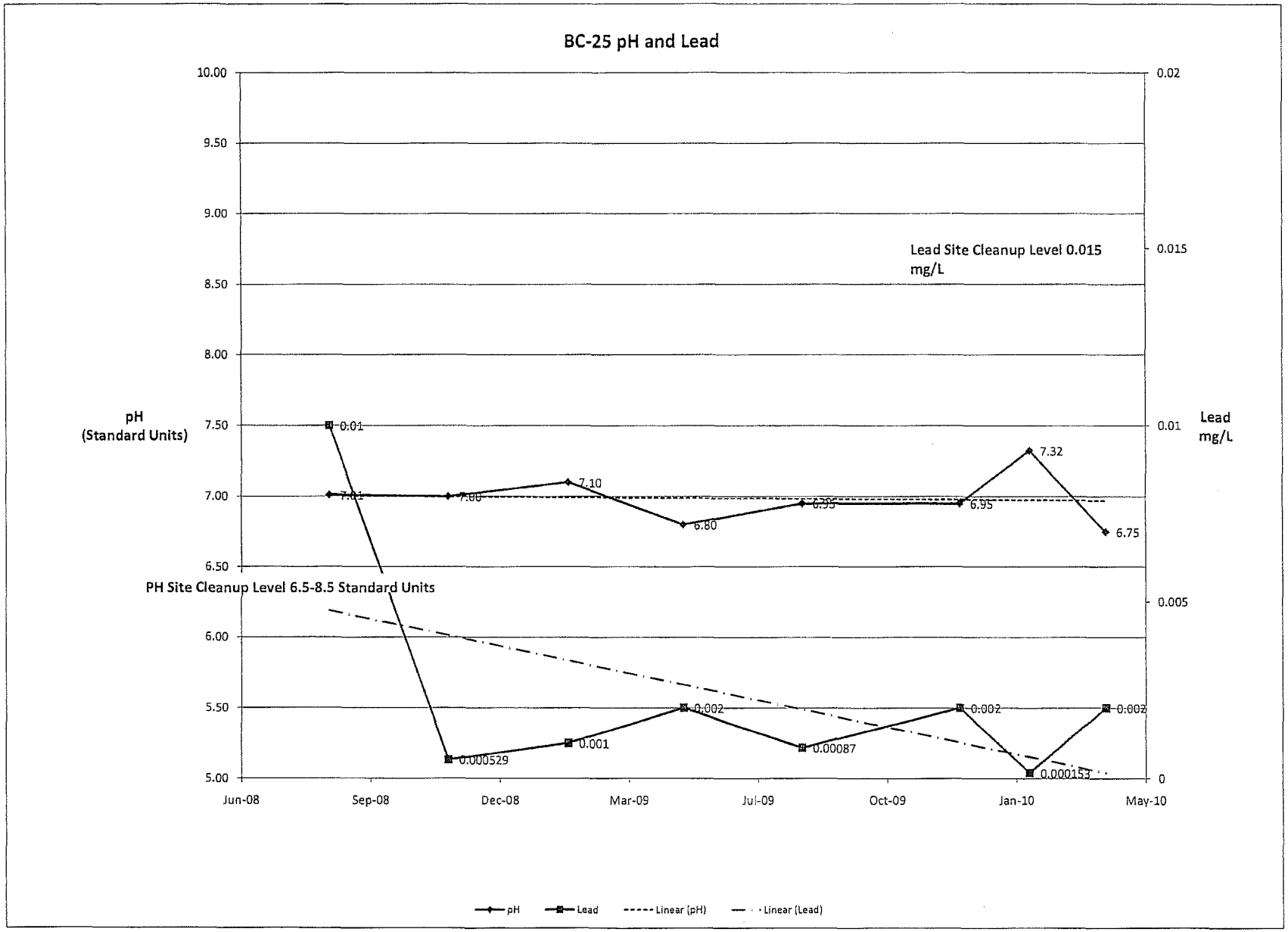

BC-19 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.004
0.0418
0.04
0.00225
0.0132
0.0345
0.00119
0.000306
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

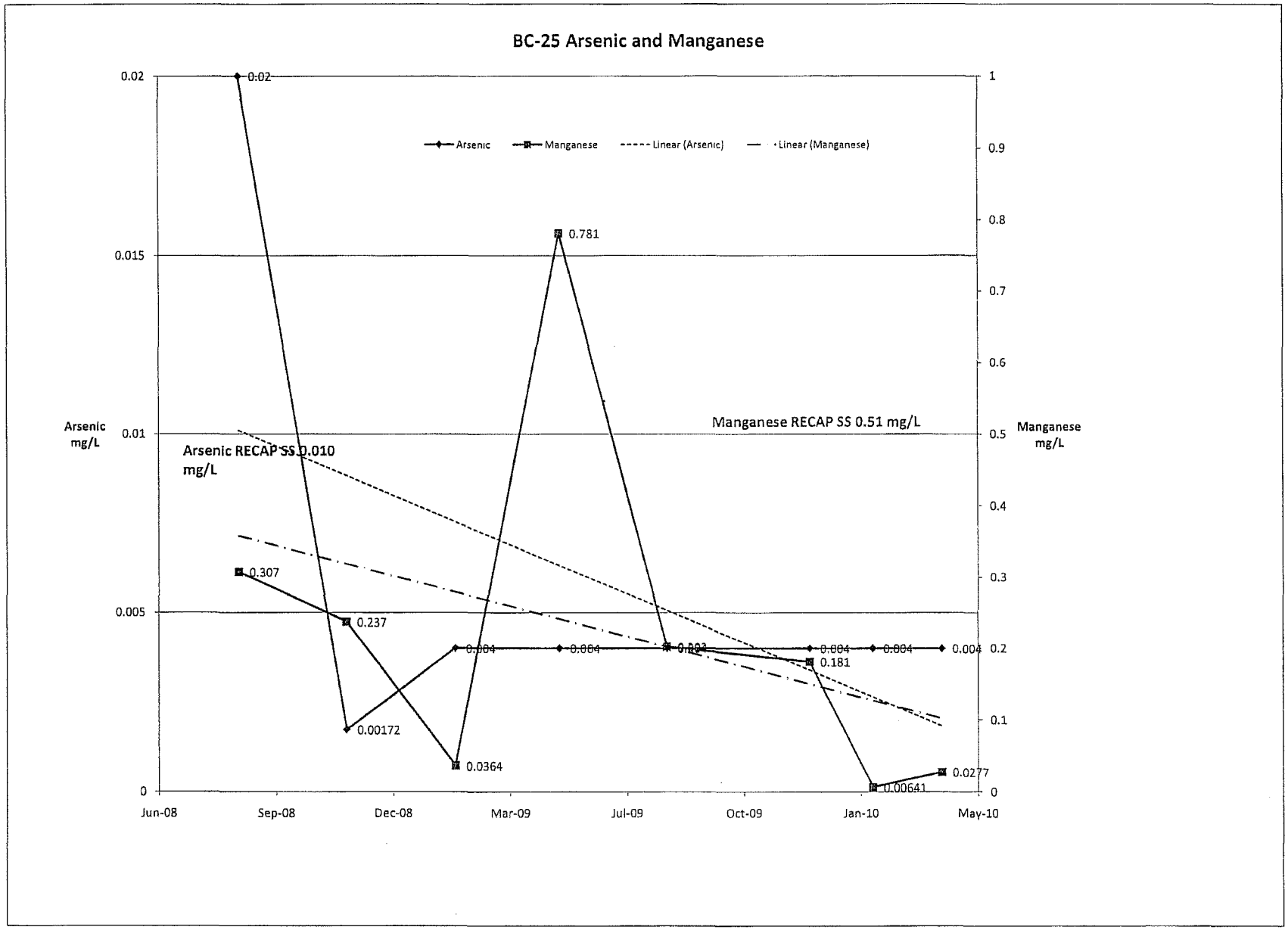

BC-19 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.000937
0.00309
0.00112
0.00199
0.00134
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

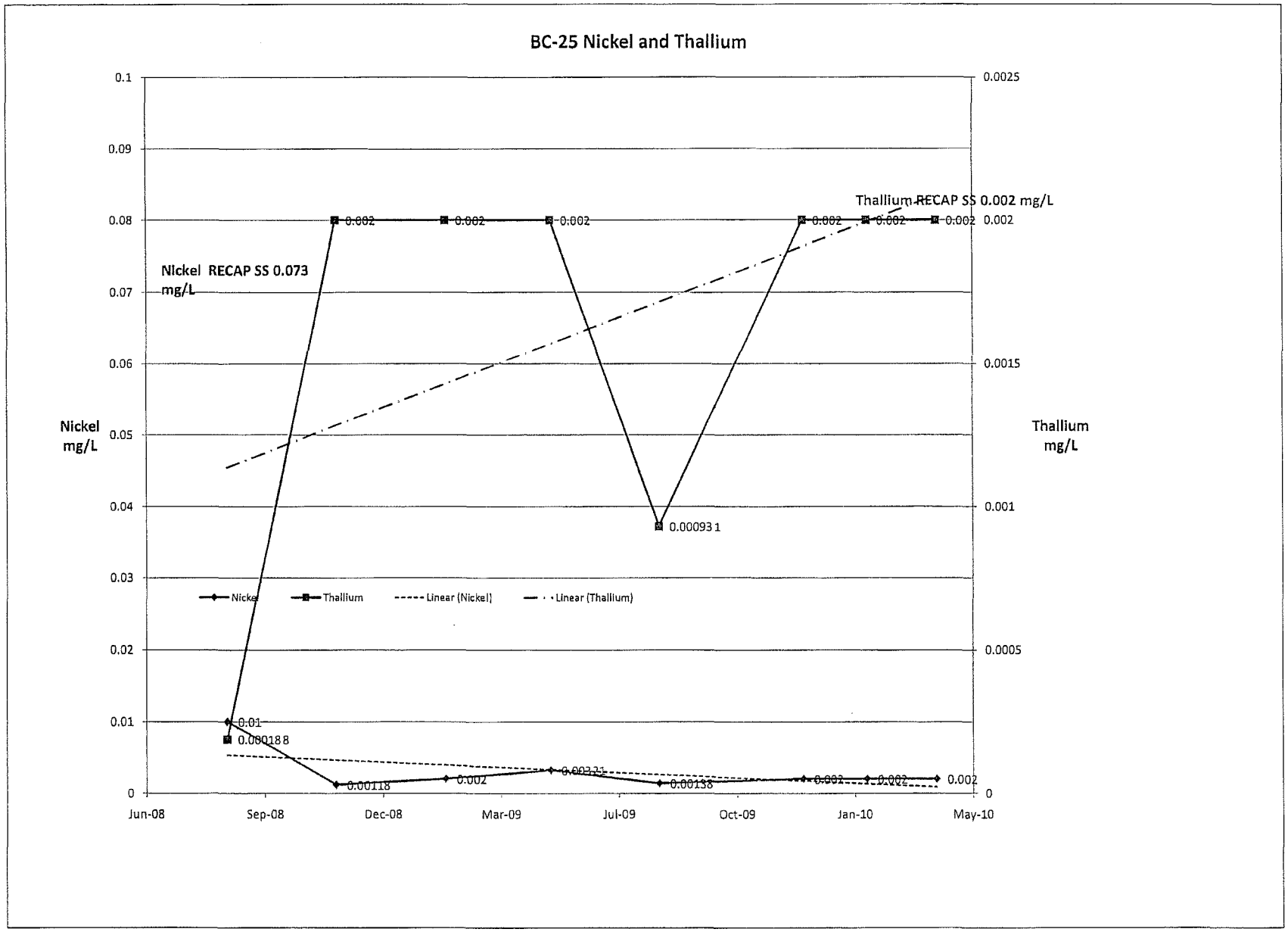

BC-21R pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level 6.5-8.5
Standard Units
PH Site Cleanup Level 6.5-8.5
Standard Units
0.01
7.32
7.21
6.81
6.75
7.03
7.24
6.83
0.00088
0.001
0.002
0.000768
0.002
0.000162
0.002
pH
Lead
Linear (pH)
Linear (Lead)


BC-21R Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.02
0.16
0.004
0.0446
0.00717
0.00628
0.0763
0.00886
0.00642
0.00468
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

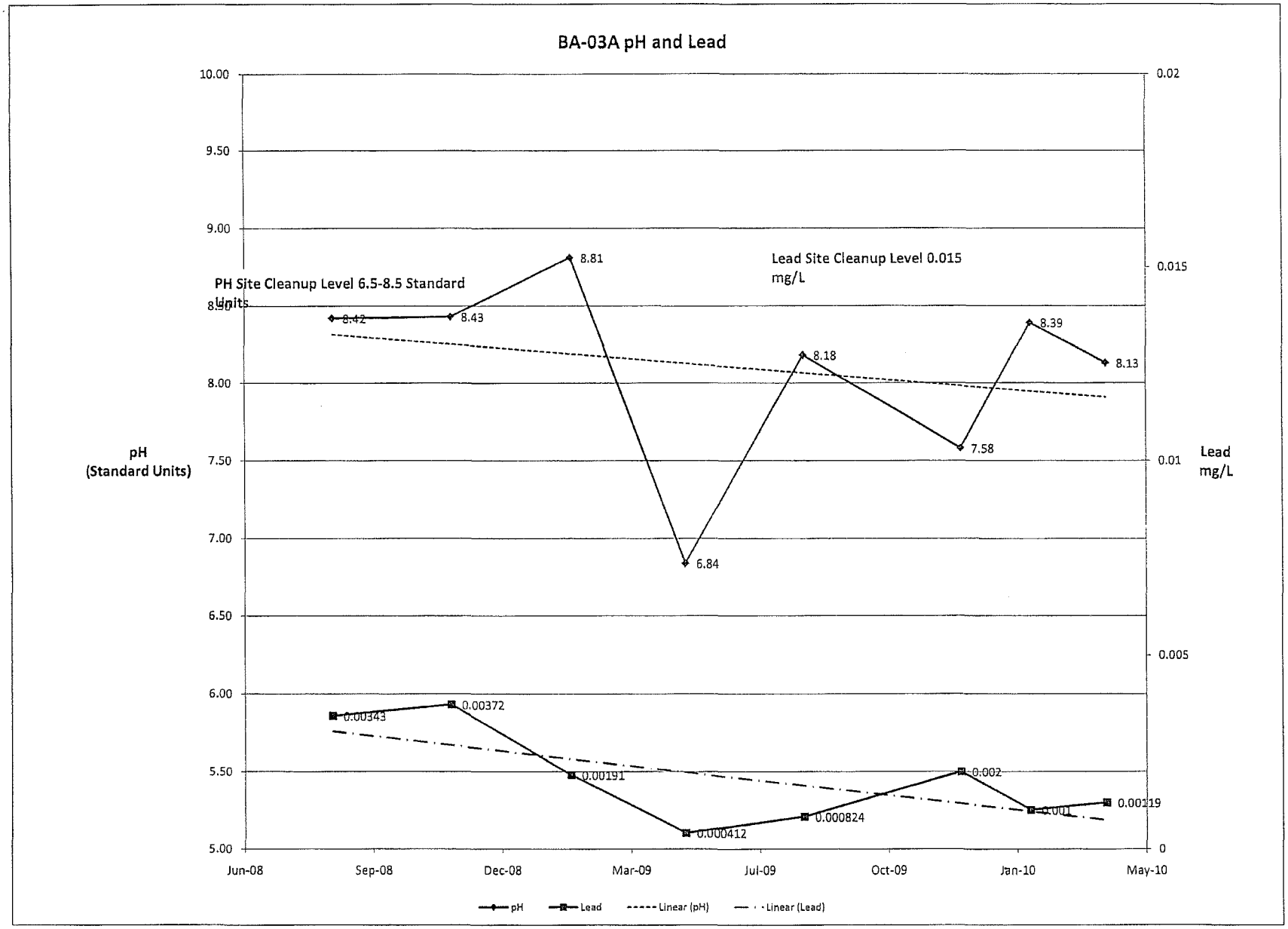

BC-21R Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00093 5
0.01
0.00451
0.00252
0.00265
0.000979
0.00123
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

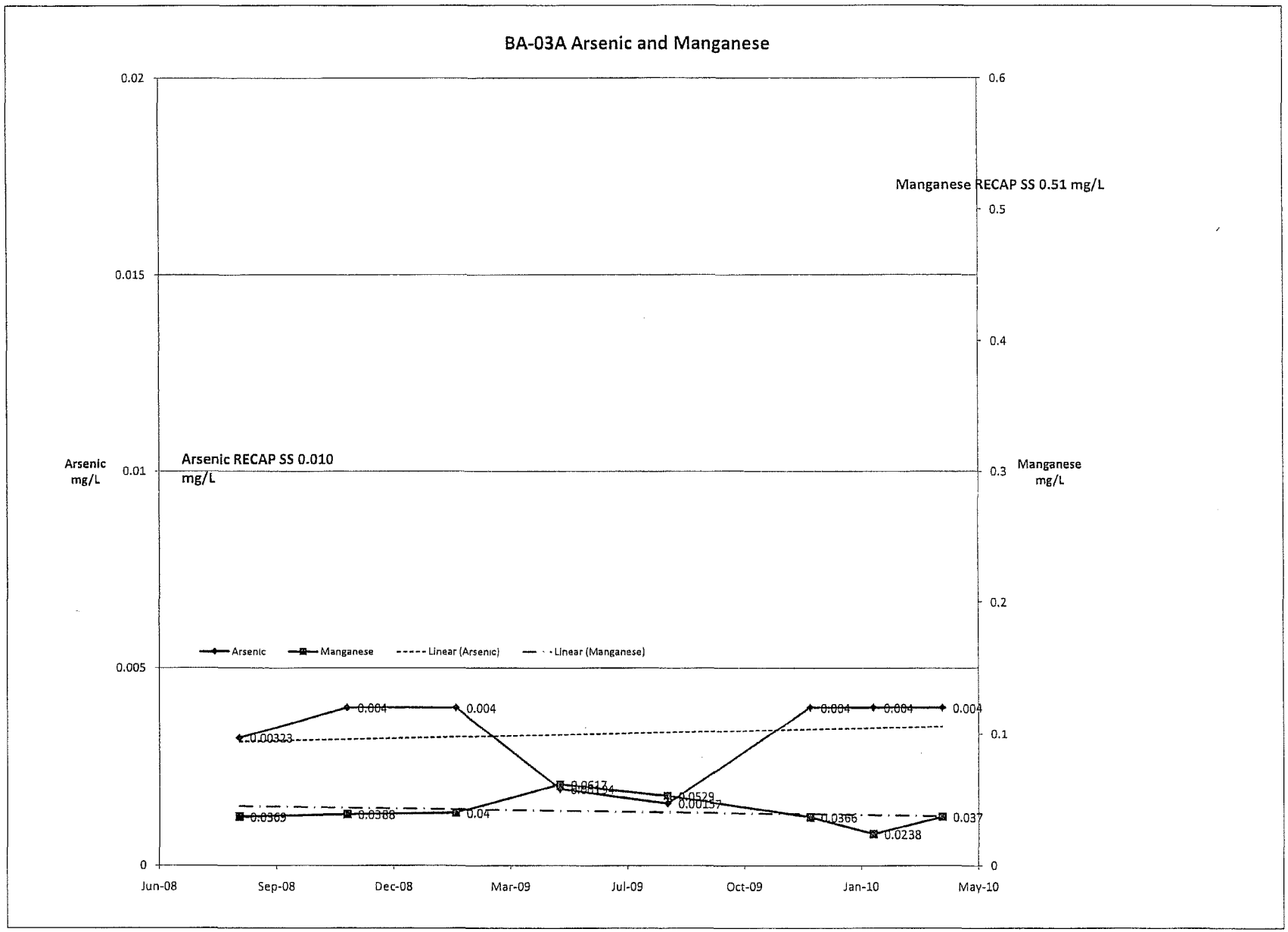

BC-25 pH and Lead
pH
(Standard Units)
Lead
mg/L
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.01
7.01
7.00
7.10
6.80
6.95
6.95
7.32
6.75
0.000529
0.001
0.002
0.00087
0.002
0.000153
0.002
pH
Lead
Linear (pH)
Linear (Lead)

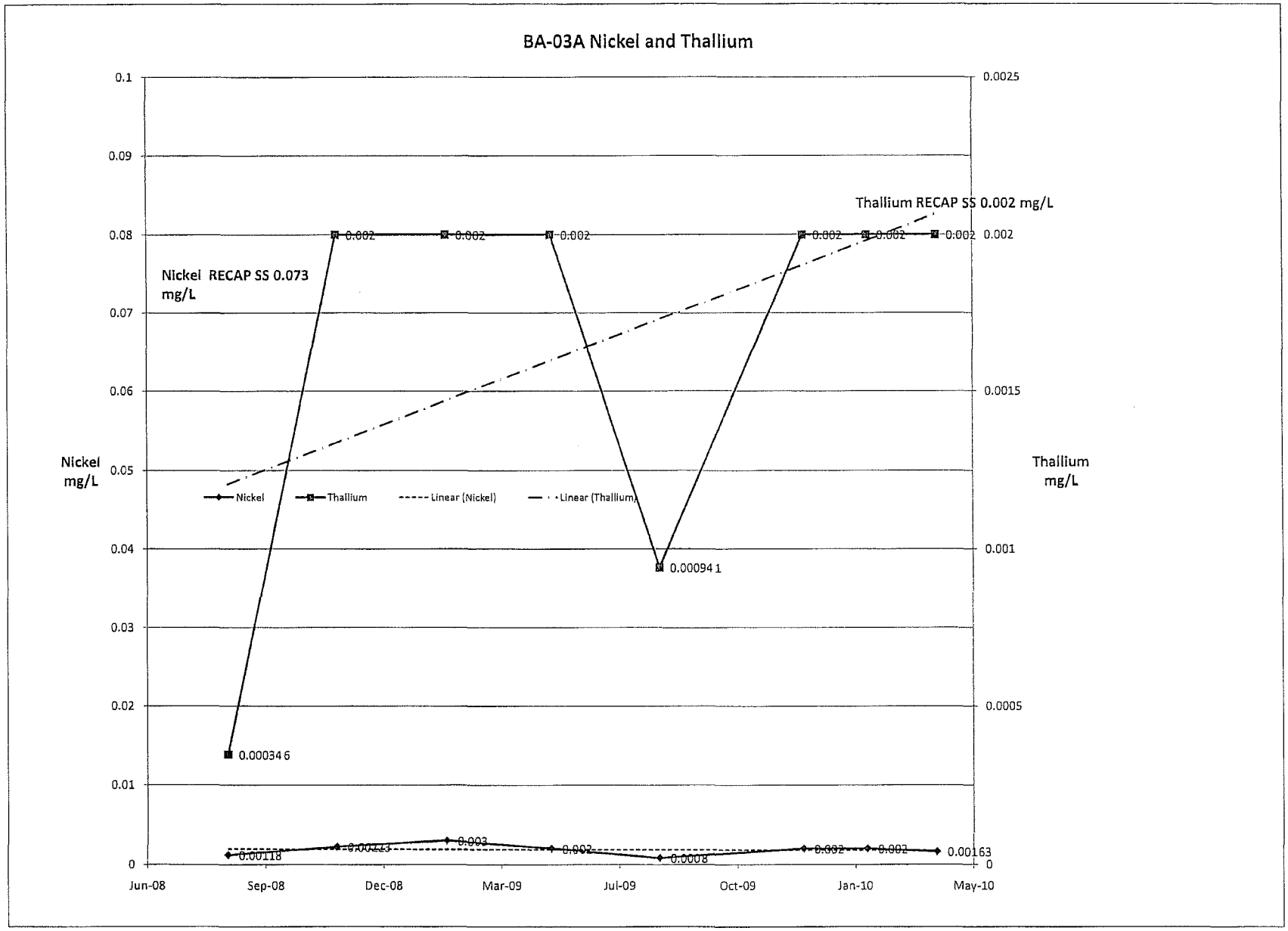

BC-25 Arsenic and Manganese
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.015
0.01
0.005
0
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.02
0.781
0.307
0.237
0.004
0.004
0.003
0.004
0.004
0.004
0.181
0.00172
0.0364
0.00641
0.0277
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

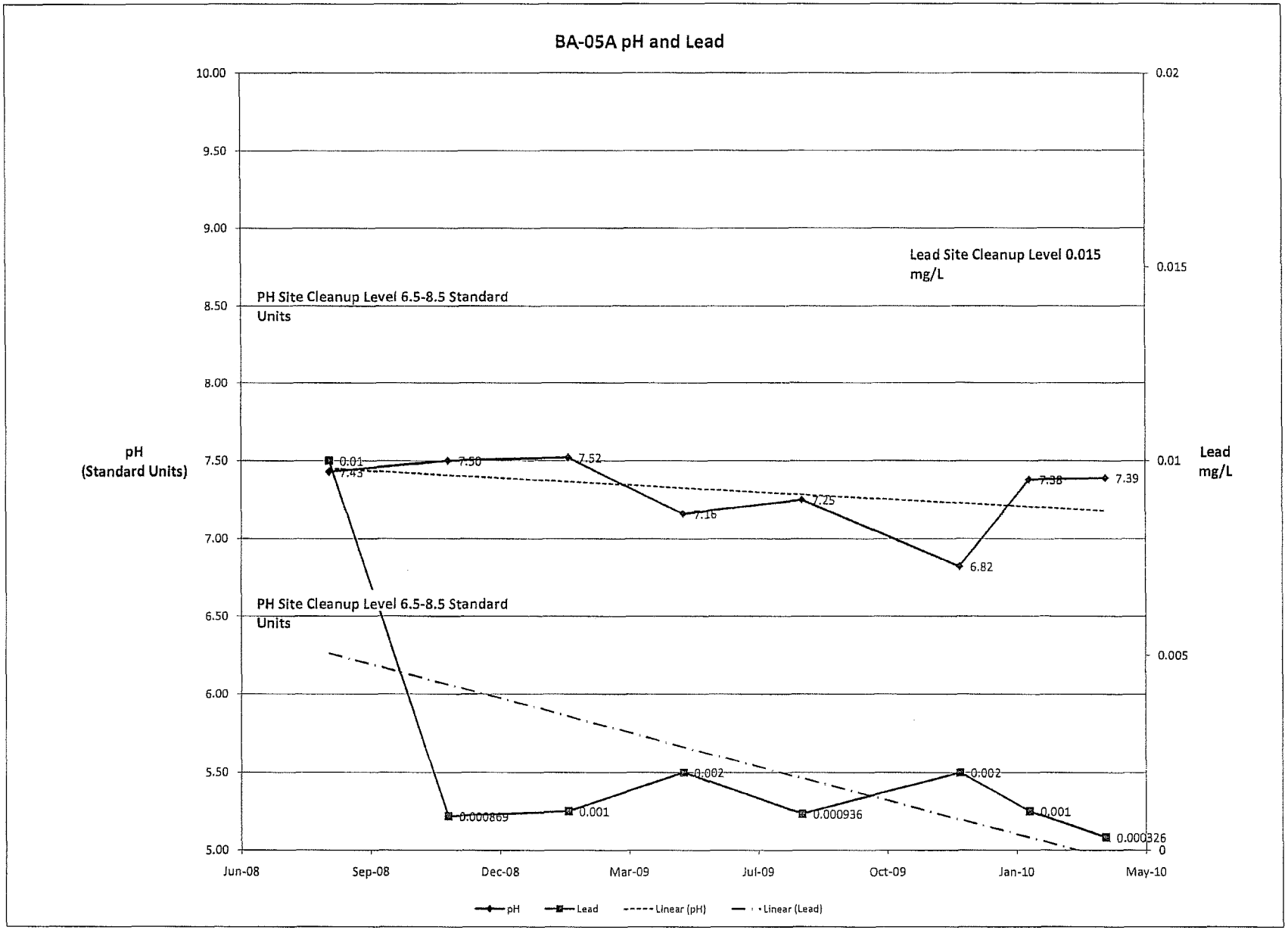

BC-25 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Nickel RECAP SS 0.073 mg/L
Thallium RECAP SS 0.002 mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.01
0.000188
0.00118
0.002
0.00321
0.00138
0.002
0.00093 1
0.002

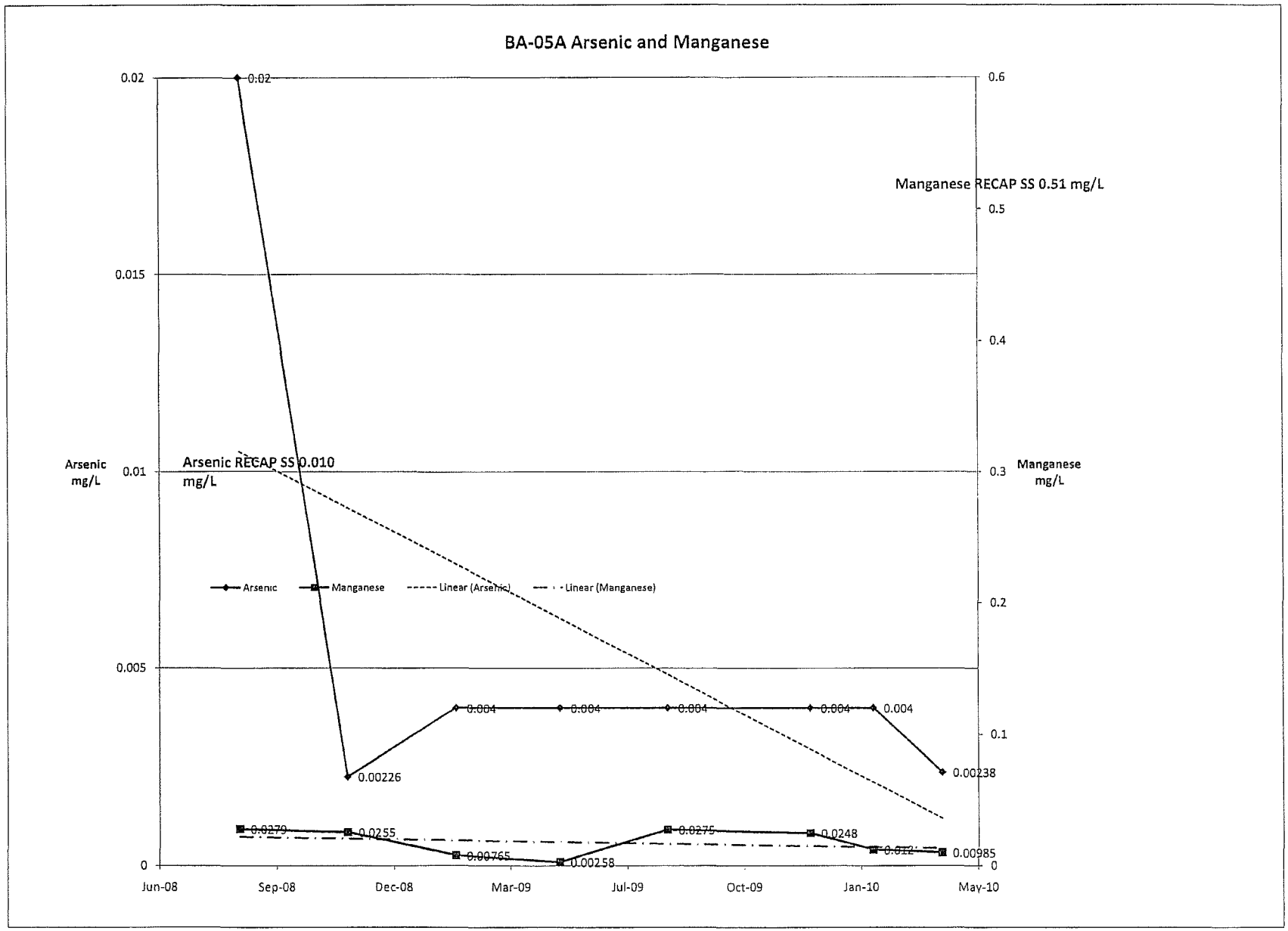
# THIRD WATER BEARING ZONE

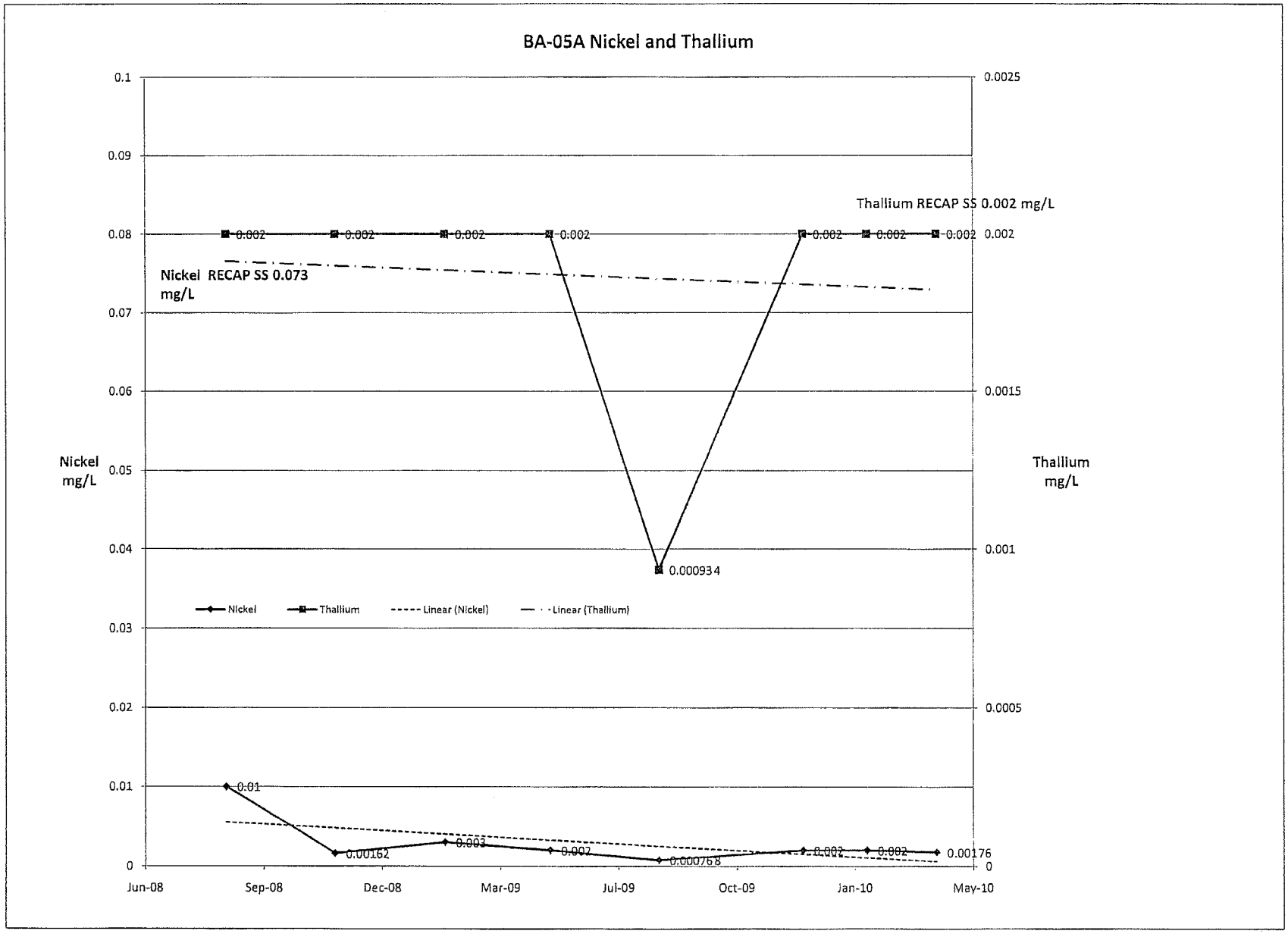

BA-03A pH and Lead
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
pH (Standard Units)
Lead mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
8.42
8.43
8.81
6.84
8.18
7.58
8.39
8.13
0.00343
0.00372
0.00191
0.000412
0.000824
0.002
0.001
0.00119
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

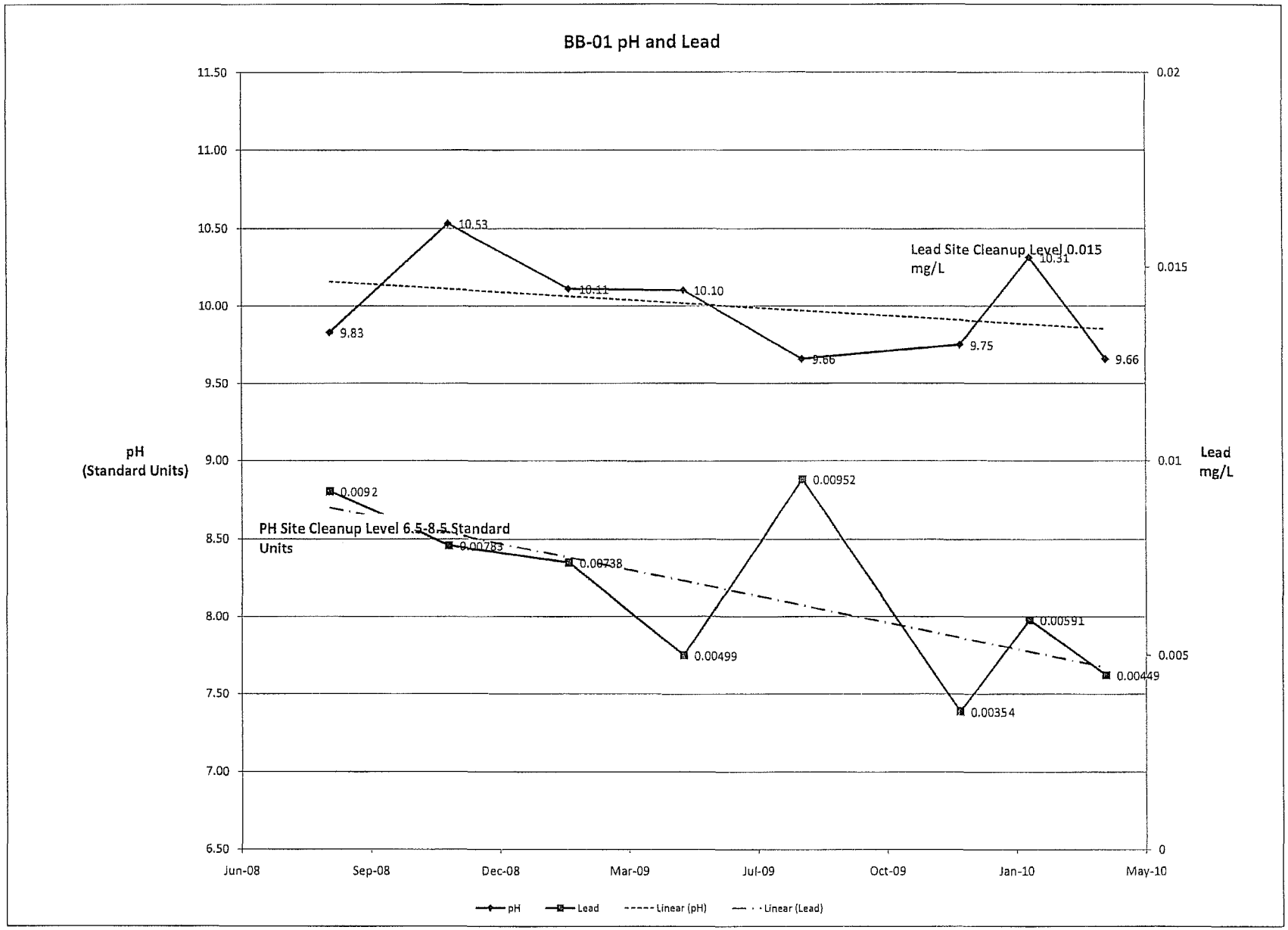

BA-03A Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.004
0.004
0.004
0.004
0.004
0.00323
0.0369
0.0388
0.04
0.0617
0.0529
0.00157
0.0366
0.0238
0.037

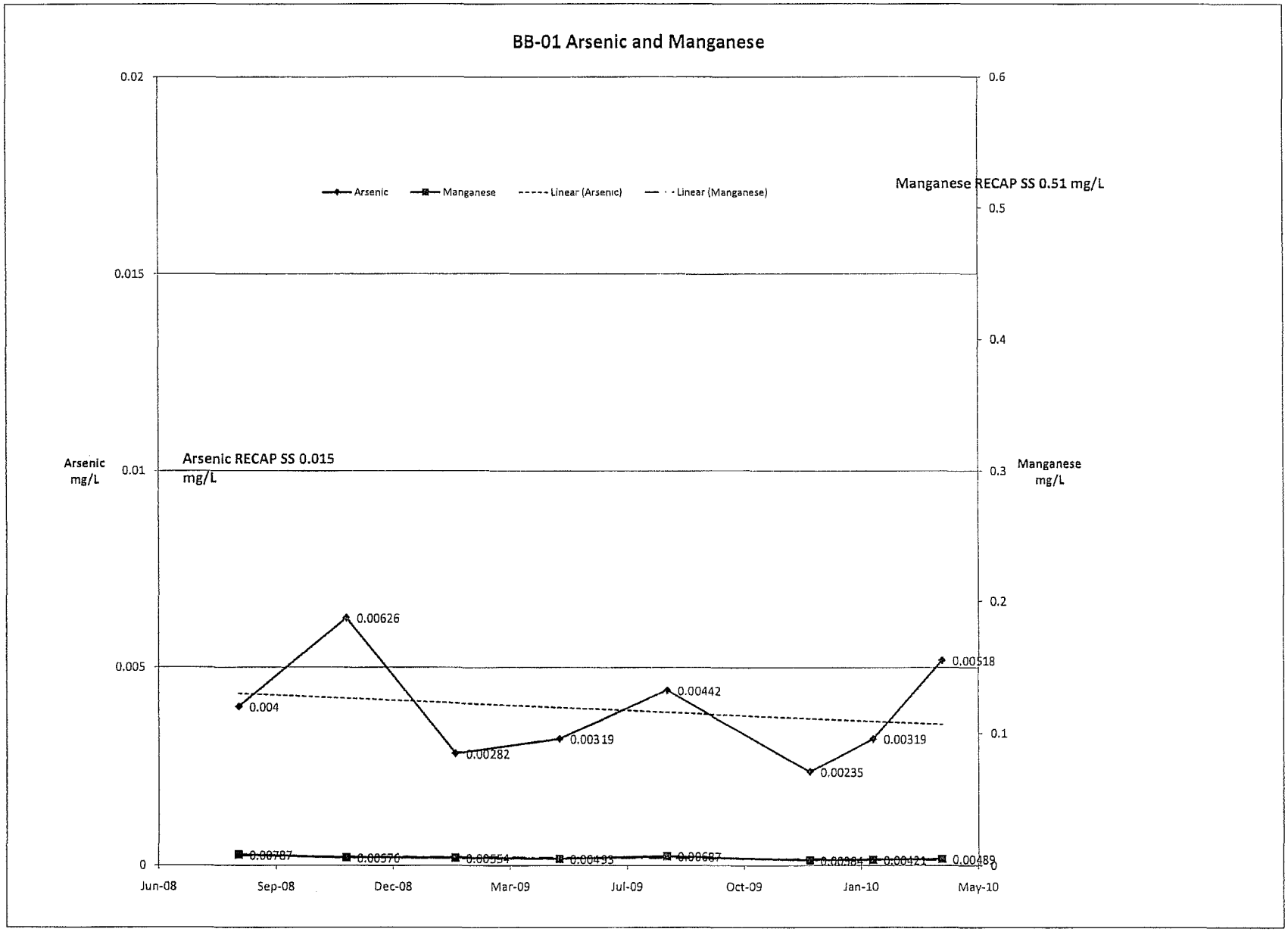

BA-03A Nickel and Thallium
Nickel mg/L
Thallium mg/L
Nickel RECAP SS 0.073 mg/L
Thallium RECAP SS 0.002 mg/L
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.000346
0.000941
0.00118
0.00243
0.003
0.002
0.0008
0.00163
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

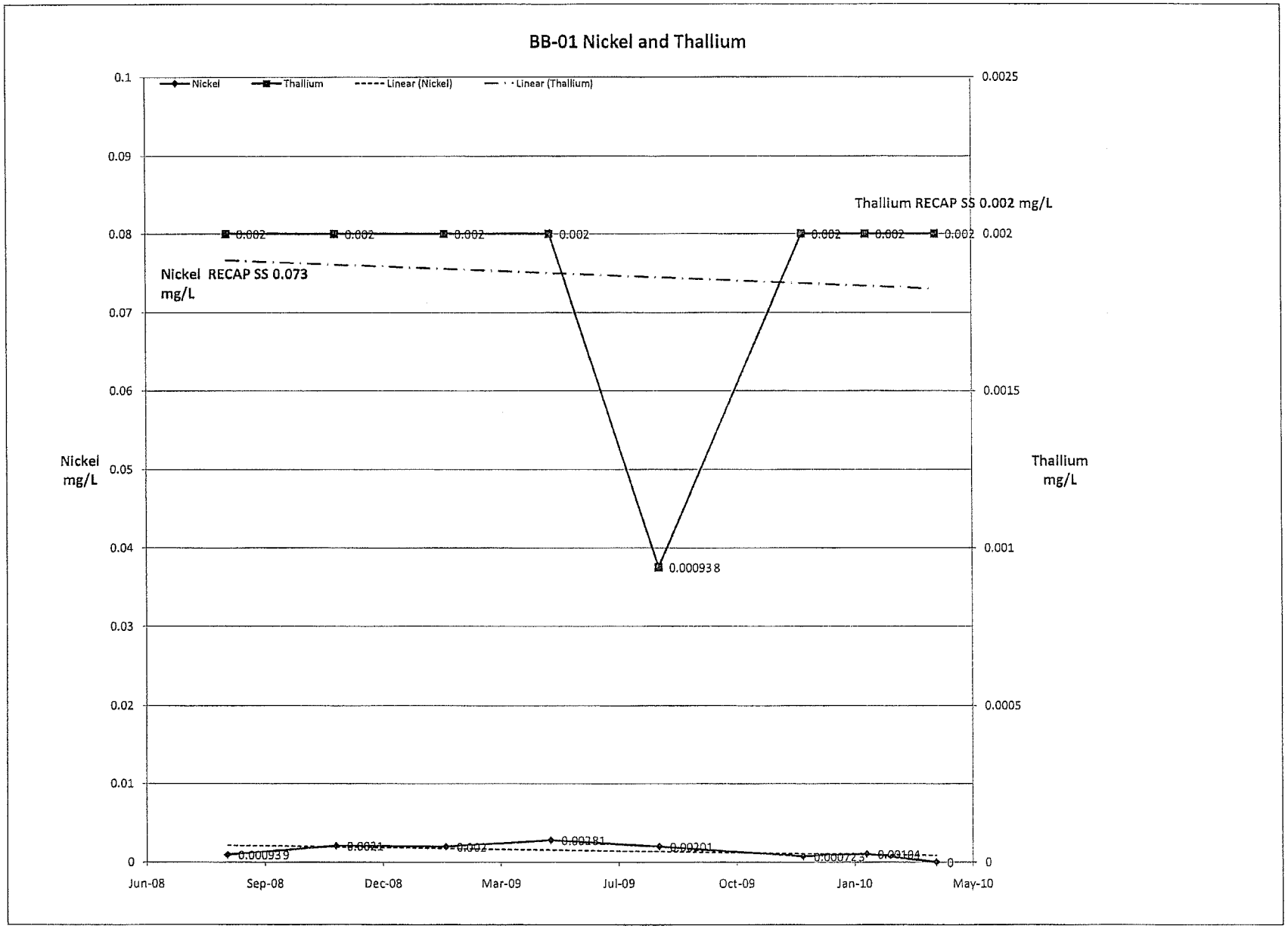

BA-05A pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
0.01
7.43
7.50
7.52
7.16
7.25
6.82
7.38
7.39
0.000869
0.001
0.002
0.000936
0.002
0.001
0.000326
pH
Lead
Linear (pH)
Linear (Lead)

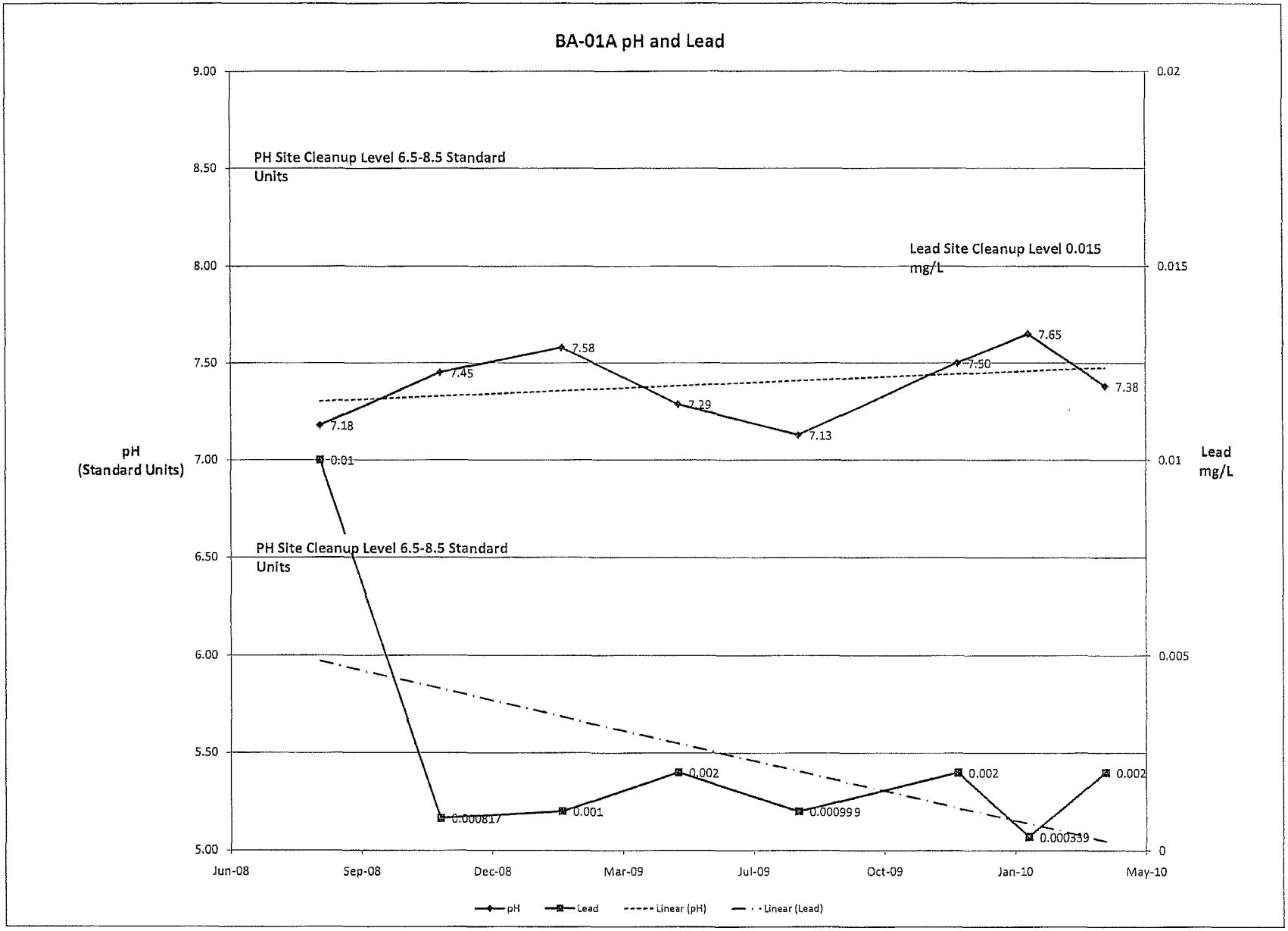

BA-05A Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.02
0.00226
0.004
0.004
0.004
0.004
0.004
0.00238
0.0279
0.0255
0.00765
0.00258
0.0275
0.0248
0.0212
0.00985
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

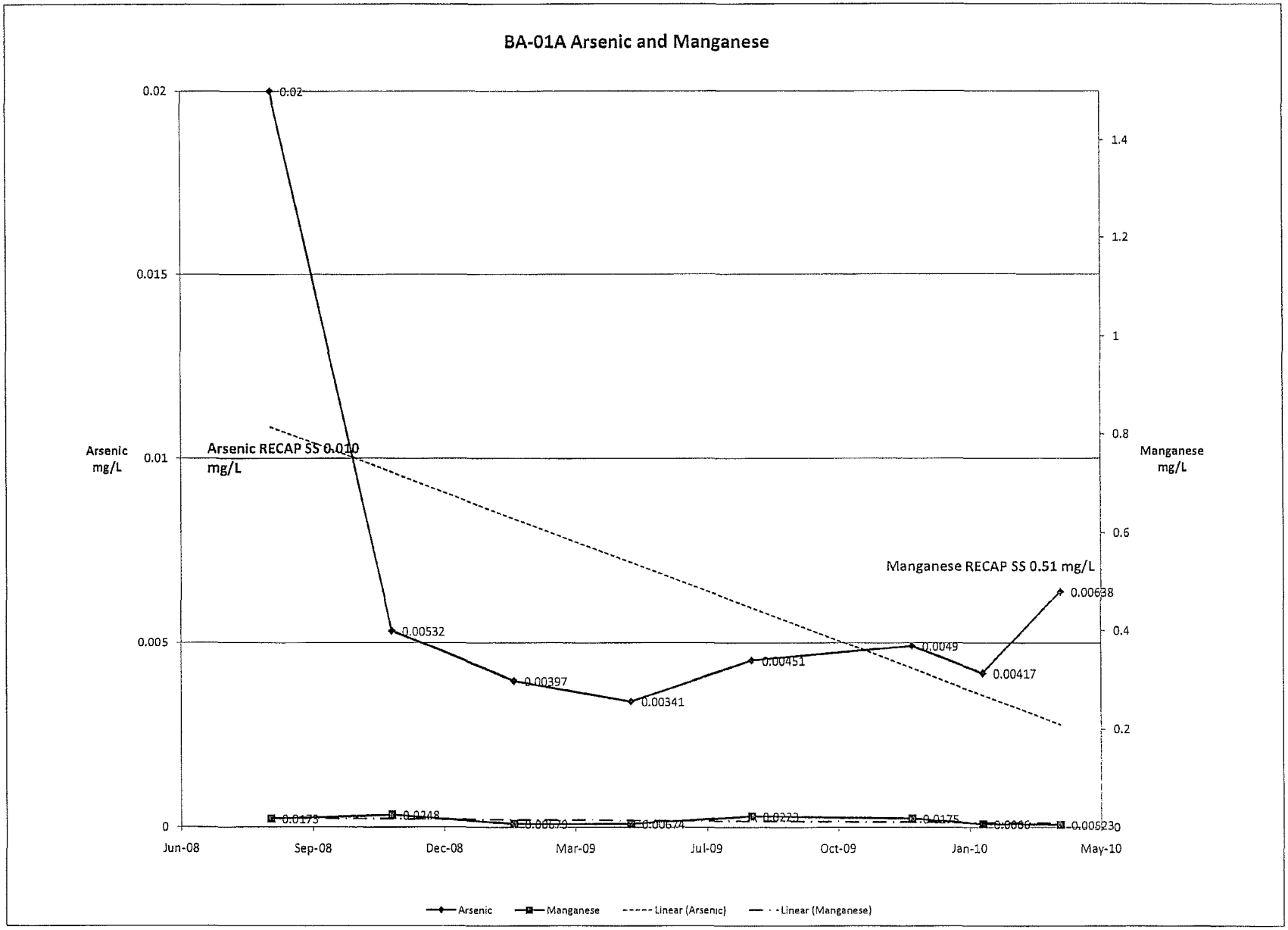

BA-05A Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.000934
0.01
0.00162
0.003
0.000768
0.00176
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

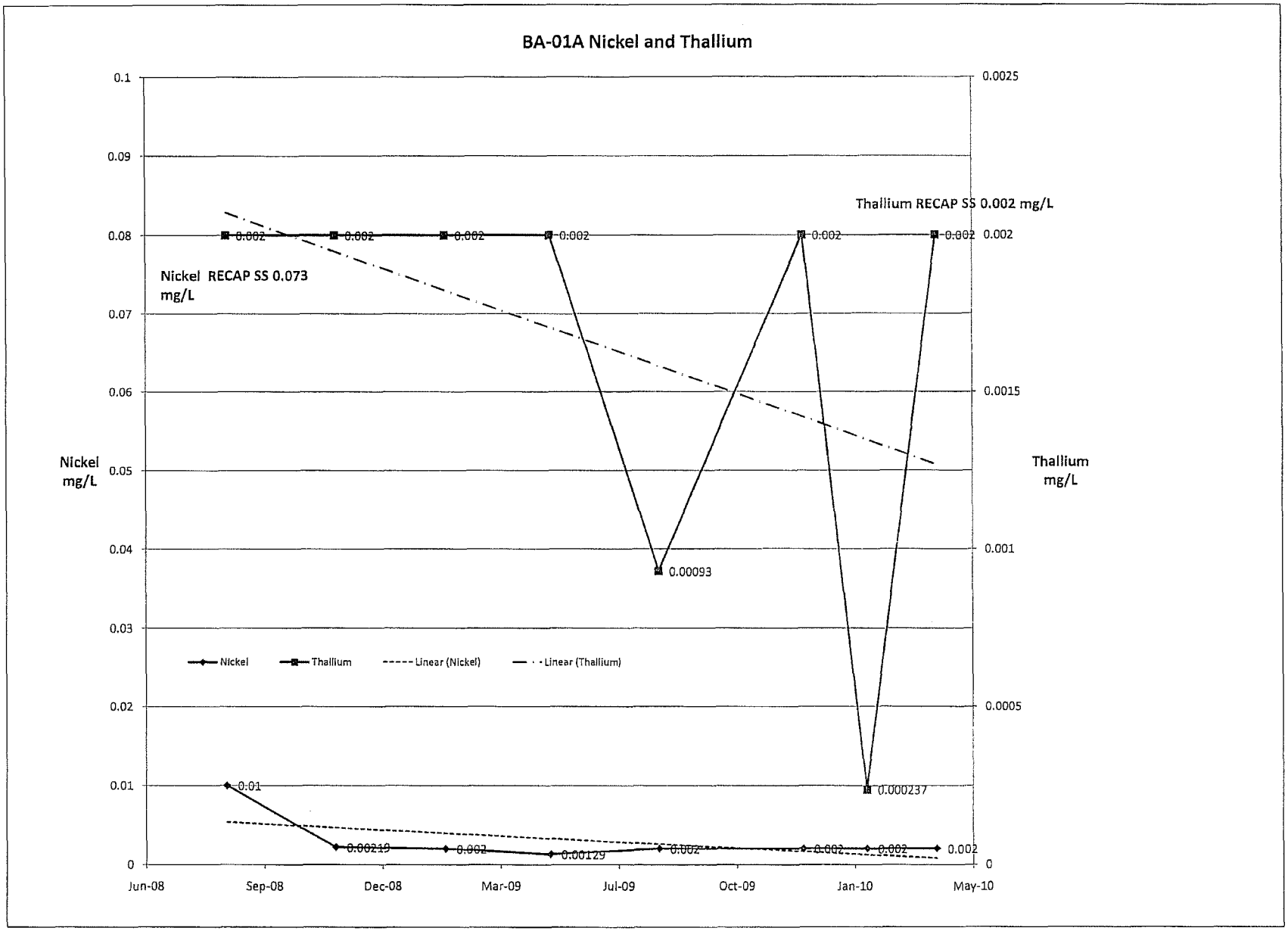

BB-01 pH and Lead
pH
(Standard Units)
Lead
mg/L
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
9.83
10.53
10.11
10.10
9.66
9.75
10.31
9.66
0.0092
0.00783
0.00738
0.00499
0.00952
0.00354
0.00591
0.00449
pH
Lead
Linear (pH)
Linear (Lead)


BB-01 Arsenic and Manganese
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.015 mg/L
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.004
0.00626
0.00282
0.00319
0.00442
0.00235
0.00319
0.00518
0.00787
0.00576
0.00554
0.00493
0.00687
0.00384
0.00421
0.00489
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

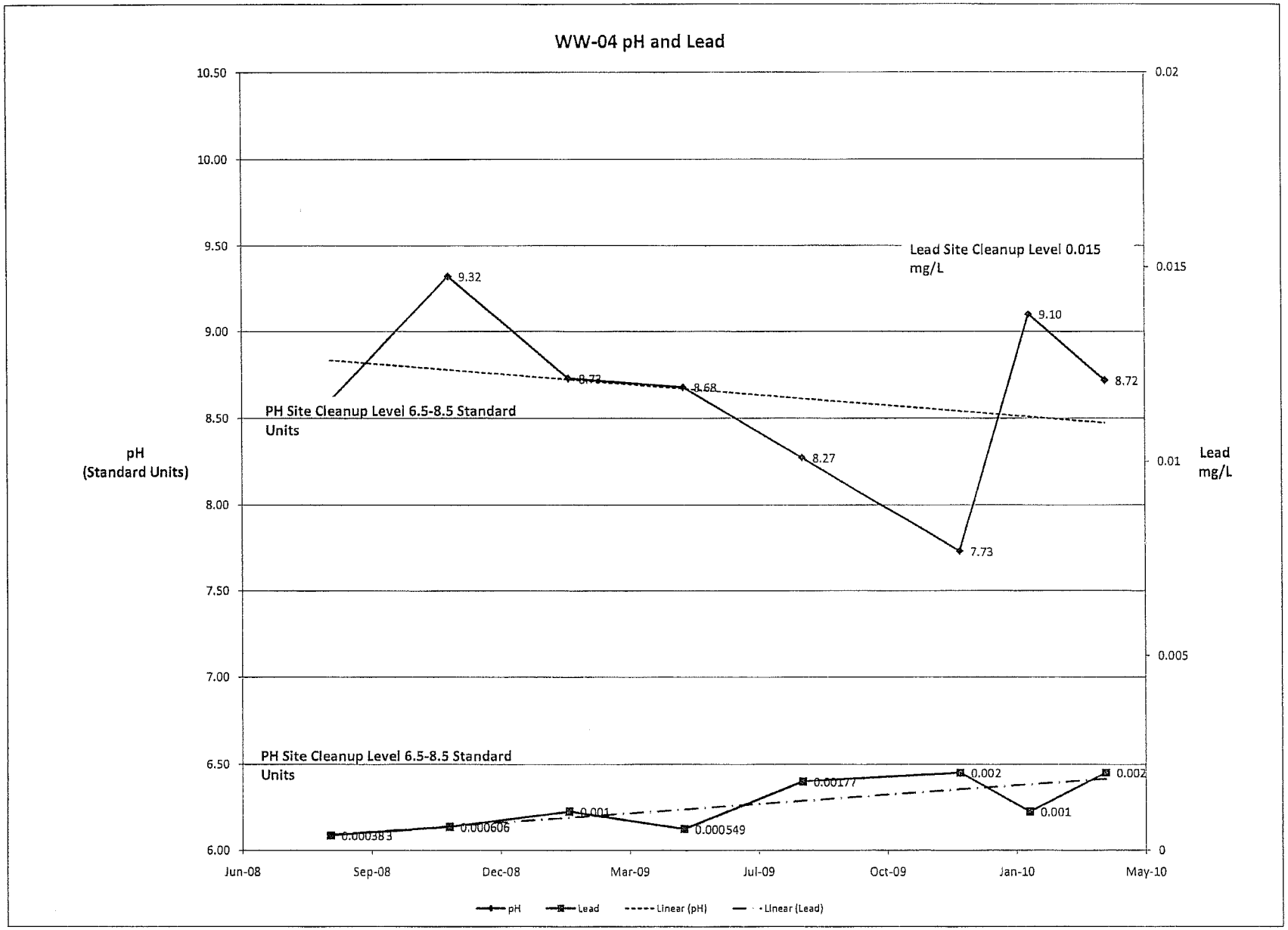

BB-01 Nickel and Thallium
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.000938
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

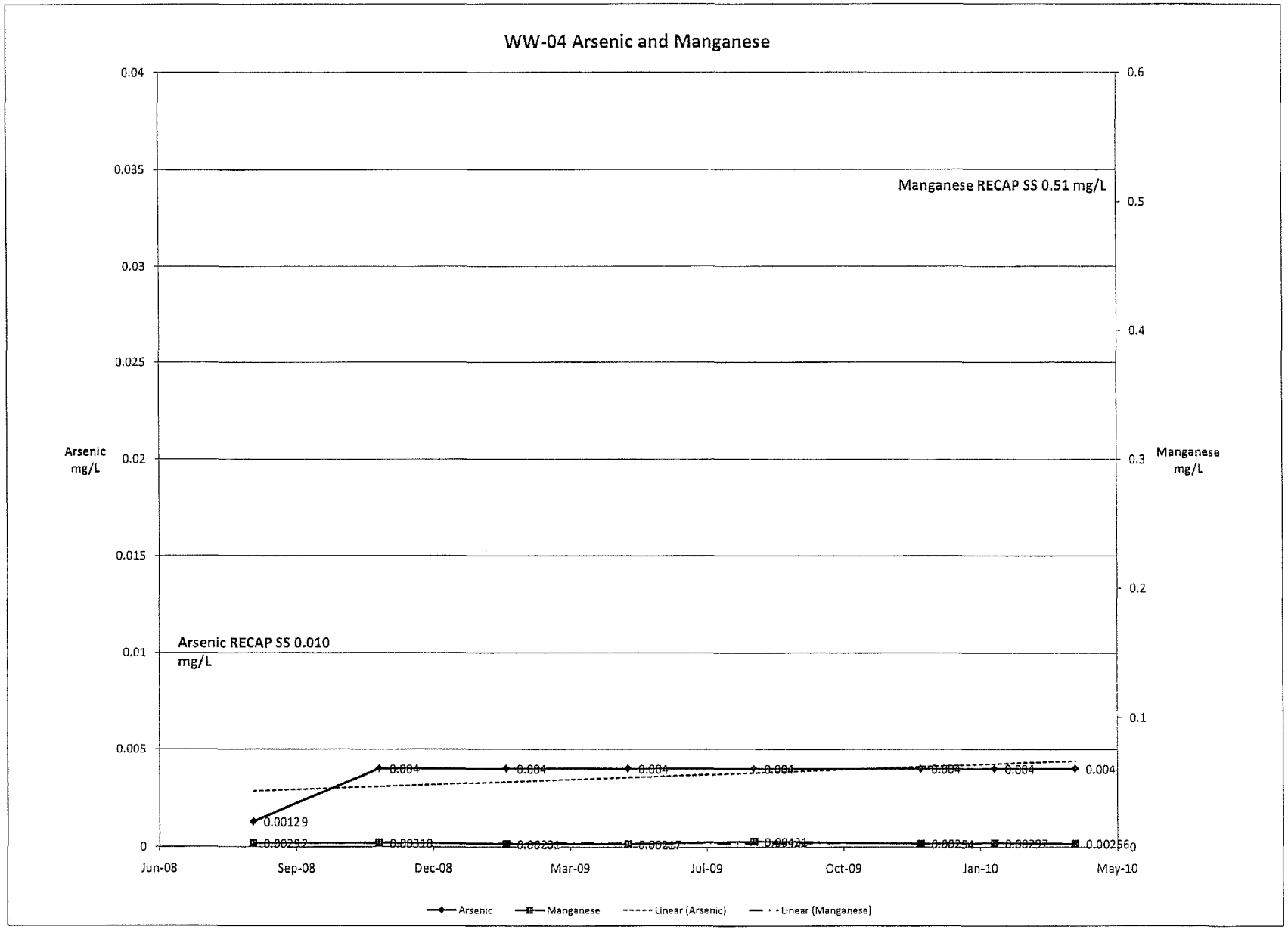

BA-01A pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
7.18
7.45
7.58
7.29
7.13
7.50
7.65
7.38
0.01
0.000817
0.001
0.002
0.000999
0.002
0.000339
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

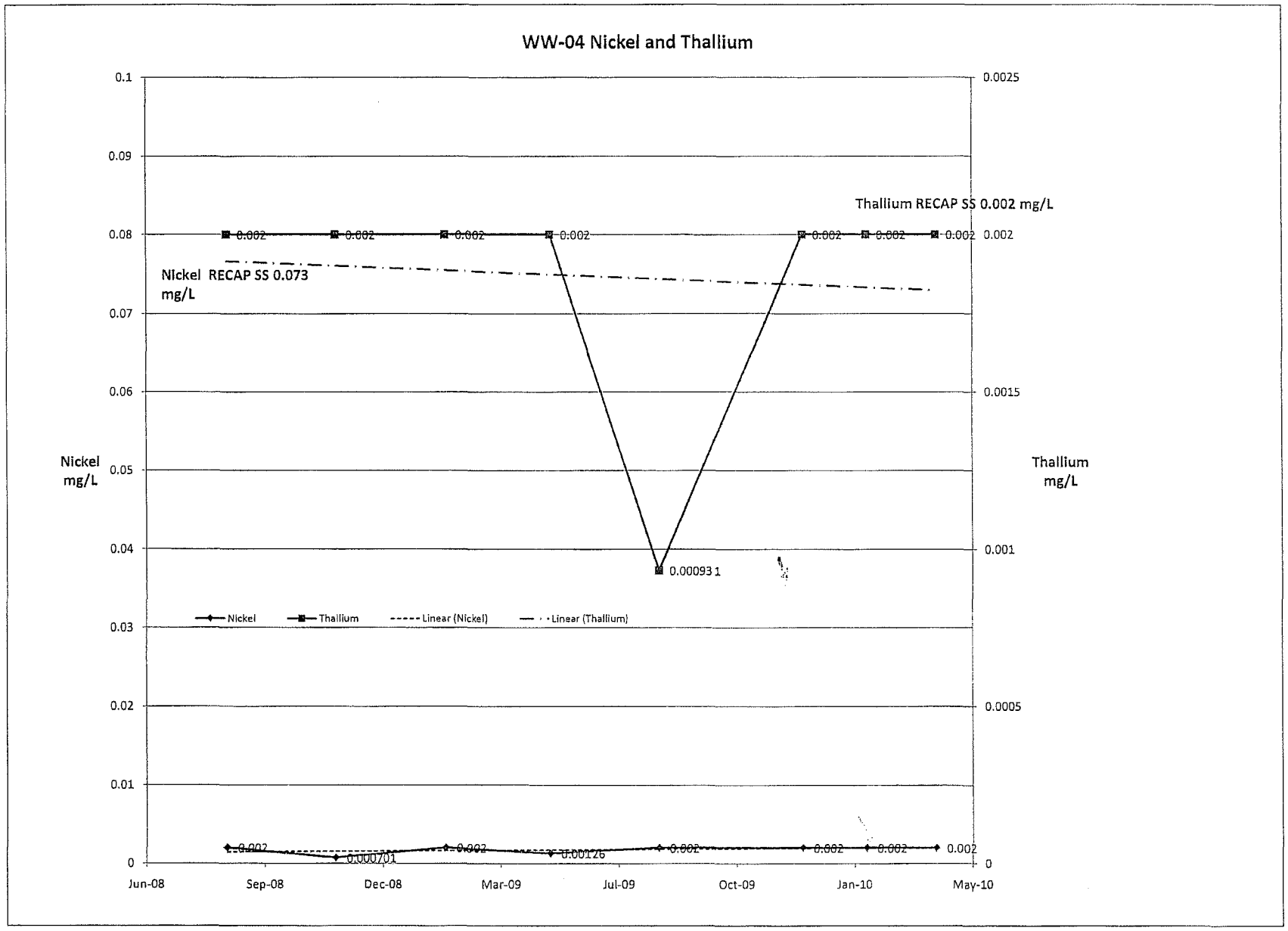

BA-01A Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.00532
0.00397
0.00341
0.00451
0.0049
0.00417
0.00638
0.0173
0.0248
0.00679
0.00674
0.0223
0.0175
0.0060
0.00523
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

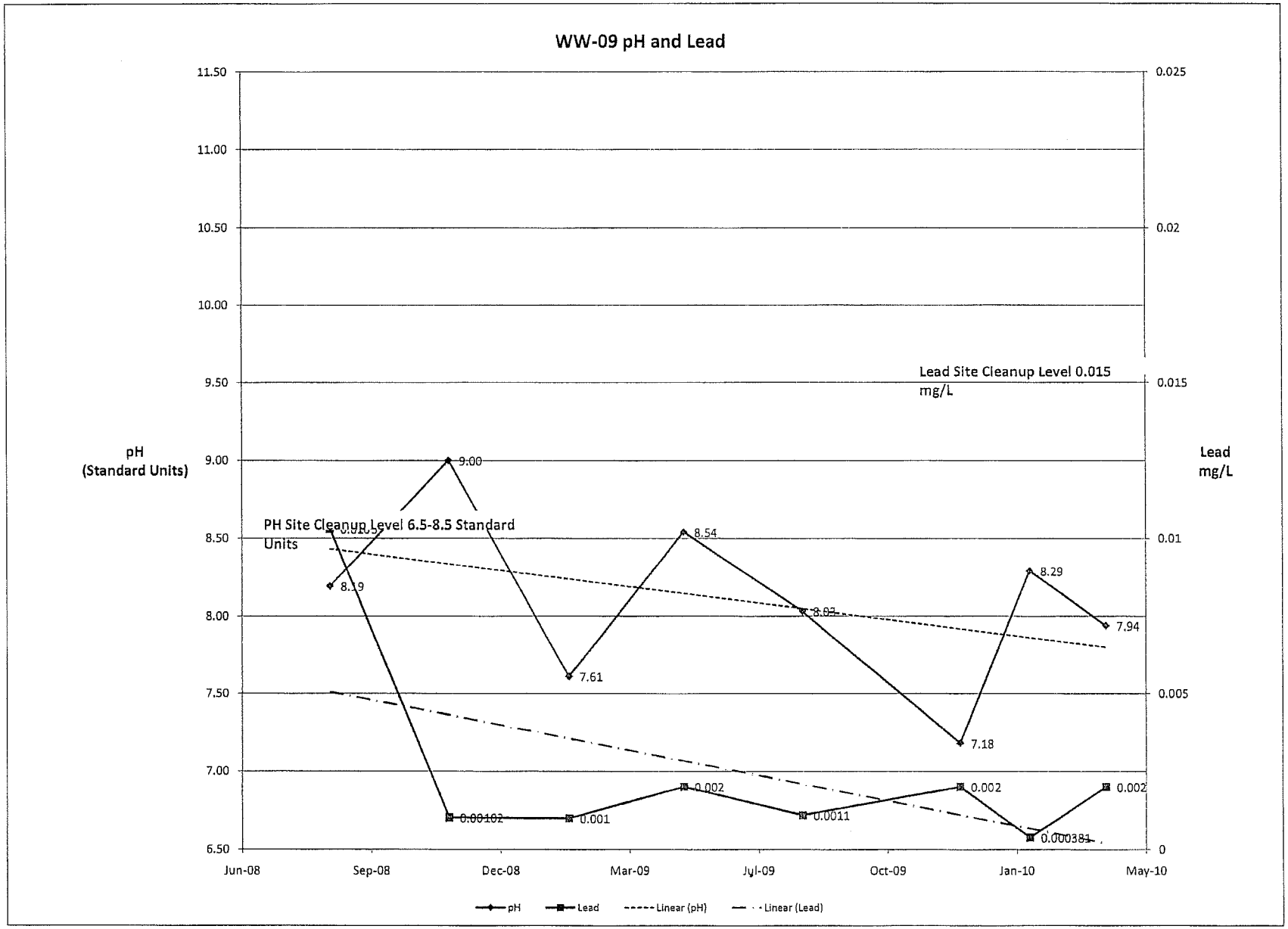

BA-01A Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00093
0.000237
0.01
0.00219
0.00129
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

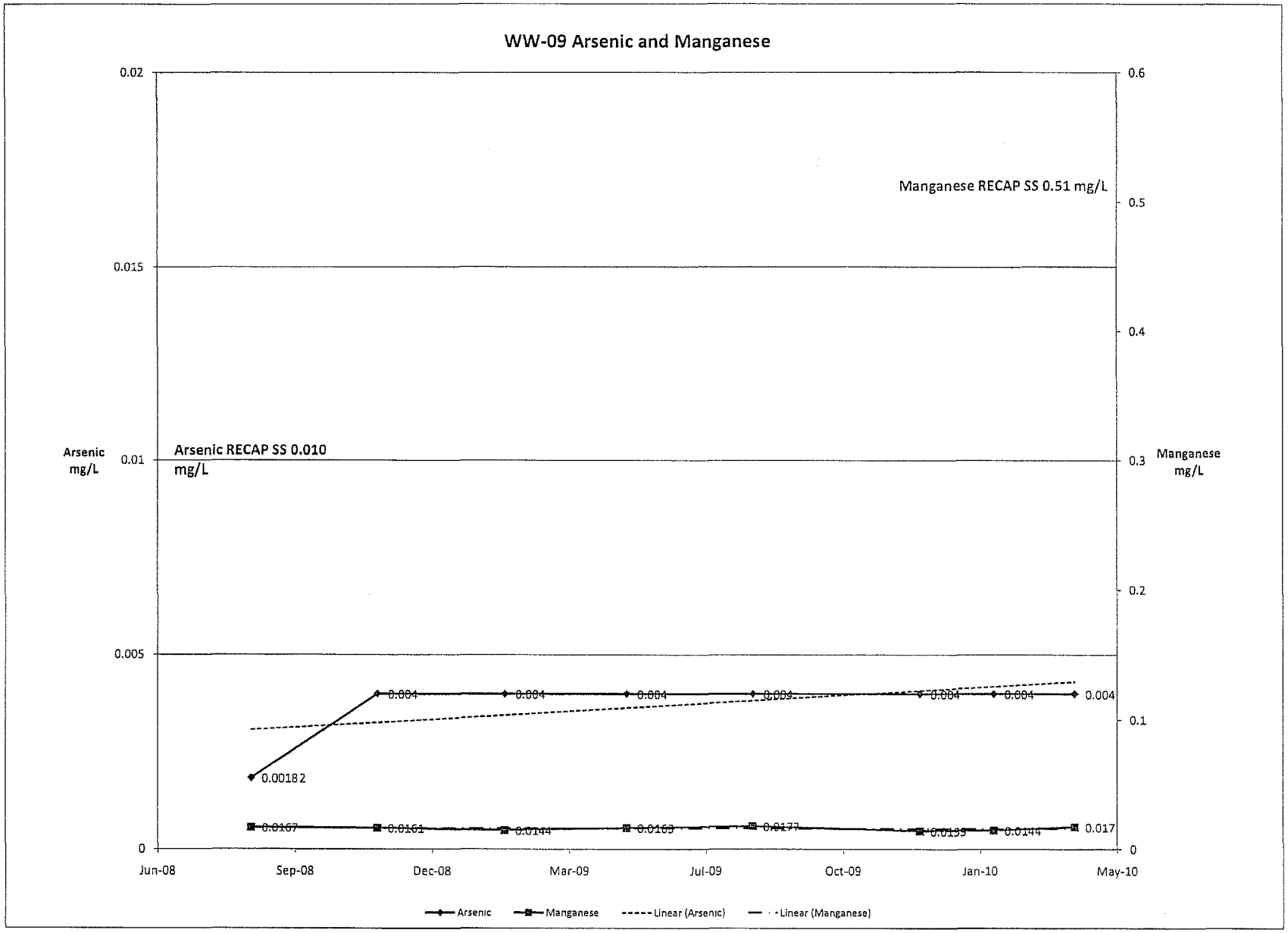
# WATER WELLS

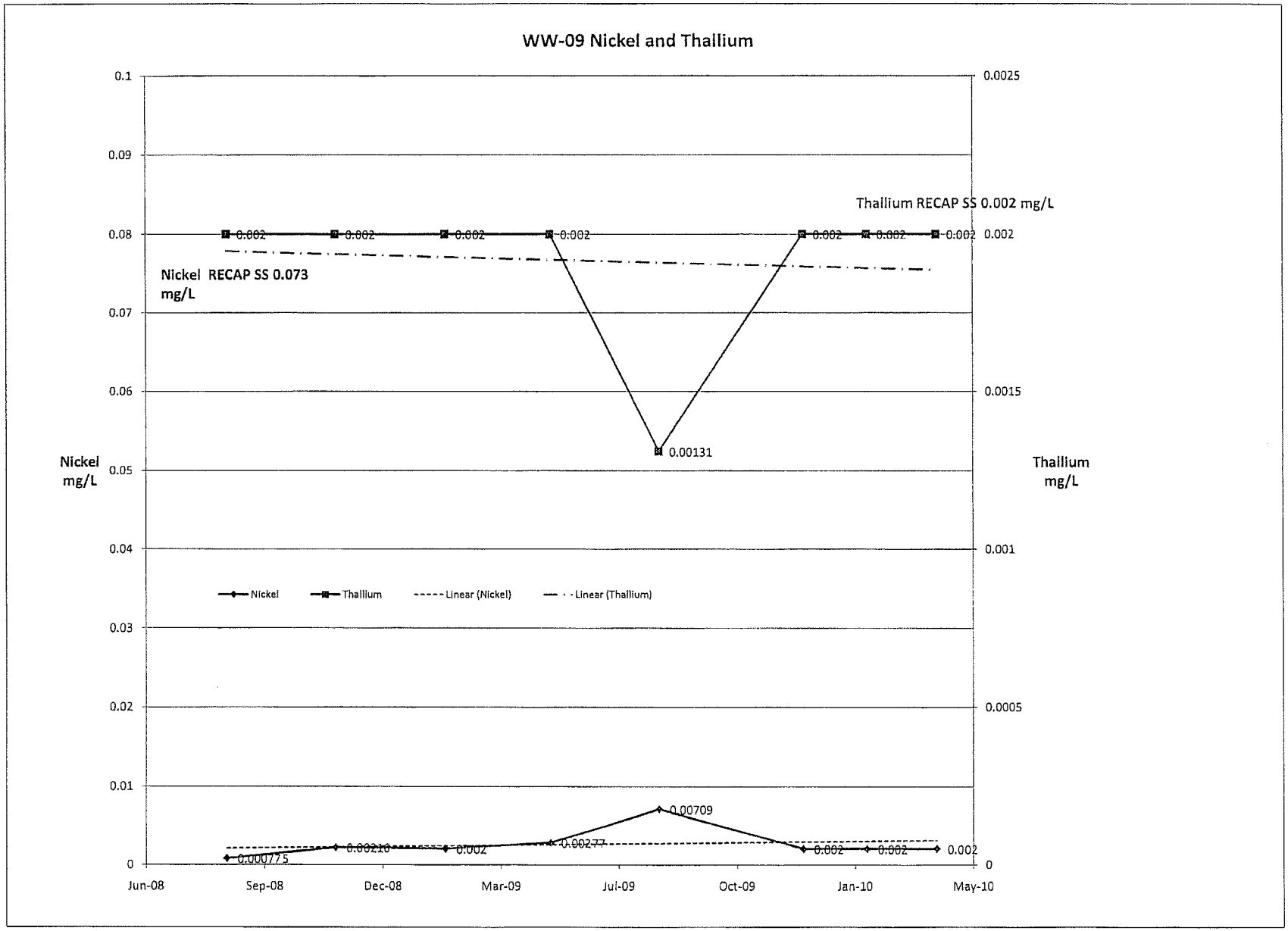

WW-04 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
9.32
8.73
8.68
8.27
7.73
9.10
8.72
0.000383
0.000606
0.001
0.000549
0.00177
0.002
0.001
0.002
pH
Lead
Linear (pH)
Linear (Lead)

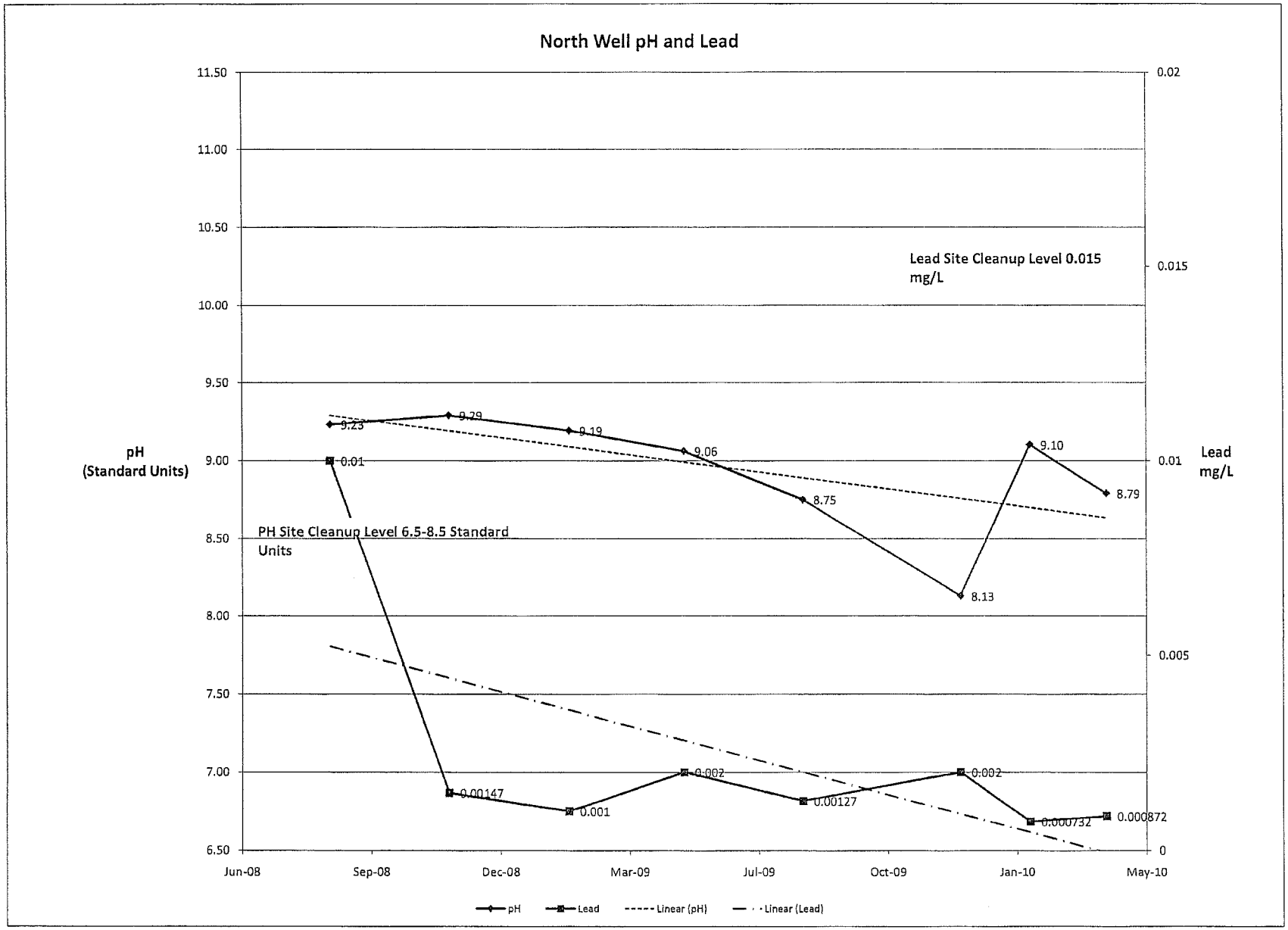

WW-04 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
0.00129
0.004
0.004
0.004
0.004
0.004
0.004
0.004
0.00292
0.00318
0.00294
0.00217
0.00421
0.00254
0.00297
0.00256
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

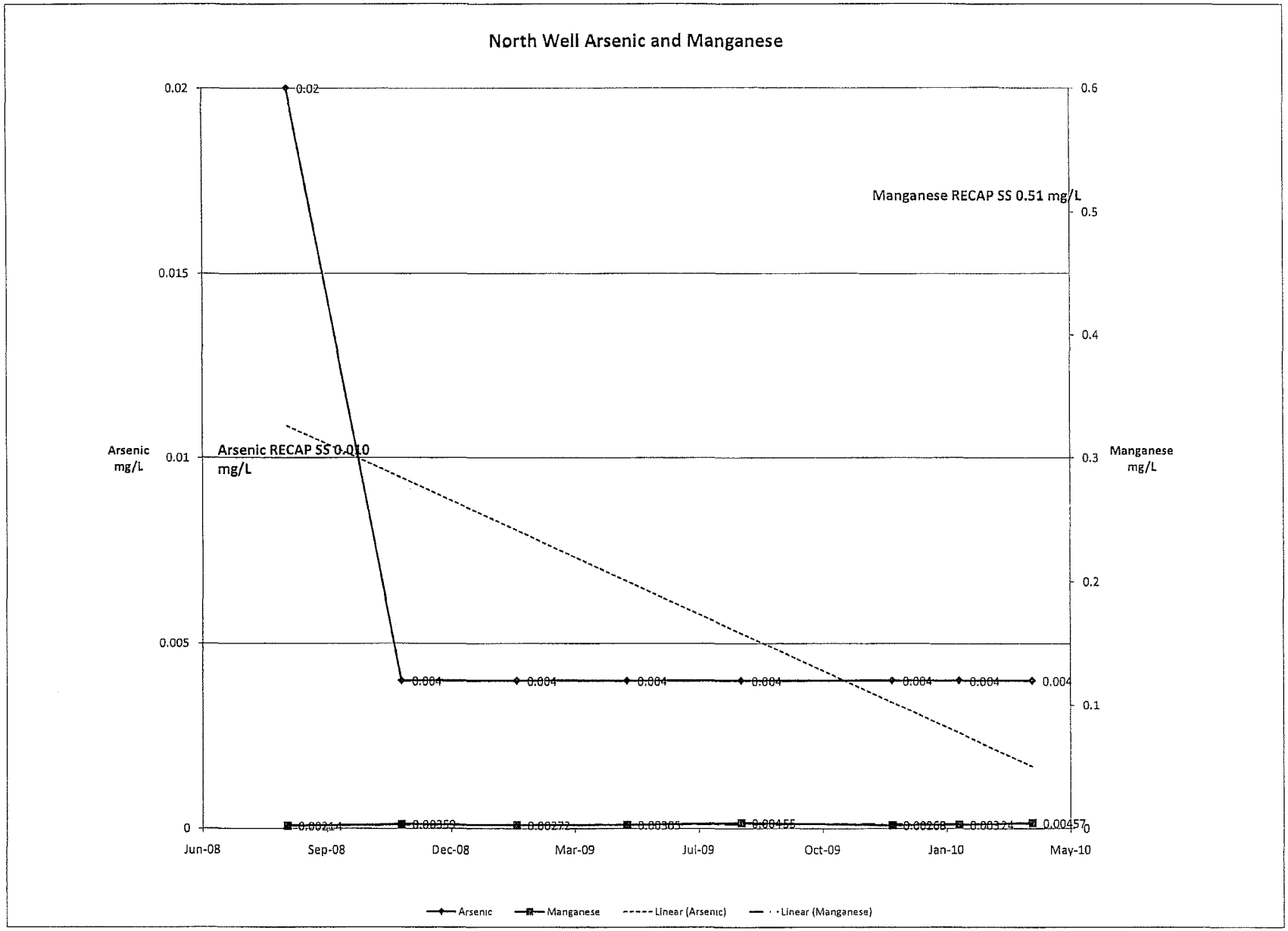

WW-04 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.00093 1
0.000701
0.00126
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

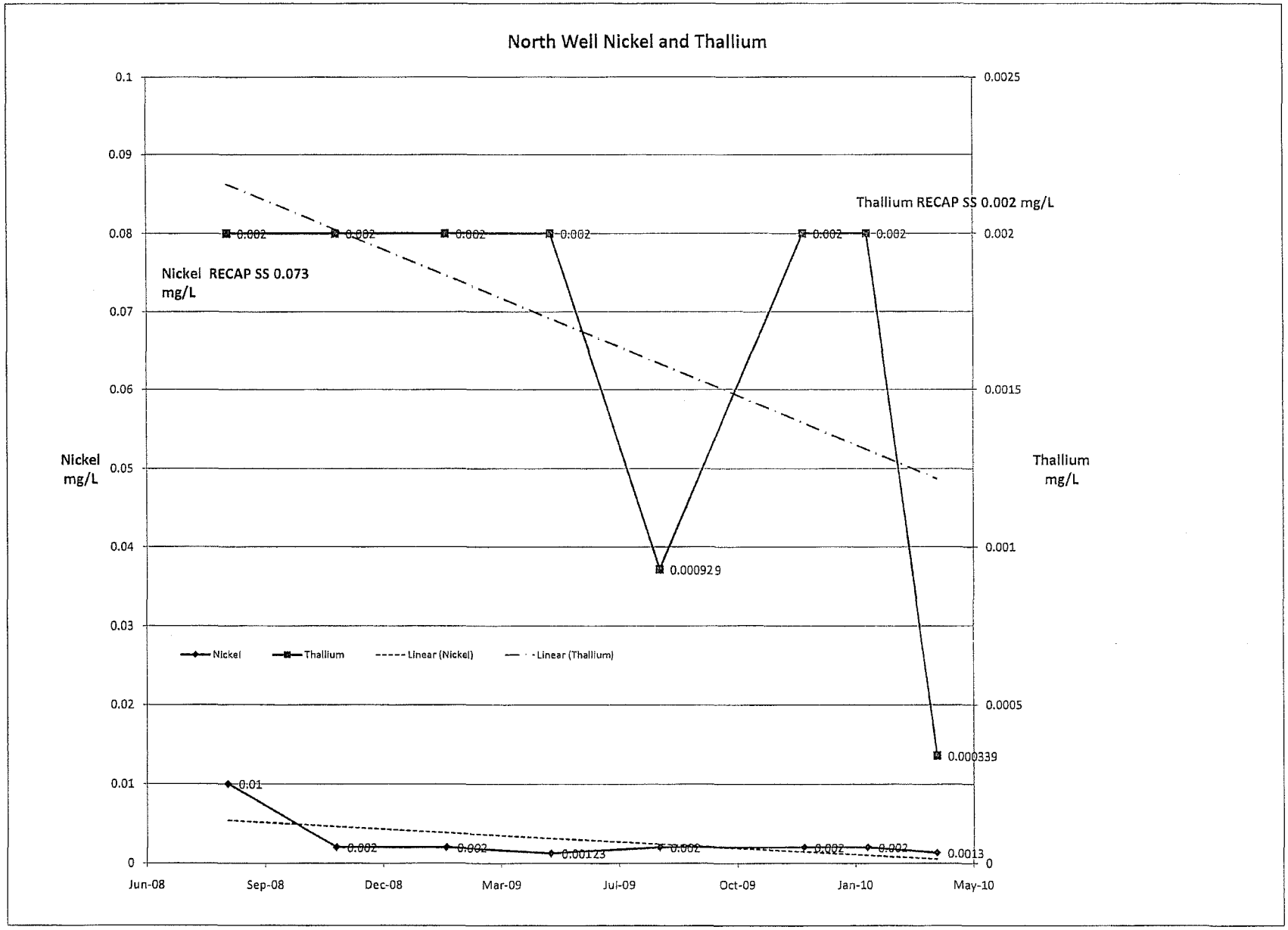

WW-09 pH and Lead
pH
(Standard Units)
Lead
mg/L
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.025
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
9.00
8.19
8.54
8.29
7.94
7.61
7.18
0.00102
0.001
0.002
0.0011
0.002
0.000381
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)

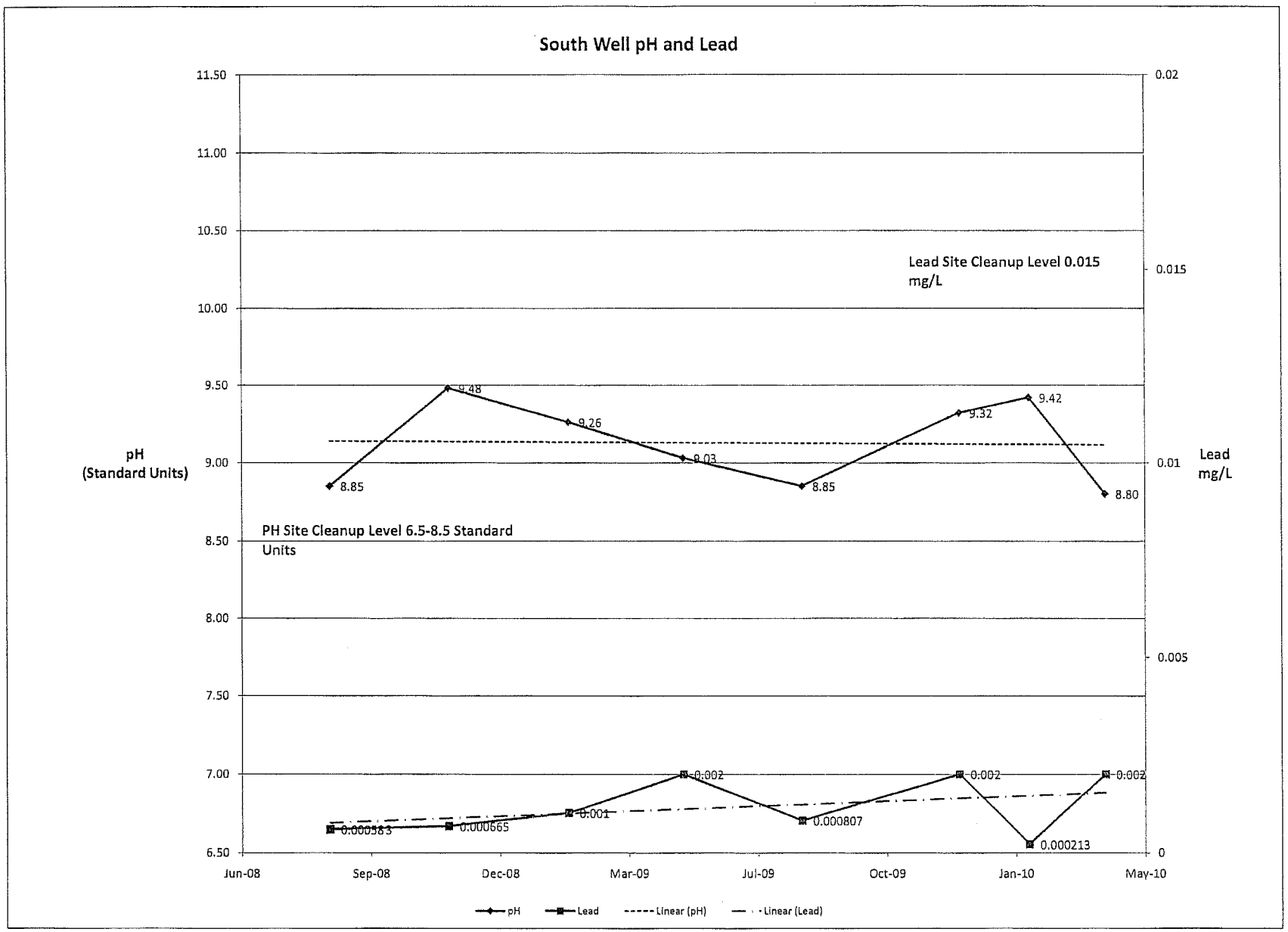

WW-09 Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.00182
0.004
0.0167
0.0161
0.0144
0.0163
0.0177
0.0139
0.017
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

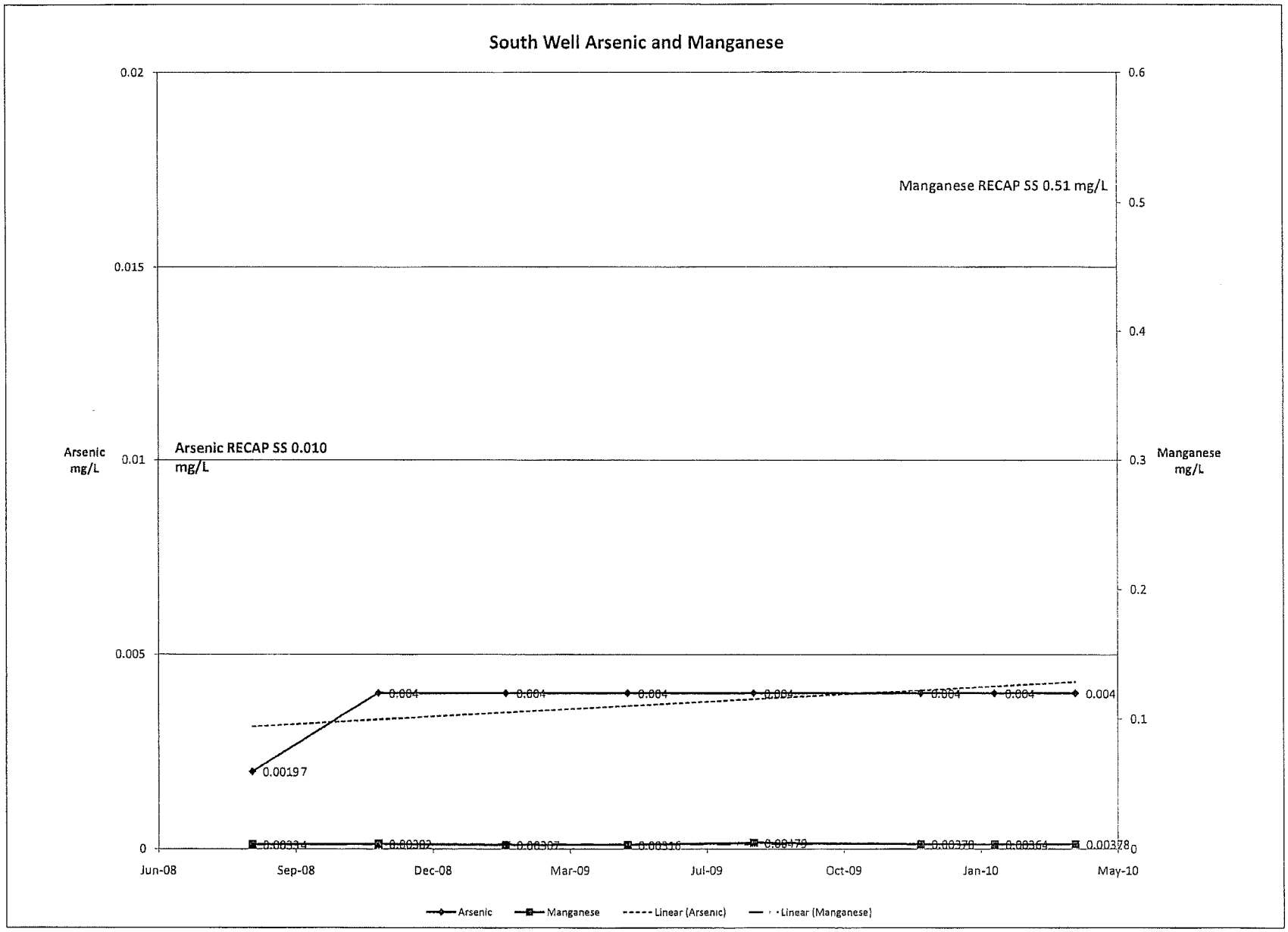

WW-09 Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.00131
0.00709
0.00077 5
0.00210
0.00277
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

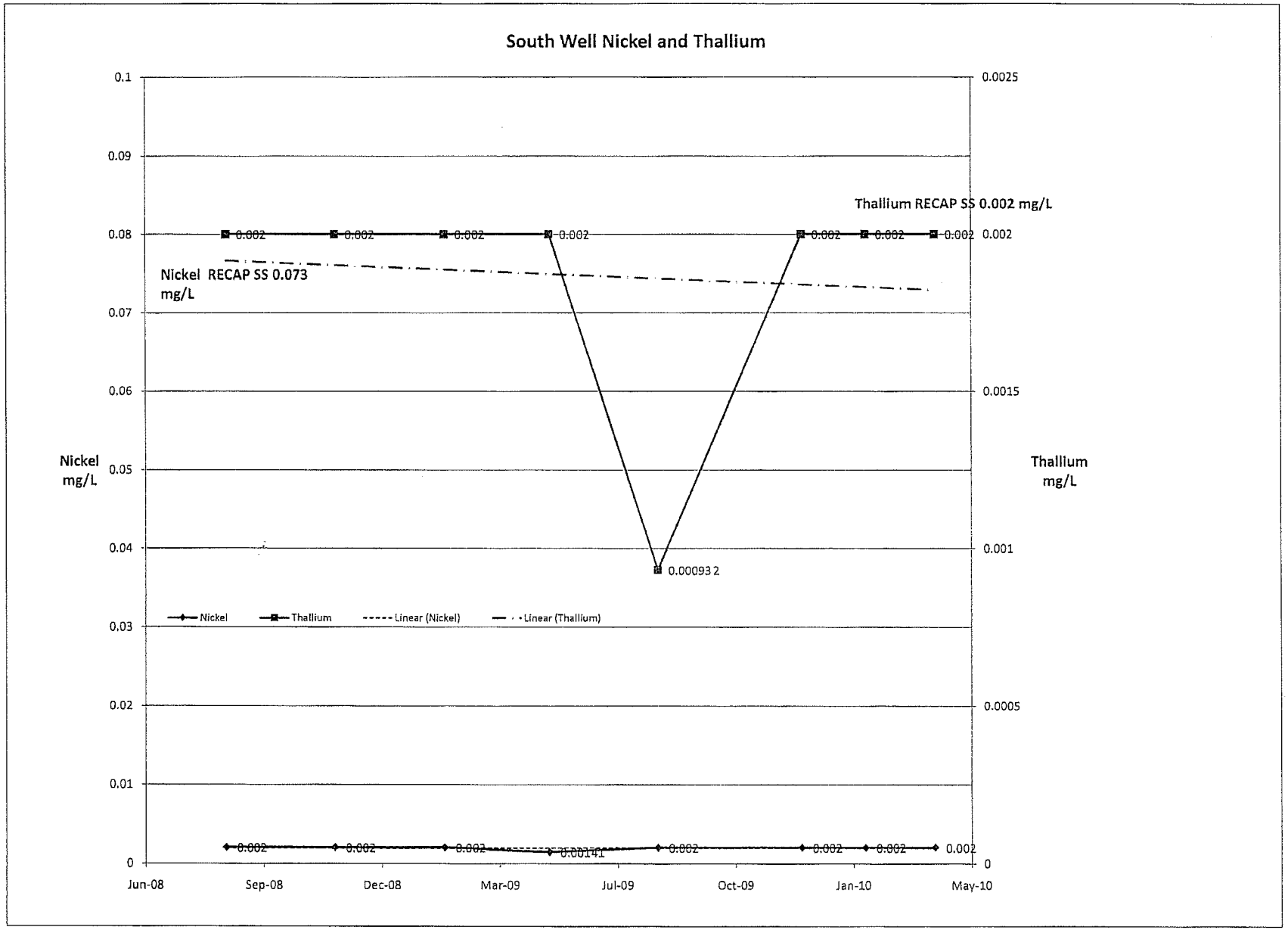

North Well pH and Lead
pH
(Standard Units)
Lead
mg/L
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.02
0.015
0.01
0.005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
9.23
9.29
9.19
9.06
8.75
8.13
9.10
8.79
0.01
0.00147
0.001
0.002
0.00127
0.002
0.000732
0.000872
pH
Lead
Linear (pH)
Linear (Lead)

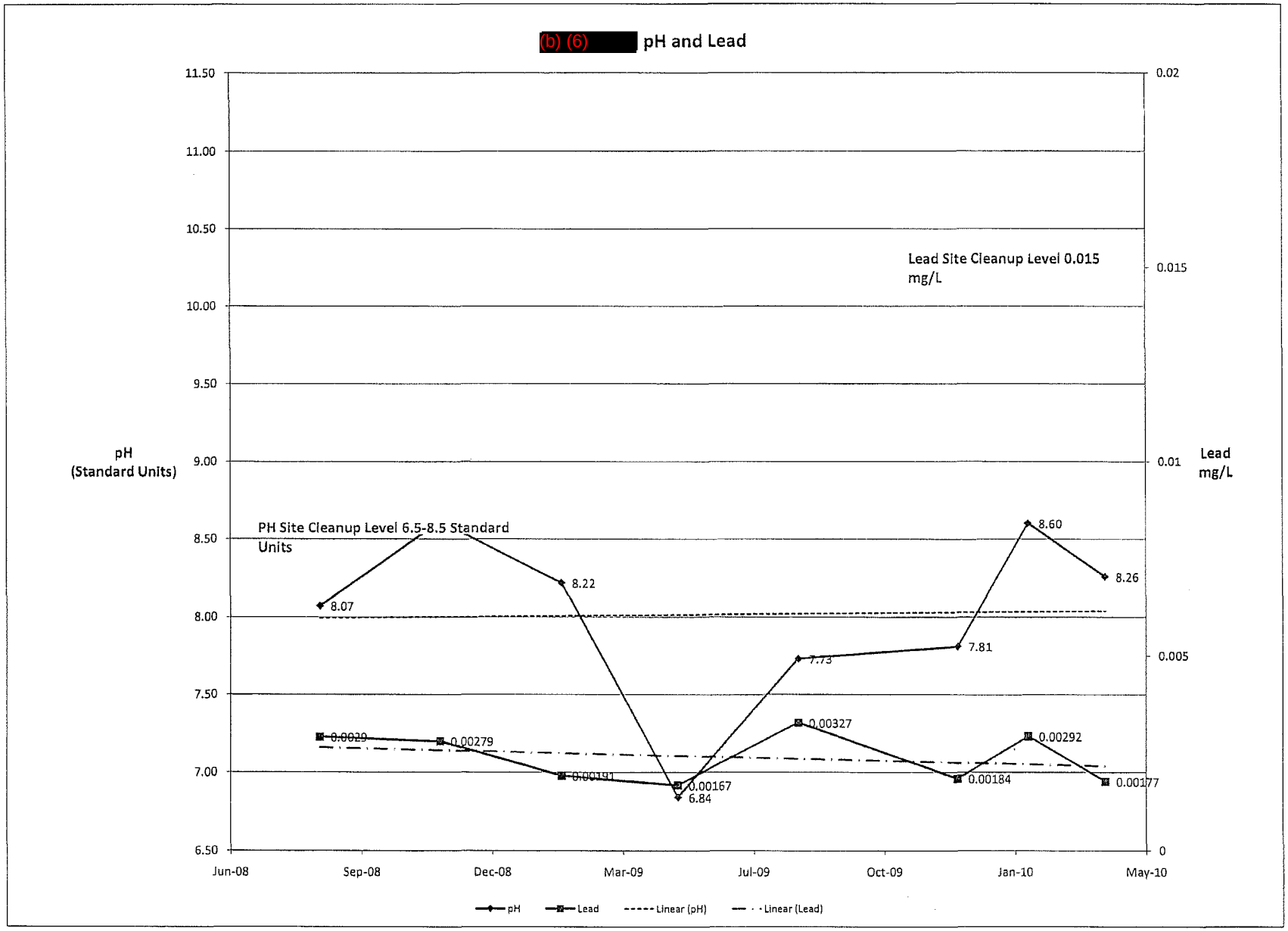

North Well Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.02
0.004
0.004
0.004
0.004
0.004
0.004
0.004
0.00214
0.00359
0.00272
0.00365
0.00455
0.00268
0.00324
0.00457
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

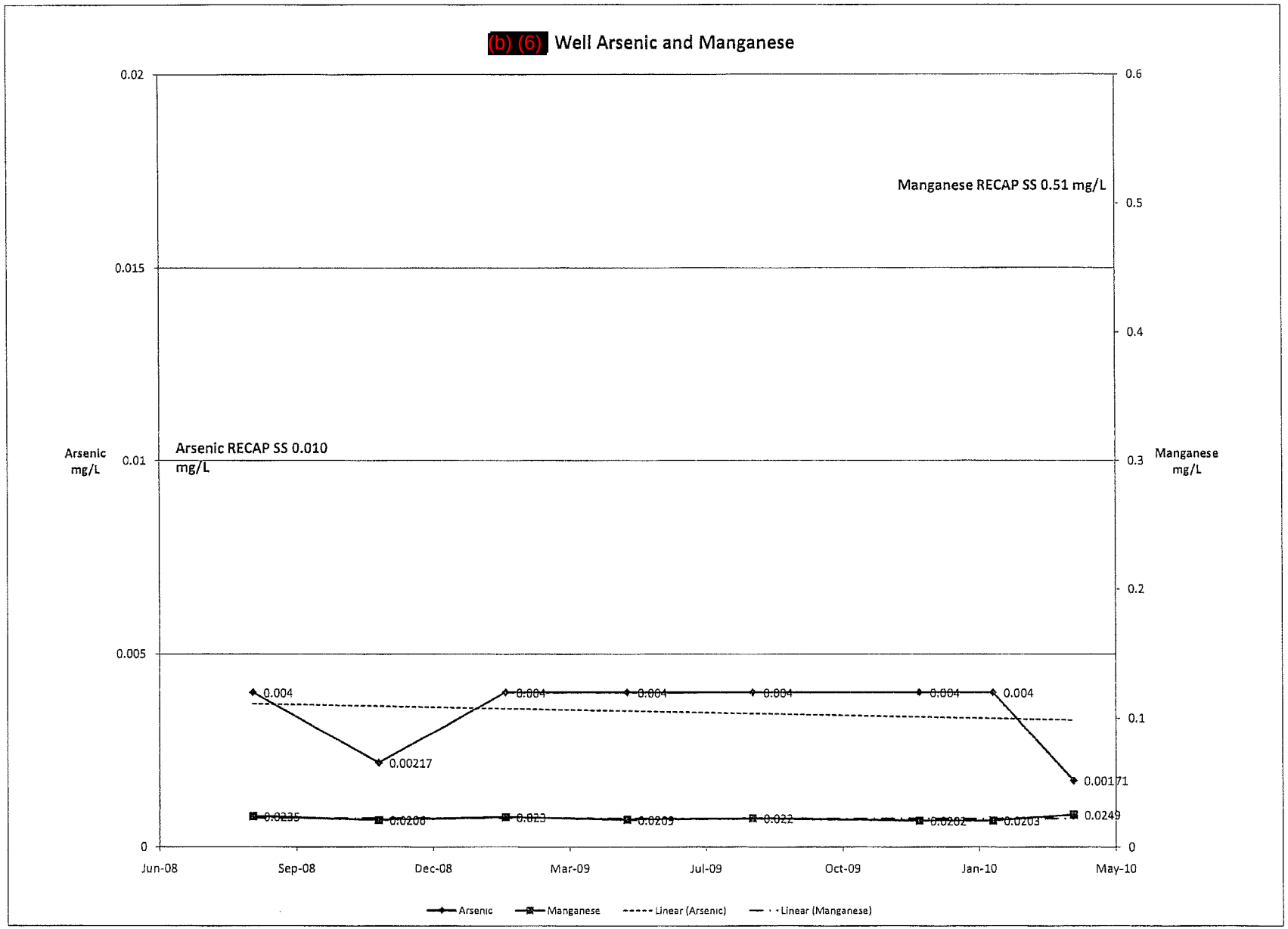

North Well Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.002
0.000929
0.000339
0.01
0.00123
0.0013
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

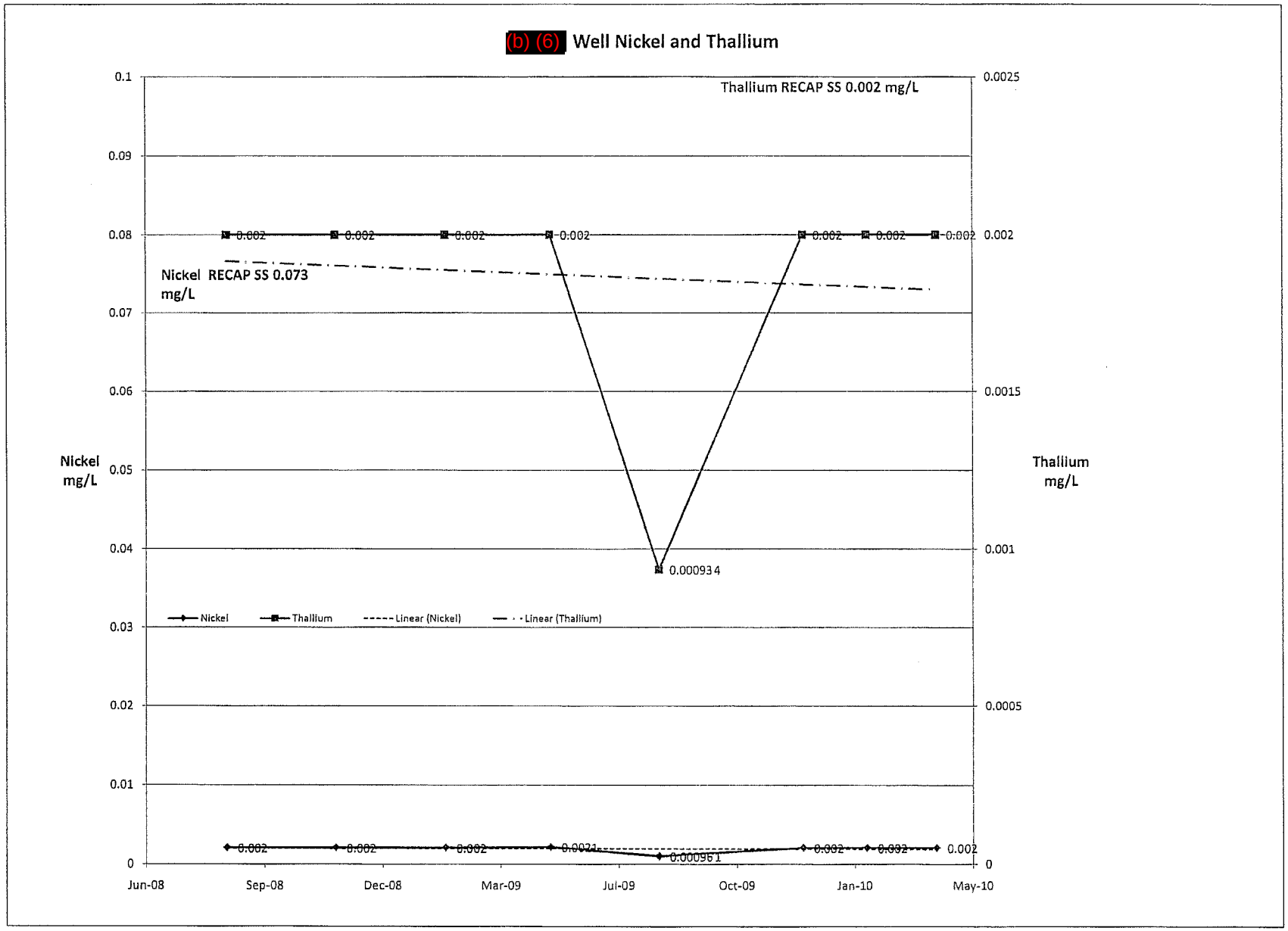

South Well pH and Lead
pH
(Standard Units)
Lead
mg/L
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.02
0.015
0.01
0.005
0
8.85
9.48
9.26
9.03
8.85
9.32
9.42
8.80
0.000583
0.000665
0.001
0.002
0.000807
0.002
0.000213
0.002
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)


South Well Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
0.00197
0.004
0.004
0.004
0.004
0.004
0.004
0.004
0.00334
0.00302
0.00307
0.00316
0.00379
0.00370
0.00364
0.00378
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


South Well Nickel and Thallium
Nickel mg/L
Thallium mg/L
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
0.00093 2
0.00141
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10


(b) (6) [redacted] pH and Lead
pH
(Standard Units)
Lead
mg/L
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.02
0.015
0.01
0.005
0
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
8.07
8.22
6.84
7.73
7.81
8.60
8.26
0.00279
0.00191
0.00167
0.00327
0.00184
0.00292
0.00177
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
pH
Lead
Linear (pH)
Linear (Lead)


(b) (6) Well Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.004
0.00217
0.004
0.004
0.004
0.004
0.004
0.00171
0.0235
0.0206
0.023
0.0205
0.022
0.0202
0.0203
0.0249
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


(b) (6) Well Nickel and Thallium
Thallium RECAP SS 0.002 mg/L
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
Thallium mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0025
0.002
0.0015
0.001
0.0005
0
0.002
0.000934
0.000961
0.0021
Nickel
Thallium
Linear (Nickel)
Linear (Thallium)
Jun-08
Sep-08
Dec-08
Mar-09
Jul-09
Oct-09
Jan-10
May-10

# ATTACHMENT D

# DATA VALIDATION PACKAGE

# Data Validation Report

## DELATTE METALS PROJECT

**SDG: 10040344** **June 2010**

# INTRODUCTION

## Disclaimer

The opinions expressed and the qualifiers and values assigned by TerraBase Incorporated™ (TerraBase) are based on information provided to us in a hardcopy raw data package and/or an electronic deliverable.

TerraBase assumes this information accurately and completely represents the samples and information received by the laboratory, the analyses performed by the laboratory, and the raw data and results provided by the laboratory.

If TerraBase discovers that for any reason the information is inaccurate or incomplete, or non-representative of the site, TerraBase reserves the right to modify or withdraw any information contained in this report.

# DELATTE METALS PROJECT

# DATA VALIDATION REPORT

## SDG: 10040344

*Prepared for:*

SEMS, Inc.
Baton Rouge, LA

TerraBase Project Number: 207-0006
June 2009

**Purpose of the Validation Report**

Analytical data validation is a confirmatory procedure that evaluates client-generated laboratory data in accordance with definitive regulatory performance standards set forth by the USEPA.[1,2] TerraBase Incorporated™ (TerraBase) provides client assistance with data validation to ensure that analytical data are complete, in compliance with laboratory protocols, in agreement with the project data quality objectives, and are technically valid and legally defensible.

**Format of the Introduction Section**

The introduction contains summary tables that permit the reader easy access to the validated detected results. The tables are identified as: 1) ***Table E 1*** *Sample Identification Cross-Reference Table*, 2) ***Table E 2*** *Summary of Validated Sample Detects Sorted by Client Sample and Fraction* and 3) ***Table E 3*** *Summary of Validated Analyte Detects Sorted by Fraction, Analyte and Client Sample.* A brief description of the contents of each table is presented below.

Executive Summaries:

1) ***Table E 1*** *Sample Identification Cross-Reference Table:* This table is a cross-reference of client sample names and laboratory names. It also references any consultants sample names, if they are available.

2) ***Table E 2*** *Summary of Validated Sample Detects Sorted by Client Sample and Fraction:* Identification of all post-validation detected analytes by client or site sample location, fraction and analyte. The order of the analytical fractions appearing in this report follows the typical order found in a laboratory data package. That is, volatiles appear first, followed by semivolatiles, pesticides, herbicides, metals and conventionals. The detected analytes of each fraction are also displayed according to their order of appearance in the data package. This table also shows the sample type, sample matrix, extraction level, dilution factor and the method quantitation limits (MQL).

3) ***Table E 3*** *Summary of Validated Analyte Detects Sorted by Fraction, Analyte and Client Sample:* Identification of all post-validation detected analytes by fraction, analyte and client site/sample location.

---

[1]National Functional Guidelines For Organic Data Review, USEPA, October 1999
[2]National Functional Guidelines For Inorganic Data Review, USEPA, February 1994.

# INTRODUCTION

Qualifier Definitions

- U - The analyte was analyzed for , but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.
- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

## NOTES:

1. On June 1, 2010 the results for total and dissolved site water samples were received by TerraBase, Inc. Four of these samples were requested for full data validation by TerraBase, Inc. in order to meet the client's 10% validation criteria. Arsenic, lead, nickel, thallium, and manganese were analyzed by the laboratory as per the chain of custody.
2. The validator used all quality control samples available to provide the most complete and accurate data validation possible.
3. Arsenic for samples BA-09, BA-01, DW-03, PW-04, DW-02, MW-02, MW-01, BA-03, Duplicate #3, and Duplicate #4 was subcontracted out to SPL-Houston and run by method 6010B.
4. All other results were run by method 6020A at SPL-Lafayette.
5. There were no times marked on the field duplicates for the validator to determine what samples they were duplicates of so, they were not used in the validation process.
6. Samples BC-03 and North Well were used for the MS/MSD as per the chain of custody. It had all required elements run by ICPMS.
7. Sample BA-09 was used for the MS/MSD for arsenic samples subcontracted to the SLP Houston laboratory.
8. There was low level blank contamination found for Arsenic, Manganese, Nickel, and Thallium; however, all results were over 10 times the contamination level making no qualification necessary.

## E1 - Sample Identification Cross-Reference Table

Site Samples Sorted by Fraction

**Delatte Metals**
**10040344**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10040344**

| Fraction | Client Sample | Lab Sample | Sample Type | Matrix | Level | Sampling Date/Time |
|---|---|---|---|---|---|---|
| **Metals** | | | | | | |
| | BA-09 | 10040344-02A | Site Sample | Water | Low | 04/05/2010 8:37 |
| | (b) (6) [redacted] WELL | 10040344-06A | Site Sample | Water | Low | 04/05/2010 10:15 |
| | BC-25 | 10040344-11A | Site Sample | Water | Low | 04/05/2010 14:00 |
| | MW-06 | 10040344-13A | Site Sample | Water | Low | 04/05/2010 15:05 |

## E2 - Summary of Validated Sample Detects

Sorted by Client Sample, Fraction, and Elution Order

**Delatte Metals**
**10040344**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10040344**

| Client Sample | Fraction | Analyte | Sample Type | Matrix | Level | Dilution Factor | RL | Validated Result | Units |
|---|---|---|---|---|---|---|---|---|---|
| **BA-09** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Lead | Site Sample | Water | Low | 1 | 0.002 | 0.000272 J | mg/L |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 4.08 | mg/L |
| | | Nickel | Site Sample | Water | Low | 1 | 0.002 | 0.195 | mg/L |
| | | Arsenic | Site Sample | Water | Low | 1 | 0.0014 | 0.0222 | mg/L |
| **BC-25** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 0.0277 | mg/L |
| **MW-06** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 1.92 | mg/L |
| | | Nickel | Site Sample | Water | Low | 1 | 0.002 | 0.0179 | mg/L |
| (b) (6) [redacted] **WELL** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Lead | Site Sample | Water | Low | 1 | 0.002 | 0.00177 J | mg/L |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 0.0249 | mg/L |
| | | Arsenic | Site Sample | Water | Low | 1 | 0.004 | 0.00171 J | mg/L |



**Qualifiers:**

**J** - Estimated

**B** - (Organics) Found in the associated method blank

**D** - Reported from a dilution

**E** - Exceeds calibration range

**P** - (Pesticides) Difference in column concentrations > 25%

**B** - (Inorganics) Lab qualifier - analyte detected between the instrument detection limit (IDL) and the RL

## E3 - Summary of Validated Analyte Detects

Sorted by Fraction, Analyte and Client Sample

**Delatte Metals**
**10040344**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10040344**

| Fraction | Analyte | Client Sample | Sample Type | Matrix | Level | Dilution Factor | RL | Validated Result | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| | Arsenic | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.0014 | 0.0222 | mg/L |
| | | (b) (6) WELL | Site Sample | Water | Low | 1 | 0.004 | 0.00171 J | mg/L |
| | Lead | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.002 | 0.000272 J | mg/L |
| | | (b) (6) WELL | Site Sample | Water | Low | 1 | 0.002 | 0.00177 J | mg/L |
| | Manganese | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.002 | 4.08 | mg/L |
| | | BC-25 | Site Sample | Water | Low | 1 | 0.002 | 0.0277 | mg/L |
| | | MW-06 | Site Sample | Water | Low | 1 | 0.002 | 1.92 | mg/L |
| | | (b) (6) WELL | Site Sample | Water | Low | 1 | 0.002 | 0.0249 | mg/L |
| | Nickel | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.002 | 0.195 | mg/L |
| | | MW-06 | Site Sample | Water | Low | 1 | 0.002 | 0.0179 | mg/L |



**Qualifiers:**

**J** - Estimated

**B** - (Organics) Found in the associated method blank

**D** - Reported from a dilution

**E** - Exceeds calibration range

**P** - (Pesticides) Difference in column concentrations > 25%

**B** - (Inorganics) Lab qualifier - analyte detected between the instrument detection limit (IDL) and the RL

METAL

# DELATTE METALS PROJECT

# DATA VALIDATION REPORT

## SDG: 10040344

*Prepared for:*

SEMS, Inc.
Baton Rouge, LA

TerraBase Project Number: 207-0006
June 2010

# TerraBase Data Validation Reporting Method

The purpose of this section is to give the data user an understanding of the ideas and concepts associated with data validation in general and with the TerraBase, Inc.™ (TerraBase) method of reporting validated data.

**Analyte Level Validation Issues**

TerraBase has developed a method for reporting validated data which utilizes a presentation of laboratory data issues and validation issues. This technique is based on the concept that issues encountered in the validation of laboratory data affect individual analytes of a sample. For instance, determining that a detected analyte in a sample was the result of laboratory contamination will cause only that analyte to be qualified.

**TerraBase Codes: Standardizing the Description of Analytical Defects**

TerraBase has standardized the data validation process by developing a database of codes employed by our analysts to describe the various analytical defects that may occur with an analysis. Each code is associated with written text describing the problem and the qualification that may be applied. For instance, the code that would be applied to an analyte that was determined to be a result of laboratory contamination would be BC (Blank Contamination). A complete listing of the analyte qualification parameters and their respective codes are presented below in *Analyte Qualification Codes*.

## *Analyte Qualification Codes*

- CO Comment
- HT Holding Time
- IC Initial Calibration
- CC Continuing Calibration
- BC Blank Contamination
- MS Matrix Spike Effects
- TC Target Compound Identification
- CQ Compound Quantitation
- TI Tentatively Identified Compound
- SD System Monitoring Compound
- IS Internal Standard
- TU GC/MS Tune Criteria

- AS Analytical Sequence

## Metal Section Reporting Format

The Metal Section of this data validation report is divided into 1) a text-formatted report which describes the contents of the laboratory data package and 2) a number of tabular reports which allow the data user to readily obtain information about the results of the data validation. Below is a description of the type of information contained in these tabular reports.

1) *Narrative of the Sample Delivery Group (SDG):* This section provides general information that pertains to the data package, such as the date of receipt, the number and type of samples, the laboratory performing the analysis, the instrumentation utilized to perform the analysis, the method of analysis, and the number and type of quality control parameters reported by the laboratory. Additionally, any other pertinent issues dealing with the laboratory or the data package may be noted in this section.

2) ***Table M1*** *Summary of Metal Data Validation Issues*: This table represents a bulleted summary of all metal samples that were validated for analyte level defects and provides a quick view of any issues that were associated with this sample delivery group. A bullet represents the assignment of a comment and/or qualifier by the data validator for a specific sample. The nature of a qualification can be found in ***Table M2*** *Metal Analyte Qualification Summary.*

3) ***Table M2*** *Metal Analyte Qualification Summary*: This tabular report displays all of the analyte-level data validation issues checked (*Analyte Qualification Codes*). The table indicates the client sample name, the analyte that has been qualified, the qualification code, the lab result and its qualifier and units, the validated result and the validation qualifier and units. Explanations of the actions taken by the validator are explained in ***Table M3*** *Metal Analyte Qualification Comments.*

4) ***Table M3*** *Metal Analyte Qualification Comments:* This report contains an explanation of each problem and any qualification which was documented in ***Table M2*** *Metal Analyte Qualification Summary.*

5) ***Table M4*** *Validated Metal Results*: This report displays all the analytical and validated information in a one-sample per-page view. It includes the metal analyte list, analytical extraction level, dilution factor, method quantitation limits per analyte, the results for each analyte and the units of measure for each analyte.

**Narrative of Sample Delivery Group (SDG): 10040344**

On June 8, 2010 the results for four total water samples were contracted out to TerraBase, Inc. for data validation. The samples were analyzed by SPL-Lafayette for Arsenic, Lead, Nickel, Thallium, and Manganese. The laboratory utilized an ICP-MS according to SW-846 Method 6020A and 6010B for waters. The following quality control parameters were reported in the data package:

| QC for 6020A As, Pb, Ni, Tl, Mn | QC for 6010B: As – Houston SPL |
|---|---|
| • 2 method blank(s) | • 1 method blank(s) |
| • 1 matrix spike(s) | • 0 matrix spike(s) |
| • 1 matrix spike duplicate(s) | • 0 matrix spike duplicate(s) |
| • 0 lab duplicate(s) | • 0 lab duplicate(s) |
| • 1 linear dilution sample(s) | • 0 linear dilution sample(s) |
| • 1 post digestion spike(s) | • 0 post digestion spike(s) |
| • 1 post digestion spike duplicate(s) | • 0 post digestion spike duplicate(s) |
| • 2 laboratory control sample(s) | • 2 laboratory control sample(s) |
| • 0 laboratory control sample dup(s) | • 0 laboratory control sample dup(s) |

NOTES:

1. On June 1, 2010 the results for total and dissolved site water samples were received by TerraBase, Inc. Four of these samples were requested for full data validation by TerraBase, Inc. in order to meet the client's 10% validation criteria. Arsenic, lead, nickel, thallium, and manganese were analyzed by the laboratory as per the chain of custody.
2. The validator used all quality control samples available to provide the most complete and accurate data validation possible.
3. Arsenic for samples BA-09, BA-01, DW-03, PW-04, DW-02, MW-02, MW-01, BA-03, Duplicate #3, and Duplicate #4 was subcontracted out to SPL-Houston and run by method 6010B.
4. All other results were run by method 6020A at SPL-Lafayette.
5. There were no times marked on the field duplicates for the validator to determine what samples they were duplicates of so, they were not used in the validation process.
6. Samples BC-03 and North Well were used for the MS/MSD as per the chain of custody. It had all required elements run by ICPMS.
7. Sample BA-09 was used for the MS/MSD for arsenic samples subcontracted to the SLP Houston laboratory.
8. There was low level blank contamination found for Arsenic, Manganese, Nickel, and Thallium; however, all results were over 10 times the contamination level making no qualification necessary.

## M1 - Summary of Metal Data Validation Issues

Sorted by SDG Print Sequence Number

**Delatte Metals**
**10040344**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10040344**

| Client Sample | Analyte Qualification | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | AS | CO | HT | IC | CC | BC | MS | CQ |
| BA-09 | | | | | | | | |
| BC-25 | | | | | | | | |
| MW-06 | | | | | | | | |
| (b) (6) [redacted] WELL | | | | | | | | |

**All samples were validated. A bullet (•) denotes sample qualification.**

*Analyte Qualification Codes:*

**AS** - Analytical sequence
**CO** - Comment
**HT** - Holding time
**IC** - Initial calibration
**CC** - Continuing calibration
**BC** - Blank contamination
**MS** - Matrix spike effects
**CQ** - Compound/parameter quantitation

## M2 - Metal Analyte Qualification Summary

As prepared by Integrate, Inc.

**Delatte Metals**
**10040344**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10040344**

| Client Sample | Analyte Name | AS | CO | HT | IC | CC | BC | MS | CQ | Lab Result | Units | Validated Result | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**No metal samples received analyte qualifiers in this sample delivery group**

***Analyte Qualification Codes:***

**AS** - Analytical sequence
**CO** - Comment
**HT** - Holding time
**IC** - Initial calibration
**CC** - Continuing calibration
**BC** - Blank contamination
**MS** - Matrix spike effects
**CQ** - Compound/parameter quantitation

***Analyte Qualifiers:***

**U** - Non-detected
**J** - Estimated
**R** - Unusable
**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10040344**

**No metal samples received analyte qualifiers in this sample delivery group.**



| *Qualification Categories:* | | | |
|---|---|---|---|
| **CO** | - Comment | **MS** | - Matrix spike effects |
| **HT** | - Holding time | **TC** | - TCL compound ID |
| **IC** | - Initial calibration | **CQ** | - Compound/parameter quantitation |
| **CC** | - Continuing calibration | **TI** | - Tentatively identified compound |
| **BC** | - Blank contamination | **SD** | - Surrogate deficiencies |
| | | **IS** | - Internal standard |

## M4 - Validated Metal Results

**Delatte Metals**
**10040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10040344** |
| Lab Sample ID: | **10040344-02A** | Sampling Date/Time: | **04/05/2010 8:37** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000272 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 4.08 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.195 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0222 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

***** - Modification by data validation

## M4 - Validated Metal Results

**Delatte Metals**
**10040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | (b) (6) [redacted] **WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10040344** |
| Lab Sample ID: | **10040344-06A** | Sampling Date/Time: | **04/05/2010 10:15** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00177 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0249 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00171 J | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

* - Modification by data validation

## M4 - Validated Metal Results

**Delatte Metals**
**10040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-25** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10040344** |
| Lab Sample ID: | **10040344-11A** | Sampling Date/Time: | **04/05/2010 14:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0277 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

***** - Modification by data validation

## M4 - Validated Metal Results

**Delatte Metals**
**10040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-06** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10040344** |
| Lab Sample ID: | **10040344-13A** | Sampling Date/Time: | **04/05/2010 15:05** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.92 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0179 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

* - Modification by data validation

All Lab Level Results

# DELATTE METALS PROJECT

# DATA VALIDATION REPORT

## SDG: 10040344

*Prepared for:*

SEMS, Inc.
Baton Rouge, LA

TerraBase Project Number: 207-0006
June 2010

## E1 - Sample Identification Cross-Reference Table

Site Samples Sorted by Fraction

**Delatte Metals**
**0040344**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **0040344**

| Fraction | Client Sample | Lab Sample | Sample Type | Matrix | Level | Sampling Date/Time |
|---|---|---|---|---|---|---|
| **Metals** | | | | | | |
| | BA-09A | 10040344-01A | Site Sample | Water | Low | 04/05/2010 8:14 |
| | BA-09 | 10040344-02A | Site Sample | Water | Low | 04/05/2010 8:37 |
| | MW-04 | 10040344-03A | Site Sample | Water | Low | 04/05/2010 9:21 |
| | WW-09 | 10040344-04A | Site Sample | Water | Low | 04/05/2010 9:20 |
| | WW-04 | 10040344-05A | Site Sample | Water | Low | 04/05/2010 10:10 |
| | [redacted] WELL | 10040344-06A | Site Sample | Water | Low | 04/05/2010 10:15 |
| | BC-03 | 10040344-07A | Site Sample | Water | Low | 04/05/2010 10:44 |
| | BC-07 | 10040344-08A | Site Sample | Water | Low | 04/05/2010 11:38 |
| | DW-04 | 10040344-09A | Site Sample | Water | Low | 04/05/2010 13:02 |
| | BC-19 | 10040344-10A | Site Sample | Water | Low | 04/05/2010 13:28 |
| | BC-25 | 10040344-11A | Site Sample | Water | Low | 04/05/2010 14:00 |
| | MW-03 | 10040344-12A | Site Sample | Water | Low | 04/05/2010 14:26 |
| | MW-06 | 10040344-13A | Site Sample | Water | Low | 04/05/2010 15:05 |
| | BB-01 | 10040344-14A | Site Sample | Water | Low | 04/06/2010 10:31 |
| | SOUTH WELL | 10040344-15A | Site Sample | Water | Low | 04/06/2010 10:45 |
| | BC-17 | 10040344-16A | Site Sample | Water | Low | 04/06/2010 11:15 |
| | NORTH WELL | 10040344-17A | Site Sample | Water | Low | 04/06/2010 11:20 |
| | BC-21R | 10040344-18A | Site Sample | Water | Low | 04/06/2010 11:48 |
| | BA-01A | 10040344-19A | Site Sample | Water | Low | 04/06/2010 12:08 |
| | BA-01 | 10040344-20A | Site Sample | Water | Low | 04/06/2010 12:25 |
| | BA-01 | 10040344-20B | Site Sample | Water | Low | 04/06/2010 12:25 |
| | DW-03 | 10040344-21A | Site Sample | Water | Low | 04/06/2010 12:58 |
| | PW-04 | 10040344-22A | Site Sample | Water | Low | 04/06/2010 13:18 |
| | DW-02 | 10040344-23A | Site Sample | Water | Low | 04/06/2010 13:52 |
| | BA-05A | 10040344-24A | Site Sample | Water | Low | 04/06/2010 14:25 |
| | BA05 | 10040344-25A | Site Sample | Water | Low | 04/06/2010 14:45 |
| | BA05 | 10040344-25B | Site Sample | Water | Low | 04/06/2010 14:45 |
| | MW-A | 10040344-26A | Site Sample | Water | Low | 04/07/2010 7:54 |
| | DW-01 | 10040344-27A | Site Sample | Water | Low | 04/07/2010 8:39 |
| | DW-01 | 10040344-27B | Site Sample | Water | Low | 04/07/2010 8:39 |
| | MW-02 | 10040344-28A | Site Sample | Water | Low | 04/07/2010 10:15 |
| | MW-01 | 10040344-29A | Site Sample | Water | Low | 04/07/2010 9:22 |
| | BA-03A | 10040344-30A | Site Sample | Water | Low | 04/07/2010 11:07 |
| | BA-03 | 10040344-31A | Site Sample | Water | Low | 04/07/2010 11:35 |
| | DUPLICATE #1 | 10040344-32A | Field Duplicate | Water | Low | 04/05/2010 0:00 |
| | DUPLICATE #2 | 10040344-33A | Field Duplicate | Water | Low | 04/06/2010 0:00 |
| | DUPLICATE #3 | 10040344-34A | Field Duplicate | Water | Low | 04/06/2010 0:00 |
| | DUPLICATE #4 | 10040344-35A | Field Duplicate | Water | Low | 04/07/2010 0:00 |

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-09A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-01A** | Sampling Date/Time: | **04/05/2010 8:14** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000828 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0239 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00192 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-02A** | Sampling Date/Time: | **04/05/2010 8:37** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0222 | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000272 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 4.08 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.195 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-03A** | Sampling Date/Time: | **04/05/2010 9:21** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00843 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **WW-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-04A** | Sampling Date/Time: | **04/05/2010 9:20** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.017 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **WW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-05A** | Sampling Date/Time: | **04/05/2010 10:10** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00256 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | [redacted] **WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-06A** | Sampling Date/Time: | **04/05/2010 10:15** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00177 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0249 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00171 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-07A** | Sampling Date/Time: | **04/05/2010 10:44** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.000141 J | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000884 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-07** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-08A** | Sampling Date/Time: | **04/05/2010 11:38** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0314 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000742 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.0016 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-09A** | Sampling Date/Time: | **04/05/2010 13:02** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.000091 U | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-19** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-10A** | Sampling Date/Time: | **04/05/2010 13:28** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.000316 J | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00134 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-25** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-11A** | Sampling Date/Time: | **04/05/2010 14:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0277 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-12A** | Sampling Date/Time: | **04/05/2010 14:26** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.0015 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.677 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00138 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-06** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-13A** | Sampling Date/Time: | **04/05/2010 15:05** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.92 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0179 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BB-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-14A** | Sampling Date/Time: | **04/06/2010 10:31** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00449 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00489 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000688 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00518 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **SOUTH WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-15A** | Sampling Date/Time: | **04/06/2010 10:45** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00378 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-17** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-16A** | Sampling Date/Time: | **04/06/2010 11:15** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.0172 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.106 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00169 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00248 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **NORTH WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-17A** | Sampling Date/Time: | **04/06/2010 11:20** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000872 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00457 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0013 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000339 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-21R** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-18A** | Sampling Date/Time: | **04/06/2010 11:48** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00468 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00123 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-01A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-19A** | Sampling Date/Time: | **04/06/2010 12:08** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00523 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00638 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-20A** | Sampling Date/Time: | **04/06/2010 12:25** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.015 | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00105 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.51 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0612 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-20B** | Sampling Date/Time: | **04/06/2010 12:25** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.42 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0605 | mg/L |
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0044 J | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-21A** | Sampling Date/Time: | **04/06/2010 12:58** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.035 | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.0846 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 6.73 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.178 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **PW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-22A** | Sampling Date/Time: | **04/06/2010 13:18** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0014 U | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00109 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.931 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0237 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000151 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-02** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-23A** | Sampling Date/Time: | **04/06/2010 13:52** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0407 | mg/L |
| 7439-92-1 | Lead | 6020 | 5 | 0.01 | 0.0114 | mg/L |
| 7439-96-5 | Manganese | 6020 | 5 | 0.01 | 16.9 | mg/L |
| 7440-02-0 | Nickel | 6020 | 5 | 0.01 | 0.824 | mg/L |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000735 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-05A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-24A** | Sampling Date/Time: | **04/06/2010 14:25** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000326 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00985 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00176 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00238 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA05** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-25A** | Sampling Date/Time: | **04/06/2010 14:45** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000365 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 13.5 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0517 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.00015 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00195 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA05** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-25B** | Sampling Date/Time: | **04/06/2010 14:45** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 14.1 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0557 | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-26A** | Sampling Date/Time: | **04/07/2010 7:54** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000271 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00724 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00178 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.00015 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-27A** | Sampling Date/Time: | **04/07/2010 8:39** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00254 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 4.72 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0254 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000324 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.12 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-27B** | Sampling Date/Time: | **04/07/2010 8:39** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000628 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 3.82 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.041 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0222 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-02** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-28A** | Sampling Date/Time: | **04/07/2010 10:15** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0035 J | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00418 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.91 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0801 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000804 J | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-29A** | Sampling Date/Time: | **04/07/2010 9:22** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.043 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 5.6 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.239 | mg/L |
| 7439-92-1 | Lead | 6020 | 5 | 0.01 | 0.00261 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000744 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-03A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-30A** | Sampling Date/Time: | **04/07/2010 11:07** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00119 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.037 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00163 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-31A** | Sampling Date/Time: | **04/07/2010 11:35** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.004 J | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.144 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 2.23 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0899 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000412 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #1** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-32A** | Sampling Date/Time: | **04/05/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0024 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00276 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00176 J | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #2** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-33A** | Sampling Date/Time: | **04/06/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.0137 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0976 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00326 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000154 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00286 J | mg/L |



U - Non-detected
J - Estimated
R - Unusable
RL - Reporting limit

B - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #3** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-34A** | Sampling Date/Time: | **04/06/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0384 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 11.7 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.526 | mg/L |
| 7439-92-1 | Lead | 6020 | 5 | 0.01 | 0.0134 | mg/L |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000735 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0040344**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #4** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0040344** |
| Lab Sample ID: | **10040344-35A** | Sampling Date/Time: | **04/07/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 6010 | 1 | 0.0014 | 0.0035 J | mg/L |
| 7439-92-1 | Lead | 6020 | 1 | 0.002 | 0.00325 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 2.04 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0826 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000777 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

**ATTACHMENT E**

**LEVEL IV DATA PACKAGE**
**(VOLUME II OF II)**

**CD ATTACHED**

# Data Validation Report

## DELATTE METALS PROJECT

**SDG: 10020428** **March 2010**

**Disclaimer**

The opinions expressed and the qualifiers and values assigned by TerraBase Incorporated™ (TerraBase) are based on information provided to us in a hardcopy raw data package and/or an electronic deliverable.

TerraBase assumes this information accurately and completely represents the samples and information received by the laboratory, the analyses performed by the laboratory, and the raw data and results provided by the laboratory.

If TerraBase discovers that for any reason the information is inaccurate or incomplete, or non-representative of the site, TerraBase reserves the right to modify or withdraw any information contained in this report.

# DELATTE METALS PROJECT

# DATA VALIDATION REPORT

## SDG: 10020428

*Prepared for:*

SEMS, Inc.
Baton Rouge, LA

TerraBase Project Number: 207-0006
June 2009

## Purpose of the Validation Report

Analytical data validation is a confirmatory procedure that evaluates client-generated laboratory data in accordance with definitive regulatory performance standards set forth by the USEPA.[1,2] TerraBase Incorporated™ (TerraBase) provides client assistance with data validation to ensure that analytical data are complete, in compliance with laboratory protocols, in agreement with the project data quality objectives, and are technically valid and legally defensible.

## Format of the Introduction Section

The introduction contains summary tables that permit the reader easy access to the validated detected results. The tables are identified as: 1) ***Table E 1*** *Sample Identification Cross-Reference Table*, 2) ***Table E 2*** *Summary of Validated Sample Detects Sorted by Client Sample and Fraction* and 3) ***Table E 3*** *Summary of Validated Analyte Detects Sorted by Fraction, Analyte and Client Sample.* A brief description of the contents of each table is presented below.

Executive Summaries:

1) ***Table E 1*** *Sample Identification Cross-Reference Table:* This table is a cross-reference of client sample names and laboratory names. It also references any consultants sample names, if they are available.

2) ***Table E 2*** *Summary of Validated Sample Detects Sorted by Client Sample and Fraction:* Identification of all post-validation detected analytes by client or site sample location, fraction and analyte. The order of the analytical fractions appearing in this report follows the typical order found in a laboratory data package. That is, volatiles appear first, followed by semivolatiles, pesticides, herbicides, metals and conventionals. The detected analytes of each fraction are also displayed according to their order of appearance in the data package. This table also shows the sample type, sample matrix, extraction level, dilution factor and the method quantitation limits (MQL).

***3)*** ***Table E 3*** *Summary of Validated Analyte Detects Sorted by Fraction, Analyte and Client Sample:* Identification of all post-validation detected analytes by fraction, analyte and client site/sample location.

---

[1]National Functional Guidelines For Organic Data Review, USEPA, October 1999
[2]National Functional Guidelines For Inorganic Data Review, USEPA, February 1994.

# INTRODUCTION

Qualifier Definitions

- U - The analyte was analyzed for , but was not detected above the reported sample quantitation limit.

- J - The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.

- N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value represents its approximate concentration.

- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

NOTES:

1. On March 1, 2010 the results for total and dissolved site water samples were received by TerraBase, Inc. Four of these samples were requested for full data validation by TerraBase, Inc. in order to meet the client's 10% validation criteria. Arsenic, lead, nickel, thallium, and manganese were analyzed by the laboratory as per the chain of custody.
2. The validator used all quality control samples available to provide the most complete and accurate data validation possible.
3. There were no times marked on the field duplicates for the validator to determine what samples they were duplicates of so, they were not used in the validation process.

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10020428**

| Fraction | Client Sample | Lab Sample | Sample Type | Matrix | Level | Sampling Date/Time |
|---|---|---|---|---|---|---|
| **Metals** | | | | | | |
| | BA-09 | 10020428-02A | Site Sample | Water | Low | 02/08/2010 11:21 |
| | WW-09 | 10020428-04A | Site Sample | Water | Low | 02/08/2010 12:25 |
| | BC-07 | 10020428-08A | Site Sample | Water | Low | 02/09/2010 8:19 |
| | MW-03 | 10020428-12A | Site Sample | Water | Low | 02/09/2010 10:06 |

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10020428**

| Client Sample | Fraction | Analyte | Sample Type | Matrix | Level | Dilution Factor | RL | Validated Result | Units |
|---|---|---|---|---|---|---|---|---|---|
| **BA-09** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 3.41 J | mg/L |
| | | Nickel | Site Sample | Water | Low | 1 | 0.002 | 0.161 J | mg/L |
| | | Arsenic | Site Sample | Water | Low | 1 | 0.02 | 0.0452 | mg/L |
| **BC-07** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Lead | Site Sample | Water | Low | 1 | 0.001 | 0.000163 J | mg/L |
| | | Thallium | Site Sample | Water | Low | 1 | 0.002 | 0.00022 J | mg/L |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 0.0129 J | mg/L |
| | | Nickel | Site Sample | Water | Low | 1 | 0.002 | 0.000783 J | mg/L |
| **MW-03** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Lead | Site Sample | Water | Low | 1 | 0.001 | 0.00508 | mg/L |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 0.462 J | mg/L |
| | | Nickel | Site Sample | Water | Low | 1 | 0.002 | 0.00141 J | mg/L |
| **WW-09** | | | | | | | | | |
| | Metals | | | | | | | | |
| | | Lead | Site Sample | Water | Low | 1 | 0.001 | 0.000381 J | mg/L |
| | | Manganese | Site Sample | Water | Low | 1 | 0.002 | 0.0144 J | mg/L |



**Qualifiers:**

**J** - Estimated

**B** - (Organics) Found in the associated method blank

**D** - Reported from a dilution

**E** - Exceeds calibration range

**P** - (Pesticides) Difference in column concentrations > 25%

**B** - (Inorganics) Lab qualifier - analyte detected between the instrument detection limit (IDL) and the RL

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10020428**

| Fraction | Analyte | Client Sample | Sample Type | Matrix | Level | Dilution Factor | RL | Validated Result | Units |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| | Arsenic | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.02 | 0.0452 | mg/L |
| | Lead | | | | | | | | |
| | | BC-07 | Site Sample | Water | Low | 1 | 0.001 | 0.000163 J | mg/L |
| | | MW-03 | Site Sample | Water | Low | 1 | 0.001 | 0.00508 | mg/L |
| | | WW-09 | Site Sample | Water | Low | 1 | 0.001 | 0.000381 J | mg/L |
| | Manganese | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.002 | 3.41 J | mg/L |
| | | BC-07 | Site Sample | Water | Low | 1 | 0.002 | 0.0129 J | mg/L |
| | | MW-03 | Site Sample | Water | Low | 1 | 0.002 | 0.462 J | mg/L |
| | | WW-09 | Site Sample | Water | Low | 1 | 0.002 | 0.0144 J | mg/L |
| | Nickel | | | | | | | | |
| | | BA-09 | Site Sample | Water | Low | 1 | 0.002 | 0.161 J | mg/L |
| | | BC-07 | Site Sample | Water | Low | 1 | 0.002 | 0.000783 J | mg/L |
| | | MW-03 | Site Sample | Water | Low | 1 | 0.002 | 0.00141 J | mg/L |
| | Thallium | | | | | | | | |
| | | BC-07 | Site Sample | Water | Low | 1 | 0.002 | 0.00022 J | mg/L |



**Qualifiers:**

**J** - Estimated

**B** - (Organics) Found in the associated method blank

**D** - Reported from a dilution

**E** - Exceeds calibration range

**P** - (Pesticides) Difference in column concentrations > 25%

**B** - (Inorganics) Lab qualifier - analyte detected between the instrument detection limit (IDL) and the RL

METAL

# DELATTE METALS PROJECT

# DATA VALIDATION REPORT

## SDG: 10020428

*Prepared for:*

SEMS, Inc.
Baton Rouge, LA

TerraBase Project Number: 207-0006
March 2010

# TerraBase Data Validation Reporting Method

The purpose of this section is to give the data user an understanding of the ideas and concepts associated with data validation in general and with the TerraBase, Inc.™ (TerraBase) method of reporting validated data.

**Analyte Level Validation Issues**

TerraBase has developed a method for reporting validated data which utilizes a presentation of laboratory data issues and validation issues. This technique is based on the concept that issues encountered in the validation of laboratory data affect individual analytes of a sample. For instance, determining that a detected analyte in a sample was the result of laboratory contamination will cause only that analyte to be qualified.

**TerraBase Codes: Standardizing the Description of Analytical Defects**

TerraBase has standardized the data validation process by developing a database of codes employed by our analysts to describe the various analytical defects that may occur with an analysis. Each code is associated with written text describing the problem and the qualification that may be applied. For instance, the code that would be applied to an analyte that was determined to be a result of laboratory contamination would be BC (Blank Contamination). A complete listing of the analyte qualification parameters and their respective codes are presented below in *Analyte Qualification Codes*.

## *Analyte Qualification Codes*

- CO Comment
- HT Holding Time
- IC Initial Calibration
- CC Continuing Calibration
- BC Blank Contamination
- MS Matrix Spike Effects
- TC Target Compound Identification
- CQ Compound Quantitation
- TI Tentatively Identified Compound
- SD System Monitoring Compound
- IS Internal Standard
- TU GC/MS Tune Criteria

- AS Analytical Sequence

## Metal Section Reporting Format

The Metal Section of this data validation report is divided into 1) a text-formatted report which describes the contents of the laboratory data package and 2) a number of tabular reports which allow the data user to readily obtain information about the results of the data validation. Below is a description of the type of information contained in these tabular reports.

1) *Narrative of the Sample Delivery Group (SDG):* This section provides general information that pertains to the data package, such as the date of receipt, the number and type of samples, the laboratory performing the analysis, the instrumentation utilized to perform the analysis, the method of analysis, and the number and type of quality control parameters reported by the laboratory. Additionally, any other pertinent issues dealing with the laboratory or the data package may be noted in this section.

2) ***Table M1*** *Summary of Metal Data Validation Issues*: This table represents a bulleted summary of all metal samples that were validated for analyte level defects and provides a quick view of any issues that were associated with this sample delivery group. A bullet represents the assignment of a comment and/or qualifier by the data validator for a specific sample. The nature of a qualification can be found in ***Table M2*** *Metal Analyte Qualification Summary*.

3) ***Table M2*** *Metal Analyte Qualification Summary*: This tabular report displays all of the analyte-level data validation issues checked (*Analyte Qualification Codes*). The table indicates the client sample name, the analyte that has been qualified, the qualification code, the lab result and its qualifier and units, the validated result and the validation qualifier and units. Explanations of the actions taken by the validator are explained in ***Table M3*** *Metal Analyte Qualification Comments*.

4) ***Table M3*** *Metal Analyte Qualification Comments:* This report contains an explanation of each problem and any qualification which was documented in ***Table M2*** *Metal Analyte Qualification Summary*.

5) ***Table M4*** *Validated Metal Results*: This report displays all the analytical and validated information in a one-sample per-page view. It includes the metal analyte list, analytical extraction level, dilution factor, method quantitation limits per analyte, the results for each analyte and the units of measure for each analyte.

**Narrative of Sample Delivery Group (SDG): 10020428**

On March 1, 2010 the results for four total water samples were contracted out to TerraBase, Inc. for data validation. The samples were analyzed by SPL-Lafayette for Arsenic, Lead, Nickel, Thallium, and Manganese. The laboratory utilized an ICP-MS according to SW-846 Method 6020A and 6010B for waters. The following quality control parameters were reported in the data package:

| QC for 6020A | QC for 6010B |
|---|---|
| • 2 method blank(s) | • 1 method blank(s) |
| • 1 matrix spike(s) | • 0 matrix spike(s) |
| • 1 matrix spike duplicate(s) | • 0 matrix spike duplicate(s) |
| • 0 lab duplicate(s) | • 0 lab duplicate(s) |
| • 1 linear dilution sample(s) | • 0 linear dilution sample(s) |
| • 1 post digestion spike(s) | • 0 post digestion spike(s) |
| • 1 post digestion spike duplicate(s) | • 0 post digestion spike duplicate(s) |
| • 2 laboratory control sample(s) | • 2 laboratory control sample(s) |
| • 0 laboratory control sample dup(s) | • 0 laboratory control sample dup(s) |

NOTES:

1. On March 1, 2010 the results for total and dissolved site water samples were received by TerraBase, Inc. Four of these samples were requested for full data validation by TerraBase, Inc. in order to meet the client's 10% validation criteria. Arsenic, lead, nickel, thallium, and manganese were analyzed by the laboratory as per the chain of custody.
2. The validator used all quality control samples available to provide the most complete and accurate data validation possible.
3. There were no times marked on the field duplicates for the validator to determine what samples they were duplicates of so, they were not used in the validation process.
4. Results for Lead, Manganese, Nickel and Thallium were acquired using SW-846 Method 6020 for ICPMS.
5. The result for arsenic on sample BA-09 was run by SW-846 Method 6010B for ICP.
6. The results for arsenic on samples BC-07, MW-03, and WW-09 were acquired using SW-846 Method 6020 for ICPMS.
7. Sample BC-07 was used for the MS/MSD as per the chain of custody. It had all required elements run by ICPMS.
8. There was low level blank contamination found for Manganese; however, all results were over 10 times the contamination level making no qualification necessary.
9. The Manganese and Nickel had low matrix spike recoveries; however, there were no problems with the post digestion matrix spike and post digestion matrix spike duplicate. Qualification was done accordingly.

10. Arsenic on BA-09 was run by ICP so, the MS/MSD from that analytical run was used even though it was not performed on this specific sample.
11. Lead and Thallium was run at a 5x dilution for sample BA-09 even though there were no hits for these compounds due to interferences found. For this reason, a higher detection limit had to be reported.
12. There was a CCV that had lead recoveries over the quality control limits; however, it did not affect any samples in this sample delivery group.

## M1 - Summary of Metal Data Validation Issues

Sorted by SDG Print Sequence Number

**Delatte Metals**
**10020428**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10020428**

| | ***Analyte Qualification*** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Client Sample** | AS | CO | HT | IC | CC | BC | MS | CQ |
| BA-09 | | | | | | | • | |
| BC-07 | | | | | | | • | |
| MW-03 | | | | | | | • | |
| WW-09 | | | | | | | • | |

**All samples were validated. A bullet (•) denotes sample qualification.**

***Analyte Qualification Codes:***

**AS** - Analytical sequence
**CO** - Comment
**HT** - Holding time
**IC** - Initial calibration
**CC** - Continuing calibration
**BC** - Blank contamination
**MS** - Matrix spike effects
**CQ** - Compound/parameter quantitation

## M2 - Metal Analyte Qualification Summary

As prepared by Integrate, Inc.

**Delatte Metals**
**10020428**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10020428**

| Client Sample | Analyte Name | AS | CO | HT | IC | CC | BC | MS | CQ | Lab Result | | Units | Validated Result | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BA-09** | | | | | | | | | | | | | | | |
| | Manganese | - | - | - | - | - | - | 21 | - | 3.41 | | mg/L | 3.41 | J | mg/L |
| | Nickel | - | - | - | - | - | - | 21 | - | 0.161 | | mg/L | 0.161 | J | mg/L |
| **BC-07** | | | | | | | | | | | | | | | |
| | Manganese | - | - | - | - | - | - | 21 | - | 0.0129 | | mg/L | 0.0129 | J | mg/L |
| | Nickel | - | - | - | - | - | - | 21 | - | 0.000783 | J | mg/L | 0.000783 | J | mg/L |
| **MW-03** | | | | | | | | | | | | | | | |
| | Manganese | - | - | - | - | - | - | 21 | - | 0.462 | | mg/L | 0.462 | J | mg/L |
| | Nickel | - | - | - | - | - | - | 21 | - | 0.00141 | J | mg/L | 0.00141 | J | mg/L |
| **WW-09** | | | | | | | | | | | | | | | |
| | Manganese | - | - | - | - | - | - | 21 | - | 0.0144 | | mg/L | 0.0144 | J | mg/L |
| | Nickel | - | - | - | - | - | - | 21 | - | 0.000678 | U | mg/L | 0.000678 | UJ | mg/L |

***Analyte Qualification Codes:***

**AS** - Analytical sequence
**CO** - Comment
**HT** - Holding time
**IC** - Initial calibration
**CC** - Continuing calibration
**BC** - Blank contamination
**MS** - Matrix spike effects
**CQ** - Compound/parameter quantitation

***Analyte Qualifiers:***

**U** - Non-detected
**J** - Estimated
**R** - Unusable
**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **10020428**

Qualification Category: **MS**

Qualification Code: **21**

Qualification Description: The recovery of the pre-digestion matrix spike for an analyte was low.

Qualification Action: The pre-digestion spike is prepared by adding a known amount of an analyte to the sample before the acid digestion. If the spike recovery is below acceptable limits, results in all samples for the affected analyte may be biased on the low side. The results reported are assumed to be the minimum possible value. All results are qualified as estimated (J) and estimated non-detected (UJ). If a spike recovery is less than 30%, non-detected results may be qualified as unusable (R).

## M4 - Validated Metal Results

**Delatte Metals**
**10020428**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10020428** |
| Lab Sample ID: | **10020428-02A** | Sampling Date/Time: | **02/08/2010 11:21** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units | |
|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 5 | 0.005 | 0.000687 U | mg/L | |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 3.41 J | mg/L | * |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.161 J | mg/L | * |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000735 U | mg/L | |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.0452 | mg/L | |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

***** - Modification by data validation

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **WW-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10020428** |
| Lab Sample ID: | **10020428-04A** | Sampling Date/Time: | **02/08/2010 12:25** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units | |
|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000381 J | mg/L | |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0144 J | mg/L | * |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 UJ | mg/L | * |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L | |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L | |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

***** - Modification by data validation

## M4 - Validated Metal Results

**Delatte Metals**
**10020428**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-07** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10020428** |
| Lab Sample ID: | **10020428-08A** | Sampling Date/Time: | **02/09/2010 8:19** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | | Units | |
|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000163 | J | mg/L | |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.00022 | J | mg/L | |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 | U | mg/L | |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0129 | J | mg/L | * |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000783 | J | mg/L | |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

***** - Modification by data validation

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **10020428** |
| Lab Sample ID: | **10020428-12A** | Sampling Date/Time: | **02/09/2010 10:06** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Validated Results | Units | |
|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.00508 | mg/L | |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.462 J | mg/L | * |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00141 J | mg/L | |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L | |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L | |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

***** - Modification by data validation

All Lab Level Results

# DELATTE METALS PROJECT

# DATA VALIDATION REPORT

## SDG: 10020428

*Prepared for:*

SEMS, Inc.
Baton Rouge, LA

TerraBase Project Number: 207-0006
March 2010

# E1 - Sample Identification Cross-Reference Table

Site Samples Sorted by Fraction

**Delatte Metals**
**0020428A**

Lab: **SPLLAF / SPL Labs - Lafayette** SDG ID: **0020428A**

| Fraction | Client Sample | Lab Sample | Sample Type | Matrix | Level | Sampling Date/Time |
|---|---|---|---|---|---|---|
| **Metals** | | | | | | |
| | BA-09A | 10020428-01A | Site Sample | Water | Low | 02/08/2010 10:53 |
| | BA-09 | 10020428-02A | Site Sample | Water | Low | 02/08/2010 11:21 |
| | MW-04 | 10020428-03A | Site Sample | Water | Low | 02/08/2010 11:51 |
| | WW-09 | 10020428-04A | Site Sample | Water | Low | 02/08/2010 12:25 |
| | WW-04 | 10020428-05A | Site Sample | Water | Low | 02/08/2010 14:20 |
| | (b) (6) WELL | 10020428-06A | Site Sample | Water | Low | 02/08/2010 14:30 |
| | BC-03 | 10020428-07A | Site Sample | Water | Low | 02/08/2010 15:09 |
| | BC-07 | 10020428-08A | Site Sample | Water | Low | 02/09/2010 8:19 |
| | DW-04 | 10020428-09A | Site Sample | Water | Low | 02/09/2010 8:48 |
| | BC-19 | 10020428-10A | Site Sample | Water | Low | 02/09/2010 9:11 |
| | BC-25 | 10020428-11A | Site Sample | Water | Low | 02/09/2010 9:43 |
| | MW-03 | 10020428-12A | Site Sample | Water | Low | 02/09/2010 10:06 |
| | MW-06 | 10020428-13A | Site Sample | Water | Low | 02/09/2010 11:01 |
| | BB-01 | 10020428-14A | Site Sample | Water | Low | 02/09/2010 11:50 |
| | SOUTH WELL | 10020428-15A | Site Sample | Water | Low | 02/09/2010 12:25 |
| | BC-17 | 10020428-16A | Site Sample | Water | Low | 02/09/2010 12:50 |
| | NORTH WELL | 10020428-17A | Site Sample | Water | Low | 02/09/2010 12:55 |
| | BC-21R | 10020428-18A | Site Sample | Water | Low | 02/09/2010 13:19 |
| | BA-01A | 10020428-19A | Site Sample | Water | Low | 02/09/2010 13:53 |
| | BA-01 | 10020428-20A | Site Sample | Water | Low | 02/09/2010 14:19 |
| | BA-01 | 10020428-20B | Dissolved TRG | Water | Low | 02/09/2010 14:19 |
| | DW-03 | 10020428-21A | Site Sample | Water | Low | 02/10/2010 9:53 |
| | PW-04 | 10020428-22A | Site Sample | Water | Low | 02/10/2010 10:28 |
| | DW-02 | 10020428-23A | Site Sample | Water | Low | 02/10/2010 11:40 |
| | BA-05A | 10020428-24A | Site Sample | Water | Low | 02/10/2010 12:03 |
| | BA-05 | 10020428-25A | Site Sample | Water | Low | 02/10/2010 12:38 |
| | MW-A | 10020428-26A | Site Sample | Water | Low | 02/10/2010 14:13 |
| | DW-01 | 10020428-27A | Site Sample | Water | Low | 02/10/2010 14:50 |
| | DW-01 | 10020428-27B | Dissolved TRG | Water | Low | 02/10/2010 14:50 |
| | BA-03A | 10020428-28A | Site Sample | Water | Low | 02/10/2010 15:26 |
| | BA-03 | 10020428-29A | Site Sample | Water | Low | 02/10/2010 15:57 |
| | MW-02 | 10020428-30A | Site Sample | Water | Low | 02/11/2010 10:20 |
| | MW-01 | 10020428-31A | Site Sample | Water | Low | 02/11/2010 10:53 |
| | DUPLICATE #1 | 10020428-32A | Field Duplicate | Water | Low | 02/09/2010 0:00 |
| | DUPLICATE #2 | 10020428-33A | Field Duplicate | Water | Low | 02/10/2010 0:00 |
| | DUPLICATE #3 | 10020428-34A | Field Duplicate | Water | Low | 02/10/2010 0:00 |
| | DUPLICATE #4 | 10020428-35A | Field Duplicate | Water | Low | 02/10/2010 0:00 |

## Metal Results

**Delatte Metals**
**0020428A**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-09A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-01A** | Sampling Date/Time: | **02/08/2010 10:53** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000504 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0234 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

## Metal Results

**Delatte Metals**
**0020428A**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-02A** | Sampling Date/Time: | **02/08/2010 11:21** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 5 | 0.005 | 0.000687 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000735 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.0452 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-03A** | Sampling Date/Time: | **02/08/2010 11:51** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000524 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0077 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **WW-09** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-04A** | Sampling Date/Time: | **02/08/2010 12:25** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000381 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0144 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **WW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-05A** | Sampling Date/Time: | **02/08/2010 14:20** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00297 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

## Metal Results

**Delatte Metals**
**0020428A**

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | (b) (6) [redacted] **WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-06A** | Sampling Date/Time: | **02/08/2010 14:30** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.00292 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0203 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

TerraBase®
integrate inc

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-07A** | Sampling Date/Time: | **02/08/2010 15:09** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000221 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00138 J | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00146 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-07** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-08A** | Sampling Date/Time: | **02/09/2010 8:19** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000163 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0129 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000783 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.00022 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-09A** | Sampling Date/Time: | **02/09/2010 8:48** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000534 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.000732 J | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-19** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-10A** | Sampling Date/Time: | **02/09/2010 9:11** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000185 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00119 J | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00104 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-25** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-11A** | Sampling Date/Time: | **02/09/2010 9:43** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000153 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00641 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-12A** | Sampling Date/Time: | **02/09/2010 10:06** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.00508 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.462 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00141 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-06** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-13A** | Sampling Date/Time: | **02/09/2010 11:01** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000493 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 2.25 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0191 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.00797 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BB-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-14A** | Sampling Date/Time: | **02/09/2010 11:50** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.00591 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00421 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00104 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00319 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **SOUTH WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-15A** | Sampling Date/Time: | **02/09/2010 12:25** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000213 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00364 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-17** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-16A** | Sampling Date/Time: | **02/09/2010 12:50** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.0209 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0709 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.00138 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **NORTH WELL** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-17A** | Sampling Date/Time: | **02/09/2010 12:55** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000732 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00324 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BC-21R** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-18A** | Sampling Date/Time: | **02/09/2010 13:19** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000162 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.00642 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000979 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-01A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-19A** | Sampling Date/Time: | **02/09/2010 13:53** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000339 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 0.0066 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.000678 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000237 J | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00417 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-20A** | Sampling Date/Time: | **02/09/2010 14:19** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000806 J | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.34 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.002 | 0.0465 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.0172 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Dissolved TRG** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-20B** | Sampling Date/Time: | **02/09/2010 14:19** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 1.59 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.009 | 0.0546 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.00829 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-21A** | Sampling Date/Time: | **02/10/2010 9:53** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.22 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.0018 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **PW-04** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-22A** | Sampling Date/Time: | **02/10/2010 10:28** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000655 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.00797 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-02** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-23A** | Sampling Date/Time: | **02/10/2010 11:40** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 5 | 0.005 | 0.046 | mg/L |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000735 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.0915 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-05A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-24A** | Sampling Date/Time: | **02/10/2010 12:03** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-05** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-25A** | Sampling Date/Time: | **02/10/2010 12:38** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-26A** | Sampling Date/Time: | **02/10/2010 14:13** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-27A** | Sampling Date/Time: | **02/10/2010 14:50** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.00357 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.0648 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DW-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Dissolved TRG** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-27B** | Sampling Date/Time: | **02/10/2010 14:50** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.00283 | mg/L |
| 7439-96-5 | Manganese | 6020 | 1 | 0.002 | 6.21 | mg/L |
| 7440-02-0 | Nickel | 6020 | 1 | 0.009 | 0.022 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.0029 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-03A** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-28A** | Sampling Date/Time: | **02/10/2010 15:26** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **BA-03** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-29A** | Sampling Date/Time: | **02/10/2010 15:57** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.146 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.015 J | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-02** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-30A** | Sampling Date/Time: | **02/11/2010 10:20** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.0015 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.00797 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **MW-01** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Site Sample** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-31A** | Sampling Date/Time: | **02/11/2010 10:53** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 5 | 0.005 | 0.00389 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 5 | 0.01 | 0.000735 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.0792 | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #1** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-32A** | Sampling Date/Time: | **02/09/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.0153 | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #2** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-33A** | Sampling Date/Time: | **02/10/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000508 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6010B | 1 | 0.02 | 0.00797 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #3** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-34A** | Sampling Date/Time: | **02/10/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000137 U | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

| | | | | | |
|---|---|---|---|---|---|
| Client Sample ID: | **DUPLICATE #4** | Matrix: | **Water** | Lab ID: | **SPLLAF** |
| Sample Type: | **Field Duplicate** | % Solids: | **100** | SDG ID: | **0020428A** |
| Lab Sample ID: | **10020428-35A** | Sampling Date/Time: | **02/10/2010 0:00** | SDG Page: | **0** |

| CAS Number | Analyte Name | Method | D/F | RL | Lab Result | Units |
|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 6020 | 1 | 0.001 | 0.000184 J | mg/L |
| 7440-28-0 | Thallium | 6020 | 1 | 0.002 | 0.000147 U | mg/L |
| 7440-38-2 | Arsenic | 6020 | 1 | 0.004 | 0.00145 U | mg/L |



**U** - Non-detected
**J** - Estimated
**R** - Unusable
**RL** - Reporting limit

**B** - (Lab qualifier) Analyte detected between the instrument detection limit (IDL) and the RL

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

## Case Narrative for:

# SEMS, INC.

## Certificate of Analysis Number:

## 10020428

| Report To: | | Project Name: | N-207-0006 |
|---|---|---|---|
| SEMS, INC. | | Site: | DELATTE METALS |
| JESSE HOPPES | | Site Address: | |
| 11628 S. CHOCTAW DRIVE | | | PONCHATOULA LA |
| | | PO Number: | |
| BATON ROUGE | | State: | Louisiana |
| LA | | State Cert. No.: | 02048 |
| 70815- | | | |
| ph: (225)924-2002 | fax: | Date Reported: | 2/23/2010 |

I. SAMPLE RECEIPT

A. All samples were received intact. The internal ice chest temperatures were measured upon receipt and recorded on the Sample Receipt Checklist included in this data package.

II. ANALYSIS

A. Holding Times: All analyses were completed within the recommended holding time.

B. Measurement Basis: "J" values may be presented for the analyses in this report. Programmatically, "J" values are those confirmed values for components detected less than the "Rep. Limit" but greater than the laboratory method detection limit (MDL). Thus, it should be noted that positive values may appear on quantitation reports but not on Form I if those values are below the MDL.

C. Analytical Exceptions:

Total Metals by method 6020: Laboratory batch 87095-Target analyte Manganese was detected in the method blank at a concentration below the laboratory reporting limits (0.000277J mg/L.) The concentrations detected in the method blank are below the laboratory reporting limit and are presumptive. The detected concentrations had no effect on the reported results. The sample selected for use in SPL's quality control program had Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries that were outside of the advisable quality control limits for Manganese and Nickel due to possible matrix interference. Other samples of like matrix collected from this site also may be affected. A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were within quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits. Laboratory batch 87906-Target analyte Manganese was detected in the method blank at a concentration below the laboratory reporting limits (0.000279J mg/L.) The concentrations detected in the method blank are below the laboratory reporting limit and are presumptive. The detected concentrations had no effect on the reported results. The sample selected for use in SPL's quality control program had Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries that were outside of the advisable quality control limits for Manganese and Nickel due to possible matrix interference. Other samples of like matrix collected from this site also may be affected. A Post Digestion Spike (PDS) and Post Digestion Spike Duplicate (PDSD) was performed and all recoveries were within quality control limits. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Dissolved Metals by method 6020: Laboratory batch 87103-Target analytes Manganese (0.0022J mg/L) and Nickel (0.00677 mg/L) were detected in the method blank at a concentration below the laboratory reporting limits. The concentrations detected in the method blank are below the laboratory reporting limit and are presumptive. The detected concentrations had no effect on the reported results.

III. QUALITY CONTROL

A. Analytical Protocol and Deliverables: The samples were analyzed in accordance with the protocol requirements.

B. Initial and Continuing Calibrations: All QA acceptance criteria were met for initial and continuing calibration samples.

C. Blanks: Method and calibration blanks met the method criteria except as otherwise noted.

Amy K. Jackson
Project Manager

2/23/2010
Date



Test results meet all requirements of NELAC, unless specified in the narrative.

**LAFAYETTE LABORATORY**
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Case Narrative for:**

# SEMS, INC.

**Certificate of Analysis Number:**

**10020428**

NOTE: This data package was produced using software base on CLP type deliverables. The forms and documentation in this data package are to be considered "CLP-like" and may not meet all the criteria specified in the CLP protocols. The data are reported based on the method requirements.

CERTIFICATION:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

Amy K. Jackson
Project Manager

2/23/2010
Date



Test results meet all requirements of NELAC, unless specified in the narrative.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# SEMS, INC.

## Certificate of Analysis Number:

## 10020428

**Report To:** SEMS, INC.
JESSE HOPPES
11628 S. CHOCTAW DRIVE

BATON ROUGE
LA
70815-
ph: (225) 924-2002 fax: (225) 924-2004

**Fax To:**

**Project Name:** N-207-0006
**Site:** DELATTE METALS
**Site Address:**
PONCHATOULA LA
**PO Number:**
**State:** Louisiana
**State Cert. No.:** 02048
**Date Reported:** 2/23/2010

| Client Sample ID | Lab Sample ID | Matrix | Date Collected | Date Received | COC ID | HOLD |
|---|---|---|---|---|---|---|
| BA-09A | 10020428-01 | Water | 2/8/2010 10:53:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-09 | 10020428-02 | Water | 2/8/2010 11:21:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| MW-04 | 10020428-03 | Water | 2/8/2010 11:51:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| WW-09 | 10020428-04 | Water | 2/8/2010 12:25:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| WW-04 | 10020428-05 | Water | 2/8/2010 2:20:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| (b) (6) [redacted] WELL | 10020428-06 | Water | 2/8/2010 2:30:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-03 | 10020428-07 | Water | 2/8/2010 3:09:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-07 | 10020428-08 | Water | 2/9/2010 8:19:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-07MS | 10020428-08MS | Water | 2/9/2010 8:19:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-07MSD | 10020428-08MSD | Water | 2/9/2010 8:19:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DW-04 | 10020428-09 | Water | 2/9/2010 8:48:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-19 | 10020428-10 | Water | 2/9/2010 9:11:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-25 | 10020428-11 | Water | 2/9/2010 9:43:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| MW-03 | 10020428-12 | Water | 2/9/2010 10:06:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| MW-06 | 10020428-13 | Water | 2/9/2010 11:01:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BB-01 | 10020428-14 | Water | 2/9/2010 11:50:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| SOUTH WELL | 10020428-15 | Water | 2/9/2010 12:25:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-17 | 10020428-16 | Water | 2/9/2010 12:50:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| NORTH WELL | 10020428-17 | Water | 2/9/2010 12:55:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BC-21R | 10020428-18 | Water | 2/9/2010 1:19:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-01A | 10020428-19 | Water | 2/9/2010 1:53:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-01AMS | 10020428-19MS | Water | 2/9/2010 1:53:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-01AMSD | 10020428-19MSD | Water | 2/9/2010 1:53:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-01 | 10020428-20 | Water | 2/9/2010 2:19:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |

Amy K. Jackson
ProjectManager

2/23/2010
Date

RonBenjamin
LaboratoryDirector

Tristan Davis
Quality Assurance Officer

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# SEMS, INC.

## Certificate of Analysis Number:

## 10020428

**Report To:** SEMS, INC.
JESSE HOPPES
11628 S. CHOCTAW DRIVE

BATON ROUGE
LA
70815-
ph: (225) 924-2002 fax: (225) 924-2004

**Fax To:**

**Project Name:** N-207-0006
**Site:** DELATTE METALS
**Site Address:**
PONCHATOULA LA
**PO Number:**
**State:** Louisiana
**State Cert. No.:** 02048
**Date Reported:** 2/23/2010

| Client Sample ID | Lab Sample ID | Matrix | Date Collected | Date Received | COC ID | HOLD |
|---|---|---|---|---|---|---|
| DW-03 | 10020428-21 | Water | 2/10/2010 9:53:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| PW-04 | 10020428-22 | Water | 2/10/2010 10:28:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DW-02 | 10020428-23 | Water | 2/10/2010 11:40:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-05A | 10020428-24 | Water | 2/10/2010 12:03:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-05 | 10020428-25 | Water | 2/10/2010 12:38:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| MW-A | 10020428-26 | Water | 2/10/2010 2:13:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DW-01 | 10020428-27 | Water | 2/10/2010 2:50:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-03A | 10020428-28 | Water | 2/10/2010 3:26:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| BA-03 | 10020428-29 | Water | 2/10/2010 3:57:00 PM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| MW-02 | 10020428-30 | Water | 2/11/2010 10:20:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| MW-01 | 10020428-31 | Water | 2/11/2010 10:53:00 AM | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DUPLICATE #1 | 10020428-32 | Water | 2/9/2010 | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DUPLICATE #2 | 10020428-33 | Water | 2/10/2010 | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DUPLICATE #3 | 10020428-34 | Water | 2/10/2010 | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |
| DUPLICATE #4 | 10020428-35 | Water | 2/10/2010 | 2/11/2010 5:20:00 PM | ,302977,302965, | ☐ |

Amy K. Jackson
ProjectManager

2/23/2010
Date

RonBenjamin
LaboratoryDirector

Tristan Davis
Quality Assurance Officer



2/23/2010 9:19:28 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-09A **Collected:** 02/08/2010 10:53 **SPL Sample ID:** 10020428-01

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 17:47 | RJD | 3457642 |
| Lead | 0.000504 | J | 0.000137 | 0.001 | 1 | 02/15/10 17:47 | RJD | 3457642 |
| Manganese | 0.0234 | | 9.14E-05 | 0.002 | 1 | 02/15/10 17:47 | RJD | 3457642 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 17:47 | RJD | 3457642 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 17:47 | RJD | 3457642 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-09 **Collected:** 02/08/2010 11:21 **SPL Sample ID:** 10020428-02

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | ND | | 0.000687 | 0.005 | 5 | 02/16/10 12:22 | RJD | 3458574 |
| Manganese | 3.41 | | 9.14E-05 | 0.002 | 1 | 02/15/10 17:50 | RJD | 3457643 |
| Nickel | 0.161 | | 0.000678 | 0.002 | 1 | 02/15/10 17:50 | RJD | 3457643 |
| Thallium | ND | | 0.000735 | 0.01 | 5 | 02/16/10 12:22 | RJD | 3458574 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0452 | | 0.00797 | 0.02 | 1 | 02/19/10 20:32 | SVW | 3464457 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** MW-04 **Collected:** 02/08/2010 11:51 **SPL Sample ID:** 10020428-03

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 17:53 | RJD | 3457644 |
| Lead | 0.000524 | J | 0.000137 | 0.001 | 1 | 02/15/10 17:53 | RJD | 3457644 |
| Manganese | 0.0077 | | 9.14E-05 | 0.002 | 1 | 02/15/10 17:53 | RJD | 3457644 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 17:53 | RJD | 3457644 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 17:53 | RJD | 3457644 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** WW-09 **Collected:** 02/08/2010 12:25 **SPL Sample ID:** 10020428-04

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 17:55 | RJD | 3457645 |
| Lead | 0.000381 | J | 0.000137 | 0.001 | 1 | 02/15/10 17:55 | RJD | 3457645 |
| Manganese | 0.0144 | | 9.14E-05 | 0.002 | 1 | 02/15/10 17:55 | RJD | 3457645 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 17:55 | RJD | 3457645 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 17:55 | RJD | 3457645 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count



2/23/2010 9:19:42 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** WW-04 **Collected:** 02/08/2010 14:20 **SPL Sample ID:** 10020428-05

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 17:58 | RJD | 3457646 |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/15/10 17:58 | RJD | 3457646 |
| Manganese | 0.00297 | | 9.14E-05 | 0.002 | 1 | 02/15/10 17:58 | RJD | 3457646 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 17:58 | RJD | 3457646 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 17:58 | RJD | 3457646 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** (b) (6) WELL **Collected:** 02/08/2010 14:30 **SPL Sample ID:** 10020428-06

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:01 | RJD | 3457647 |
| Lead | 0.00292 | | 0.000137 | 0.001 | 1 | 02/15/10 18:01 | RJD | 3457647 |
| Manganese | 0.0203 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:01 | RJD | 3457647 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 18:01 | RJD | 3457647 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:01 | RJD | 3457647 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BC-03 **Collected:** 02/08/2010 15:09 **SPL Sample ID:** 10020428-07

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:03 | RJD | 3457648 |
| Lead | 0.000221 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:03 | RJD | 3457648 |
| Manganese | 0.00138 | J | 9.14E-05 | 0.002 | 1 | 02/15/10 18:03 | RJD | 3457648 |
| Nickel | 0.00146 | J | 0.000678 | 0.002 | 1 | 02/15/10 18:03 | RJD | 3457648 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:03 | RJD | 3457648 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BC-07 **Collected:** 02/09/2010 8:19 **SPL Sample ID:** 10020428-08

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 17:26 | RJD | 3457634 |
| Lead | 0.000163 | J | 0.000137 | 0.001 | 1 | 02/15/10 17:26 | RJD | 3457634 |
| Manganese | 0.0129 | | 9.14E-05 | 0.002 | 1 | 02/15/10 17:26 | RJD | 3457634 |
| Nickel | 0.000783 | J | 0.000678 | 0.002 | 1 | 02/15/10 17:26 | RJD | 3457634 |
| Thallium | 0.00022 | J | 0.000147 | 0.002 | 1 | 02/15/10 17:26 | RJD | 3457634 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DW-04 **Collected:** 02/09/2010 8:48 **SPL Sample ID:** 10020428-09

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:06 | RJD | 3457649 |
| Lead | 0.000534 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:06 | RJD | 3457649 |
| Manganese | 0.000732 | J | 9.14E-05 | 0.002 | 1 | 02/15/10 18:06 | RJD | 3457649 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 18:06 | RJD | 3457649 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:06 | RJD | 3457649 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BC-19 **Collected:** 02/09/2010 9:11 **SPL Sample ID:** 10020428-10

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:09 | RJD | 3457650 |
| Lead | 0.000185 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:09 | RJD | 3457650 |
| Manganese | 0.00119 | J | 9.14E-05 | 0.002 | 1 | 02/15/10 18:09 | RJD | 3457650 |
| Nickel | 0.00104 | J | 0.000678 | 0.002 | 1 | 02/15/10 18:09 | RJD | 3457650 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:09 | RJD | 3457650 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BC-25 **Collected:** 02/09/2010 9:43 **SPL Sample ID:** 10020428-11

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:12 | RJD | 3457651 |
| Lead | 0.000153 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:12 | RJD | 3457651 |
| Manganese | 0.00641 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:12 | RJD | 3457651 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 18:12 | RJD | 3457651 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:12 | RJD | 3457651 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** MW-03 **Collected:** 02/09/2010 10:06 **SPL Sample ID:** 10020428-12

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:20 | RJD | 3457654 |
| Lead | 0.00508 | | 0.000137 | 0.001 | 1 | 02/15/10 18:20 | RJD | 3457654 |
| Manganese | 0.462 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:20 | RJD | 3457654 |
| Nickel | 0.00141 | J | 0.000678 | 0.002 | 1 | 02/15/10 18:20 | RJD | 3457654 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:20 | RJD | 3457654 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** MW-06 **Collected:** 02/09/2010 11:01 **SPL Sample ID:** 10020428-13

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.000493 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:22 | RJD | 3457655 |
| Manganese | 2.25 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:22 | RJD | 3457655 |
| Nickel | 0.0191 | | 0.000678 | 0.002 | 1 | 02/15/10 18:22 | RJD | 3457655 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:22 | RJD | 3457655 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | **MCL** | | **SW6010B Units: mg/L** | | |
| Arsenic | ND | | 0.00797 | 0.02 | 1 | 02/19/10 20:22 | SVW | 3464455 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BB-01 **Collected:** 02/09/2010 11:50 **SPL Sample ID:** 10020428-14

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | 0.00319 | J | 0.00145 | 0.004 | 1 | 02/15/10 18:25 | RJD | 3457656 |
| Lead | 0.00591 | | 0.000137 | 0.001 | 1 | 02/15/10 18:25 | RJD | 3457656 |
| Manganese | 0.00421 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:25 | RJD | 3457656 |
| Nickel | 0.00104 | J | 0.000678 | 0.002 | 1 | 02/15/10 18:25 | RJD | 3457656 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:25 | RJD | 3457656 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** SOUTH WELL **Collected:** 02/09/2010 12:25 **SPL Sample ID:** 10020428-15

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:28 | RJD | 3457657 |
| Lead | 0.000213 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:28 | RJD | 3457657 |
| Manganese | 0.00364 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:28 | RJD | 3457657 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 18:28 | RJD | 3457657 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:28 | RJD | 3457657 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BC-17 **Collected:** 02/09/2010 12:50 **SPL Sample ID:** 10020428-16

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:30 | RJD | 3457658 |
| Lead | 0.0209 | | 0.000137 | 0.001 | 1 | 02/15/10 18:30 | RJD | 3457658 |
| Manganese | 0.0709 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:30 | RJD | 3457658 |
| Nickel | 0.00138 | J | 0.000678 | 0.002 | 1 | 02/15/10 18:30 | RJD | 3457658 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:30 | RJD | 3457658 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** NORTH WELL **Collected:** 02/09/2010 12:55 **SPL Sample ID:** 10020428-17

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:33 | RJD | 3457659 |
| Lead | 0.000732 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:33 | RJD | 3457659 |
| Manganese | 0.00324 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:33 | RJD | 3457659 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 18:33 | RJD | 3457659 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:33 | RJD | 3457659 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BC-21R **Collected:** 02/09/2010 13:19 **SPL Sample ID:** 10020428-18

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/15/10 18:36 | RJD | 3457660 |
| Lead | 0.000162 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:36 | RJD | 3457660 |
| Manganese | 0.00642 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:36 | RJD | 3457660 |
| Nickel | 0.000979 | J | 0.000678 | 0.002 | 1 | 02/15/10 18:36 | RJD | 3457660 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:36 | RJD | 3457660 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-01A **Collected:** 02/09/2010 13:53 **SPL Sample ID:** 10020428-19

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | 0.00417 | | 0.00145 | 0.004 | 1 | 02/15/10 19:00 | RJD | 3457668 |
| Lead | 0.000339 | J | 0.000137 | 0.001 | 1 | 02/15/10 19:00 | RJD | 3457668 |
| Manganese | 0.0066 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:00 | RJD | 3457668 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 19:00 | RJD | 3457668 |
| Thallium | 0.000237 | J | 0.000147 | 0.002 | 1 | 02/15/10 19:00 | RJD | 3457668 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-01 **Collected:** 02/09/2010 14:19 **SPL Sample ID:** 10020428-20

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP/MS** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/16/10 10:39 | RJD | 3458555 |
| Manganese | 1.59 | | 9.14E-05 | 0.002 | 1 | 02/16/10 10:39 | RJD | 3458555 |
| Nickel | 0.0546 | | 0.000678 | 0.009 | 1 | 02/16/10 10:39 | RJD | 3458555 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 10:39 | RJD | 3458555 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005 | 02/12/2010 14:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY METHOD 6010B** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.00829 | J | 0.00797 | 0.02 | 1 | 02/19/10 23:07 | SVW | 3464484 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005 | 02/12/2010 14:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | 0.000806 | J | 0.000137 | 0.001 | 1 | 02/15/10 18:38 | RJD | 3457661 |
| Manganese | 1.34 | | 9.14E-05 | 0.002 | 1 | 02/15/10 18:38 | RJD | 3457661 |
| Nickel | 0.0465 | | 0.000678 | 0.002 | 1 | 02/15/10 18:38 | RJD | 3457661 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/15/10 18:38 | RJD | 3457661 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0172 | J | 0.00797 | 0.02 | 1 | 02/19/10 20:27 | SVW | 3464456 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DW-03 **Collected:** 02/10/2010 9:53 **SPL Sample ID:** 10020428-21

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | 0.0018 | J | 0.00145 | 0.004 | 1 | 02/16/10 12:37 | RJD | 3458577 |
| Lead | 0.22 | | 0.000137 | 0.001 | 1 | 02/16/10 12:37 | RJD | 3458577 |
| Manganese | 0.284 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:21 | RJD | 3457676 |
| Nickel | 0.0145 | | 0.000678 | 0.002 | 1 | 02/15/10 19:21 | RJD | 3457676 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 12:37 | RJD | 3458577 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count



2/23/2010 9:19:54 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** PW-04 **Collected:** 02/10/2010 10:28 **SPL Sample ID:** 10020428-22

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.000655 | J | 0.000137 | 0.001 | 1 | 02/16/10 12:40 | RJD | 3458578 |
| Manganese | 1.5 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:24 | RJD | 3457677 |
| Nickel | 0.0358 | | 0.000678 | 0.002 | 1 | 02/15/10 19:24 | RJD | 3457677 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 12:40 | RJD | 3458578 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | **MCL** | | **SW6010B Units: mg/L** | | |
| Arsenic | ND | | 0.00797 | 0.02 | 1 | 02/19/10 21:57 | SVW | 3464472 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DW-02 **Collected:** 02/10/2010 11:40 **SPL Sample ID:** 10020428-23

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | 0.046 | | 0.000687 | 0.005 | 5 | 02/16/10 12:53 | RJD | 3458582 |
| Manganese | 9.15 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:27 | RJD | 3457678 |
| Nickel | 0.388 | | 0.000678 | 0.002 | 1 | 02/15/10 19:27 | RJD | 3457678 |
| Thallium | ND | | 0.000735 | 0.01 | 5 | 02/16/10 12:53 | RJD | 3458582 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0915 | | 0.00797 | 0.02 | 1 | 02/19/10 22:02 | SVW | 3464473 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-05A **Collected:** 02/10/2010 12:03 **SPL Sample ID:** 10020428-24

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 12:58 | RJD | 3458584 |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/16/10 12:58 | RJD | 3458584 |
| Manganese | 0.012 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:29 | RJD | 3457679 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 19:29 | RJD | 3457679 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 12:58 | RJD | 3458584 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-05 **Collected:** 02/10/2010 12:38 **SPL Sample ID:** 10020428-25

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 13:01 | RJD | 3458585 |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/16/10 13:01 | RJD | 3458585 |
| Manganese | 15.4 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:32 | RJD | 3457680 |
| Nickel | 0.058 | | 0.000678 | 0.002 | 1 | 02/15/10 19:32 | RJD | 3457680 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:01 | RJD | 3458585 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** MW-A **Collected:** 02/10/2010 14:13 **SPL Sample ID:** 10020428-26

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 13:04 | RJD | 3458586 |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/16/10 13:04 | RJD | 3458586 |
| Manganese | 0.00402 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:35 | RJD | 3457681 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 19:35 | RJD | 3457681 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:04 | RJD | 3458586 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count



2/23/2010 9:19:57 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DW-01 **Collected:** 02/10/2010 14:50 **SPL Sample ID:** 10020428-27

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP/MS** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Arsenic | 0.0029 | J | 0.00145 | 0.004 | 1 | 02/16/10 11:11 | RJD | 3458564 |
| Lead | 0.00283 | | 0.000137 | 0.001 | 1 | 02/16/10 11:11 | RJD | 3458564 |
| Manganese | 6.21 | | 9.14E-05 | 0.002 | 1 | 02/16/10 11:11 | RJD | 3458564 |
| Nickel | 0.022 | | 0.000678 | 0.009 | 1 | 02/16/10 11:11 | RJD | 3458564 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 11:11 | RJD | 3458564 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3005 | 02/12/2010 14:00 | SA | 1.00 |

| METALS BY METHOD 6020 (ICP/MS), TOTAL | | | | | MCL | SW6020 Units: mg/L | | |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0648 | | 0.00145 | 0.004 | 1 | 02/16/10 13:06 | RJD | 3458587 |
| Lead | 0.00357 | | 0.000137 | 0.001 | 1 | 02/16/10 13:06 | RJD | 3458587 |
| Manganese | 5.19 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:37 | RJD | 3457682 |
| Nickel | 0.0187 | | 0.000678 | 0.002 | 1 | 02/15/10 19:37 | RJD | 3457682 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:06 | RJD | 3458587 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-03A **Collected:** 02/10/2010 15:26 **SPL Sample ID:** 10020428-28

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 13:09 | RJD | 3458588 |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/16/10 13:09 | RJD | 3458588 |
| Manganese | 0.0238 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:40 | RJD | 3457683 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 19:40 | RJD | 3457683 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:09 | RJD | 3458588 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count



2/23/2010 9:19:59 AM

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** BA-03 **Collected:** 02/10/2010 15:57 **SPL Sample ID:** 10020428-29

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | 0.146 | | 0.000137 | 0.001 | 1 | 02/16/10 13:12 | RJD | 3458589 |
| Manganese | 2.2 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:43 | RJD | 3457684 |
| Nickel | 0.0898 | | 0.000678 | 0.002 | 1 | 02/15/10 19:43 | RJD | 3457684 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:12 | RJD | 3458589 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.015 | J | 0.00797 | 0.02 | 1 | 02/19/10 22:07 | SVW | 3464474 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** MW-02 **Collected:** 02/11/2010 10:20 **SPL Sample ID:** 10020428-30

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Lead | 0.0015 | | 0.000137 | 0.001 | 1 | 02/16/10 13:17 | RJD | 3458591 |
| Manganese | 0.728 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:45 | RJD | 3457685 |
| Nickel | 0.0775 | | 0.000678 | 0.002 | 1 | 02/15/10 19:45 | RJD | 3457685 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:17 | RJD | 3458591 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | **MCL** | | **SW6010B Units: mg/L** | | |
| Arsenic | ND | | 0.00797 | 0.02 | 1 | 02/19/10 22:12 | SVW | 3464475 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** MW-01 **Collected:** 02/11/2010 10:53 **SPL Sample ID:** 10020428-31

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | 0.00389 | J | 0.000687 | 0.005 | 5 | 02/16/10 13:31 | RJD | 3458595 |
| Manganese | 3.57 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:54 | RJD | 3457688 |
| Nickel | 0.15 | | 0.000678 | 0.002 | 1 | 02/15/10 19:54 | RJD | 3457688 |
| Thallium | ND | | 0.000735 | 0.01 | 5 | 02/16/10 13:31 | RJD | 3458595 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | 0.0792 | | 0.00797 | 0.02 | 1 | 02/19/10 22:17 | SVW | 3464476 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DUPLICATE #1 **Collected:** 02/09/2010 0:00 **SPL Sample ID:** 10020428-32

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | **SW6020 Units: mg/L** | | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 13:36 | RJD | 3458597 |
| Lead | 0.0153 | | 0.000137 | 0.001 | 1 | 02/16/10 13:36 | RJD | 3458597 |
| Manganese | 0.0762 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:56 | RJD | 3457689 |
| Nickel | 0.00139 | J | 0.000678 | 0.002 | 1 | 02/15/10 19:56 | RJD | 3457689 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:36 | RJD | 3458597 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DUPLICATE #2 **Collected:** 02/10/2010 0:00 **SPL Sample ID:** 10020428-33

**Site: DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | | **MCL** | **SW6020 Units: mg/L** | | |
| Lead | 0.000508 | J | 0.000137 | 0.001 | 1 | 02/16/10 13:39 | RJD | 3458598 |
| Manganese | 1.43 | | 9.14E-05 | 0.002 | 1 | 02/15/10 19:59 | RJD | 3457690 |
| Nickel | 0.0326 | | 0.000678 | 0.002 | 1 | 02/15/10 19:59 | RJD | 3457690 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:39 | RJD | 3458598 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TOTAL METALS BY METHOD 6010B - WATER** | | | | | **MCL** | **SW6010B Units: mg/L** | | |
| Arsenic | ND | | 0.00797 | 0.02 | 1 | 02/19/10 22:23 | SVW | 3464477 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DUPLICATE #3 **Collected:** 02/10/2010 0:00 **SPL Sample ID:** 10020428-34

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 13:41 | RJD | 3458599 |
| Lead | ND | | 0.000137 | 0.001 | 1 | 02/16/10 13:41 | RJD | 3458599 |
| Manganese | 0.00171 | J | 9.14E-05 | 0.002 | 1 | 02/15/10 20:02 | RJD | 3457691 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 20:02 | RJD | 3457691 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:41 | RJD | 3458599 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

**Client Sample ID:** DUPLICATE #4 **Collected:** 02/10/2010 0:00 **SPL Sample ID:** 10020428-35

**Site:** **DELATTE METALS**

| Analyses/Method | Result | QUAL | MDL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|---|---|---|---|---|---|---|---|---|
| **METALS BY METHOD 6020 (ICP/MS), TOTAL** | | | | **MCL** | | **SW6020 Units: mg/L** | | |
| Arsenic | ND | | 0.00145 | 0.004 | 1 | 02/16/10 13:44 | RJD | 3458600 |
| Lead | 0.000184 | J | 0.000137 | 0.001 | 1 | 02/16/10 13:44 | RJD | 3458600 |
| Manganese | 0.0259 | | 9.14E-05 | 0.002 | 1 | 02/15/10 20:04 | RJD | 3457692 |
| Nickel | ND | | 0.000678 | 0.002 | 1 | 02/15/10 20:04 | RJD | 3457692 |
| Thallium | ND | | 0.000147 | 0.002 | 1 | 02/16/10 13:44 | RJD | 3458600 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|---|---|---|---|
| SW3010A | 02/12/2010 17:00 | SA | 1.00 |

**Qualifiers:**

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

# *Quality Control Documentation*

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Metals by Method 6020 (ICP/MS), Total
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87095

### Method Blank

RunID: ICPDV_100219D-3464445 Units: mg/L
Analysis Date: 02/19/2010 19:32 Analyst: SVW
PreparationDate: 02/12/2010 17:00 Prep By: SA Method SW3010A

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10020428-02A | BA-09 |
| 10020428-13A | MW-06 |
| 10020428-20A | BA-01 |

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.02 | 0.00797 |

### Laboratory Control Sample (LCS)

RunID: ICPDV_100219D-3464446 Units: mg/L
Analysis Date: 02/19/2010 19:37 Analyst: SVW
PreparationDate: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1144 | 114.4 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10020428-08
RunID: ICPDV_100219D-3464449 Units: mg/L
Analysis Date: 02/19/2010 19:52 Analyst: SVW
Preparation Date: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.1176 | 117.6 | | 0.1 | 0.1121 | 112.1 | | 4.821 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Metals by Method 6020 (ICP/MS), Total
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87095-I

### Method Blank

RunID: ICPMS_100215A-3457632 Units: mg/L
Analysis Date: 02/15/2010 17:21 Analyst: RJD
Preparation Date: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.004 | 0.00145 |
| Lead | ND | | 0.001 | 0.000137 |
| Manganese | 0.000277 | J | 0.002 | 0.0000914 |
| Nickel | ND | | 0.002 | 0.000678 |
| Thallium | ND | | 0.002 | 0.000147 |

### Samples in Analytical Batch:

| Lab Sample ID | Client Sample ID |
|---|---|
| 10020428-01A | BA-09A |
| 10020428-02A | BA-09 |
| 10020428-03A | MW-04 |
| 10020428-04A | WW-09 |
| 10020428-05A | WW-04 |
| 10020428-06A | (b) (6) WELL |
| 10020428-07A | BC-03 |
| 10020428-08A | BC-07 |
| 10020428-09A | DW-04 |
| 10020428-10A | BC-19 |
| 10020428-11A | BC-25 |
| 10020428-12A | MW-03 |
| 10020428-13A | MW-06 |
| 10020428-14A | BB-01 |
| 10020428-15A | SOUTH WELL |
| 10020428-16A | BC-17 |
| 10020428-17A | NORTH WELL |
| 10020428-18A | BC-21R |
| 10020428-20A | BA-01 |

### Laboratory Control Sample (LCS)

RunID: ICPMS_100215A-3457633 Units: mg/L
Analysis Date: 02/15/2010 17:23 Analyst: RJD
Preparation Date: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.09557 | 95.57 | | 80 | 120 |
| Lead | 0.1000 | 0.1105 | 110.5 | | 80 | 120 |
| Manganese | 0.1000 | 0.09684 | 96.84 | | 80 | 120 |
| Nickel | 0.1000 | 0.09450 | 94.50 | | 80 | 120 |
| Thallium | 0.1000 | 0.1094 | 109.4 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Metals by Method 6020 (ICP/MS), Total
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87095-I

Sample Spiked: 10020428-08
RunID: ICPMS_100215A-3457636 Units: mg/L
Analysis Date: 02/15/2010 17:31 Analyst: RJD
Preparation Date: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.08697 | 86.97 | | 0.1 | 0.07762 | 77.62 | | 11.35 | | 20 | 75 | 125 |
| Lead | 0.0001632 | J | 0.1 | 0.09341 | 93.24 | | 0.1 | 0.08222 | 82.05 | | 12.74 | | 20 | 75 | 125 |
| Manganese | 0.01288 | B | 0.1 | 0.09721 | 84.33 | | 0.1 | 0.08531 | 72.43 | * | 13.04 | | 20 | 75 | 125 |
| Nickel | 0.0007827 | J | 0.1 | 0.07987 | 79.08 | | 0.1 | 0.07132 | 70.54 | * | 11.30 | | 20 | 75 | 125 |
| Thallium | 0.0002199 | J | 0.1 | 0.09135 | 91.13 | | 0.1 | 0.08192 | 81.70 | | 10.88 | | 20 | 75 | 125 |

**Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)**

Sample Spiked: 10020428-08
RunID: ICPMS_100215A-3457638 Units: mg/L
Analysis Date: 02/15/2010 17:37 Analyst: RJD

| Analyte | Sample Result | PDS Spike Added | PDS Result | PDS % Recovery | PDSD Spike Added | PDSD Result | PDSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 0.0129 | 0.5 | 0.4511 | 87.65 | 0.5 | 0.4831 | 94.04 | 6.840 | 20 | 75 | 125 |
| Nickel | 0.000783 | 0.5 | 0.4317 | 86.19 | 0.5 | 0.4585 | 91.54 | 6.013 | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Metals by Method 6020 (ICP/MS), Total
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87096

### Method Blank

RunID: ICPDV_100219D-3464462 Units: mg/L
Analysis Date: 02/19/2010 21:07 Analyst: SVW
PreparationDate: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.02 | 0.00797 |

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10020428-22A | PW-04 |
| 10020428-23A | DW-02 |
| 10020428-29A | BA-03 |
| 10020428-30A | MW-02 |
| 10020428-31A | MW-01 |
| 10020428-33A | DUPLICATE #2 |

### Laboratory Control Sample (LCS)

RunID: ICPDV_100219D-3464463 Units: mg/L
Analysis Date: 02/19/2010 21:12 Analyst: SVW
PreparationDate: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1170 | 117.0 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10020428-19
RunID: ICPDV_100219D-3464466 Units: mg/L
Analysis Date: 02/19/2010 21:27 Analyst: SVW
Preparation Date: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.01395 | J | 0.1 | 0.1239 | 109.9 | | 0.1 | 0.1151 | 101.2 | | 7.306 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Metals by Method 6020 (ICP/MS), Total
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87096-I

### Method Blank

RunID: ICPMS_100215A-3457666 Units: mg/L
Analysis Date: 02/15/2010 18:55 Analyst: RJD
PreparationDate: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.004 | 0.00145 |
| Lead | ND | | 0.001 | 0.000137 |
| Manganese | 0.000279 | J | 0.002 | 0.0000914 |
| Nickel | ND | | 0.002 | 0.000678 |
| Thallium | ND | | 0.002 | 0.000147 |

### Samples in Analytical Batch:

| Lab Sample ID | Client Sample ID |
|---|---|
| 10020428-19A | BA-01A |
| 10020428-21A | DW-03 |
| 10020428-22A | PW-04 |
| 10020428-23A | DW-02 |
| 10020428-24A | BA-05A |
| 10020428-25A | BA-05 |
| 10020428-26A | MW-A |
| 10020428-27A | DW-01 |
| 10020428-28A | BA-03A |
| 10020428-29A | BA-03 |
| 10020428-30A | MW-02 |
| 10020428-31A | MW-01 |
| 10020428-32A | DUPLICATE #1 |
| 10020428-33A | DUPLICATE #2 |
| 10020428-34A | DUPLICATE #3 |
| 10020428-35A | DUPLICATE #4 |

### Laboratory Control Sample (LCS)

RunID: ICPMS_100215A-3457667 Units: mg/L
Analysis Date: 02/15/2010 18:57 Analyst: RJD
PreparationDate: 02/12/2010 17:00 Prep By: SA Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.09538 | 95.38 | | 80 | 120 |
| Lead | 0.1000 | 0.1110 | 111.0 | | 80 | 120 |
| Manganese | 0.1000 | 0.09043 | 90.43 | | 80 | 120 |
| Nickel | 0.1000 | 0.08917 | 89.17 | | 80 | 120 |
| Thallium | 0.1000 | 0.1114 | 111.4 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10020428-19
RunID: ICPMS_100215A-3457670 Units: mg/L
Analysis Date: 02/15/2010 19:05 Analyst: RJD
Preparation Date: 02/12/2010 17:00 Prep By: SA Method SW3010A

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** **Metals by Method 6020 (ICP/MS), Total** **WorkOrder:** **10020428**
**Method:** **SW6020** **Lab Batch ID:** **87096-I**

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.004168 | | 0.1 | 0.08991 | 85.74 | | 0.1 | 0.08652 | 82.35 | | 3.849 | | 20 | 75 | 125 |
| Lead | 0.0003388 | J | 0.1 | 0.09556 | 95.22 | | 0.1 | 0.09022 | 89.88 | | 5.752 | | 20 | 75 | 125 |
| Manganese | 0.006595 | B | 0.1 | 0.08318 | 76.58 | | 0.1 | 0.08147 | 74.88 | * | 2.073 | | 20 | 75 | 125 |
| Nickel | ND | | 0.1 | 0.07623 | 76.23 | | 0.1 | 0.07348 | 73.48 | * | 3.662 | | 20 | 75 | 125 |
| Thallium | 0.0002367 | J | 0.1 | 0.09355 | 93.32 | | 0.1 | 0.08961 | 89.38 | | 4.304 | | 20 | 75 | 125 |

**Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)**

SampleSpiked: 10020428-19
RunID: ICPMS_100215A-3457672 Units: mg/L
Analysis Date: 02/15/2010 19:11 Analyst: RJD

| Analyte | Sample Result | PDS Spike Added | PDS Result | PDS % Recovery | PDSD Spike Added | PDSD Result | PDSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 0.0066 | 0.5 | 0.4767 | 94.02 | 0.5 | 0.4784 | 94.36 | 0.3517 | 20 | 75 | 125 |
| Nickel | ND | 0.5 | 0.4642 | 92.84 | 0.5 | 0.4719 | 94.39 | 1.652 | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Dissolved Metals by ICP/MS
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87103

### Method Blank

RunID: ICPDV_100219D-3464482 Units: mg/L
Analysis Date: 02/19/2010 22:58 Analyst: SVW
Preparation Date: 02/12/2010 14:00 Prep By: SA Method SW3005

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10020428-20B | BA-01 |

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.02 | 0.00797 |

### Laboratory Control Sample (LCS)

RunID: ICPDV_100219D-3464483 Units: mg/L
Analysis Date: 02/19/2010 23:03 Analyst: SVW
Preparation Date: 02/12/2010 14:00 Prep By: SA Method SW3005

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.1095 | 109.5 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10020428-20
RunID: ICPDV_100219D-3464486 Units: mg/L
Analysis Date: 02/19/2010 23:18 Analyst: SVW
Preparation Date: 02/12/2010 14:00 Prep By: SA Method SW3005

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.008288 | J | 0.1 | 0.1158 | 107.5 | | 0.1 | 0.1222 | 113.9 | | 5.344 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Dissolved Metals by ICP/MS
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87103-I

### Method Blank

RunID: ICPMS_100216A-3458553 Units: mg/L
Analysis Date: 02/16/2010 10:33 Analyst: RJD
PreparationDate: 02/12/2010 14:00 Prep By: SA Method SW3005

**Samples in Analytical Batch:**

| Lab Sample ID | Client Sample ID |
|---|---|
| 10020428-20B | BA-01 |
| 10020428-27B | DW-01 |

| Analyte | Result | Qual | Rep Limit | MDL |
|---|---|---|---|---|
| Arsenic | ND | | 0.004 | 0.00145 |
| Lead | ND | | 0.001 | 0.000137 |
| Manganese | 0.00022 | J | 0.002 | 0.0000914 |
| Nickel | 0.00877 | | 0.009 | 0.000678 |
| Thallium | ND | | 0.002 | 0.000147 |

### Laboratory Control Sample (LCS)

RunID: ICPMS_100216A-3458554 Units: mg/L
Analysis Date: 02/16/2010 10:35 Analyst: RJD
PreparationDate: 02/12/2010 14:00 Prep By: SA Method SW3005

| Analyte | Spike Added | Result | Percent Recovery | Qual | Lower Limit | Upper Limit |
|---|---|---|---|---|---|---|
| Arsenic | 0.1000 | 0.09143 | 91.43 | | 80 | 120 |
| Lead | 0.1000 | 0.09884 | 98.84 | | 80 | 120 |
| Manganese | 0.1000 | 0.1016 | 101.6 | | 80 | 120 |
| Nickel | 0.1000 | 0.09937 | 99.37 | | 80 | 120 |
| Thallium | 0.1000 | 0.09885 | 98.85 | | 80 | 120 |

### Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 10020428-20
RunID: ICPMS_100216A-3458557 Units: mg/L
Analysis Date: 02/16/2010 10:45 Analyst: RJD
Preparation Date: 02/12/2010 14:00 Prep By: SA Method SW3005

| Analyte | Sample Result | Smp Qual | MS Spike Added | MS Result | MS % Rcvry | MS Qual | MSD Spike Added | MSD Result | MSD % Rcvry | MSD Qual | RPD | RPD Qual | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 0.1 | 0.05396 | 53.96 | * | 0.1 | 0.05466 | 54.66 | * | 1.278 | | 20 | 75 | 125 |
| Lead | ND | | 0.1 | 0.08715 | 87.15 | | 0.1 | 0.09142 | 91.42 | | 4.783 | | 20 | 75 | 125 |
| Manganese | 1.587 | B | 0.1 | 1.634 | N/C | | 0.1 | 1.743 | N/C | | N/C | | 20 | 75 | 125 |
| Nickel | 0.05464 | B | 0.1 | 0.1314 | 76.73 | | 0.1 | 0.1374 | 82.72 | | 4.457 | | 20 | 75 | 125 |
| Thallium | ND | | 0.1 | 0.08616 | 86.16 | | 0.1 | 0.09094 | 90.94 | | 5.404 | | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

# Quality Control Report

## SEMS, INC.

**N-207-0006**

**Analysis:** Dissolved Metals by ICP/MS
**Method:** SW6020
**WorkOrder:** 10020428
**Lab Batch ID:** 87103-I

**Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)**

SampleSpiked: 10020428-20
RunID: ICPMS_100216A-3458559 Units: mg/L
Analysis Date: 02/16/2010 10:50 Analyst: RJD

| Analyte | Sample Result | PDS Spike Added | PDS Result | PDS % Recovery | PDSD Spike Added | PDSD Result | PDSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.5 | 0.4266 | 85.31 | 0.5 | 0.4495 | 89.91 | 5.242 | 20 | 75 | 125 |

**Qualifiers:**
ND/U - Not Detected at the Reporting Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B - Analyte Detected In The Associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.


2/23/2010 9:20:17 AM

# *Sample Receipt Checklist*
# *And*
# *Chain of Custody*

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337)237-4775

# Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Workorder: | 10020428 | Received By: | HJC |
| Date and Time Received: | 2/11/2010 5:20:00 PM | Carriername: | SPL-Driver-Other |
| Temperature: | 4°C | Chilled by: | Water Ice |

| | | | | |
|---|---|---|---|---|
| 1. | Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. | Custody seals intact on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. | Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. | Chain of custody present? | Yes ☑ | No ☐ | |
| 5. | Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 6. | Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 7. | Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 8. | Sample containers intact? | Yes ☑ | No ☐ | |
| 9. | Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 10. | All samples received within holding time? | Yes ☑ | No ☐ | |
| 11. | Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |
| 12. | Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | VOA Vials Not Present ☑ |
| 13. | Water - Preservation checked upon receipt (except VOA*)? | Yes ☑ | No ☐ | NotApplicable ☐ |

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 302978
10020428
page 1 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd, suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 504-342-2340

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals | Dissolved Metals | MS/MSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BA-09A | 2/8/10 | 1053 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BA-09 | 2/8/10 | 1121 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| MW-04 | 2/8/10 | 1151 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| WW-09 | 2/8/10 | 1225 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| WW-04 | 2/8/10 | 1420 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| [redacted] Well | 2/8/10 | 1430 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BC-03 | 2/8/10 | 1509 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BC-07 | 2/9/10 | 819 | | X | W | P | X | 2 | 3 | X | | X | | | | | | 3 |
| DW-04 | 2/9/10 | 848 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BC-19 | 2/9/10 | 911 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks: Run Arsenic, Thallium, Lead, Nickel, & Manganese

Laboratory remarks: CS on cooler, SPL Bottles (3x)

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 4.0

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☒ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☒ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

| | date | time | | date | time |
|---|---|---|---|---|---|
| 1. Relinquished by Sampler: | 2/11/10 | 1315 | 2. Received by: | | |
| 3. Relinquished by: | 2/11/10 | 1430 | 4. Received by: | | |
| 5. Relinquished by: | 2-11-10 | 1700 | 6. Received by Laboratory: | | |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 302977

page 2 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd, Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 504-342-2340

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals | Dissolved Metals (Field Filtered) | MS/MSD | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-25 | 2/9/10 | ~~0935~~ 943 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| MW-03 | 2/9/10 | 1006 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| MW-06 | 2/9/10 | 1101 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BB-01 | 2/9/10 | 1150 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| South Well | 2/9/10 | 1225 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BC-17 | 2/9/10 | 1250 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| North Well | 2/9/10 | 1255 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BC-21R | 2/9/10 | 1319 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BA-01A | 2/9/10 | 1353 | | X | W | P | X | 2 | 3 | X | | X | | | | | | 3 |
| BA-01 | 2/9/10 | 1419 | | X | W | P | X | 2 | 2 | X | X | | | | | | | 2 |

Client/Consultant Remarks: Run Arsenic, Thallium, Lead, Nickel & Magnesium

Laboratory remarks: CS on cooler, SPL Driver, (3W)

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 4.0

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☒ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☒ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 2/11/10 | time 1315 | 2. Received by: |
| 3. Relinquished by: | date 2/11/10 | time 1430 | 4. Received by: |
| 5. Relinquished by: | date 2-11-10 | time 1720 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☑ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

**SPL, Inc.**
Analysis Request & Chain of Custody Record

SPL Workorder No. 302965

page 3 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd. Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location:
Invoice To: SEMS Inc. Ph: 504-342-2340

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

**Requested Analysis**

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals | Dissolved Metals (Field Filtered) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-03 | 2/10/10 | 953 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| PW-04 | 2/10/10 | 1028 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| DW-02 | 2/10/10 | 1140 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BA-05A | 2/10/10 | 1203 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BA-05 | 2/10/10 | 1238 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| MW-A | 2/10/10 | 1413 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| DW-01 | 2/10/10 | 1450 | | X | W | P | X | 2 | 2 | X | X | | | | | | | 2 |
| BA-03A | 2/10/10 | 1526 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| BA-03 | 2/10/10 | 1557 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| MW-02 | 2/11/10 | 1020 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks: Run Arsenic, Lead, Thallium, Manganese, & Nickel

Laboratory remarks: NOKS, SPL Driver, (3W)

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 4.0

**Requested TAT**
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☒ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

| | | | |
|---|---|---|---|
| 1. Relinquished by Sampler: | date 2/11/10 | time 1315 | 2. Received by: |
| 3. Relinquished by: | date 2/12/10 | time 1430 | 4. Received by: |
| 5. Relinquished by: | date 2-11-10 | time 1720 | 6. Received by Laboratory: |

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

X

# SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 302979

page 4 of 4

Client Name: SEMS, Inc.
Address: 3801 N. Causeway Blvd Suite 209
City Metairie State LA Zip 70002
Phone/Fax: 504-342-2340 / 504-342-2543
Client Contact: Jesse Hoppes Email: jhoppes@semsinc.net
Project Name/No.: 207-0006
Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, LA
Invoice To: SEMS, Inc. Ph: 504-237-8848

matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

| SAMPLE ID | DATE | TIME | comp | grab | matrix | bottle | size | pres. | Number of Containers | Total Metals | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-01 | 2/11/10 | 1053 | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #1 | 12/9/10 | — | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #2 | 12/10/10 | — | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #3 | 12/10/10 | — | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |
| Duplicate #4 | 12/10/10 | — | | X | W | P | X | 2 | 1 | X | | | | | | | | 1 |

Client/Consultant Remarks:

Laboratory remarks: N/cs, SPL Driver. SW

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 4.0

## Requested TAT

☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other _____
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☒ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☒ TX TRRP ☐ LA RECAP ☒

Special Detection Limits (specify):

PM review (initial):

| | date | time | |
|---|---|---|---|
| 1. Relinquished by Sampler: | 2/11/10 | 1315 | 2. Received by: |
| 3. Relinquished by: | 2/11/10 | 1430 | 4. Received by: |
| 5. Relinquished by: | 2-11-10 | 17:20 | 6. Received by Laboratory: |

00055

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

# EPA Defined Data Qualifiers for Inorganics

The data qualifiers for inorganic parameters (metals and cyanide) are defined below. The qualifiers fall into three categories:

**Concentration(C) qualifiers**
**Data quality (Q) qualifiers**
**Analysis method (M) qualifiers**

## Concentration Qualifiers:

J -- Indicates that the analyte was detected at a level greater than or equal to the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

U -- Indicates that the analyte was analyzed but not detected at a concentration greater than the MDL for the analyte. For each sample, the MDL or PQL reported on the Form 1-IN must be corrected for dilution factors and/or for percent moisture (soils).

## Data Quality Qualifiers:

E -- Indicates analyte(s) with a reported value that is considered as "estimated" because of the presence of interference. Typically, this qualifier is used in cases in which the RPD between the ICP serial dilution results on Form 9 differs from the initial result on Form 1 by more than 10 percent. (The E flag does not apply if the sample concentration is less than 50 times the MDL). Whenever an "E" flag is used, a narrative explanation must accompany the SDG or the Form 1-IN depending on whether the problem is isolated or applies to all samples.

N -- Indicates spike sample recovery was not within the 75% - 125% recovery control limits. A post-digestion or post-distillation spike for the target analyte that failed must accompany all data flagged with an "N" except for graphite furnace metals or silver.

* -- Indicates that the duplicate analysis (Form 5 or 6) was not within the +/-20% RPD.

## EPA Defined Data Qualifiers for Inorganics (cont.)

### Analysis Method Qualifiers.

P: ICP-AES
MS: ICP-MS
CV: Manual Cold Vapor Atomic Absorption (AA)
AV: Automated Cold Vapor AA
AS: Semi-Automated Spectrophotometric
C: Manual Spectrophotometric

# EPA DEFINED QUALIFIERS
# ORGANIC ANALYSES

**U -** Indicates that the compound was analyzed for but not detected above the Practical Quantitation Limit (PQL). For each sample, the PQL must be corrected for dilution and percent moisture (solid matrices). For example, if the raw PQL is 5 ppb and the compound was not detected on the quantitation report, the result (assuming a moisture of 0 percent and a dilution factor of 1) is reported as 5U.

**J -** Indicates an estimated value. This flag is used under the following circumstances: **1)** when estimating a concentration for tentatively identified compounds where 1:1 response is assumed, **2)** when the mass spectra and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL), **3)** when the retention time data indicate the presence of a compound that meets the Pesticide/Aroclor identification criteria and the result is less than PQL but greater than zero. **NOTE:** the **J** code is not used and the compound is not reported as being identified for Pesticide/Aroclor results less than the PQL, if the technical judgement of the pesticide residue analysis expert determines that the peak used for compound identification resulted from instrument noise or other interferences (column bleed, solvent contamination, etc.). For example, if the sample quantitation limit is 1 µg/L, but a concentration of 3 µg/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for dilution as discussed for the **U** flag.

**N -** Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectra library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the **N** code is not used.

**P -** This flag is used for a pesticide/Aroclor target analyte when there is greater than 40% difference for detected concentrations between the two GC columns. The lower of the two values is reported and flagged with this code.

**C -** This flag applies to pesticide results where the identification has been confirmed by GC/MS. If the GC/MS confirmation was attempted, but was unsuccessful do not use this flag. The laboratory shall use another laboratory defined flag for explanation.

**B -** This flag is used to indicate an analyte that is detected in the method blank. It indicates possible/probable blank contamination. It warns the data users to take appropriate actions. This flag will be used, if required, for both positively identified and tentatively identified target compounds. This flag is applied to the results for the appropriate compounds on all samples associated with the blank.

# EPA DEFINED QUALIFIERS
# ORGANIC ANALYSES
## (CONT.)

**E -** This flag identifies compounds with concentrations that exceed the calibration range of the instrument for that specific analysis. If the response for one or more of the compounds is greater than full scale, the sample must be diluted and reanalyzed. Compounds with such responses must be flagged with "**E**". If the response for any compound that was flagged with **"E"** falls below the calibration range in the second analysis, then the results for the second analysis are flagged "**D**". A "**DL**" suffix is added to the sample number of the diluted sample and data for both analyses are reported.

**D -** This flag identifies all compounds identified in an analysis at a secondary dilution. If a sample or extract is reanalyzed at a higher dilution, the concentration shall be flagged "**D**". The "**DL**" suffix shall be added to the sample number for the secondary dilution. This flag alerts the user that discrepancies between the reported concentrations may be due to the dilution of the sample or extract.

**A -** This flag indicates that the TIC is suspected to be aldol condensation product.

**X -** Compound presumed not present based on the absence of a spectral match utilizing reference library NBS75K.

**Other -** Other flags may be required to properly define results. If used, they must be defined in the case narrative and are limited to "X" , "Y", and "Z".

# INORGANICS LEVEL IV PACKAGE
# 10020428 NARRATIVE

Analytical measurements less than the laboratory reporting limit (PQL) but greater than the laboratory method detection limit (MDL) are presented as estimate quantities which are indicated with a "J" in the qualifier field on this data report.

Preparation Batch: 87095

Recovery of manganese and nickel in the matrix spike and matrix spike duplicate analyses of sample BC-07; SPL sample ID: 10020428-08A, as listed on Form V(a)-IN exceeded the control limit acceptance criteria. Field sample results affected by this non-conformance are not noted with "N" in the quality control field on this data report.

Preparation Batch: 87096

Recovery of manganese and nickel in the matrix spike and matrix spike duplicate analyses of sample BA-01A; SPL sample ID: 10020428-19A, as listed on Form V(a)-IN exceeded the control limit acceptance criteria. Field sample results affected by this non-conformance are not noted with "N" in the quality control field on this data report.

Preparation Batch: 87103

Recovery of arsenic in the matrix spike and matrix spike duplicate analyses of sample BA-01; SPL sample ID: 10020428-20B, as listed on Form V(a)-IN exceeded the control limit acceptance criteria. Field sample results affected by this non-conformance are not noted with "N" in the quality control field on this data report.

Reviewed By: Laurie B Petko

Date: 2-25-10

# METALS CLP-LIKE FORMS

COVER PAGE - INORGANICS DATA PACKAGE

Lab Name: SPL Inc.

Lab Code: SPLLAF

SDG: 10020428

| Client Sample ID | Lab Sample ID | Date Collected | Date Received | Matrix |
|---|---|---|---|---|
| BA-01 | 10020428-20 | 2/9/10 14:19 | 2/11/10 17:20 | Water |
| BA-03 | 10020428-29 | 2/10/10 15:57 | 2/11/10 17:20 | Water |
| BA-09 | 10020428-02 | 2/8/10 11:21 | 2/11/10 17:20 | Water |
| DUPLICATE #2 | 10020428-33 | 2/10/10 0:00 | 2/11/10 17:20 | Water |
| DW-02 | 10020428-23 | 2/10/10 11:40 | 2/11/10 17:20 | Water |
| MW-01 | 10020428-31 | 2/11/10 10:53 | 2/11/10 17:20 | Water |
| MW-02 | 10020428-30 | 2/11/10 10:20 | 2/11/10 17:20 | Water |
| MW-06 | 10020428-13 | 2/9/10 11:01 | 2/11/10 17:20 | Water |
| PW-04 | 10020428-22 | 2/10/10 10:28 | 2/11/10 17:20 | Water |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory manager or the Manager's designee, as verified by the following signature.

Signature: Keran Lafleur

Date: 2-25-10

Name: KERAN LAFLEUR

Title: METALS SUPERVISOR

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BA-09 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-02A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.0452 | | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| MW-06 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-13A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00797 | U | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BA-01 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-20A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.0172 | J | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| PW-04 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-22A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00797 | U | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| DW-02 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-23A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.0915 | | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BA-03 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-29A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.0150 | J | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| MW-02 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-30A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00797 | U | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| MW-01 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-31A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | STND |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.0792 | | 0.00797 | 0.02 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | DUPLICATE #2 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-33A |
| | | Date Received: | 2/11/2010 5:20:00PM |
| Matrix: | Water | Total/Dissolved: | Total |
| Level: | LOW | Prep Method: | STND |
| % Moisture: | 0 | | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00797 | U | 0.00797 | 0.02 | | P | mg/L |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 11:03 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464405 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 480.0 | 96.0 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 18:57 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464441 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 508.9 | 101.8 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 20:02 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464451 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 501.5 | 100.3 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 20:37 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464458 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 502.4 | 100.5 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 21:37 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464468 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 502.5 | 100.5 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 22:28 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464478 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 510.0 | 102.0 | P | 90 | 110 |

# INITIAL CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICV |
| Analysis | 2/19/10 10:47 | Sample Type: | ICV |
| RunID: | ICPDV_100219D-3464403 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 1000 | 922.7 | 92.3 | P | 90 | 110 |

# INITIAL CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 10:58 | | |
| Run ID: | ICPDV_100219D-3464404 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# METHOD BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | MBLK-87095 |
| Matrix: | Water | Total/Dissolved: | Total |
| Analysis Date: | 2/19/10 19:32 | | |
| Run ID: | ICPDV_100219D-3464445 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.00797 | U | 0.00797 | 0.02 | P | mg/L |

# METHOD BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | MBLK-87096 |
| Matrix: | Water | Total/Dissolved: | Total |
| Analysis Date: | 2/19/10 21:07 | | |
| Run ID: | ICPDV_100219D-3464462 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.00797 | U | 0.00797 | 0.02 | P | mg/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 11:13 | | |
| Run ID: | ICPDV_100219D-3464406 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 19:07 | | |
| Run ID: | ICPDV_100219D-3464442 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 20:07 | | |
| Run ID: | ICPDV_100219D-3464452 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 20:43 | | |
| Run ID: | ICPDV_100219D-3464459 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/19/10 21:42

Run ID: ICPDV_100219D-3464469

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 22:33 | | |
| Run ID: | ICPDV_100219D-3464479 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 11:18 Sol. A | | | 02/19/2010 11:22 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 518689 | 103.7 | | 518760 | 103.8 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10415.1 | 104.2 | | - | 80-120 |
| Arsenic | 0 | 10000 | 14.7225 | 0 | | 10509.9 | 105.1 | | - | 80-120 |
| Barium | 0 | 3000 | 8.58061 | 0 | | 2899.7 | 96.66 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.74261 | 0 | | 1037.4 | 103.7 | | - | 80-120 |
| Cadmium | 0 | 3000 | 12.2 | 0 | | 3308.2 | 110.3 | | - | 80-120 |
| Calcium | 500000 | 500000 | 497027 | 99.4 | | 493947 | 98.79 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 19.6 | 0 | | 2991 | 99.7 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2821.5 | 94.05 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3230.4 | 107.7 | | - | 80-120 |
| Iron | 500000 | 500000 | 458621 | 91.72 | | 456040 | 91.21 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 3.70924 | 0 | | 9565.2 | 95.65 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 512467 | 102.5 | | 509287 | 101.9 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 1977.1 | 98.85 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3001.8 | 100.1 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2795.1 | 93.17 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5246.9 | 104.9 | | - | 80-120 |
| Silver | 0 | 3000 | 23.8 | 0 | | 2801 | 93.37 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 9666.6 | 96.67 | | - | 80-120 |
| Vanadium | 0 | 3000 | 0 | 0 | | 3100.2 | 103.3 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2754.4 | 91.82 | | - | 80-120 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 19:12 Sol. A | | | 02/19/2010 19:17 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 522805 | 104.6 | | 519552 | 103.9 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10430.9 | 104.3 | | - | 80-120 |
| Arsenic | 0 | 10000 | 11.652 | 0 | | 10775.2 | 107.8 | | - | 80-120 |
| Barium | 0 | 3000 | 10.7 | 0 | | 2950.7 | 98.36 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.35082 | 0 | | 1054.4 | 105.4 | | - | 80-120 |
| Cadmium | 0 | 3000 | 12.6 | 0 | | 3311 | 110.4 | | - | 80-120 |
| Calcium | 500000 | 500000 | 508267 | 101.7 | | 502838 | 100.6 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 20.8 | 0 | | 3028.5 | 100.9 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2844.8 | 94.83 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3229.1 | 107.6 | | - | 80-120 |
| Iron | 500000 | 500000 | 465710 | 93.14 | | 461482 | 92.3 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 0 | 0 | | 9676.1 | 96.76 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 525379 | 105.1 | | 519749 | 104 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 2010 | 100.5 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3028 | 100.9 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2846.5 | 94.88 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5274.8 | 105.5 | | - | 80-120 |
| Silver | 0 | 3000 | 19.4 | 0 | | 2818.6 | 93.95 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 9554.3 | 95.54 | | - | 80-120 |
| Vanadium | 0 | 3000 | 18.8023 | 0 | | 3132.6 | 104.4 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2814.9 | 93.83 | | - | 80-120 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 20:47 Sol. A | | | 02/19/2010 20:53 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 524170 | 104.8 | | 521151 | 104.2 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10470.3 | 104.7 | | - | 80-120 |
| Arsenic | 0 | 10000 | 0 | 0 | | 10784.9 | 107.8 | | - | 80-120 |
| Barium | 0 | 3000 | 11.1 | 0 | | 2955.1 | 98.5 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.24888 | 0 | | 1060 | 106 | | - | 80-120 |
| Cadmium | 0 | 3000 | 13 | 0 | | 3317.9 | 110.6 | | - | 80-120 |
| Calcium | 500000 | 500000 | 511771 | 102.4 | | 506122 | 101.2 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 20.7 | 0 | | 3031.6 | 101.1 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2854.6 | 95.15 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3219.6 | 107.3 | | - | 80-120 |
| Iron | 500000 | 500000 | 470580 | 94.12 | | 462533 | 92.51 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 4.09532 | 0 | | 9714.9 | 97.15 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 532022 | 106.4 | | 522021 | 104.4 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 2014.6 | 100.7 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3041.6 | 101.4 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2855.2 | 95.17 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5314.5 | 106.3 | | - | 80-120 |
| Silver | 0 | 3000 | 19 | 0 | | 2837.7 | 94.59 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 10022.2 | 100.2 | | - | 80-120 |
| Vanadium | 0 | 3000 | 23.4 | 0 | | 3132 | 104.4 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2830.1 | 94.34 | | - | 80-120 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 22:38 Sol. A | | | 02/19/2010 22:43 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 525664 | 105.1 | | 521817 | 104.4 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10592.1 | 105.9 | | - | 80-120 |
| Arsenic | 0 | 10000 | 8.17272 | 0 | | 10856.3 | 108.6 | | - | 80-120 |
| Barium | 0 | 3000 | 10.1 | 0 | | 2992.6 | 99.75 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.38438 | 0 | | 1063.5 | 106.4 | | - | 80-120 |
| Cadmium | 0 | 3000 | 13.4 | 0 | | 3351 | 111.7 | | - | 80-120 |
| Calcium | 500000 | 500000 | 514581 | 102.9 | | 508899 | 101.8 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 20.7 | 0 | | 3072.1 | 102.4 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2887.3 | 96.24 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3252.7 | 108.4 | | - | 80-120 |
| Iron | 500000 | 500000 | 474579 | 94.92 | | 468878 | 93.78 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 5.65671 | 0 | | 9844.3 | 98.44 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 536515 | 107.3 | | 528963 | 105.8 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 2035 | 101.8 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3070.4 | 102.3 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2892.4 | 96.41 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5375.7 | 107.5 | | - | 80-120 |
| Silver | 0 | 3000 | 21.9 | 0 | | 2880.8 | 96.03 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 10097.7 | 101 | | - | 80-120 |
| Vanadium | 0 | 3000 | 27 | 0 | | 3181.7 | 106.1 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2881.3 | 96.04 | | - | 80-120 |

# LABORATORY CONTROL SAMPLE

LCS-87095

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Total/Dissolved: Total

Solid LCS Source:

Aqueous LCS Source:

| Analyte | M | Aqueous (mg/L) True | Found | %R | Limits | Solid (mg/kg) True | Found | C | %R | Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | P | 0.1 | 0.1144 | 114.4 | 80 - 120 | | | | | |

00092

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# LABORATORY CONTROL SAMPLE

LCS-87096

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Total/Dissolved: Total

Solid LCS Source:

Aqueous LCS Source:

| Analyte | M | Aqueous (mg/L) True | Found | %R | Limits | Solid (mg/kg) True | Found | C | %R | Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | P | 0.1 | 0.1170 | 117.0 | 80 - 120 | | | | | |

00093

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# METHOD DETECTION LIMITS

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Instrument ID Number: ICPDV Date: 3/26/2009

6010_W

| Analyte | Wavelength (nm) | Background | PQL mg/L | MDL mg/L | M |
|---|---|---|---|---|---|
| Arsenic | 188.980 | | 0.020 | 0.0080 | P |

# PREPARATION LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Method: SW3010A

Total/Diss.: Total

| Lab Sample ID | Client Sample ID | Preparation Date | Initial Weight (gram) | Initial Volume (ml) | Final Volume (ml) |
|---|---|---|---|---|---|
| 10020428-20A | BA-01 | 2/12/10 | 0 | 50 | 50 |
| 10020428-02A | BA-09 | 2/12/10 | 0 | 50 | 50 |
| LCS-87095 | LCS-87095 | 2/12/10 | 0 | 50 | 50 |
| MBLK-87095 | MBLK-87095 | 2/12/10 | 0 | 50 | 50 |
| 10020428-13A | MW-06 | 2/12/10 | 0 | 50 | 50 |

# PREPARATION LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Method: SW3010A

Total/Diss.: Total

| Lab Sample ID | Client Sample ID | Preparation Date | Initial Weight (gram) | Initial Volume (ml) | Final Volume (ml) |
|---|---|---|---|---|---|
| 10020428-29A | BA-03 | 2/12/10 | 0 | 50 | 50 |
| 10020428-33A | DUPLICATE #2 | 2/12/10 | 0 | 50 | 50 |
| 10020428-23A | DW-02 | 2/12/10 | 0 | 50 | 50 |
| LCS-87096 | LCS-87096 | 2/12/10 | 0 | 50 | 50 |
| MBLK-87096 | MBLK-87096 | 2/12/10 | 0 | 50 | 50 |
| 10020428-31A | MW-01 | 2/12/10 | 0 | 50 | 50 |
| 10020428-30A | MW-02 | 2/12/10 | 0 | 50 | 50 |
| 10020428-22A | PW-04 | 2/12/10 | 0 | 50 | 50 |

# ANALYSIS RUN LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Method: SW6010B

Instrument ID: ICPDV Total/Dissolved: Total

Start Date: 2/19/2010 End Date: 2/19/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| ICV | ICV | 1 | 10:47 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICB | ICB | 1 | 10:58 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCV | CCV | 1 | 11:03 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 11:13 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 11:18 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 11:22 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| CCV | CCV | 1 | 18:57 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 19:07 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 19:12 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 19:17 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| MBLK-87095 | MBLK-87095 | 1 | 19:32 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| LCS-87095 | LCS-87095 | 1 | 19:37 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-08Z | ZZZZZZ | 1 | 19:42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-08ASD | ZZZZZZ | 5 | 19:47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-08AMS | ZZZZZZ | 1 | 19:52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-08AMSD | ZZZZZZ | 1 | 19:57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | CCV | 1 | 20:02 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 20:07 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| 10020428-08APDS | ZZZZZZ | 5 | 20:12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-08APDSD | ZZZZZZ | 5 | 20:17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-13A | MW-06 | 1 | 20:22 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-20A | BA-01 | 1 | 20:27 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-02A | BA-09 | 1 | 20:32 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | CCV | 1 | 20:37 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 20:43 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 20:47 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 20:53 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| MBLK-87096 | MBLK-87096 | 1 | 21:07 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| LCS-87096 | LCS-87096 | 1 | 21:12 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-19Z | ZZZZZZ | 1 | 21:17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-19ASD | ZZZZZZ | 5 | 21:22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

00097

# ANALYSIS RUN LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Method: SW6010B

Instrument ID: ICPDV Total/Dissolved: Total

Start Date: 2/19/2010 End Date: 2/19/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| 10020428-19AMS | ZZZZZZ | 1 | 21:27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-19AMSD | ZZZZZZ | 1 | 21:32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | CCV | 1 | 21:37 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 21:42 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| 10020428-19APDS | ZZZZZZ | 5 | 21:47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-19APDSD | ZZZZZZ | 5 | 21:52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-22A | PW-04 | 1 | 21:57 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-23A | DW-02 | 1 | 22:02 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-29A | BA-03 | 1 | 22:07 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-30A | MW-02 | 1 | 22:12 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-31A | MW-01 | 1 | 22:17 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-33A | DUPLICATE #2 | 1 | 22:23 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | CCV | 1 | 22:28 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 22:33 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 22:38 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 22:43 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |

00098

COVER PAGE - INORGANICS DATA PACKAGE

Lab Name: SPL Inc.

Lab Code: SPLLAF

SDG: 10020428

| Client Sample ID | Lab Sample ID | Date Collected | Date Received | Matrix |
|---|---|---|---|---|
| BA-01 | 10020428-20 | 2/9/10 14:19 | 2/11/10 17:20 | Water |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory manager or the Manager's designee, as verified by the following signature.

Signature: Keran Lafleur

Date: 2-25-10

Name: KERAN LAFLEUR

Title: METALS SUPERVISOR

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BA-01 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-20B |
| | | Date Received: | 2/11/2010 5:20:00PM |
| Matrix: | Water | Total/Dissolved: | Dissolved |
| Level: | LOW | Prep Method: | STND |
| % Moisture: | 0 | | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00829 | J | 0.00797 | 0.02 | | P | mg/L |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 11:03 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464405 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 480.0 | 96.0 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 22:28 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464478 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 510.0 | 102.0 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 23:28 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464488 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 511.5 | 102.3 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/19/10 23:48 | Sample Type: | CCV |
| RunID: | ICPDV_100219D-3464492 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 500 | 514.2 | 102.8 | P | 90 | 110 |

# INITIAL CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICV |
| Analysis | 2/19/10 10:47 | Sample Type: | ICV |
| RunID: | ICPDV_100219D-3464403 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 1000 | 922.7 | 92.3 | P | 90 | 110 |

# INITIAL CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 10:58 | | |
| Run ID: | ICPDV_100219D-3464404 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# METHOD BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | MBLK-87103 |
| Matrix: | Water | Total/Dissolved: | Dissolved |
| Analysis Date: | 2/19/10 22:58 | | |
| Run ID: | ICPDV_100219D-3464482 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.00797 | U | 0.00797 | 0.02 | P | mg/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 11:13 | | |
| Run ID: | ICPDV_100219D-3464406 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 22:33 | | |
| Run ID: | ICPDV_100219D-3464479 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 23:33 | | |
| Run ID: | ICPDV_100219D-3464489 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/19/10 23:53 | | |
| Run ID: | ICPDV_100219D-3464493 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 8.0 | U | 8.0 | 20 | P | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 11:18 Sol. A | | | 02/19/2010 11:22 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 518689 | 103.7 | | 518760 | 103.8 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10415.1 | 104.2 | | - | 80-120 |
| Arsenic | 0 | 10000 | 14.7225 | 0 | | 10509.9 | 105.1 | | - | 80-120 |
| Barium | 0 | 3000 | 8.58061 | 0 | | 2899.7 | 96.66 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.74261 | 0 | | 1037.4 | 103.7 | | - | 80-120 |
| Cadmium | 0 | 3000 | 12.2 | 0 | | 3308.2 | 110.3 | | - | 80-120 |
| Calcium | 500000 | 500000 | 497027 | 99.4 | | 493947 | 98.79 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 19.6 | 0 | | 2991 | 99.7 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2821.5 | 94.05 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3230.4 | 107.7 | | - | 80-120 |
| Iron | 500000 | 500000 | 458621 | 91.72 | | 456040 | 91.21 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 3.70924 | 0 | | 9565.2 | 95.65 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 512467 | 102.5 | | 509287 | 101.9 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 1977.1 | 98.85 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3001.8 | 100.1 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2795.1 | 93.17 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5246.9 | 104.9 | | - | 80-120 |
| Silver | 0 | 3000 | 23.8 | 0 | | 2801 | 93.37 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 9666.6 | 96.67 | | - | 80-120 |
| Vanadium | 0 | 3000 | 0 | 0 | | 3100.2 | 103.3 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2754.4 | 91.82 | | - | 80-120 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 22:38 Sol. A | | | 02/19/2010 22:43 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 525664 | 105.1 | | 521817 | 104.4 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10592.1 | 105.9 | | - | 80-120 |
| Arsenic | 0 | 10000 | 8.17272 | 0 | | 10856.3 | 108.6 | | - | 80-120 |
| Barium | 0 | 3000 | 10.1 | 0 | | 2992.6 | 99.75 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.38438 | 0 | | 1063.5 | 106.4 | | - | 80-120 |
| Cadmium | 0 | 3000 | 13.4 | 0 | | 3351 | 111.7 | | - | 80-120 |
| Calcium | 500000 | 500000 | 514581 | 102.9 | | 508899 | 101.8 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 20.7 | 0 | | 3072.1 | 102.4 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2887.3 | 96.24 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3252.7 | 108.4 | | - | 80-120 |
| Iron | 500000 | 500000 | 474579 | 94.92 | | 468878 | 93.78 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 5.65671 | 0 | | 9844.3 | 98.44 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 536515 | 107.3 | | 528963 | 105.8 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 2035 | 101.8 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3070.4 | 102.3 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2892.4 | 96.41 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5375.7 | 107.5 | | - | 80-120 |
| Silver | 0 | 3000 | 21.9 | 0 | | 2880.8 | 96.03 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 10097.7 | 101 | | - | 80-120 |
| Vanadium | 0 | 3000 | 27 | 0 | | 3181.7 | 106.1 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2881.3 | 96.04 | | - | 80-120 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPDV Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/19/2010 23:58 Sol. A | | | 02/20/2010 00:03 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 500000 | 500000 | 525936 | 105.2 | | 522505 | 104.5 | | 80-120 | 80-120 |
| Antimony | 0 | 10000 | 0 | 0 | | 10630.4 | 106.3 | | - | 80-120 |
| Arsenic | 0 | 10000 | 12.6906 | 0 | | 10889.9 | 108.9 | | - | 80-120 |
| Barium | 0 | 3000 | 10.7 | 0 | | 2987.3 | 99.58 | | - | 80-120 |
| Beryllium | 0 | 1000 | 2.27936 | 0 | | 1065.4 | 106.5 | | - | 80-120 |
| Cadmium | 0 | 3000 | 13.1 | 0 | | 3361.8 | 112.1 | | - | 80-120 |
| Calcium | 500000 | 500000 | 515534 | 103.1 | | 509774 | 102 | | 80-120 | 80-120 |
| Chromium | 0 | 3000 | 20.8 | 0 | | 3064.5 | 102.2 | | - | 80-120 |
| Cobalt | 0 | 3000 | 0 | 0 | | 2895.4 | 96.52 | | - | 80-120 |
| Copper | 0 | 3000 | 0 | 0 | | 3244.5 | 108.2 | | - | 80-120 |
| Iron | 500000 | 500000 | 471701 | 94.34 | | 467977 | 93.6 | | 80-120 | 80-120 |
| Lead | 0 | 10000 | 3.44643 | 0 | | 9867.7 | 98.68 | | - | 80-120 |
| Magnesium | 500000 | 500000 | 533396 | 106.7 | | 528554 | 105.7 | | 80-120 | 80-120 |
| Manganese | 0 | 2000 | 0 | 0 | | 2034.5 | 101.7 | | - | 80-120 |
| Molybdenum | 0 | 3000 | 0 | 0 | | 3085.1 | 102.8 | | - | 80-120 |
| Nickel | 0 | 3000 | 0 | 0 | | 2891 | 96.37 | | - | 80-120 |
| Selenium | 0 | 5000 | 0 | 0 | | 5379.4 | 107.6 | | - | 80-120 |
| Silver | 0 | 3000 | 19.3 | 0 | | 2893.2 | 96.44 | | - | 80-120 |
| Thallium | 0 | 10000 | 0 | 0 | | 10141.2 | 101.4 | | - | 80-120 |
| Vanadium | 0 | 3000 | 26.5 | 0 | | 3169.8 | 105.7 | | - | 80-120 |
| Zinc | 0 | 3000 | 0 | 0 | | 2878.9 | 95.96 | | - | 80-120 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Ext. method: | STND |
| Total/Diss.: | Dissolved | Level:(low/med): | LOW |

Matrix Spike - Client SampleID: BA-01MS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | MS CONCENTRATION mg/L | C | MS % REC | Q | QC LIMITS LOW | QC LIMITS HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.00829 | J | 0.1158 | | 108 | | 75 | 125 | P |

Matrix Spike - Client SampleID: BA-01MSD

| Analyte | SPIKE ADDED mg/L | MSD CONCENTRATION mg/L | C | MSD % REC | Q | % RPD | Q | QC LIMITS RPD | QC LIMITS LOW | QC LIMITS HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.1222 | | 114 | | 5.38 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

POST DIGESTION SPIKE/POST DIGESTION SPIKE DUPLICATE

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Ext. method: | STND |
| Total/Diss.: | Dissolved | Level:(low/med): | LOW |

Matrix Spike - Client SampleID: BA-01PDS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | PDS CONCENTRATION mg/L | PDS % REC | Q | QC LIMITS LOW | QC LIMITS HIGH | M |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1 | 0.00829 | J | 1.096 | 109 | | 75 | 125 | P |

| Analyte | SPIKE ADDED mg/L | PDSD CONCENTRATION mg/L | PDSD % REC | Q | % RPD | Q | QC LIMITS RPD | QC LIMITS LOW | QC LIMITS HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1 | 1.099 | 109 | | 0.273 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# LABORATORY CONTROL SAMPLE

LCS-87103

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Total/Dissolved: Dissolved

Solid LCS Source:

Aqueous LCS Source:

| Analyte | M | Aqueous (mg/L) True | Found | %R | Limits | Solid (mg/kg) True | Found | C | %R | Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | P | 0.1 | 0.1095 | 109.5 | 80 - 120 | | | | | |

00117

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# ICP SERIAL DILUTIONS

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BA-01SD | |
| Lab Name: | SPL Inc. | Lab Sample ID: | 10020428-20B |
| Lab Code: | SPLLAF | SDG: | 10020428 |
| Matrix: | Water | Concentration Units: | mg/L |
| Level: | LOW | | |
| Total/Diss.: | Dissolved | | |

| Analyte | Initial Sample Results (I) | C | Serial Dilution Results (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.00829 | J | 0.03985 | U | | | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# METHOD DETECTION LIMITS

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Instrument ID Number: ICPDV Date: 3/26/2009

6010_D

| Analyte | Wavelength (nm) | Background | PQL mg/L | MDL mg/L | M |
|---|---|---|---|---|---|
| Arsenic | | | 0.020 | 0.0080 | P |

# PREPARATION LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Method: SW3005

Total/Diss.: Dissolved

| Lab Sample ID | Client Sample ID | Preparation Date | Initial Weight (gram) | Initial Volume (ml) | Final Volume (ml) |
|---|---|---|---|---|---|
| 10020428-20B | BA-01 | 2/12/10 | 0 | 100 | 100 |
| 10020428-20BMS | BA-01MS | 2/12/10 | 0 | 100 | 100 |
| 10020428-20BMSD | BA-01MSD | 2/12/10 | 0 | 100 | 100 |
| LCS-87103 | LCS-87103 | 2/12/10 | 0 | 100 | 100 |
| MBLK-87103 | MBLK-87103 | 2/12/10 | 0 | 100 | 100 |

# ANALYSIS RUN LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Method: SW6010B

Instrument ID: ICPDV Total/Dissolved: Dissolved

Start Date: 2/19/2010 End Date: 2/20/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| ICV | ICV | 1 | 10:47 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICB | ICB | 1 | 10:58 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCV | CCV | 1 | 11:03 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 11:13 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 11:18 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 11:22 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| CCV | CCV | 1 | 22:28 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 22:33 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 22:38 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 22:43 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| MBLK-87103 | MBLK-87103 | 1 | 22:58 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| LCS-87103 | LCS-87103 | 1 | 23:03 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-20B | BA-01 | 1 | 23:07 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-20BSD | BA-01SD | 5 | 23:12 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-20BMS | BA-01MS | 1 | 23:18 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-20BMSD | BA-01MSD | 1 | 23:23 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | CCV | 1 | 23:28 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 23:33 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| 10020428-20BPDS | BA-01PDS | 5 | 23:38 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| 10020428-20BPDSD | BA-01PDSD | 5 | 23:43 | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | CCV | 1 | 23:48 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| CCB | CCB | 1 | 23:53 | | | | X | | | X | | X | | | | X | | | | | | | X | | | X | | | | X | X |
| ICSA | ICSA | 1 | 23:58 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |
| ICSAB | ICSAB | 1 | 00:03 | | X | | X | | | X | X | X | | | X | X | X | | | | | | X | | | X | | | | X | X |

90121

# METALS RAW DATA

**Analytical Sequence**

**Method : 6010B 200.7**

| Seq. | Loc. | Sample ID | |
|---|---|---|---|
| 1 | 7 | Calib Blank 1 | |
| 2 | 1 | Calib Std 1 | |
| 3 | 2 | Calib Std 2 | |
| 4 | 3 | Calib Std 3 | |
| 5 | 9 | Calib Std 4 | |
| 6 | 10 | Calib Std 5 | |
| 7 | 6 | ICV | |
| 8 | 11 | LLICV | |
| 9 | 7 | ICB | |
| 10 | 6 | CCV | |
| 11 | 12 | LLCCV | |
| 12 | 7 | CCB | |
| 13 | 4 | ICSA | |
| 14 | 5 | ICSAB | |
| 15 | 13 | RINSE BLANK | |
| 16 | 14 | RINSE BLANK | |
| 17 | 15 | MBLK-87221 | 200.7 |
| 18 | 16 | LCS-87221 | |
| 19 | 17 | 10020634-03A | Pb orig |
| 20 | 18 | 10020634-03ASD | |
| 21 | 19 | 10020634-03AMS | |
| 22 | 20 | 10020634-03AMSD | |
| 23 | 6 | CCV | |
| 24 | 7 | CCB | |
| 25 | 21 | 10020634-03APDS | |
| 26 | 22 | 10020634-03APDSD | |
| 27 | 23 | 10020683-01A | Cu Zn orig |
| 28 | 24 | 10020540-01A | As Ba Cd Cr Pb Se orig Ag Rep 6010.5 # 87208 |
| 29 | 25 | 10020541-03A | As Cd Cr Pb Se Zn orig |
| 30 | 6 | CCV | |
| 31 | 7 | CCB | |
| 32 | 4 | ICSA | |
| 33 | 5 | ICSAB | |
| 34 | 26 | RINSE BLANK | |
| 35 | 27 | RINSE BLANK | |
| 36 | 28 | MBLK-87220 | 200.7 |
| 37 | 29 | LCS-87220 | |
| 38 | 30 | 10020643-04B | Ni orig |
| 39 | 31 | 10020643-04BSD | |
| 40 | 32 | 10020643-04BMS | |
| 41 | 33 | 10020643-04BMSD | |
| 42 | 6 | CCV | |
| 43 | 7 | CCB | |
| 44 | 34 | 10020643-04BPDS | |
| 45 | 35 | 10020643-04BPDSD | |
| 46 | 36 | 10020643-05B | |
| 47 | 37 | 10020643-09B | |
| 48 | 38 | 10020625-02B | Zn orig |
| 49 | 39 | 10020627-02A | Pb orig |
| 50 | 40 | 10020628-01A | |
| 51 | 41 | 10020629-03A | |
| 52 | 42 | 10020630-03A | |
| 53 | 43 | 10020631-03A | |
| 54 | 6 | CCV | |
| 55 | 7 | CCB | |
| 56 | 44 | 10020632-03A | |

100219 1022 DV
02-19-10
SLV

ICPDV_100219A
✓LD 2-19-10

ICPDV_100219B
✓ P 2-22-10

ICPDV_100219C
✓ P 2-22-10

00123

Analytical Sequence

Method : 6010B 200.7

| Seq. | Loc. | | Sample ID |
|---|---|---|---|
| 57 | 6 | QC | CCV |
| 58 | 7 | QC | CCB |
| 59 | 4 | QC | ICSA |
| 60 | 5 | QC | ICSAB |
| 61 | 45 | | RINSE BLANK |
| 62 | 46 | | RINSE BLANK |
| 63 | 47 | | MBLK-87222 6010_W-Recap |
| 64 | 48 | | LCS-87222 |
| 65 | 49 | | 10020624-01C Pb orig |
| 66 | 50 | | 10020624-01CSD |
| 67 | 51 | | 10020624-01CMS |
| 68 | 52 | | 10020624-01CMSD |
| 69 | 6 | QC | CCV |
| 70 | 7 | QC | CCB |
| 71 | 53 | | 10020624-01CPDS |
| 72 | 54 | | 10020624-01CPDSD |
| 73 | 55 | | 10020624-02C |
| 74 | 56 | | 10020624-03C |
| 75 | 57 | | 10020624-04C |
| 76 | 58 | | 10020624-05C |
| 77 | 59 | | 10020624-06C |
| 78 | 60 | | 10020624-07C |
| 79 | 61 | | 10020624-08C |
| 80 | 62 | | 10020624-09C |
| 81 | 6 | QC | CCV |
| 82 | 7 | QC | CCB |
| 83 | 63 | | 10020624-10C |
| 84 | 64 | | 10020624-11C |
| 85 | 65 | | 10020624-12C |
| 86 | 66 | | 10020624-13C |
| 87 | 6 | QC | CCV |
| 88 | 11 | | LLCCV |
| 89 | 7 | QC | CCB |
| 90 | 4 | QC | ICSA |
| 91 | 5 | QC | ICSAB |
| 92 | 67 | | RINSE BLANK |
| 93 | 68 | | RINSE BLANK |
| 94 | 69 | | MBLK-87225 6010_W |
| 95 | 70 | | LCS-87225 |
| 96 | 71 | | 10020655-01B Pb Rep 2 |
| 97 | 72 | | 10020655-01BSD |
| 98 | 73 | | 10020655-01BMS |
| 99 | 74 | | 10020655-01BMSD |
| 100 | 6 | QC | CCV |
| 101 | 11 | | LLCCV |
| 102 | 7 | QC | CCB |
| 103 | 75 | | 10020655-01BPDS |
| 104 | 76 | | 10020655-01BPDSD |
| 105 | 6 | QC | CCV |
| 106 | 11 | | LLCCV |
| 107 | 7 | QC | CCB |
| 108 | 4 | QC | ICSA |
| 109 | 5 | QC | ICSAB |
| 110 | 77 | | RINSE BLANK |
| 111 | 78 | | RINSE BLANK |
| 112 | 79 | | MBLK-87095 6010_W |

ICPDV_100219D
- JMP 2-22-10

ICPDV_100219E
- JMP 2-22-10

00124

Analytical Sequence

Method : 6010B 200.7

| Seq. | Loc. | Sample ID |
|---|---|---|
| 113 | 80 | LCS-87095 |
| 114 | 81 | 10020428-08A QC |
| 115 | 82 | 10020428-08ASD |
| 116 | 83 | 10020428-08AMS |
| 117 | 84 | 10020428-08AMSD |
| 118 | 6 | CCV |
| 119 | 7 | CCB |
| 120 | 85 | 10020428-08APDS |
| 121 | 86 | 10020428-08APDSD |
| 122 | 87 | 10020428-13A AS orig |
| 123 | 88 | 10020428-20A |
| 124 | 89 | 10020428-02A |
| 125 | 1 | CCV |
| 126 | 2 | CCB |
| 127 | 4 | ICSA |
| 128 | 5 | ICSAB |
| 129 | 90 | RINSE BLANK |
| 130 | 91 | RINSE BLANK |
| 131 | 92 | MBLK-87096 W010_W |
| 132 | 93 | LCS-87096 |
| 133 | 94 | 10020428-19A QC |
| 134 | 95 | 10020428-19ASD |
| 135 | 96 | 10020428-19AMS |
| 136 | 97 | 10020428-19AMSD |
| 137 | 1 | CCV |
| 138 | 2 | CCB |
| 139 | 98 | 10020428-19APDS |
| 140 | 99 | 10020428-19APDSD |
| 141 | 100 | 10020428-22A AS orig |
| 142 | 101 | 10020428-23A |
| 143 | 102 | 10020428-29A |
| 144 | 103 | 10020428-30A |
| 145 | 104 | 10020428-31A |
| 146 | 105 | 10020428-33A |
| 147 | 1 | CCV |
| 148 | 2 | CCB |
| 149 | 4 | ICSA |
| 150 | 5 | ICSAB |
| 151 | 106 | RINSE BLANK |
| 152 | 107 | RINSE BLANK |
| 153 | 108 | MBLK-87103 W010_D |
| 154 | 109 | LCS-87103 |
| 155 | 110 | 10020428-20B AS orig |
| 156 | 111 | 10020428-20BSD |
| 157 | 112 | 10020428-20BMS |
| 158 | 113 | 10020428-20BMSD |
| 159 | 1 | CCV |
| 160 | 2 | CCB |
| 161 | 114 | 10020428-20BPDS |
| 162 | 115 | 10020428-20BPDSD |
| 163 | 1 | CCV |
| 164 | 2 | CCB |
| 165 | 4 | ICSA |
| 166 | 5 | ICSAB |
| 167 | 116 | RINSE BLANK |
| 168 | 117 | RINSE BLANK |

Analytical Sequence

Method : 6010B 200.7

| Seq. | Loc. | | Sample ID | Status |
|---|---|---|---|---|
| 169 | 118 | | MBLK-87232 | 10010_S |
| 170 | 119 | | LCS-87232 | |
| 171 | 120 | | 10020636-01A | AsCdPbSeZnorig Ag,CrRep1 |
| 172 | 121 | | 10020636-01ASD | |
| 173 | 122 | | 10020636-01AMS | |
| 174 | 123 | | 10020636-01AMSD | |
| 175 | 1 | QC | CCV | |
| 176 | 2 | QC | CCB | |
| 177 | 124 | | 10020636-01APDS | |
| 178 | 125 | | 10020636-01APDSD | |
| 179 | 126 | | 10020649-10A | ØCdCrPbVZn -dil |
| 180 | 127 | | 10020679-01A | AsCdPbSeZnorig Ag,CrRep1 |
| 181 | 128 | | 10020679-02A | ØAsCdCrPbSeAgZn -dil |
| 182 | 129 | | 10020679-03A | |
| 183 | 130 | | 10020679-04A | |
| 184 | 131 | | 10020679-05A | AsCdPbSeZnorig Ag,CrRep1 |
| 185 | 132 | | 10020679-06A | |
| 186 | 133 | | 10020679-07A | |
| 187 | 1 | QC | CCV | |
| 188 | 2 | QC | CCB | |
| 189 | 134 | | 10020679-08A | ØAsCdCrPbSeAgZn -dil |
| 190 | 135 | | 10020679-09A | AsCdPbSeZnorig Ag,CrRep1 |
| 191 | 136 | | 10020679-10A | |
| 192 | 1 | QC | CCV | |
| 193 | 2 | QC | CCB | |
| 194 | 4 | QC | ICSA | |
| 195 | 5 | QC | ICSAB | |
| 196 | 137 | | RINSE BLANK | |
| 197 | 138 | | RINSE BLANK | |

00126

IEC File Last Saved: 2/19/10 12:03:01 PM
Printed On: 2/19/10 2:28:15 PM

Results Data Set Name: 0503230939DV
Method Name: 6010B 200.7
Results Library: D:\pe\Administrator\Results\results.mdb

Interfering Analytes

| | Analytes | ALUMINUM | BARIUM | CALCIUM | CHROMIUM |
|---|---|---|---|---|---|
| 1 | ALUMINUM | n/a | 0 | -1.46109 | 0 |
| 2 | ANTIMONY | 0 | 0 | -0.0452145 | -7.01437 |
| 3 | ARGON | 183.413 | 2026.53 | 206.756 | 1082.54 |
| 4 | ARSENIC | 0 | 0 | 0 | 5.60658 |
| 5 | ARSENIC2 | -2.70764 | 0 | 0 | 1.11888 |
| 6 | BARIUM | 0 | n/a | 0 | 0 |
| 8 | BORON | -0.0593863 | 0 | 0 | 0 |
| 9 | CADMIUM | 0 | 0 | 0 | 0 |
| 10 | CALCIUM | 0 | 0 | n/a | -2.85338 |
| 11 | CHROMIUM | -0.0417116 | 0 | 0 | n/a |
| 12 | COBALT | 0 | -2.13953 | 0 | 0.645107 |
| 13 | COPPER | 0 | 1.19527 | -0.0404796 | 0.306911 |
| 14 | Cu 324.752 | 0 | 0.326304 | 0 | 0 |
| 15 | IRON | 0 | 0 | 0 | -7.23881 |
| 17 | LEAD | 0 | 0 | 0 | -0.654581 |
| 18 | LITHIUM | 0 | 0 | 0 | 0.5579 |
| 19 | MAGNESIUM | 0 | 0 | 0 | 0 |
| 20 | MANGANESE | 0 | 0 | 0 | 0 |
| 21 | MOLYBDENUM | 0 | 0 | 0 | 0 |
| 22 | Na 589.592 | 0 | 0 | 0 | 0 |
| 23 | NICKEL | 0 | 0 | 0 | 0 |
| 25 | POTASSIUM | 0 | 0 | 0 | -11.1182 |
| 26 | SELENIUM | -0.425533 | 0 | 0 | 0 |
| 27 | SILVER | 0 | 0 | 0 | 0 |
| 28 | SODIUM | 0 | 0 | -1.86505 | -53.4469 |
| 29 | STRONTIUM | 0 | 0 | -0.0513704 | -0.298112 |
| 31 | THALLIUM | 0 | 0 | 0 | 0.667884 |
| 32 | TIN | 0 | 0 | -0.296253 | 0 |
| 33 | TITANIUM | 0 | 0 | 0.235441 | 0.273544 |
| 34 | TI 276.787 | 0 | 0 | 0 | -43.6102 |
| 35 | VANADIUM | 0.416917 | 1.65894 | 0.165208 | -0.347067 |
| 36 | YTTRIUM | 17.9495 | 201.56 | 20.9207 | 106.933 |
| 37 | ZINC | 0 | 0 | 0 | 8.31132 |

IEC File Last Saved: 2/19/10 12:03:01 PM
Printed On: 2/19/10 2:28:15 PM

Results Data Set Name: 0503230939DV
Method Name: 6010B 200.7
Results Library: D:\pe\Administrator\Results\results.mdb

Interfering Analytes

| | Analytes | Cu 324.752 | IRON | MAGNESIUM | NICKEL |
|---|---|---|---|---|---|
| 1 | ALUMINUM | 0 | 0 | 0 | 0 |
| 2 | ANTIMONY | 0 | 0.0467459 | 0 | -1.20776 |
| 3 | ARGON | 1062.24 | 204.5 | 188.48 | 2110.65 |
| 4 | ARSENIC | 0 | -0.139155 | 0 | 0 |
| 5 | ARSENIC2 | -0.579979 | -12.2086 | -0.194962 | 0 |
| 6 | BARIUM | 0 | -0.0019353 | 0 | -1.02225 |
| 8 | BORON | 0 | 4.43845 | 0 | 0 |
| 9 | CADMIUM | 0 | -0.0317159 | 0 | 0 |
| 10 | CALCIUM | 0 | 0 | 0 | 0 |
| 11 | CHROMIUM | 0 | 0.014955 | 0 | 0 |
| 12 | COBALT | 0 | 0 | 0 | 0 |
| 13 | COPPER | 0 | 0.257498 | 0 | 0.736969 |
| 14 | Cu 324.752 | n/a | -0.240165 | 0 | 0.218513 |
| 15 | IRON | 0 | n/a | 0 | 0 |
| 17 | LEAD | 0.527941 | -0.140628 | 0 | 0 |
| 18 | LITHIUM | 0 | 0.102185 | 0 | -0.63366 |
| 19 | MAGNESIUM | 0 | -10.1326 | n/a | 0 |
| 20 | MANGANESE | 0 | -0.0376557 | 0 | 0 |
| 21 | MOLYBDENUM | 0 | -0.0668328 | 0 | 0 |
| 22 | Na 589.592 | 0 | 0.764148 | 0 | 0 |
| 23 | NICKEL | 0 | 0.0508592 | 0 | n/a |
| 25 | POTASSIUM | 0 | 0.189915 | 0 | 0 |
| 26 | SELENIUM | 0.517273 | -0.0033227 | 0 | 0 |
| 27 | SILVER | 0 | -0.307832 | 0 | 0 |
| 28 | SODIUM | 0 | -1.36433 | 2.37603 | 0 |
| 29 | STRONTIUM | 0 | 0.156116 | -0.0684507 | 0 |
| 31 | THALLIUM | 0 | 0.218141 | 0 | 0 |
| 32 | TIN | 0 | 0.345811 | 0 | 0 |
| 33 | TITANIUM | 0 | -0.293074 | 0 | 0 |
| 34 | Tl 276.787 | 0 | -42.6613 | -13.8127 | -1.44124 |
| 35 | VANADIUM | 0.628022 | -0.819165 | 0.262523 | -8.7026 |
| 36 | YTTRIUM | 103.3 | 20.499 | 18.9835 | 211.312 |
| 37 | ZINC | 0 | -0.104954 | 0.0895752 | 0 |

00128

IEC File Last Saved: 2/19/10 12:03:01 PM
Printed On: 2/19/10 2:28:15 PM

Results Data Set Name: 0503230939DV
Method Name: 6010B 200.7
Results Library: D:\pe\Administrator\Results\results.mdb

Interfering Analytes

| | Analytes | SELENIUM | VANADIUM |
|---|---|---|---|
| 1 | ALUMINUM | 0 | -36.9255 |
| 2 | ANTIMONY | 0 | 1.93753 |
| 3 | ARGON | 1178.57 | 1124.13 |
| 4 | ARSENIC | 0 | 1.57224 |
| 5 | ARSENIC2 | -0.365662 | -41.2647 |
| 6 | BARIUM | 0 | 1.58496 |
| 8 | BORON | 0 | 0 |
| 9 | CADMIUM | 0 | 0 |
| 10 | CALCIUM | 0 | 0 |
| 11 | CHROMIUM | 0.70177 | -0.426011 |
| 12 | COBALT | 0 | 0 |
| 13 | COPPER | -0.237408 | 0.949911 |
| 14 | Cu 324.752 | -0.217803 | 0.461562 |
| 15 | IRON | 0 | -48.7476 |
| 17 | LEAD | 0 | 0 |
| 18 | LITHIUM | 0 | 0.72905 |
| 19 | MAGNESIUM | 0 | 0 |
| 20 | MANGANESE | 0 | 0 |
| 21 | MOLYBDENUM | 0 | -0.261331 |
| 22 | Na 589.592 | 0 | 0 |
| 23 | NICKEL | 0 | 0 |
| 25 | POTASSIUM | 0 | 0 |
| 26 | SELENIUM | n/a | 1.05078 |
| 27 | SILVER | 0 | 0.013301 |
| 28 | SODIUM | 0 | -95.142 |
| 29 | STRONTIUM | 0 | 0 |
| 31 | THALLIUM | 0 | 0 |
| 32 | TIN | 0 | 0 |
| 33 | TITANIUM | 0 | 0 |
| 34 | Tl 276.787 | 0 | -203.043 |
| 35 | VANADIUM | -0.667099 | n/a |
| 36 | YTTRIUM | 114.746 | 111.224 |
| 37 | ZINC | 0 | 0 |

00129

==========

**Analysis Begun**

Start Time: 2/19/10 10:23:25 AM
Logged In Analyst: LAFMETALS
Spectrometer Model: Optima 3000 DV

Plasma On Time: 2/19/10 8:37:37 AM
Technique: ICP Continuous
Autosampler Model: AS-93plus

Sample Information File: D:\PE\LAFMETALS\Sample Information\6010C.sif
Results Data Set: 1002191022DV
Results Library: d:\PE\LAFMETALS\Results\Results.mdb

==========

Method Loaded
Method Name: 6010B 200.7
IEC File: 050422IEC.iec
Method Description: 6010B/200.7

Method Last Saved: 2/19/10 9:31:04 AM
MSF File:

==========

Sequence No.: 1
Sample ID: Calib Blank 1
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 2/19/10 10:23:25 AM
Sample Prep Volume:
Data Type: Original

---

Mean Data: Calib Blank 1

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| YTTRIUM | 18559713.3 | 66766.80 | 0.36% | 10.00 | mg/L |
| ALUMINUM† | 3486.3 | 41.57 | 1.19% | [0.00] | mg/L |
| ANTIMONY† | 24.0 | 10.86 | 45.19% | [0.00] | mg/L |
| ARSENIC† | -60.2 | 1.65 | 2.74% | [0.00] | mg/L |
| BARIUM† | -333.8 | 21.59 | 6.47% | [0.00] | mg/L |
| BERYLLIUM† | -16633.8 | 144.32 | 0.87% | [0.00] | mg/L |
| CADMIUM† | 469.9 | 10.07 | 2.14% | [0.00] | mg/L |
| CHROMIUM† | 1196.7 | 36.66 | 3.06% | [0.00] | mg/L |
| COBALT† | -794.2 | 3.93 | 0.49% | [0.00] | mg/L |
| COPPER† | 3320.2 | 80.73 | 2.43% | [0.00] | mg/L |
| MANGANESE† | -4089.4 | 13.18 | 0.32% | [0.00] | mg/L |
| MOLYBDENUM† | 352.8 | 10.85 | 3.08% | [0.00] | mg/L |
| NICKEL† | 2321.0 | 4.23 | 0.18% | [0.00] | mg/L |
| LEAD† | 159.3 | 19.88 | 12.48% | [0.00] | mg/L |
| SELENIUM† | -6.7 | 21.04 | 312.02% | [0.00] | mg/L |
| SILVER† | -1128.3 | 57.07 | 5.06% | [0.00] | mg/L |
| THALLIUM† | 41.6 | 12.41 | 29.83% | [0.00] | mg/L |
| VANADIUM† | 284619.3 | 987.84 | 0.35% | [0.00] | mg/L |
| ZINC† | 166.7 | 1.12 | 0.67% | [0.00] | mg/L |
| MAGNESIUM† | -6377.9 | 60.52 | 0.95% | [0.00] | mg/L |
| IRON† | -4668.9 | 16.38 | 0.35% | [0.00] | mg/L |
| CALCIUM† | -16151.0 | 781.30 | 4.84% | [0.00] | mg/L |

==========

Sequence No.: 2
Sample ID: Calib Std 1
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 2/19/10 10:27:12 AM
Sample Prep Volume:
Data Type: Original

---

Mean Data: Calib Std 1

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| YTTRIUM | 18581480.8 | 61719.92 | 0.33% | 10.01 | mg/L |
| ANTIMONY† | 16.5 | 13.03 | 79.05% | [0.005] | mg/L |
| ARSENIC† | 12.4 | 7.72 | 62.35% | [0.005] | mg/L |
| BARIUM† | 463.6 | 20.66 | 4.46% | [0.005] | mg/L |
| BERYLLIUM† | 28292.7 | 355.39 | 1.26% | [0.005] | mg/L |
| CADMIUM† | 195.8 | 4.94 | 2.52% | [0.005] | mg/L |
| CHROMIUM† | 716.3 | 17.13 | 2.39% | [0.005] | mg/L |
| COBALT† | 142.3 | 3.61 | 2.53% | [0.005] | mg/L |

| | | | | | |
|---|---|---|---|---|---|
| COPPER† | 744.6 | 99.22 | 13.33% | [0.005] | mg/L |
| MANGANESE† | 2015.6 | 4.16 | 0.21% | [0.005] | mg/L |
| MOLYBDENUM† | 165.1 | 13.11 | 7.94% | [0.005] | mg/L |
| NICKEL† | 327.2 | 17.63 | 5.39% | [0.005] | mg/L |
| LEAD† | 63.2 | 11.53 | 18.23% | [0.005] | mg/L |
| SELENIUM† | 13.7 | 16.09 | 117.07% | [0.005] | mg/L |
| SILVER† | 1262.1 | 87.09 | 6.90% | [0.005] | mg/L |
| THALLIUM† | 6.9 | 7.20 | 104.93% | [0.005] | mg/L |
| VANADIUM† | 3012.9 | 1864.19 | 61.87% | [0.005] | mg/L |
| ZINC† | 320.8 | 22.31 | 6.96% | [0.005] | mg/L |
| ARGON | Saturated2 | | | | |

Saturated in preshot (code 2)

---

**Sequence No.:** 3
**Sample ID:** Calib Std 2
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 2
**Date Collected:** 2/19/10 10:30:54 AM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: Calib Std 2**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| YTTRIUM | 18634120.0 | 86502.39 | 0.46% | 10.04 | mg/L |
| ALUMINUM† | 822.9 | 70.45 | 8.56% | [0.05] | mg/L |
| ANTIMONY† | 150.8 | 5.86 | 3.89% | [0.05] | mg/L |
| ARSENIC† | 124.0 | 8.08 | 6.52% | [0.05] | mg/L |
| BARIUM† | 4316.6 | 35.27 | 0.82% | [0.05] | mg/L |
| BERYLLIUM† | 268233.5 | 1124.60 | 0.42% | [0.05] | mg/L |
| CADMIUM† | 1835.9 | 25.30 | 1.38% | [0.05] | mg/L |
| CHROMIUM† | 6011.8 | 76.36 | 1.27% | [0.05] | mg/L |
| COBALT† | 1456.5 | 22.55 | 1.55% | [0.05] | mg/L |
| COPPER† | 6993.7 | 69.34 | 0.99% | [0.05] | mg/L |
| MANGANESE† | 19448.5 | 88.26 | 0.45% | [0.05] | mg/L |
| MOLYBDENUM† | 1448.1 | 12.37 | 0.85% | [0.05] | mg/L |
| NICKEL† | 3079.0 | 48.69 | 1.58% | [0.05] | mg/L |
| LEAD† | 617.0 | 14.61 | 2.37% | [0.05] | mg/L |
| SELENIUM† | 171.4 | 19.54 | 11.40% | [0.05] | mg/L |
| SILVER† | 11338.8 | 102.21 | 0.90% | [0.05] | mg/L |
| THALLIUM† | 164.9 | 3.26 | 1.98% | [0.05] | mg/L |
| VANADIUM† | 21168.7 | 913.26 | 4.31% | [0.05] | mg/L |
| ZINC† | 3252.3 | 36.57 | 1.12% | [0.05] | mg/L |
| MAGNESIUM† | 691.7 | 47.33 | 6.84% | [0.05] | mg/L |
| IRON† | 818.4 | 13.37 | 1.63% | [0.05] | mg/L |
| CALCIUM† | 2177.6 | 107.87 | 4.95% | [0.05] | mg/L |

---

**Sequence No.:** 4
**Sample ID:** Calib Std 3
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 3
**Date Collected:** 2/19/10 10:34:40 AM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: Calib Std 3**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| YTTRIUM | 18640586.1 | 120090.90 | 0.64% | 10.04 | mg/L |
| ALUMINUM† | 1617.0 | 38.21 | 2.36% | [0.10] | mg/L |
| ANTIMONY† | 306.6 | 14.32 | 4.67% | [0.10] | mg/L |
| ARSENIC† | 261.0 | 4.28 | 1.64% | [0.10] | mg/L |
| BARIUM† | 8733.0 | 33.49 | 0.38% | [0.10] | mg/L |
| BERYLLIUM† | 548113.6 | 3156.50 | 0.58% | [0.10] | mg/L |
| CADMIUM† | 3737.9 | 39.58 | 1.06% | [0.10] | mg/L |
| CHROMIUM† | 12234.1 | 19.21 | 0.16% | [0.10] | mg/L |
| COBALT† | 3009.8 | 28.96 | 0.96% | [0.10] | mg/L |
| COPPER† | 14186.5 | 83.25 | 0.59% | [0.10] | mg/L |
| MANGANESE† | 39379.0 | 181.29 | 0.46% | [0.10] | mg/L |
| MOLYBDENUM† | 2954.5 | 30.56 | 1.03% | [0.10] | mg/L |
| NICKEL† | 6334.6 | 74.97 | 1.18% | [0.10] | mg/L |

| | | | | | |
|---|---|---|---|---|---|
| LEAD† | 1244.6 | 7.28 | 0.58% | [0.10] | mg/L |
| SELENIUM† | 367.3 | 1.66 | 0.45% | [0.10] | mg/L |
| SILVER† | 23275.5 | 152.38 | 0.65% | [0.10] | mg/L |
| THALLIUM† | 354.2 | 16.41 | 4.63% | [0.10] | mg/L |
| VANADIUM† | 44075.4 | 2065.51 | 4.69% | [0.10] | mg/L |
| ZINC† | 6702.6 | 68.28 | 1.02% | [0.10] | mg/L |
| MAGNESIUM† | 1258.7 | 32.24 | 2.56% | [0.10] | mg/L |
| IRON† | 1619.2 | 42.50 | 2.62% | [0.10] | mg/L |
| CALCIUM† | 6572.0 | 295.18 | 4.49% | [0.10] | mg/L |

**Sequence No.:** 5
**Sample ID:** Calib Std 4
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 9
**Date Collected:** 2/19/10 10:38:27 AM
**Sample Prep Volume:**
**Data Type:** Original

**Mean Data:** Calib Std 4

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| YTTRIUM | 18619899.0 | 190578.99 | 1.02% | 10.03 | mg/L |
| ALUMINUM† | 8806.5 | 54.12 | 0.61% | [0.50] | mg/L |
| ANTIMONY† | 1526.6 | 19.81 | 1.30% | [0.50] | mg/L |
| ARSENIC† | 1264.8 | 13.45 | 1.06% | [0.50] | mg/L |
| BARIUM† | 45258.3 | 424.23 | 0.94% | [0.50] | mg/L |
| BERYLLIUM† | 2837334.3 | 17893.47 | 0.63% | [0.50] | mg/L |
| CADMIUM† | 19433.0 | 217.46 | 1.12% | [0.50] | mg/L |
| CHROMIUM† | 62937.9 | 605.54 | 0.96% | [0.50] | mg/L |
| COBALT† | 15394.2 | 164.37 | 1.07% | [0.50] | mg/L |
| COPPER† | 74703.0 | 815.83 | 1.09% | [0.50] | mg/L |
| MANGANESE† | 202245.2 | 1929.36 | 0.95% | [0.50] | mg/L |
| MOLYBDENUM† | 14948.2 | 182.06 | 1.22% | [0.50] | mg/L |
| NICKEL† | 32777.9 | 279.08 | 0.85% | [0.50] | mg/L |
| LEAD† | 6412.0 | 75.64 | 1.18% | [0.50] | mg/L |
| SELENIUM† | 1899.9 | 30.46 | 1.60% | [0.50] | mg/L |
| SILVER† | 119841.1 | 1150.13 | 0.96% | [0.50] | mg/L |
| THALLIUM† | 1793.4 | 30.61 | 1.71% | [0.50] | mg/L |
| VANADIUM† | 227986.6 | 5078.95 | 2.23% | [0.50] | mg/L |
| ZINC† | 35309.2 | 335.96 | 0.95% | [0.50] | mg/L |
| MAGNESIUM† | 6583.7 | 17.55 | 0.27% | [0.50] | mg/L |
| IRON† | 8180.2 | 47.04 | 0.57% | [0.50] | mg/L |
| CALCIUM† | 39591.7 | 234.94 | 0.59% | [0.50] | mg/L |

**Sequence No.:** 6
**Sample ID:** Calib Std 5
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 10
**Date Collected:** 2/19/10 10:42:33 AM
**Sample Prep Volume:**
**Data Type:** Original

**Mean Data:** Calib Std 5

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| YTTRIUM | 18674595.8 | 77220.37 | 0.41% | 10.06 | mg/L |
| ALUMINUM† | 18005.9 | 119.47 | 0.66% | [1.00] | mg/L |
| ANTIMONY† | 3130.1 | 26.59 | 0.85% | [1.00] | mg/L |
| ARSENIC† | 2564.7 | 18.52 | 0.72% | [1.00] | mg/L |
| BARIUM† | 92515.5 | 458.35 | 0.50% | [1.00] | mg/L |
| BERYLLIUM† | 5834884.8 | 3455.79 | 0.06% | [1.00] | mg/L |
| CADMIUM† | 40466.5 | 204.19 | 0.50% | [1.00] | mg/L |
| CHROMIUM† | 128700.4 | 482.57 | 0.37% | [1.00] | mg/L |
| COBALT† | 31704.4 | 215.75 | 0.68% | [1.00] | mg/L |
| COPPER† | 155372.2 | 636.57 | 0.41% | [1.00] | mg/L |
| MANGANESE† | 411191.9 | 1532.71 | 0.37% | [1.00] | mg/L |
| MOLYBDENUM† | 30791.2 | 242.15 | 0.79% | [1.00] | mg/L |
| NICKEL† | 67344.5 | 289.22 | 0.43% | [1.00] | mg/L |
| LEAD† | 13117.1 | 91.91 | 0.70% | [1.00] | mg/L |
| SELENIUM† | 3860.3 | 57.21 | 1.48% | [1.00] | mg/L |
| SILVER† | 246364.2 | 940.33 | 0.38% | [1.00] | mg/L |

| | | | | |
|---|---|---|---|---|
| THALLIUM† | 3471.7 | 14.79 | 0.43% | [1.00] mg/L |
| VANADIUM† | 464780.8 | 3146.55 | 0.68% | [1.00] mg/L |
| ZINC† | 72992.1 | 358.25 | 0.49% | [1.00] mg/L |
| MAGNESIUM† | 13546.7 | 123.16 | 0.91% | [1.00] mg/L |
| IRON† | 16791.5 | 115.38 | 0.69% | [1.00] mg/L |
| CALCIUM† | 82965.7 | 266.80 | 0.32% | [1.00] mg/L |

**Calibration Summary**

| Analyte | Stds. | Equation | Intercept | Slope | Curvature | Corr. Coef. | Reslope |
|---|---|---|---|---|---|---|---|
| ALUMINUM | 4 | Lin, Calc Int | -105.5 | 18050 | 0.00000 | 0.999925 | |
| ANTIMONY | 5 | Lin, Calc Int | -6.1 | 3122 | 0.00000 | 0.999931 | |
| ARSENIC | 5 | Lin, Calc Int | -1.7 | 2560 | 0.00000 | 0.999974 | |
| BARIUM | 5 | Lin, Calc Int | -282.7 | 92440 | 0.00000 | 0.999942 | |
| BERYLLIUM | 5 | Lin, Calc Int | -21194.6 | 5827000 | 0.00000 | 0.999910 | |
| CADMIUM | 5 | Lin, Calc Int | -189.4 | 40370 | 0.00000 | 0.999817 | |
| CHROMIUM | 5 | Lin, Calc Int | -355.7 | 128500 | 0.00000 | 0.999940 | |
| COBALT | 5 | Lin, Calc Int | -113.2 | 31650 | 0.00000 | 0.999905 | |
| COPPER | 5 | Lin, Calc Int | -772.1 | 155100 | 0.00000 | 0.999823 | |
| MANGANESE | 5 | Lin, Calc Int | -977.7 | 411000 | 0.00000 | 0.999967 | |
| MOLYBDENUM | 5 | Lin, Calc Int | -87.9 | 30720 | 0.00000 | 0.999902 | |
| NICKEL | 5 | Lin, Calc Int | -243.9 | 67270 | 0.00000 | 0.999916 | |
| LEAD | 5 | Lin, Calc Int | -38.5 | 13100 | 0.00000 | 0.999940 | |
| SELENIUM | 5 | Lin, Calc Int | -13.7 | 3864 | 0.00000 | 0.999967 | |
| SILVER | 5 | Lin, Calc Int | -840.3 | 246000 | 0.00000 | 0.999912 | |
| THALLIUM | 5 | Lin, Calc Int | 1.9 | 3492 | 0.00000 | 0.999854 | |
| VANADIUM | 5 | Lin, Calc Int | -1267.5 | 464400 | 0.00000 | 0.999946 | |
| ZINC | 5 | Lin, Calc Int | -350.5 | 72920 | 0.00000 | 0.999872 | |
| MAGNESIUM | 4 | Lin, Calc Int | -47.7 | 13530 | 0.00000 | 0.999884 | |
| IRON | 4 | Lin, Calc Int | -51.6 | 16770 | 0.00000 | 0.999920 | |
| CALCIUM | 4 | Lin, Calc Int | -1405.4 | 83840 | 0.00000 | 0.999639 | |

**Sequence No.:** 7
**Sample ID:** ICV
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 6
**Date Collected:** 2/19/10 10:47:00 AM
**Sample Prep Volume:**
**Data Type:** Original

Mean Data: ICV

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18675041.5 | 10.06 | mg/L | 0.060 | | | | 0.59% |
| ALUMINUM† | 17548.8 | 1.015 | mg/L | 0.0093 | 1.015 | mg/L | 0.0093 | 0.91% |
| QC value within limits for ALUMINUM Recovery = 101.53% | | | | | | | | |
| ANTIMONY† | 2917.8 | 0.9427 | mg/L | 0.00767 | 0.9427 | mg/L | 0.00767 | 0.81% |
| QC value less than the lower limit for ANTIMONY Recovery = 94.27% | | | | | | | | |
| ARSENIC† | 2378.1 | 0.9227 | mg/L | 0.00379 | 0.9227 | mg/L | 0.00379 | 0.41% |
| QC value less than the lower limit for ARSENIC Recovery = 92.27% | | | | | | | | |
| BARIUM† | 91513.9 | 0.9925 | mg/L | 0.00604 | 0.9925 | mg/L | 0.00604 | 0.61% |
| QC value within limits for BARIUM Recovery = 99.25% | | | | | | | | |
| BERYLLIUM† | 5626268.9 | 0.9692 | mg/L | 0.00083 | 0.9692 | mg/L | 0.00083 | 0.09% |
| QC value within limits for BERYLLIUM Recovery = 96.92% | | | | | | | | |
| CADMIUM† | 39248.4 | 0.9770 | mg/L | 0.00650 | 0.9770 | mg/L | 0.00650 | 0.67% |
| QC value within limits for CADMIUM Recovery = 97.70% | | | | | | | | |
| CHROMIUM† | 125568.0 | 0.9796 | mg/L | 0.00514 | 0.9796 | mg/L | 0.00514 | 0.52% |
| QC value within limits for CHROMIUM Recovery = 97.96% | | | | | | | | |
| COBALT† | 31141.3 | 0.9874 | mg/L | 0.00828 | 0.9874 | mg/L | 0.00828 | 0.84% |
| QC value within limits for COBALT Recovery = 98.74% | | | | | | | | |
| COPPER† | 152662.9 | 0.9864 | mg/L | 0.00417 | 0.9864 | mg/L | 0.00417 | 0.42% |
| QC value within limits for COPPER Recovery = 98.64% | | | | | | | | |
| MANGANESE† | 401476.3 | 0.9793 | mg/L | 0.00492 | 0.9793 | mg/L | 0.00492 | 0.50% |
| QC value within limits for MANGANESE Recovery = 97.93% | | | | | | | | |
| MOLYBDENUM† | 29725.1 | 0.9709 | mg/L | 0.00722 | 0.9709 | mg/L | 0.00722 | 0.74% |
| QC value within limits for MOLYBDENUM Recovery = 97.09% | | | | | | | | |
| NICKEL† | 66058.9 | 0.9856 | mg/L | 0.00519 | 0.9856 | mg/L | 0.00519 | 0.53% |
| QC value within limits for NICKEL Recovery = 98.56% | | | | | | | | |
| LEAD† | 12859.0 | 0.9851 | mg/L | 0.00721 | 0.9851 | mg/L | 0.00721 | 0.73% |
| QC value within limits for LEAD Recovery = 98.51% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| SELENIUM† | 3784.5 | 0.9824 mg/L | 0.00394 | 0.9824 mg/L | 0.00394 | 0.40% |
| QC value within limits for SELENIUM Recovery = 98.24% | | | | | | |
| SILVER† | 240290.9 | 0.9805 mg/L | 0.00492 | 0.9805 mg/L | 0.00492 | 0.50% |
| QC value within limits for SILVER Recovery = 98.05% | | | | | | |
| THALLIUM† | 3366.2 | 0.9625 mg/L | 0.01378 | 0.9625 mg/L | 0.01378 | 1.43% |
| QC value within limits for THALLIUM Recovery = 96.25% | | | | | | |
| VANADIUM† | 447724.0 | 0.9747 mg/L | 0.00743 | 0.9747 mg/L | 0.00743 | 0.76% |
| QC value within limits for VANADIUM Recovery = 97.47% | | | | | | |
| ZINC† | 71650.0 | 0.9793 mg/L | 0.00621 | 0.9793 mg/L | 0.00621 | 0.63% |
| QC value within limits for ZINC Recovery = 97.93% | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 13216.4 | 0.9905 mg/L | 0.00303 | 0.9905 mg/L | 0.00303 | 0.31% |
| QC value within limits for MAGNESIUM Recovery = 99.05% | | | | | | |
| IRON† | 16329.7 | 1.03 mg/L | 0.007 | 1.03 mg/L | 0.007 | 0.71% |
| QC value within limits for IRON Recovery = 103.12% | | | | | | |
| CALCIUM† | 80736.6 | 0.983 mg/L | 0.0038 | 0.983 mg/L | 0.0038 | 0.39% |
| QC value within limits for CALCIUM Recovery = 98.26% | | | | | | |

QC Failed. Continue with analysis.

---

**Sequence No.: 8** Autosampler Location: 11
**Sample ID: LLICV** Date Collected: 2/19/10 10:52:00 AM
**Analyst: KL**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

---

**Sequence No.: 8** Autosampler Location: 11
**Sample ID: LLICV** Date Collected: 2/19/10 10:53:42 AM
**Analyst: KL**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

---

Mean Data: LLICV

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18571147.1 | 10.01 | mg/L | 0.026 | | | | 0.26% |
| ALUMINUM† | 1602.4 | 0.0957 | mg/L | 0.00491 | 0.0957 | mg/L | 0.00491 | 5.13% |
| ANTIMONY† | 62.0 | 0.0219 | mg/L | 0.00263 | 0.0219 | mg/L | 0.00263 | 12.01% |
| ARSENIC† | 64.1 | 0.0256 | mg/L | 0.00268 | 0.0256 | mg/L | 0.00268 | 10.46% |
| BARIUM† | 886.0 | 0.0126 | mg/L | 0.00021 | 0.0126 | mg/L | 0.00021 | 1.66% |
| BERYLLIUM† | 54206.2 | 0.0129 | mg/L | 0.00007 | 0.0129 | mg/L | 0.00007 | 0.51% |
| CADMIUM† | 399.7 | 0.0146 | mg/L | 0.00031 | 0.0146 | mg/L | 0.00031 | 2.13% |
| CHROMIUM† | 1229.9 | 0.0123 | mg/L | 0.00045 | 0.0123 | mg/L | 0.00045 | 3.61% |
| COBALT† | 265.5 | 0.0120 | mg/L | 0.00011 | 0.0120 | mg/L | 0.00011 | 0.91% |
| COPPER† | 1671.5 | 0.0157 | mg/L | 0.00041 | 0.0157 | mg/L | 0.00041 | 2.59% |
| MANGANESE† | 3850.7 | 0.0118 | mg/L | 0.00007 | 0.0118 | mg/L | 0.00007 | 0.59% |
| MOLYBDENUM† | 305.2 | 0.0128 | mg/L | 0.00039 | 0.0128 | mg/L | 0.00039 | 3.04% |
| NICKEL† | 645.4 | 0.0132 | mg/L | 0.00009 | 0.0132 | mg/L | 0.00009 | 0.72% |
| LEAD† | 139.8 | 0.0136 | mg/L | 0.00114 | 0.0136 | mg/L | 0.00114 | 8.40% |
| SELENIUM† | 60.5 | 0.0192 | mg/L | 0.00609 | 0.0192 | mg/L | 0.00609 | 31.67% |
| SILVER† | 2271.7 | 0.0127 | mg/L | 0.00011 | 0.0127 | mg/L | 0.00011 | 0.84% |
| THALLIUM† | 109.3 | 0.0307 | mg/L | 0.00711 | 0.0307 | mg/L | 0.00711 | 23.15% |
| VANADIUM† | 7811.2 | 0.0196 | mg/L | 0.00185 | 0.0196 | mg/L | 0.00185 | 9.43% |
| ZINC† | 1345.5 | 0.0232 | mg/L | 0.00027 | 0.0232 | mg/L | 0.00027 | 1.18% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1195.7 | 0.0928 | mg/L | 0.00806 | 0.0928 | mg/L | 0.00806 | 8.68% |
| IRON† | 1470.3 | 0.092 | mg/L | 0.0006 | 0.092 | mg/L | 0.0006 | 0.71% |
| CALCIUM† | 17752.5 | 0.229 | mg/L | 0.0045 | 0.229 | mg/L | 0.0045 | 1.96% |

---

**Sequence No.: 9** Autosampler Location: 7
**Sample ID: ICB** Date Collected: 2/19/10 10:58:33 AM
**Analyst:**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

---

Mean Data: ICB

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18482574.3 | 9.958 | mg/L | 0.0269 | | | | 0.27% |
| ALUMINUM† | 25.4 | 0.0075 | mg/L | 0.00238 | 0.0075 | mg/L | 0.00238 | 31.85% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | -3.7 | 0.0008 | mg/L | 0.00125 | 0.0008 | mg/L | 0.00125 | 156.89% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | 5.2 | 0.0027 | mg/L | 0.00311 | 0.0027 | mg/L | 0.00311 | 115.71% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | 16.6 | 0.0032 | mg/L | 0.00021 | 0.0032 | mg/L | 0.00021 | 6.43% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | 202.7 | 0.0037 | mg/L | 0.00004 | 0.0037 | mg/L | 0.00004 | 0.96% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | 11.7 | 0.0050 | mg/L | 0.00028 | 0.0050 | mg/L | 0.00028 | 5.64% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 73.6 | 0.0033 | mg/L | 0.00051 | 0.0033 | mg/L | 0.00051 | 15.14% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -20.6 | 0.0029 | mg/L | 0.00098 | 0.0029 | mg/L | 0.00098 | 33.40% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 151.4 | 0.0059 | mg/L | 0.00055 | 0.0059 | mg/L | 0.00055 | 9.20% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -29.4 | 0.0023 | mg/L | 0.00003 | 0.0023 | mg/L | 0.00003 | 1.49% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | 7.3 | 0.0031 | mg/L | 0.00021 | 0.0031 | mg/L | 0.00021 | 6.92% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 50.3 | 0.0044 | mg/L | 0.00017 | 0.0044 | mg/L | 0.00017 | 3.80% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | 9.4 | 0.0037 | mg/L | 0.00167 | 0.0037 | mg/L | 0.00167 | 45.73% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | 11.8 | 0.0066 | mg/L | 0.00840 | 0.0066 | mg/L | 0.00840 | 127.25% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -15.3 | 0.0034 | mg/L | 0.00023 | 0.0034 | mg/L | 0.00023 | 6.82% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | -7.5 | -0.0027 | mg/L | 0.00314 | -0.0027 | mg/L | 0.00314 | 116.92% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 559.7 | 0.0040 | mg/L | 0.00249 | 0.0040 | mg/L | 0.00249 | 62.90% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | 19.3 | 0.0050 | mg/L | 0.00015 | 0.0050 | mg/L | 0.00015 | 2.92% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | -10.8 | 0.0027 | mg/L | 0.00841 | 0.0027 | mg/L | 0.00841 | 309.36% |
| QC value within limits for MAGNESIUM Recovery = Not calculated | | | | | | | | |
| IRON† | -74.8 | -0.001 | mg/L | 0.0011 | -0.001 | mg/L | 0.0011 | 89.74% |
| QC value within limits for IRON Recovery = Not calculated | | | | | | | | |
| CALCIUM† | 2608.3 | 0.048 | mg/L | 0.0029 | 0.048 | mg/L | 0.0029 | 6.00% |
| QC value within limits for CALCIUM Recovery = Not calculated | | | | | | | | |

All analytes passed QC.

---

**Sequence No.:** 10
**Sample ID:** CCV
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 6
**Date Collected:** 2/19/10 11:03:22 AM
**Sample Prep Volume:**
**Data Type:** Original

---

Mean Data: CCV

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18608108.5 | 10.03 | mg/L | 0.059 | | | | 0.59% |
| ALUMINUM† | 8636.4 | 0.5029 | mg/L | 0.00802 | 0.5029 | mg/L | 0.00802 | 1.60% |
| QC value within limits for ALUMINUM Recovery = 100.57% | | | | | | | | |
| ANTIMONY† | 1500.4 | 0.4856 | mg/L | 0.00498 | 0.4856 | mg/L | 0.00498 | 1.03% |
| QC value within limits for ANTIMONY Recovery = 97.11% | | | | | | | | |
| ARSENIC† | 1235.9 | 0.4800 | mg/L | 0.00331 | 0.4800 | mg/L | 0.00331 | 0.69% |
| QC value within limits for ARSENIC Recovery = 96.00% | | | | | | | | |
| BARIUM† | 44573.7 | 0.4850 | mg/L | 0.00431 | 0.4850 | mg/L | 0.00431 | 0.89% |
| QC value within limits for BARIUM Recovery = 97.00% | | | | | | | | |
| BERYLLIUM† | 2784151.3 | 0.4814 | mg/L | 0.00509 | 0.4814 | mg/L | 0.00509 | 1.06% |

QC value within limits for BERYLLIUM Recovery = 96.28%

| | | | | | | |
|---|---|---|---|---|---|---|
| CADMIUM† | 19056.9 | 0.4768 mg/L | 0.00214 | 0.4768 mg/L | 0.00214 | 0.45% |

QC value within limits for CADMIUM Recovery = 95.36%

| | | | | | | |
|---|---|---|---|---|---|---|
| CHROMIUM† | 62109.9 | 0.4860 mg/L | 0.00495 | 0.4860 mg/L | 0.00495 | 1.02% |

QC value within limits for CHROMIUM Recovery = 97.19%

| | | | | | | |
|---|---|---|---|---|---|---|
| COBALT† | 15088.6 | 0.4803 mg/L | 0.00241 | 0.4803 mg/L | 0.00241 | 0.50% |

QC value within limits for COBALT Recovery = 96.05%

| | | | | | | |
|---|---|---|---|---|---|---|
| COPPER† | 73480.7 | 0.4773 mg/L | 0.00540 | 0.4773 mg/L | 0.00540 | 1.13% |

QC value within limits for COPPER Recovery = 95.46%

| | | | | | | |
|---|---|---|---|---|---|---|
| MANGANESE† | 199027.9 | 0.4867 mg/L | 0.00467 | 0.4867 mg/L | 0.00467 | 0.96% |

QC value within limits for MANGANESE Recovery = 97.34%

| | | | | | | |
|---|---|---|---|---|---|---|
| MOLYBDENUM† | 14706.7 | 0.4818 mg/L | 0.00245 | 0.4818 mg/L | 0.00245 | 0.51% |

QC value within limits for MOLYBDENUM Recovery = 96.36%

| | | | | | | |
|---|---|---|---|---|---|---|
| NICKEL† | 32298.2 | 0.4838 mg/L | 0.00529 | 0.4838 mg/L | 0.00529 | 1.09% |

QC value within limits for NICKEL Recovery = 96.75%

| | | | | | | |
|---|---|---|---|---|---|---|
| LEAD† | 6275.5 | 0.4823 mg/L | 0.00187 | 0.4823 mg/L | 0.00187 | 0.39% |

QC value within limits for LEAD Recovery = 96.45%

| | | | | | | |
|---|---|---|---|---|---|---|
| SELENIUM† | 1861.5 | 0.4850 mg/L | 0.00825 | 0.4850 mg/L | 0.00825 | 1.70% |

QC value within limits for SELENIUM Recovery = 97.00%

| | | | | | | |
|---|---|---|---|---|---|---|
| SILVER† | 118199.9 | 0.4841 mg/L | 0.00532 | 0.4841 mg/L | 0.00532 | 1.10% |

QC value within limits for SILVER Recovery = 96.81%

| | | | | | | |
|---|---|---|---|---|---|---|
| THALLIUM† | 1706.5 | 0.4877 mg/L | 0.00565 | 0.4877 mg/L | 0.00565 | 1.16% |

QC value within limits for THALLIUM Recovery = 97.54%

| | | | | | | |
|---|---|---|---|---|---|---|
| VANADIUM† | 222798.7 | 0.4863 mg/L | 0.01004 | 0.4863 mg/L | 0.01004 | 2.06% |

QC value within limits for VANADIUM Recovery = 97.27%

| | | | | | | |
|---|---|---|---|---|---|---|
| ZINC† | 34778.2 | 0.4777 mg/L | 0.00497 | 0.4777 mg/L | 0.00497 | 1.04% |

QC value within limits for ZINC Recovery = 95.54%

ARGON Saturated2

Saturated in preshot (code 2)

| | | | | | | |
|---|---|---|---|---|---|---|
| MAGNESIUM† | 6447.3 | 0.4850 mg/L | 0.00438 | 0.4850 mg/L | 0.00438 | 0.90% |

QC value within limits for MAGNESIUM Recovery = 97.00%

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 7978.1 | 0.506 mg/L | 0.0018 | 0.506 mg/L | 0.0018 | 0.36% |

QC value within limits for IRON Recovery = 101.18%

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 38618.3 | 0.479 mg/L | 0.0058 | 0.479 mg/L | 0.0058 | 1.22% |

QC value within limits for CALCIUM Recovery = 95.76%

All analytes passed QC.

---

**Sequence No.:** 11
**Sample ID:** LLCCV
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 12
**Date Collected:** 2/19/10 11:08:30 AM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: LLCCV**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18511475.7 | 9.974 | mg/L | 0.0624 | | | | 0.63% |
| ALUMINUM† | 1568.0 | 0.0938 | mg/L | 0.00348 | 0.0938 | mg/L | 0.00348 | 3.71% |
| ANTIMONY† | 57.0 | 0.0203 | mg/L | 0.00147 | 0.0203 | mg/L | 0.00147 | 7.24% |
| ARSENIC† | 56.1 | 0.0225 | mg/L | 0.00664 | 0.0225 | mg/L | 0.00664 | 29.57% |
| BARIUM† | 879.7 | 0.0126 | mg/L | 0.00018 | 0.0126 | mg/L | 0.00018 | 1.46% |
| BERYLLIUM† | 54185.8 | 0.0129 | mg/L | 0.00006 | 0.0129 | mg/L | 0.00006 | 0.49% |
| CADMIUM† | 389.1 | 0.0143 | mg/L | 0.00031 | 0.0143 | mg/L | 0.00031 | 2.18% |
| CHROMIUM† | 1253.9 | 0.0125 | mg/L | 0.00038 | 0.0125 | mg/L | 0.00038 | 3.02% |
| COBALT† | 273.4 | 0.0122 | mg/L | 0.00028 | 0.0122 | mg/L | 0.00028 | 2.32% |
| COPPER† | 1645.1 | 0.0155 | mg/L | 0.00076 | 0.0155 | mg/L | 0.00076 | 4.88% |
| MANGANESE† | 3832.4 | 0.0117 | mg/L | 0.00001 | 0.0117 | mg/L | 0.00001 | 0.10% |
| MOLYBDENUM† | 303.7 | 0.0128 | mg/L | 0.00028 | 0.0128 | mg/L | 0.00028 | 2.16% |
| NICKEL† | 642.2 | 0.0132 | mg/L | 0.00051 | 0.0132 | mg/L | 0.00051 | 3.87% |
| LEAD† | 136.6 | 0.0134 | mg/L | 0.00090 | 0.0134 | mg/L | 0.00090 | 6.73% |
| SELENIUM† | 67.6 | 0.0211 | mg/L | 0.00272 | 0.0211 | mg/L | 0.00272 | 12.90% |
| SILVER† | 2230.7 | 0.0125 | mg/L | 0.00025 | 0.0125 | mg/L | 0.00025 | 2.00% |
| THALLIUM† | 131.1 | 0.0370 | mg/L | 0.00530 | 0.0370 | mg/L | 0.00530 | 14.34% |
| VANADIUM† | 8112.4 | 0.0203 | mg/L | 0.00191 | 0.0203 | mg/L | 0.00191 | 9.41% |
| ZINC† | 1303.4 | 0.0226 | mg/L | 0.00010 | 0.0226 | mg/L | 0.00010 | 0.45% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1307.1 | 0.1011 | mg/L | 0.00844 | 0.1011 | mg/L | 0.00844 | 8.35% |
| IRON† | 1487.5 | 0.093 | mg/L | 0.0016 | 0.093 | mg/L | 0.0016 | 1.73% |

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 14977.2 | 0.195 mg/L | 0.0028 | 0.195 mg/L | 0.0028 | 1.41% |

**Sequence No.: 12** Autosampler Location: 7
**Sample ID: CCB** Date Collected: 2/19/10 11:13:22 AM
**Analyst:**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

Mean Data: CCB

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18452068.8 | 9.942 | mg/L | 0.0149 | | | | 0.15% |
| ALUMINUM† | 47.0 | 0.0086 | mg/L | 0.00087 | 0.0086 | mg/L | 0.00087 | 10.15% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | -7.1 | -0.0003 | mg/L | 0.00137 | -0.0003 | mg/L | 0.00137 | 455.59% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | 2.8 | 0.0017 | mg/L | 0.00580 | 0.0017 | mg/L | 0.00580 | 335.54% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | -3.9 | 0.0030 | mg/L | 0.00019 | 0.0030 | mg/L | 0.00019 | 6.43% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | 96.7 | 0.0037 | mg/L | 0.00010 | 0.0037 | mg/L | 0.00010 | 2.75% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | 8.8 | 0.0049 | mg/L | 0.00011 | 0.0049 | mg/L | 0.00011 | 2.30% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 28.3 | 0.0030 | mg/L | 0.00059 | 0.0030 | mg/L | 0.00059 | 19.81% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -36.6 | 0.0024 | mg/L | 0.00006 | 0.0024 | mg/L | 0.00006 | 2.53% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 104.7 | 0.0056 | mg/L | 0.00030 | 0.0056 | mg/L | 0.00030 | 5.29% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -36.8 | 0.0023 | mg/L | 0.00004 | 0.0023 | mg/L | 0.00004 | 1.88% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | 11.3 | 0.0032 | mg/L | 0.00020 | 0.0032 | mg/L | 0.00020 | 6.21% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 45.4 | 0.0043 | mg/L | 0.00029 | 0.0043 | mg/L | 0.00029 | 6.75% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | 18.1 | 0.0043 | mg/L | 0.00106 | 0.0043 | mg/L | 0.00106 | 24.47% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | 0.3 | 0.0036 | mg/L | 0.00271 | 0.0036 | mg/L | 0.00271 | 74.93% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -54.8 | 0.0032 | mg/L | 0.00055 | 0.0032 | mg/L | 0.00055 | 17.19% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | -1.3 | -0.0009 | mg/L | 0.00546 | -0.0009 | mg/L | 0.00546 | 597.46% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | -614.2 | 0.0014 | mg/L | 0.00428 | 0.0014 | mg/L | 0.00428 | 299.22% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | -7.3 | 0.0047 | mg/L | 0.00006 | 0.0047 | mg/L | 0.00006 | 1.28% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | -42.3 | 0.0004 | mg/L | 0.00415 | 0.0004 | mg/L | 0.00415 | >999.9% |
| QC value within limits for MAGNESIUM Recovery = Not calculated | | | | | | | | |
| IRON† | -67.6 | -0.001 | mg/L | 0.0010 | -0.001 | mg/L | 0.0010 | 115.08% |
| QC value within limits for IRON Recovery = Not calculated | | | | | | | | |
| CALCIUM† | 2488.2 | 0.046 | mg/L | 0.0006 | 0.046 | mg/L | 0.0006 | 1.21% |
| QC value within limits for CALCIUM Recovery = Not calculated | | | | | | | | |

All analytes passed QC.

**Sequence No.: 13** Autosampler Location: 4
**Sample ID: ICSA** Date Collected: 2/19/10 11:18:11 AM
**Analyst:**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

Mean Data: ICSA

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| YTTRIUM | 16809031.7 | 9.057 mg/L | 0.0151 | | | 0.17% |
| ALUMINUM† | 9348249.2 | 518.7 mg/L | 0.54 | 518.7 mg/L | 0.54 | 0.10% |
| QC value within limits for ALUMINUM Recovery = 103.74% | | | | | | |
| ANTIMONY† | -104.8 | -0.0305 mg/L | 0.00285 | -0.0305 mg/L | 0.00285 | 9.34% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | |
| ARSENIC† | -126.9 | 0.0147 mg/L | 0.00202 | 0.0147 mg/L | 0.00202 | 13.75% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | |
| BARIUM† | 434.8 | 0.0086 mg/L | 0.00029 | 0.0086 mg/L | 0.00029 | 3.35% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | |
| BERYLLIUM† | -5212.8 | 0.0027 mg/L | 0.00007 | 0.0027 mg/L | 0.00007 | 2.45% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | |
| CADMIUM† | -285.6 | 0.0122 mg/L | 0.00032 | 0.0122 mg/L | 0.00032 | 2.64% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | |
| CHROMIUM† | 2159.1 | 0.0196 mg/L | 0.00019 | 0.0196 mg/L | 0.00019 | 0.98% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | |
| COBALT† | -79.8 | 0.0011 mg/L | 0.00077 | 0.0011 mg/L | 0.00077 | 72.86? |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | |
| COPPER† | 14604.3 | 0.0010 mg/L | 0.00099 | 0.0010 mg/L | 0.00099 | 94.02% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | |
| MANGANESE† | -8053.0 | 0.0001 mg/L | 0.00020 | 0.0001 mg/L | 0.00020 | 372.91% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | |
| MOLYBDENUM† | -1020.1 | 0.0003 mg/L | 0.00202 | 0.0003 mg/L | 0.00202 | 631.68% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | |
| NICKEL† | 1280.1 | -0.0007 mg/L | 0.00029 | -0.0007 mg/L | 0.00029 | 42.84% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | |
| LEAD† | -835.1 | 0.0037 mg/L | 0.00139 | 0.0037 mg/L | 0.00139 | 37.58% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | |
| SELENIUM† | -854.6 | 0.0042 mg/L | 0.00577 | 0.0042 mg/L | 0.00577 | 136.21% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | |
| SILVER† | -29711.0 | 0.0238 mg/L | 0.00134 | 0.0238 mg/L | 0.00134 | 5.63? |
| QC value greater than the upper limit for SILVER Recovery = Not calculated | | | | | | |
| THALLIUM† | 286.0 | -0.0187 mg/L | 0.00473 | -0.0187 mg/L | 0.00473 | 25.26% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | |
| VANADIUM† | 25669.2 | 0.0024 mg/L | 0.00436 | 0.0024 mg/L | 0.00436 | 185.32% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | |
| ZINC† | -1612.8 | -0.0148 mg/L | 0.00018 | -0.0148 mg/L | 0.00018 | 1.21% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 6869209.7 | 512.5 mg/L | 2.03 | 512.5 mg/L | 2.03 | 0.40% |
| QC value within limits for MAGNESIUM Recovery = 102.49% | | | | | | |
| IRON† | 7690033.4 | 459 mg/L | 1.6 | 459 mg/L | 1.6 | 0.35% |
| QC value within limits for IRON Recovery = 91.72% | | | | | | |
| CALCIUM† | 41668794.9 | 497 mg/L | 0.2 | 497 mg/L | 0.2 | 0.03% |
| QC value within limits for CALCIUM Recovery = 99.41% | | | | | | |

QC Failed. Continue with analysis.

---

**Sequence No.:** 14
**Sample ID:** ICSAB
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 5
**Date Collected:** 2/19/10 11:22:44 AM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: ICSAB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16675693.0 | 8.985 | mg/L | 0.0268 | | | | 0.30% |
| ALUMINUM† | 9347551.3 | 518.8 | mg/L | 0.25 | 518.8 | mg/L | 0.25 | 0.05? |
| QC value within limits for ALUMINUM Recovery = 103.75% | | | | | | | | |
| ANTIMONY† | 32451.0 | 10.42 | mg/L | 0.026 | 10.42 | mg/L | 0.026 | 0.25% |
| QC value within limits for ANTIMONY Recovery = 104.15% | | | | | | | | |
| ARSENIC† | 26798.6 | 10.51 | mg/L | 0.060 | 10.51 | mg/L | 0.060 | 0.57% |
| QC value within limits for ARSENIC Recovery = 105.10% | | | | | | | | |
| BARIUM† | 267869.4 | 2.900 | mg/L | 0.0144 | 2.900 | mg/L | 0.0144 | 0.50% |
| QC value within limits for BARIUM Recovery = 96.66% | | | | | | | | |
| BERYLLIUM† | 6023844.3 | 1.037 | mg/L | 0.0004 | 1.037 | mg/L | 0.0004 | 0.03% |
| QC value within limits for BERYLLIUM Recovery = 103.74% | | | | | | | | |
| CADMIUM† | 132764.5 | 3.308 | mg/L | 0.0151 | 3.308 | mg/L | 0.0151 | 0.46% |
| QC value within limits for CADMIUM Recovery = 110.27% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| CHROMIUM† | 384114.4 | 2.991 mg/L | 0.0155 | 2.991 mg/L | 0.0155 | 0.52% |
| QC value within limits for CHROMIUM Recovery = 99.70% | | | | | | |
| COBALT† | 89198.7 | 2.822 mg/L | 0.0100 | 2.822 mg/L | 0.0100 | 0.35% |
| QC value within limits for COBALT Recovery = 94.05% | | | | | | |
| COPPER† | 516526.5 | 3.230 mg/L | 0.0204 | 3.230 mg/L | 0.0204 | 0.63% |
| QC value within limits for COPPER Recovery = 107.68% | | | | | | |
| MANGANESE† | 804476.4 | 1.977 mg/L | 0.0117 | 1.977 mg/L | 0.0117 | 0.59% |
| QC value within limits for MANGANESE Recovery = 98.85% | | | | | | |
| MOLYBDENUM† | 91153.1 | 3.002 mg/L | 0.0100 | 3.002 mg/L | 0.0100 | 0.33% |
| QC value within limits for MOLYBDENUM Recovery = 100.06% | | | | | | |
| NICKEL† | 189331.7 | 2.795 mg/L | 0.0163 | 2.795 mg/L | 0.0163 | 0.58% |
| QC value within limits for NICKEL Recovery = 93.17% | | | | | | |
| LEAD† | 124425.5 | 9.565 mg/L | 0.0400 | 9.565 mg/L | 0.0400 | 0.42% |
| QC value within limits for LEAD Recovery = 95.65% | | | | | | |
| SELENIUM† | 19415.5 | 5.247 mg/L | 0.0293 | 5.247 mg/L | 0.0293 | 0.56% |
| QC value within limits for SELENIUM Recovery = 104.94% | | | | | | |
| SILVER† | 653685.4 | 2.801 mg/L | 0.0195 | 2.801 mg/L | 0.0195 | 0.70% |
| QC value within limits for SILVER Recovery = 93.37% | | | | | | |
| THALLIUM† | 34113.4 | 9.667 mg/L | 0.0521 | 9.667 mg/L | 0.0521 | 0.54% |
| QC value within limits for THALLIUM Recovery = 96.67% | | | | | | |
| VANADIUM† | 1453653.7 | 3.100 mg/L | 0.0223 | 3.100 mg/L | 0.0223 | 0.72% |
| QC value within limits for VANADIUM Recovery = 103.34% | | | | | | |
| ZINC† | 202118.8 | 2.754 mg/L | 0.0127 | 2.754 mg/L | 0.0127 | 0.46% |
| QC value within limits for ZINC Recovery = 91.81% | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 6826565.6 | 509.3 mg/L | 2.74 | 509.3 mg/L | 2.74 | 0.54% |
| QC value within limits for MAGNESIUM Recovery = 101.86% | | | | | | |
| IRON† | 7643884.5 | 456 mg/L | 2.5 | 456 mg/L | 2.5 | 0.56% |
| QC value within limits for IRON Recovery = 91.21% | | | | | | |
| CALCIUM† | 41409858.7 | 494 mg/L | 0.0 | 494 mg/L | 0.0 | 0.01% |
| QC value within limits for CALCIUM Recovery = 98.79% | | | | | | |

All analytes passed QC.

---

**Sequence No.: 15** **Autosampler Location: 13**
**Sample ID: RINSE BLANK** **Date Collected: 2/19/10 11:27:31 AM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

**Mean Data: RINSE BLANK**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18479379.6 | 9.957 | mg/L | 0.0687 | | | | 0.69% |
| ALUMINUM† | 7101.6 | 0.3999 | mg/L | 0.12231 | 0.3999 | mg/L | 0.12231 | 30.58% |
| ANTIMONY† | 27.4 | 0.0108 | mg/L | 0.00228 | 0.0108 | mg/L | 0.00228 | 21.22% |
| ARSENIC† | 37.0 | 0.0152 | mg/L | 0.00706 | 0.0152 | mg/L | 0.00706 | 46.56% |
| BARIUM† | 156.0 | 0.0048 | mg/L | 0.00076 | 0.0048 | mg/L | 0.00076 | 15.98% |
| BERYLLIUM† | 3378.4 | 0.0042 | mg/L | 0.00017 | 0.0042 | mg/L | 0.00017 | 4.02% |
| CADMIUM† | 79.3 | 0.0067 | mg/L | 0.00057 | 0.0067 | mg/L | 0.00057 | 8.52% |
| CHROMIUM† | 281.7 | 0.0050 | mg/L | 0.00058 | 0.0050 | mg/L | 0.00058 | 11.72% |
| COBALT† | 20.5 | 0.0042 | mg/L | 0.00035 | 0.0042 | mg/L | 0.00035 | 8.34% |
| COPPER† | 1567.9 | 0.0150 | mg/L | 0.00146 | 0.0150 | mg/L | 0.00146 | 9.77% |
| MANGANESE† | 363.1 | 0.0033 | mg/L | 0.00028 | 0.0033 | mg/L | 0.00028 | 8.65% |
| MOLYBDENUM† | 74.3 | 0.0053 | mg/L | 0.00046 | 0.0053 | mg/L | 0.00046 | 8.68% |
| NICKEL† | 143.3 | 0.0057 | mg/L | 0.00065 | 0.0057 | mg/L | 0.00065 | 11.26% |
| LEAD† | 174.4 | 0.0163 | mg/L | 0.00407 | 0.0163 | mg/L | 0.00407 | 24.95% |
| SELENIUM† | 13.5 | 0.0072 | mg/L | 0.00077 | 0.0072 | mg/L | 0.00077 | 10.75% |
| SILVER† | 643.9 | 0.0062 | mg/L | 0.00052 | 0.0062 | mg/L | 0.00052 | 8.37% |
| THALLIUM† | 35.5 | 0.0095 | mg/L | 0.00785 | 0.0095 | mg/L | 0.00785 | 82.37% |
| VANADIUM† | -1033.2 | 0.0005 | mg/L | 0.00409 | 0.0005 | mg/L | 0.00409 | 744.90% |
| ZINC† | 515.3 | 0.0118 | mg/L | 0.00202 | 0.0118 | mg/L | 0.00202 | 17.02% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 5677.1 | 0.4274 | mg/L | 0.12931 | 0.4274 | mg/L | 0.12931 | 30.25% |
| IRON† | 6917.5 | 0.416 | mg/L | 0.1271 | 0.416 | mg/L | 0.1271 | 30.57% |
| CALCIUM† | 32836.0 | 0.408 | mg/L | 0.1284 | 0.408 | mg/L | 0.1284 | 31.44% |

---

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 77281.8 | 4.62 mg/L | 0.027 | 23.1 mg/L | 0.13 | 0.58% |
| CALCIUM† | 74481.6 | 0.906 mg/L | 0.0055 | 4.53 mg/L | 0.028 | 0.61% |

**Sequence No.: 104** **Autosampler Location: 76**
**Sample ID: 10020655-01BPDSD** **Date Collected: 2/19/10 6:52:46 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution: 5X** **Data Type: Original**

**Mean Data: 10020655-01BPDSD**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18080446.1 | 9.742 | mg/L | 0.0044 | | | | 0.04% |
| ALUMINUM† | 12522.6 | 0.7084 | mg/L | 0.00145 | 3.542 | mg/L | 0.0072 | 0.20% |
| ANTIMONY† | 590.1 | 0.1919 | mg/L | 0.00536 | 0.9597 | mg/L | 0.02682 | 2.79% |
| ARSENIC† | 501.1 | 0.1957 | mg/L | 0.00248 | 0.9784 | mg/L | 0.01241 | 1.27% |
| BARIUM† | 17400.5 | 0.1912 | mg/L | 0.00126 | 0.9559 | mg/L | 0.00632 | 0.66% |
| BERYLLIUM† | 1064040.5 | 0.1862 | mg/L | 0.00064 | 0.9312 | mg/L | 0.00319 | 0.34% |
| CADMIUM† | 7334.1 | 0.1865 | mg/L | 0.00093 | 0.9326 | mg/L | 0.00464 | 0.50% |
| CHROMIUM† | 23688.2 | 0.1871 | mg/L | 0.00079 | 0.9353 | mg/L | 0.00396 | 0.42% |
| COBALT† | 5755.9 | 0.1854 | mg/L | 0.00070 | 0.9271 | mg/L | 0.00350 | 0.38% |
| COPPER† | 27979.3 | 0.1837 | mg/L | 0.00129 | 0.9185 | mg/L | 0.00643 | 0.70% |
| MANGANESE† | 76382.5 | 0.1884 | mg/L | 0.00074 | 0.9421 | mg/L | 0.00372 | 0.39% |
| MOLYBDENUM† | 5630.4 | 0.1865 | mg/L | 0.00150 | 0.9326 | mg/L | 0.00752 | 0.81% |
| NICKEL† | 12363.8 | 0.1872 | mg/L | 0.00073 | 0.9360 | mg/L | 0.00363 | 0.39% |
| LEAD† | 2473.4 | 0.1925 | mg/L | 0.00135 | 0.9624 | mg/L | 0.00677 | 0.70% |
| SELENIUM† | 727.8 | 0.1920 | mg/L | 0.00587 | 0.9601 | mg/L | 0.02936 | 3.06% |
| SILVER† | 43466.1 | 0.1815 | mg/L | 0.00075 | 0.9076 | mg/L | 0.00374 | 0.41% |
| THALLIUM† | 669.8 | 0.1901 | mg/L | 0.00150 | 0.9507 | mg/L | 0.00751 | 0.79% |
| VANADIUM† | 91525.1 | 0.2044 | mg/L | 0.00095 | 1.022 | mg/L | 0.0048 | 0.47% |
| ZINC† | 13268.3 | 0.1856 | mg/L | 0.00074 | 0.9282 | mg/L | 0.00370 | 0.40% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 8337.1 | 0.6661 | mg/L | 0.00396 | 3.331 | mg/L | 0.0198 | 0.59% |
| IRON† | 76532.2 | 4.58 | mg/L | 0.013 | 22.9 | mg/L | 0.07 | 0.28% |
| CALCIUM† | 73621.2 | 0.895 | mg/L | 0.0030 | 4.48 | mg/L | 0.015 | 0.33% |

**Sequence No.: 105** **Autosampler Location: 6**
**Sample ID: CCV** **Date Collected: 2/19/10 6:57:44 PM**
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18109557.3 | 9.757 | mg/L | 0.0197 | | | | 0.20% |
| ALUMINUM† | 8817.0 | 0.5132 | mg/L | 0.00201 | 0.5132 | mg/L | 0.00201 | 0.39% |
| QC value within limits for ALUMINUM Recovery = 102.65% | | | | | | | | |
| ANTIMONY† | 1519.5 | 0.4917 | mg/L | 0.00338 | 0.4917 | mg/L | 0.00338 | 0.69% |
| QC value within limits for ANTIMONY Recovery = 98.34% | | | | | | | | |
| ARSENIC† | 1310.0 | 0.5089 | mg/L | 0.00373 | 0.5089 | mg/L | 0.00373 | 0.73% |
| QC value within limits for ARSENIC Recovery = 101.78% | | | | | | | | |
| BARIUM† | 45150.3 | 0.4912 | mg/L | 0.00147 | 0.4912 | mg/L | 0.00147 | 0.30% |
| QC value within limits for BARIUM Recovery = 98.25% | | | | | | | | |
| BERYLLIUM† | 2828087.4 | 0.4890 | mg/L | 0.00274 | 0.4890 | mg/L | 0.00274 | 0.56% |
| QC value within limits for BERYLLIUM Recovery = 97.79% | | | | | | | | |
| CADMIUM† | 19270.9 | 0.4821 | mg/L | 0.00030 | 0.4821 | mg/L | 0.00030 | 0.06% |
| QC value within limits for CADMIUM Recovery = 96.42% | | | | | | | | |
| CHROMIUM† | 62456.1 | 0.4887 | mg/L | 0.00152 | 0.4887 | mg/L | 0.00152 | 0.31% |
| QC value within limits for CHROMIUM Recovery = 97.73% | | | | | | | | |
| COBALT† | 15309.8 | 0.4872 | mg/L | 0.00043 | 0.4872 | mg/L | 0.00043 | 0.09% |
| QC value within limits for COBALT Recovery = 97.45% | | | | | | | | |
| COPPER† | 72928.3 | 0.4737 | mg/L | 0.00207 | 0.4737 | mg/L | 0.00207 | 0.44% |
| QC value within limits for COPPER Recovery = 94.75% | | | | | | | | |
| MANGANESE† | 201394.8 | 0.4925 | mg/L | 0.00097 | 0.4925 | mg/L | 0.00097 | 0.20% |
| QC value within limits for MANGANESE Recovery = 98.49% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| MOLYBDENUM† | 15002.3 | 0.4914 mg/L | 0.00037 | 0.4914 mg/L | 0.00037 | 0.08% |
| QC value within limits for MOLYBDENUM Recovery = 98.29% | | | | | | |
| NICKEL† | 32894.4 | 0.4926 mg/L | 0.00028 | 0.4926 mg/L | 0.00028 | 0.06% |
| QC value within limits for NICKEL Recovery = 98.52% | | | | | | |
| LEAD† | 6412.9 | 0.4928 mg/L | 0.00102 | 0.4928 mg/L | 0.00102 | 0.21% |
| QC value within limits for LEAD Recovery = 98.55% | | | | | | |
| SELENIUM† | 1881.8 | 0.4902 mg/L | 0.00136 | 0.4902 mg/L | 0.00136 | 0.28% |
| QC value within limits for SELENIUM Recovery = 98.05% | | | | | | |
| SILVER† | 117790.7 | 0.4824 mg/L | 0.00104 | 0.4824 mg/L | 0.00104 | 0.22% |
| QC value within limits for SILVER Recovery = 96.48% | | | | | | |
| THALLIUM† | 1782.4 | 0.5094 mg/L | 0.00324 | 0.5094 mg/L | 0.00324 | 0.64% |
| QC value within limits for THALLIUM Recovery = 101.88% | | | | | | |
| VANADIUM† | 227550.6 | 0.4966 mg/L | 0.00139 | 0.4966 mg/L | 0.00139 | 0.28% |
| QC value within limits for VANADIUM Recovery = 99.33% | | | | | | |
| ZINC† | 35156.1 | 0.4829 mg/L | 0.00019 | 0.4829 mg/L | 0.00019 | 0.04% |
| QC value within limits for ZINC Recovery = 96.58% | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 6342.6 | 0.4773 mg/L | 0.00470 | 0.4773 mg/L | 0.00470 | 0.99% |
| QC value within limits for MAGNESIUM Recovery = 95.46% | | | | | | |
| IRON† | 7994.5 | 0.507 mg/L | 0.0030 | 0.507 mg/L | 0.0030 | 0.58% |
| QC value within limits for IRON Recovery = 101.48% | | | | | | |
| CALCIUM† | 38283.4 | 0.475 mg/L | 0.0026 | 0.475 mg/L | 0.0026 | 0.54% |
| QC value within limits for CALCIUM Recovery = 94.96% | | | | | | |

All analytes passed QC.

---

**Sequence No.: 106** **Autosampler Location: 11**
**Sample ID: LLCCV** **Date Collected: 2/19/10 7:02:52 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

**Mean Data: LLCCV**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18134775.6 | 9.771 | mg/L | 0.0072 | | | | 0.07% |
| ALUMINUM† | 1761.6 | 0.1052 | mg/L | 0.00158 | 0.1052 | mg/L | 0.00158 | 1.50% |
| ANTIMONY† | 71.3 | 0.0248 | mg/L | 0.00528 | 0.0248 | mg/L | 0.00528 | 21.24% |
| ARSENIC† | 63.2 | 0.0252 | mg/L | 0.00267 | 0.0252 | mg/L | 0.00267 | 10.58% |
| BARIUM† | 882.1 | 0.0126 | mg/L | 0.00038 | 0.0126 | mg/L | 0.00038 | 3.04% |
| BERYLLIUM† | 54270.1 | 0.0130 | mg/L | 0.00012 | 0.0130 | mg/L | 0.00012 | 0.92% |
| CADMIUM† | 417.2 | 0.0150 | mg/L | 0.00030 | 0.0150 | mg/L | 0.00030 | 2.02% |
| CHROMIUM† | 1331.5 | 0.0131 | mg/L | 0.00046 | 0.0131 | mg/L | 0.00046 | 3.54% |
| COBALT† | 236.0 | 0.0110 | mg/L | 0.00053 | 0.0110 | mg/L | 0.00053 | 4.80% |
| COPPER† | 1585.4 | 0.0151 | mg/L | 0.00105 | 0.0151 | mg/L | 0.00105 | 6.92% |
| MANGANESE† | 3910.6 | 0.0119 | mg/L | 0.00012 | 0.0119 | mg/L | 0.00012 | 1.03% |
| MOLYBDENUM† | 326.2 | 0.0135 | mg/L | 0.00018 | 0.0135 | mg/L | 0.00018 | 1.31% |
| NICKEL† | 797.5 | 0.0155 | mg/L | 0.00025 | 0.0155 | mg/L | 0.00025 | 1.61% |
| LEAD† | 155.1 | 0.0148 | mg/L | 0.00045 | 0.0148 | mg/L | 0.00045 | 3.04% |
| SELENIUM† | 70.4 | 0.0218 | mg/L | 0.00787 | 0.0218 | mg/L | 0.00787 | 36.14% |
| SILVER† | 2238.5 | 0.0125 | mg/L | 0.00007 | 0.0125 | mg/L | 0.00007 | 0.59% |
| THALLIUM† | 130.3 | 0.0367 | mg/L | 0.00226 | 0.0367 | mg/L | 0.00226 | 6.15% |
| VANADIUM† | 14103.6 | 0.0332 | mg/L | 0.00163 | 0.0332 | mg/L | 0.00163 | 4.92% |
| ZINC† | 1464.2 | 0.0248 | mg/L | 0.00040 | 0.0248 | mg/L | 0.00040 | 1.61% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1058.7 | 0.0826 | mg/L | 0.00842 | 0.0826 | mg/L | 0.00842 | 10.19% |
| IRON† | 1326.3 | 0.084 | mg/L | 0.0010 | 0.084 | mg/L | 0.0010 | 1.25% |
| CALCIUM† | 31688.4 | 0.395 | mg/L | 0.0018 | 0.395 | mg/L | 0.0018 | 0.45% |

---

**Sequence No.: 107** **Autosampler Location: 7**
**Sample ID: CCB** **Date Collected: 2/19/10 7:07:43 PM**
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18224129.4 | 9.819 | mg/L | 0.0219 | | | | 0.22% |
| ALUMINUM† | 97.8 | 0.0117 | mg/L | 0.00024 | 0.0117 | mg/L | 0.00024 | 2.02% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | 18.4 | 0.0079 | mg/L | 0.00235 | 0.0079 | mg/L | 0.00235 | 29.96% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | 7.7 | 0.0036 | mg/L | 0.00117 | 0.0036 | mg/L | 0.00117 | 32.13% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | -19.3 | 0.0028 | mg/L | 0.00024 | 0.0028 | mg/L | 0.00024 | 8.61% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -1828.8 | 0.0033 | mg/L | 0.00003 | 0.0033 | mg/L | 0.00003 | 0.76% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | 16.7 | 0.0051 | mg/L | 0.00018 | 0.0051 | mg/L | 0.00018 | 3.44% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 111.1 | 0.0036 | mg/L | 0.00060 | 0.0036 | mg/L | 0.00060 | 16.56% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -42.9 | 0.0022 | mg/L | 0.00004 | 0.0022 | mg/L | 0.00004 | 1.59% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 109.7 | 0.0057 | mg/L | 0.00043 | 0.0057 | mg/L | 0.00043 | 7.53% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -144.4 | 0.0020 | mg/L | 0.00004 | 0.0020 | mg/L | 0.00004 | 2.13% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | 18.5 | 0.0035 | mg/L | 0.00075 | 0.0035 | mg/L | 0.00075 | 21.60% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 155.6 | 0.0059 | mg/L | 0.00011 | 0.0059 | mg/L | 0.00011 | 1.90% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | 34.0 | 0.0055 | mg/L | 0.00030 | 0.0055 | mg/L | 0.00030 | 5.39% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | -13.2 | 0.0001 | mg/L | 0.00189 | 0.0001 | mg/L | 0.00189 | >999.9% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -161.6 | 0.0028 | mg/L | 0.00019 | 0.0028 | mg/L | 0.00019 | 6.79% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | -4.7 | -0.0019 | mg/L | 0.00380 | -0.0019 | mg/L | 0.00380 | 201.14% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 4109.1 | 0.0116 | mg/L | 0.00101 | 0.0116 | mg/L | 0.00101 | 8.72% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | -144.7 | 0.0028 | mg/L | 0.00021 | 0.0028 | mg/L | 0.00021 | 7.65% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | -234.1 | -0.0139 | mg/L | 0.00068 | -0.0139 | mg/L | 0.00068 | 4.88% |
| QC value within limits for MAGNESIUM Recovery = Not calculated | | | | | | | | |
| IRON† | -225.0 | -0.010 | mg/L | 0.0015 | -0.010 | mg/L | 0.0015 | 14.89% |
| QC value within limits for IRON Recovery = Not calculated | | | | | | | | |
| CALCIUM† | -1699.8 | -0.004 | mg/L | 0.0018 | -0.004 | mg/L | 0.0018 | 52.36% |
| QC value within limits for CALCIUM Recovery = Not calculated | | | | | | | | |

All analytes passed QC.

==========

**Sequence No.:** 108
**Sample ID:** ICSA
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 4
**Date Collected:** 2/19/10 7:12:32 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: ICSA**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16450549.6 | 8.864 | mg/L | 0.0240 | | | | 0.27% |
| ALUMINUM† | 9422231.2 | 522.8 | mg/L | 0.72 | 522.8 | mg/L | 0.72 | 0.14% |
| QC value within limits for ALUMINUM Recovery = 104.56% | | | | | | | | |
| ANTIMONY† | -91.1 | -0.0260 | mg/L | 0.00307 | -0.0260 | mg/L | 0.00307 | 11.80% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | -137.2 | 0.0117 | mg/L | 0.00409 | 0.0117 | mg/L | 0.00409 | 35.12% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | 635.3 | 0.0107 | mg/L | 0.00054 | 0.0107 | mg/L | 0.00054 | 5.00% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -7495.9 | 0.0024 | mg/L | 0.00007 | 0.0024 | mg/L | 0.00007 | 3.13% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| CADMIUM† | -277.2 | 0.0126 mg/L | 0.00050 | 0.0126 mg/L | 0.00050 | 3.96% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | |
| CHROMIUM† | 2316.0 | 0.0208 mg/L | 0.00046 | 0.0208 mg/L | 0.00046 | 2.24% |
| QC value greater than the upper limit for CHROMIUM Recovery = Not calculated | | | | | | |
| COBALT† | -127.5 | -0.0005 mg/L | 0.00072 | -0.0005 mg/L | 0.00072 | 158.55% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | |
| COPPER† | 14491.8 | -0.0011 mg/L | 0.00075 | -0.0011 mg/L | 0.00075 | 69.93% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | |
| MANGANESE† | -8399.4 | -0.0005 mg/L | 0.00020 | -0.0005 mg/L | 0.00020 | 37.74% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | |
| MOLYBDENUM† | -1097.3 | -0.0017 mg/L | 0.00066 | -0.0017 mg/L | 0.00066 | 38.67% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | |
| NICKEL† | 1414.5 | 0.0010 mg/L | 0.00025 | 0.0010 mg/L | 0.00025 | 25.51% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | |
| LEAD† | -879.7 | 0.0013 mg/L | 0.00148 | 0.0013 mg/L | 0.00148 | 113.58% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | |
| SELENIUM† | -856.7 | 0.0054 mg/L | 0.00386 | 0.0054 mg/L | 0.00386 | 70.80% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | |
| SILVER† | -31327.4 | 0.0194 mg/L | 0.00162 | 0.0194 mg/L | 0.00162 | 8.33% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | |
| THALLIUM† | 349.6 | -0.0020 mg/L | 0.00354 | -0.0020 mg/L | 0.00354 | 172.81% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | |
| VANADIUM† | 33826.4 | 0.0188 mg/L | 0.00138 | 0.0188 mg/L | 0.00138 | 7.32% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | |
| ZINC† | -1526.6 | -0.0141 mg/L | 0.00010 | -0.0141 mg/L | 0.00010 | 0.68% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 7042897.2 | 525.4 mg/L | 1.03 | 525.4 mg/L | 1.03 | 0.20% |
| QC value within limits for MAGNESIUM Recovery = 105.08% | | | | | | |
| IRON† | 7808881.7 | 466 mg/L | 1.0 | 466 mg/L | 1.0 | 0.23% |
| QC value within limits for IRON Recovery = 93.14% | | | | | | |
| CALCIUM† | 42611164.5 | 508 mg/L | 0.6 | 508 mg/L | 0.6 | 0.12% |
| QC value within limits for CALCIUM Recovery = 101.65% | | | | | | |

QC Failed. Continue with analysis.

---

**Sequence No.:** 109
**Sample ID:** ICSAB
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 5
**Date Collected:** 2/19/10 7:17:57 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: ICSAB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16283979.5 | 8.774 | mg/L | 0.0214 | | | | 0.24% |
| ALUMINUM† | 9361605.1 | 519.6 | mg/L | 0.26 | 519.6 | mg/L | 0.26 | 0.05% |
| QC value within limits for ALUMINUM Recovery = 103.91% | | | | | | | | |
| ANTIMONY† | 32499.0 | 10.43 | mg/L | 0.041 | 10.43 | mg/L | 0.041 | 0.39% |
| QC value within limits for ANTIMONY Recovery = 104.31% | | | | | | | | |
| ARSENIC† | 27476.3 | 10.78 | mg/L | 0.020 | 10.78 | mg/L | 0.020 | 0.19% |
| QC value within limits for ARSENIC Recovery = 107.75% | | | | | | | | |
| BARIUM† | 272581.1 | 2.951 | mg/L | 0.0091 | 2.951 | mg/L | 0.0091 | 0.31% |
| QC value within limits for BARIUM Recovery = 98.36% | | | | | | | | |
| BERYLLIUM† | 6123068.3 | 1.054 | mg/L | 0.0002 | 1.054 | mg/L | 0.0002 | 0.02% |
| QC value within limits for BERYLLIUM Recovery = 105.44% | | | | | | | | |
| CADMIUM† | 132869.6 | 3.311 | mg/L | 0.0080 | 3.311 | mg/L | 0.0080 | 0.24% |
| QC value within limits for CADMIUM Recovery = 110.36% | | | | | | | | |
| CHROMIUM† | 388923.4 | 3.028 | mg/L | 0.0085 | 3.028 | mg/L | 0.0085 | 0.28% |
| QC value within limits for CHROMIUM Recovery = 100.95% | | | | | | | | |
| COBALT† | 89934.1 | 2.845 | mg/L | 0.0047 | 2.845 | mg/L | 0.0047 | 0.16% |
| QC value within limits for COBALT Recovery = 94.83% | | | | | | | | |
| COPPER† | 516504.0 | 3.229 | mg/L | 0.0079 | 3.229 | mg/L | 0.0079 | 0.25% |
| QC value within limits for COPPER Recovery = 107.64% | | | | | | | | |
| MANGANESE† | 817932.4 | 2.010 | mg/L | 0.0070 | 2.010 | mg/L | 0.0070 | 0.35% |
| QC value within limits for MANGANESE Recovery = 100.50% | | | | | | | | |
| MOLYBDENUM† | 91946.0 | 3.028 | mg/L | 0.0044 | 3.028 | mg/L | 0.0044 | 0.15% |
| QC value within limits for MOLYBDENUM Recovery = 100.93% | | | | | | | | |
| NICKEL† | 192810.5 | 2.847 | mg/L | 0.0088 | 2.847 | mg/L | 0.0088 | 0.31% |

QC value within limits for NICKEL Recovery = 94.88%

| | | | | | | |
|---|---|---|---|---|---|---|
| LEAD† | 125867.7 | 9.676 mg/L | 0.0110 | 9.676 mg/L | 0.0110 | 0.11% |

QC value within limits for LEAD Recovery = 96.76%

| | | | | | | |
|---|---|---|---|---|---|---|
| SELENIUM† | 19521.8 | 5.275 mg/L | 0.0222 | 5.275 mg/L | 0.0222 | 0.42% |

QC value within limits for SELENIUM Recovery = 105.50%

| | | | | | | |
|---|---|---|---|---|---|---|
| SILVER† | 657610.0 | 2.819 mg/L | 0.0086 | 2.819 mg/L | 0.0086 | 0.30% |

QC value within limits for SILVER Recovery = 93.95%

| | | | | | | |
|---|---|---|---|---|---|---|
| THALLIUM† | 33725.6 | 9.554 mg/L | 0.0281 | 9.554 mg/L | 0.0281 | 0.29% |

QC value within limits for THALLIUM Recovery = 95.54%

| | | | | | | |
|---|---|---|---|---|---|---|
| VANADIUM† | 1468550.5 | 3.133 mg/L | 0.0118 | 3.133 mg/L | 0.0118 | 0.38% |

QC value within limits for VANADIUM Recovery = 104.42%

| | | | | | | |
|---|---|---|---|---|---|---|
| ZINC† | 206578.4 | 2.815 mg/L | 0.0051 | 2.815 mg/L | 0.0051 | 0.18% |

QC value within limits for ZINC Recovery = 93.83%

| | | | | | | |
|---|---|---|---|---|---|---|
| ARGON | Saturated2 | | | | | |

Saturated in preshot (code 2)

| | | | | | | |
|---|---|---|---|---|---|---|
| MAGNESIUM† | 6967340.9 | 519.7 mg/L | 1.79 | 519.7 mg/L | 1.79 | 0.35% |

QC value within limits for MAGNESIUM Recovery = 103.95%

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 7735102.1 | 461 mg/L | 1.5 | 461 mg/L | 1.5 | 0.32% |

QC value within limits for IRON Recovery = 92.30%

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 42155242.0 | 503 mg/L | 0.2 | 503 mg/L | 0.2 | 0.05% |

QC value within limits for CALCIUM Recovery = 100.57%

All analytes passed QC.

---

**Sequence No.: 110** Autosampler Location: 77
**Sample ID: RINSE BLANK** Date Collected: 2/19/10 7:22:44 PM
**Analyst: KL**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

---

**Mean Data: RINSE BLANK**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18110722.0 | 9.758 | mg/L | 0.1031 | | | | 1.06% |
| ALUMINUM† | 7264.7 | 0.4094 | mg/L | 0.11402 | 0.4094 | mg/L | 0.11402 | 27.85% |
| ANTIMONY† | 36.5 | 0.0137 | mg/L | 0.00924 | 0.0137 | mg/L | 0.00924 | 67.63% |
| ARSENIC† | 32.5 | 0.0134 | mg/L | 0.00341 | 0.0134 | mg/L | 0.00341 | 25.48% |
| BARIUM† | 161.3 | 0.0048 | mg/L | 0.00067 | 0.0048 | mg/L | 0.00067 | 14.07% |
| BERYLLIUM† | 2458.6 | 0.0041 | mg/L | 0.00026 | 0.0041 | mg/L | 0.00026 | 6.52% |
| CADMIUM† | 124.7 | 0.0078 | mg/L | 0.00067 | 0.0078 | mg/L | 0.00067 | 8.59% |
| CHROMIUM† | 359.9 | 0.0056 | mg/L | 0.00055 | 0.0056 | mg/L | 0.00055 | 9.86% |
| COBALT† | -1.0 | 0.0035 | mg/L | 0.00085 | 0.0035 | mg/L | 0.00085 | 23.92% |
| COPPER† | 1583.0 | 0.0151 | mg/L | 0.00225 | 0.0151 | mg/L | 0.00225 | 14.91% |
| MANGANESE† | 317.0 | 0.0032 | mg/L | 0.00045 | 0.0032 | mg/L | 0.00045 | 14.30% |
| MOLYBDENUM† | 89.1 | 0.0058 | mg/L | 0.00104 | 0.0058 | mg/L | 0.00104 | 17.97% |
| NICKEL† | 290.7 | 0.0079 | mg/L | 0.00053 | 0.0079 | mg/L | 0.00053 | 6.71% |
| LEAD† | 167.5 | 0.0158 | mg/L | 0.00312 | 0.0158 | mg/L | 0.00312 | 19.75% |
| SELENIUM† | 30.9 | 0.0117 | mg/L | 0.00498 | 0.0117 | mg/L | 0.00498 | 42.53% |
| SILVER† | 863.8 | 0.0071 | mg/L | 0.00098 | 0.0071 | mg/L | 0.00098 | 13.87% |
| THALLIUM† | 51.3 | 0.0140 | mg/L | 0.00632 | 0.0140 | mg/L | 0.00632 | 44.97% |
| VANADIUM† | 3981.2 | 0.0114 | mg/L | 0.00714 | 0.0114 | mg/L | 0.00714 | 62.86% |
| ZINC† | 336.6 | 0.0094 | mg/L | 0.00156 | 0.0094 | mg/L | 0.00156 | 16.60% |
| ARGON | Saturated2 | | | | | | | |

Saturated in preshot (code 2)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MAGNESIUM† | 5471.1 | 0.4122 | mg/L | 0.13313 | 0.4122 | mg/L | 0.13313 | 32.30% |
| IRON† | 6860.6 | 0.413 | mg/L | 0.1245 | 0.413 | mg/L | 0.1245 | 30.16% |
| CALCIUM† | 32536.8 | 0.405 | mg/L | 0.1266 | 0.405 | mg/L | 0.1266 | 31.26% |

---

**Sequence No.: 111** Autosampler Location: 78
**Sample ID: RINSE BLANK** Date Collected: 2/19/10 7:27:35 PM
**Analyst: KL**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

---

**Mean Data: RINSE BLANK**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18117329.3 | 9.762 | mg/L | 0.0642 | | | | 0.66% |

| | | | | | | |
|---|---|---|---|---|---|---|
| ALUMINUM† | 1327.0 | 0.0798 mg/L | 0.01474 | 0.0798 mg/L | 0.01474 | 18.47% |
| ANTIMONY† | 11.4 | 0.0056 mg/L | 0.00062 | 0.0056 mg/L | 0.00062 | 10.95% |
| ARSENIC† | 26.9 | 0.0112 mg/L | 0.00308 | 0.0112 mg/L | 0.00308 | 27.61% |
| BARIUM† | -8.0 | 0.0030 mg/L | 0.00018 | 0.0030 mg/L | 0.00018 | 5.98% |
| BERYLLIUM† | -1632.7 | 0.0034 mg/L | 0.00002 | 0.0034 mg/L | 0.00002 | 0.53% |
| CADMIUM† | 43.9 | 0.0058 mg/L | 0.00020 | 0.0058 mg/L | 0.00020 | 3.40% |
| CHROMIUM† | 85.7 | 0.0034 mg/L | 0.00048 | 0.0034 mg/L | 0.00048 | 13.89% |
| COBALT† | -61.3 | 0.0016 mg/L | 0.00022 | 0.0016 mg/L | 0.00022 | 13.45% |
| COPPER† | 628.5 | 0.0090 mg/L | 0.00145 | 0.0090 mg/L | 0.00145 | 16.12% |
| MANGANESE† | -172.9 | 0.0020 mg/L | 0.00001 | 0.0020 mg/L | 0.00001 | 0.69% |
| MOLYBDENUM† | 30.5 | 0.0039 mg/L | 0.00022 | 0.0039 mg/L | 0.00022 | 5.67% |
| NICKEL† | 181.5 | 0.0063 mg/L | 0.00048 | 0.0063 mg/L | 0.00048 | 7.55% |
| LEAD† | 58.2 | 0.0074 mg/L | 0.00215 | 0.0074 mg/L | 0.00215 | 29.16% |
| SELENIUM† | 3.5 | 0.0045 mg/L | 0.00169 | 0.0045 mg/L | 0.00169 | 37.70% |
| SILVER† | 128.7 | 0.0040 mg/L | 0.00031 | 0.0040 mg/L | 0.00031 | 7.95% |
| THALLIUM† | 3.1 | 0.0003 mg/L | 0.00285 | 0.0003 mg/L | 0.00285 | 915.25% |
| VANADIUM† | 3045.9 | 0.0093 mg/L | 0.00370 | 0.0093 mg/L | 0.00370 | 39.62% |
| ZINC† | -9.2 | 0.0047 mg/L | 0.00026 | 0.0047 mg/L | 0.00026 | 5.64% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 604.6 | 0.0488 mg/L | 0.02484 | 0.0488 mg/L | 0.02484 | 50.91% |
| IRON† | 893.7 | 0.057 mg/L | 0.0125 | 0.057 mg/L | 0.0125 | 22.07% |
| CALCIUM† | 2532.4 | 0.047 mg/L | 0.0183 | 0.047 mg/L | 0.0183 | 38.95% |

**Sequence No.:** 112
**Sample ID:** MBLK-87095
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 79
**Date Collected:** 2/19/10 7:32:26 PM
**Sample Prep Volume:**
**Data Type:** Original

Mean Data: MBLK-87095

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18085097.4 | 9.744 | mg/L | 0.0070 | | | | 0.07% |
| ALUMINUM† | 1337.1 | 0.0805 | mg/L | 0.00568 | 0.0805 | mg/L | 0.00568 | 7.05% |
| ANTIMONY† | 17.2 | 0.0075 | mg/L | 0.00172 | 0.0075 | mg/L | 0.00172 | 23.07% |
| ARSENIC† | 13.4 | 0.0059 | mg/L | 0.00169 | 0.0059 | mg/L | 0.00169 | 28.95% |
| BARIUM† | -7.3 | 0.0030 | mg/L | 0.00011 | 0.0030 | mg/L | 0.00011 | 3.70% |
| BERYLLIUM† | -2314.4 | 0.0032 | mg/L | 0.00006 | 0.0032 | mg/L | 0.00006 | 1.84% |
| CADMIUM† | 37.5 | 0.0056 | mg/L | 0.00019 | 0.0056 | mg/L | 0.00019 | 3.39% |
| CHROMIUM† | 87.8 | 0.0034 | mg/L | 0.00036 | 0.0034 | mg/L | 0.00036 | 10.56% |
| COBALT† | -65.5 | 0.0015 | mg/L | 0.00017 | 0.0015 | mg/L | 0.00017 | 11.53% |
| COPPER† | 409.3 | 0.0076 | mg/L | 0.00078 | 0.0076 | mg/L | 0.00078 | 10.26% |
| MANGANESE† | -252.0 | 0.0018 | mg/L | 0.00005 | 0.0018 | mg/L | 0.00005 | 2.73% |
| MOLYBDENUM† | 6.7 | 0.0031 | mg/L | 0.00024 | 0.0031 | mg/L | 0.00024 | 7.70% |
| NICKEL† | 155.0 | 0.0059 | mg/L | 0.00027 | 0.0059 | mg/L | 0.00027 | 4.60% |
| LEAD† | 41.1 | 0.0061 | mg/L | 0.00068 | 0.0061 | mg/L | 0.00068 | 11.19% |
| SELENIUM† | -15.2 | -0.0004 | mg/L | 0.00226 | -0.0004 | mg/L | 0.00226 | 615.36% |
| SILVER† | -27.5 | 0.0033 | mg/L | 0.00017 | 0.0033 | mg/L | 0.00017 | 5.23% |
| THALLIUM† | 14.5 | 0.0036 | mg/L | 0.00134 | 0.0036 | mg/L | 0.00134 | 37.26% |
| VANADIUM† | 5079.7 | 0.0137 | mg/L | 0.00324 | 0.0137 | mg/L | 0.00324 | 23.64% |
| ZINC† | 0.5 | 0.0048 | mg/L | 0.00003 | 0.0048 | mg/L | 0.00003 | 0.70% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 512.4 | 0.0419 | mg/L | 0.00699 | 0.0419 | mg/L | 0.00699 | 16.67% |
| IRON† | 781.7 | 0.050 | mg/L | 0.0055 | 0.050 | mg/L | 0.0055 | 10.92% |
| CALCIUM† | 2869.7 | 0.051 | mg/L | 0.0066 | 0.051 | mg/L | 0.0066 | 12.99% |

**Sequence No.:** 113
**Sample ID:** LCS-87095
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 80
**Date Collected:** 2/19/10 7:37:17 PM
**Sample Prep Volume:**
**Data Type:** Original

Mean Data: LCS-87095

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| YTTRIUM | 18196617.6 | 9.804 mg/L | 0.0520 | | | 0.53% |
| ALUMINUM† | 91170.5 | 5.069 mg/L | 0.0263 | 5.069 mg/L | 0.0263 | 0.52% |
| ANTIMONY† | 331.8 | 0.1089 mg/L | 0.00218 | 0.1089 mg/L | 0.00218 | 2.00% |
| ARSENIC† | 291.4 | 0.1144 mg/L | 0.00352 | 0.1144 mg/L | 0.00352 | 3.08% |
| BARIUM† | 9629.2 | 0.1072 mg/L | 0.00087 | 0.1072 mg/L | 0.00087 | 0.81% |
| BERYLLIUM† | 602498.6 | 0.1070 mg/L | 0.00044 | 0.1070 mg/L | 0.00044 | 0.41% |
| CADMIUM† | 4052.8 | 0.1053 mg/L | 0.00093 | 0.1053 mg/L | 0.00093 | 0.88% |
| CHROMIUM† | 13367.1 | 0.1068 mg/L | 0.00044 | 0.1068 mg/L | 0.00044 | 0.41% |
| COBALT† | 3167.5 | 0.1036 mg/L | 0.00059 | 0.1036 mg/L | 0.00059 | 0.57% |
| COPPER† | 16405.3 | 0.1094 mg/L | 0.00106 | 0.1094 mg/L | 0.00106 | 0.97% |
| MANGANESE† | 42440.8 | 0.1058 mg/L | 0.00043 | 0.1058 mg/L | 0.00043 | 0.41% |
| MOLYBDENUM† | 3113.7 | 0.1046 mg/L | 0.00039 | 0.1046 mg/L | 0.00039 | 0.37% |
| NICKEL† | 7014.1 | 0.1076 mg/L | 0.00040 | 0.1076 mg/L | 0.00040 | 0.37% |
| LEAD† | 1346.0 | 0.1065 mg/L | 0.00091 | 0.1065 mg/L | 0.00091 | 0.86% |
| SELENIUM† | 2007.5 | 0.5251 mg/L | 0.00127 | 0.5251 mg/L | 0.00127 | 0.24% |
| SILVER† | 24631.6 | 0.1051 mg/L | 0.00044 | 0.1051 mg/L | 0.00044 | 0.42% |
| THALLIUM† | 379.3 | 0.1069 mg/L | 0.00357 | 0.1069 mg/L | 0.00357 | 3.34% |
| VANADIUM† | 52645.1 | 0.1171 mg/L | 0.00234 | 0.1171 mg/L | 0.00234 | 2.00% |
| ZINC† | 7251.2 | 0.1034 mg/L | 0.00051 | 0.1034 mg/L | 0.00051 | 0.49% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 73481.7 | 5.488 mg/L | 0.0213 | 5.488 mg/L | 0.0213 | 0.39% |
| IRON† | 86596.2 | 5.17 mg/L | 0.030 | 5.17 mg/L | 0.030 | 0.59% |
| CALCIUM† | 441900.2 | 5.29 mg/L | 0.027 | 5.29 mg/L | 0.027 | 0.52% |

==========

**Sequence No.:** 114
**Sample ID:** 10020428-08A
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 81
**Date Collected:** 2/19/10 7:42:11 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-08A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17322945.4 | 9.334 | mg/L | 0.0186 | | | | 0.20% |
| ALUMINUM† | 1272.3 | 0.1671 | mg/L | 0.00402 | 0.1671 | mg/L | 0.00402 | 2.41% |
| ANTIMONY† | 12.4 | 0.0086 | mg/L | 0.00499 | 0.0086 | mg/L | 0.00499 | 57.73% |
| ARSENIC† | -1.8 | -0.0001 | mg/L | 0.00383 | -0.0001 | mg/L | 0.00383 | >999.9% |
| BARIUM† | 36723.7 | 0.4003 | mg/L | 0.00055 | 0.4003 | mg/L | 0.00055 | 0.14% |
| BERYLLIUM† | -2775.5 | 0.0032 | mg/L | 0.00007 | 0.0032 | mg/L | 0.00007 | 2.14% |
| CADMIUM† | 54.4 | 0.0060 | mg/L | 0.00016 | 0.0060 | mg/L | 0.00016 | 2.63 |
| CHROMIUM† | 329.7 | 0.0053 | mg/L | 0.00033 | 0.0053 | mg/L | 0.00033 | 6.22% |
| COBALT† | -73.1 | 0.0013 | mg/L | 0.00050 | 0.0013 | mg/L | 0.00050 | 39.35% |
| COPPER† | 745.9 | 0.0117 | mg/L | 0.00110 | 0.0117 | mg/L | 0.00110 | 9.39% |
| MANGANESE† | 5541.1 | 0.0159 | mg/L | 0.00005 | 0.0159 | mg/L | 0.00005 | 0.29% |
| MOLYBDENUM† | 218.6 | 0.0100 | mg/L | 0.00024 | 0.0100 | mg/L | 0.00024 | 2.36% |
| NICKEL† | 310.5 | 0.0082 | mg/L | 0.00060 | 0.0082 | mg/L | 0.00060 | 7.28% |
| LEAD† | 11.6 | 0.0038 | mg/L | 0.00078 | 0.0038 | mg/L | 0.00078 | 20.27% |
| SELENIUM† | -5.9 | 0.0020 | mg/L | 0.00433 | 0.0020 | mg/L | 0.00433 | 216.65% |
| SILVER† | -216.9 | 0.0025 | mg/L | 0.00035 | 0.0025 | mg/L | 0.00035 | 13.93% |
| THALLIUM† | 36.6 | 0.0099 | mg/L | 0.00593 | 0.0099 | mg/L | 0.00593 | 59.70% |
| VANADIUM† | 19336.6 | 0.0235 | mg/L | 0.00230 | 0.0235 | mg/L | 0.00230 | 9.77% |
| ZINC† | 6.2 | 0.0014 | mg/L | 0.00036 | 0.0014 | mg/L | 0.00036 | 26.17% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 522268.3 | 38.61 | mg/L | 0.150 | 38.61 | mg/L | 0.150 | 0.39% |
| IRON† | -595.6 | -0.030 | mg/L | 0.0018 | -0.030 | mg/L | 0.0018 | 6.07% |
| CALCIUM† | 5112722.0 | 61.0 | mg/L | 0.24 | 61.0 | mg/L | 0.24 | 0.39% |

==========

**Sequence No.:** 115
**Sample ID:** 10020428-08ASD
**Analyst:** KL
**Sample Wt:**
**Dilution:** 5X

**Autosampler Location:** 82
**Date Collected:** 2/19/10 7:47:21 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-08ASD

Mean Corrected Calib Sample

| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17873519.2 | 9.630 | mg/L | 0.0216 | | | | 0.22% |
| ALUMINUM† | 546.7 | 0.0550 | mg/L | 0.00070 | 0.2752 | mg/L | 0.00350 | 1.27% |
| ANTIMONY† | 22.0 | 0.0096 | mg/L | 0.00346 | 0.0478 | mg/L | 0.01732 | 36.26% |
| ARSENIC† | 1.1 | 0.0010 | mg/L | 0.00160 | 0.0052 | mg/L | 0.00801 | 155.43% |
| BARIUM† | 7412.9 | 0.0832 | mg/L | 0.00029 | 0.4161 | mg/L | 0.00147 | 0.35% |
| BERYLLIUM† | -2542.1 | 0.0032 | mg/L | 0.00003 | 0.0160 | mg/L | 0.00015 | 0.92% |
| CADMIUM† | 29.5 | 0.0054 | mg/L | 0.00037 | 0.0271 | mg/L | 0.00185 | 6.81% |
| CHROMIUM† | 58.4 | 0.0032 | mg/L | 0.00019 | 0.0161 | mg/L | 0.00094 | 5.83% |
| COBALT† | -68.9 | 0.0014 | mg/L | 0.00035 | 0.0070 | mg/L | 0.00173 | 24.67% |
| COPPER† | 333.1 | 0.0075 | mg/L | 0.00046 | 0.0375 | mg/L | 0.00231 | 6.17% |
| MANGANESE† | 889.8 | 0.0045 | mg/L | 0.00003 | 0.0227 | mg/L | 0.00013 | 0.57% |
| MOLYBDENUM† | 46.2 | 0.0044 | mg/L | 0.00033 | 0.0219 | mg/L | 0.00166 | 7.59% |
| NICKEL† | 191.4 | 0.0065 | mg/L | 0.00037 | 0.0324 | mg/L | 0.00187 | 5.79% |
| LEAD† | 30.3 | 0.0052 | mg/L | 0.00106 | 0.0262 | mg/L | 0.00529 | 20.15% |
| SELENIUM† | -1.1 | 0.0033 | mg/L | 0.00346 | 0.0163 | mg/L | 0.01729 | 105.97% |
| SILVER† | -195.0 | 0.0026 | mg/L | 0.00012 | 0.0131 | mg/L | 0.00058 | 4.42% |
| THALLIUM† | 8.8 | 0.0020 | mg/L | 0.00479 | 0.0098 | mg/L | 0.02393 | 244.09% |
| VANADIUM† | 10496.2 | 0.0211 | mg/L | 0.00508 | 0.1057 | mg/L | 0.02539 | 24.02% |
| ZINC† | -110.9 | 0.0026 | mg/L | 0.00012 | 0.0128 | mg/L | 0.00058 | 4.56% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 105262.7 | 7.785 | mg/L | 0.0801 | 38.93 | mg/L | 0.400 | 1.03% |
| IRON† | -329.2 | -0.015 | mg/L | 0.0020 | -0.076 | mg/L | 0.0099 | 12.88% |
| CALCIUM† | 1029606.6 | 12.3 | mg/L | 0.13 | 61.5 | mg/L | 0.67 | 1.08% |

==========

**Sequence No.:** 116
**Sample ID:** 10020428-08AMS
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 83
**Date Collected:** 2/19/10 7:52:14 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-08AMS

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17433560.3 | 9.393 | mg/L | 0.0545 | | | | 0.58% |
| ALUMINUM† | 93217.1 | 5.273 | mg/L | 0.0337 | 5.273 | mg/L | 0.0337 | 0.64% |
| ANTIMONY† | 332.0 | 0.1117 | mg/L | 0.00188 | 0.1117 | mg/L | 0.00188 | 1.68% |
| ARSENIC† | 299.7 | 0.1176 | mg/L | 0.00314 | 0.1176 | mg/L | 0.00314 | 2.67% |
| BARIUM† | 46436.2 | 0.5053 | mg/L | 0.00339 | 0.5053 | mg/L | 0.00339 | 0.67% |
| BERYLLIUM† | 609771.5 | 0.1083 | mg/L | 0.00103 | 0.1083 | mg/L | 0.00103 | 0.95% |
| CADMIUM† | 4154.6 | 0.1078 | mg/L | 0.00079 | 0.1078 | mg/L | 0.00079 | 0.73% |
| CHROMIUM† | 13416.4 | 0.1071 | mg/L | 0.00066 | 0.1071 | mg/L | 0.00066 | 0.62% |
| COBALT† | 3041.2 | 0.0997 | mg/L | 0.00053 | 0.0997 | mg/L | 0.00053 | 0.53% |
| COPPER† | 17536.3 | 0.1187 | mg/L | 0.00079 | 0.1187 | mg/L | 0.00079 | 0.67% |
| MANGANESE† | 47056.7 | 0.1171 | mg/L | 0.00072 | 0.1171 | mg/L | 0.00072 | 0.61% |
| MOLYBDENUM† | 3332.6 | 0.1117 | mg/L | 0.00051 | 0.1117 | mg/L | 0.00051 | 0.46% |
| NICKEL† | 6858.0 | 0.1053 | mg/L | 0.00068 | 0.1053 | mg/L | 0.00068 | 0.64% |
| LEAD† | 1307.0 | 0.1035 | mg/L | 0.00129 | 0.1035 | mg/L | 0.00129 | 1.25% |
| SELENIUM† | 2042.6 | 0.5342 | mg/L | 0.00040 | 0.5342 | mg/L | 0.00040 | 0.08% |
| SILVER† | 24871.3 | 0.1061 | mg/L | 0.00010 | 0.1061 | mg/L | 0.00010 | 0.09% |
| THALLIUM† | 391.7 | 0.1105 | mg/L | 0.00290 | 0.1105 | mg/L | 0.00290 | 2.62% |
| VANADIUM† | 66375.2 | 0.1255 | mg/L | 0.00435 | 0.1255 | mg/L | 0.00435 | 3.47% |
| ZINC† | 7474.1 | 0.1030 | mg/L | 0.00045 | 0.1030 | mg/L | 0.00045 | 0.44% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 597590.7 | 44.23 | mg/L | 0.298 | 44.23 | mg/L | 0.298 | 0.67% |
| IRON† | 83801.3 | 5.01 | mg/L | 0.035 | 5.01 | mg/L | 0.035 | 0.69% |
| CALCIUM† | 5569855.0 | 66.5 | mg/L | 0.66 | 66.5 | mg/L | 0.66 | 1.00% |

==========

**Sequence No.:** 117
**Sample ID:** 10020428-08AMSD
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 84
**Date Collected:** 2/19/10 7:57:26 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-08AMSD

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17389260.1 | 9.369 | mg/L | 0.0290 | | | | 0.31% |
| ALUMINUM† | 87071.4 | 4.928 | mg/L | 0.0355 | 4.928 | mg/L | 0.0355 | 0.72% |
| ANTIMONY† | 314.0 | 0.1057 | mg/L | 0.00495 | 0.1057 | mg/L | 0.00495 | 4.68% |
| ARSENIC† | 285.5 | 0.1121 | mg/L | 0.00738 | 0.1121 | mg/L | 0.00738 | 6.59% |
| BARIUM† | 44014.1 | 0.4791 | mg/L | 0.00406 | 0.4791 | mg/L | 0.00406 | 0.85% |
| BERYLLIUM† | 573516.2 | 0.1021 | mg/L | 0.00013 | 0.1021 | mg/L | 0.00013 | 0.12% |
| CADMIUM† | 3988.8 | 0.1037 | mg/L | 0.00062 | 0.1037 | mg/L | 0.00062 | 0.60% |
| CHROMIUM† | 12363.0 | 0.0989 | mg/L | 0.00013 | 0.0989 | mg/L | 0.00013 | 0.13% |
| COBALT† | 2832.8 | 0.0931 | mg/L | 0.00058 | 0.0931 | mg/L | 0.00058 | 0.62% |
| COPPER† | 16587.9 | 0.1126 | mg/L | 0.00066 | 0.1126 | mg/L | 0.00066 | 0.59% |
| MANGANESE† | 44132.0 | 0.1099 | mg/L | 0.00074 | 0.1099 | mg/L | 0.00074 | 0.67% |
| MOLYBDENUM† | 3147.0 | 0.1057 | mg/L | 0.00029 | 0.1057 | mg/L | 0.00029 | 0.27% |
| NICKEL† | 6425.1 | 0.0989 | mg/L | 0.00029 | 0.0989 | mg/L | 0.00029 | 0.30% |
| LEAD† | 1277.9 | 0.1012 | mg/L | 0.00097 | 0.1012 | mg/L | 0.00097 | 0.96% |
| SELENIUM† | 1988.3 | 0.5201 | mg/L | 0.00415 | 0.5201 | mg/L | 0.00415 | 0.80% |
| SILVER† | 25266.0 | 0.1076 | mg/L | 0.00085 | 0.1076 | mg/L | 0.00085 | 0.79% |
| THALLIUM† | 378.3 | 0.1067 | mg/L | 0.00193 | 0.1067 | mg/L | 0.00193 | 1.81% |
| VANADIUM† | 65323.2 | 0.1244 | mg/L | 0.00188 | 0.1244 | mg/L | 0.00188 | 1.51% |
| ZINC† | 6894.5 | 0.0953 | mg/L | 0.00066 | 0.0953 | mg/L | 0.00066 | 0.70% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 560485.7 | 41.49 | mg/L | 0.312 | 41.49 | mg/L | 0.312 | 0.75% |
| IRON† | 78506.5 | 4.69 | mg/L | 0.031 | 4.69 | mg/L | 0.031 | 0.66% |
| CALCIUM† | 5281431.6 | 63.0 | mg/L | 0.14 | 63.0 | mg/L | 0.14 | 0.22% |

**Sequence No.:** 118
**Sample ID:** CCV
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 6
**Date Collected:** 2/19/10 8:02:39 PM
**Sample Prep Volume:**
**Data Type:** Original

Mean Data: CCV

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18058769.8 | 9.730 | mg/L | 0.0322 | | | | 0.33% |
| ALUMINUM† | 8961.0 | 0.5216 | mg/L | 0.00162 | 0.5216 | mg/L | 0.00162 | 0.31% |
| QC value within limits for ALUMINUM Recovery = 104.31% | | | | | | | | |
| ANTIMONY† | 1513.5 | 0.4898 | mg/L | 0.00380 | 0.4898 | mg/L | 0.00380 | 0.78% |
| QC value within limits for ANTIMONY Recovery = 97.96% | | | | | | | | |
| ARSENIC† | 1291.2 | 0.5015 | mg/L | 0.00189 | 0.5015 | mg/L | 0.00189 | 0.38% |
| QC value within limits for ARSENIC Recovery = 100.31% | | | | | | | | |
| BARIUM† | 45239.2 | 0.4922 | mg/L | 0.00154 | 0.4922 | mg/L | 0.00154 | 0.31% |
| QC value within limits for BARIUM Recovery = 98.44% | | | | | | | | |
| BERYLLIUM† | 2825633.2 | 0.4885 | mg/L | 0.00243 | 0.4885 | mg/L | 0.00243 | 0.50% |
| QC value within limits for BERYLLIUM Recovery = 97.71% | | | | | | | | |
| CADMIUM† | 19228.9 | 0.4811 | mg/L | 0.00060 | 0.4811 | mg/L | 0.00060 | 0.13% |
| QC value within limits for CADMIUM Recovery = 96.21% | | | | | | | | |
| CHROMIUM† | 62710.7 | 0.4906 | mg/L | 0.00100 | 0.4906 | mg/L | 0.00100 | 0.20% |
| QC value within limits for CHROMIUM Recovery = 98.13% | | | | | | | | |
| COBALT† | 15230.1 | 0.4847 | mg/L | 0.00095 | 0.4847 | mg/L | 0.00095 | 0.20% |
| QC value within limits for COBALT Recovery = 96.95% | | | | | | | | |
| COPPER† | 73239.4 | 0.4757 | mg/L | 0.00318 | 0.4757 | mg/L | 0.00318 | 0.67% |
| QC value within limits for COPPER Recovery = 95.15% | | | | | | | | |
| MANGANESE† | 201728.6 | 0.4933 | mg/L | 0.00154 | 0.4933 | mg/L | 0.00154 | 0.31% |
| QC value within limits for MANGANESE Recovery = 98.65% | | | | | | | | |
| MOLYBDENUM† | 14964.3 | 0.4902 | mg/L | 0.00108 | 0.4902 | mg/L | 0.00108 | 0.22% |
| QC value within limits for MOLYBDENUM Recovery = 98.04% | | | | | | | | |
| NICKEL† | 33000.9 | 0.4942 | mg/L | 0.00173 | 0.4942 | mg/L | 0.00173 | 0.35% |
| QC value within limits for NICKEL Recovery = 98.84% | | | | | | | | |
| LEAD† | 6412.3 | 0.4927 | mg/L | 0.00112 | 0.4927 | mg/L | 0.00112 | 0.23% |
| QC value within limits for LEAD Recovery = 98.54% | | | | | | | | |
| SELENIUM† | 1900.1 | 0.4950 | mg/L | 0.00100 | 0.4950 | mg/L | 0.00100 | 0.20% |
| QC value within limits for SELENIUM Recovery = 99.00% | | | | | | | | |
| SILVER† | 118067.7 | 0.4835 | mg/L | 0.00178 | 0.4835 | mg/L | 0.00178 | 0.37% |
| QC value within limits for SILVER Recovery = 96.70% | | | | | | | | |
| THALLIUM† | 1796.1 | 0.5133 | mg/L | 0.00169 | 0.5133 | mg/L | 0.00169 | 0.33% |
| QC value within limits for THALLIUM Recovery = 102.67% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| VANADIUM† | 230671.8 | 0.5034 mg/L | 0.00442 | 0.5034 mg/L | 0.00442 | 0.88% |
| QC value within limits for VANADIUM Recovery = 100.67% | | | | | | |
| ZINC† | 35272.4 | 0.4845 mg/L | 0.00099 | 0.4845 mg/L | 0.00099 | 0.21% |
| QC value within limits for ZINC Recovery = 96.89% | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 6710.0 | 0.5044 mg/L | 0.00283 | 0.5044 mg/L | 0.00283 | 0.56% |
| QC value within limits for MAGNESIUM Recovery = 100.88% | | | | | | |
| IRON† | 7963.9 | 0.506 mg/L | 0.0021 | 0.506 mg/L | 0.0021 | 0.41% |
| QC value within limits for IRON Recovery = 101.18% | | | | | | |
| CALCIUM† | 43075.0 | 0.532 mg/L | 0.0081 | 0.532 mg/L | 0.0081 | 1.52% |
| QC value within limits for CALCIUM Recovery = 106.39% | | | | | | |

All analytes passed QC.

---

**Sequence No.:** 119
**Sample ID:** CCB
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 7
**Date Collected:** 2/19/10 8:07:47 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18079332.1 | 9.741 | mg/L | 0.0415 | | | | 0.43% |
| ALUMINUM† | 216.1 | 0.0184 | mg/L | 0.00021 | 0.0184 | mg/L | 0.00021 | 1.13% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | 7.9 | 0.0045 | mg/L | 0.00317 | 0.0045 | mg/L | 0.00317 | 70.78% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | 2.7 | 0.0017 | mg/L | 0.00265 | 0.0017 | mg/L | 0.00265 | 158.59% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | 4.7 | 0.0031 | mg/L | 0.00029 | 0.0031 | mg/L | 0.00029 | 9.22% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -68.0 | 0.0036 | mg/L | 0.00008 | 0.0036 | mg/L | 0.00008 | 2.29% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | 44.8 | 0.0058 | mg/L | 0.00043 | 0.0058 | mg/L | 0.00043 | 7.47% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 146.3 | 0.0039 | mg/L | 0.00043 | 0.0039 | mg/L | 0.00043 | 11.12% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -60.2 | 0.0017 | mg/L | 0.00025 | 0.0017 | mg/L | 0.00025 | 14.65% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 271.3 | 0.0067 | mg/L | 0.00145 | 0.0067 | mg/L | 0.00145 | 21.68% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -77.3 | 0.0022 | mg/L | 0.00003 | 0.0022 | mg/L | 0.00003 | 1.44% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | 27.9 | 0.0038 | mg/L | 0.00035 | 0.0038 | mg/L | 0.00035 | 9.36% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 199.5 | 0.0066 | mg/L | 0.00037 | 0.0066 | mg/L | 0.00037 | 5.61% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | 33.2 | 0.0055 | mg/L | 0.00138 | 0.0055 | mg/L | 0.00138 | 25.16% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | -11.0 | 0.0007 | mg/L | 0.00640 | 0.0007 | mg/L | 0.00640 | 914.17% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -84.4 | 0.0031 | mg/L | 0.00059 | 0.0031 | mg/L | 0.00059 | 19.12% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | -9.6 | -0.0033 | mg/L | 0.00115 | -0.0033 | mg/L | 0.00115 | 34.59% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 5629.3 | 0.0149 | mg/L | 0.00369 | 0.0149 | mg/L | 0.00369 | 24.77% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | -99.9 | 0.0034 | mg/L | 0.00018 | 0.0034 | mg/L | 0.00018 | 5.42% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | -279.5 | -0.0172 | mg/L | 0.00628 | -0.0172 | mg/L | 0.00628 | 36.43% |
| QC value within limits for MAGNESIUM Recovery = Not calculated | | | | | | | | |
| IRON† | -215.3 | -0.009 | mg/L | 0.0012 | -0.009 | mg/L | 0.0012 | 13.68% |
| QC value within limits for IRON Recovery = Not calculated | | | | | | | | |
| CALCIUM† | -946.5 | 0.005 | mg/L | 0.0011 | 0.005 | mg/L | 0.0011 | 20.93% |
| QC value within limits for CALCIUM Recovery = Not calculated | | | | | | | | |

All analytes passed QC.

Sequence No.: 120
Sample ID: 10020428-08APDS
Analyst: KL
Sample Wt:
Dilution: 5X

Autosampler Location: 85
Date Collected: 2/19/10 8:12:37 PM

Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-08APDS

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17961019.3 | 9.677 | mg/L | 0.0841 | | | | 0.87% |
| ALUMINUM† | 3926.3 | 0.2496 | mg/L | 0.00342 | 1.248 | mg/L | 0.0171 | 1.37% |
| ANTIMONY† | 622.8 | 0.2032 | mg/L | 0.00246 | 1.016 | mg/L | 0.0123 | 1.21% |
| ARSENIC† | 542.8 | 0.2112 | mg/L | 0.00396 | 1.056 | mg/L | 0.0198 | 1.87% |
| BARIUM† | 24983.5 | 0.2732 | mg/L | 0.00249 | 1.366 | mg/L | 0.0124 | 0.91% |
| BERYLLIUM† | 1166684.7 | 0.2039 | mg/L | 0.00280 | 1.019 | mg/L | 0.0140 | 1.37% |
| CADMIUM† | 7846.9 | 0.1991 | mg/L | 0.00238 | 0.9955 | mg/L | 0.01189 | 1.19% |
| CHROMIUM† | 25416.4 | 0.2005 | mg/L | 0.00284 | 1.002 | mg/L | 0.0142 | 1.42% |
| COBALT† | 6047.4 | 0.1946 | mg/L | 0.00144 | 0.9731 | mg/L | 0.00720 | 0.74% |
| COPPER† | 30775.9 | 0.2032 | mg/L | 0.00400 | 1.016 | mg/L | 0.0200 | 1.97% |
| MANGANESE† | 82029.6 | 0.2020 | mg/L | 0.00265 | 1.010 | mg/L | 0.0133 | 1.31% |
| MOLYBDENUM† | 6189.5 | 0.2044 | mg/L | 0.00154 | 1.022 | mg/L | 0.0077 | 0.75% |
| NICKEL† | 12931.6 | 0.1959 | mg/L | 0.00192 | 0.9793 | mg/L | 0.00962 | 0.98% |
| LEAD† | 2569.2 | 0.1992 | mg/L | 0.00216 | 0.9959 | mg/L | 0.01080 | 1.08% |
| SELENIUM† | 778.9 | 0.2050 | mg/L | 0.00040 | 1.025 | mg/L | 0.0020 | 0.20% |
| SILVER† | 47054.1 | 0.1947 | mg/L | 0.00335 | 0.9737 | mg/L | 0.01677 | 1.72% |
| THALLIUM† | 727.4 | 0.2076 | mg/L | 0.00282 | 1.038 | mg/L | 0.0141 | 1.36% |
| VANADIUM† | 102697.5 | 0.2213 | mg/L | 0.01164 | 1.106 | mg/L | 0.0582 | 5.26% |
| ZINC† | 14081.8 | 0.1956 | mg/L | 0.00164 | 0.9779 | mg/L | 0.00819 | 0.84% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 105778.0 | 7.825 | mg/L | 0.0983 | 39.13 | mg/L | 0.491 | 1.26% |
| IRON† | 2885.7 | 0.188 | mg/L | 0.0018 | 0.938 | mg/L | 0.0089 | 0.95% |
| CALCIUM† | 1026962.6 | 12.3 | mg/L | 0.17 | 61.3 | mg/L | 0.84 | 1.36% |

Sequence No.: 121
Sample ID: 10020428-08APDSD
Analyst: KL
Sample Wt:
Dilution: 5X

Autosampler Location: 86
Date Collected: 2/19/10 8:17:36 PM

Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-08APDSD

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17855563.0 | 9.621 | mg/L | 0.0387 | | | | 0.40% |
| ALUMINUM† | 4132.3 | 0.2616 | mg/L | 0.00365 | 1.308 | mg/L | 0.0182 | 1.39% |
| ANTIMONY† | 652.4 | 0.2127 | mg/L | 0.00736 | 1.064 | mg/L | 0.0368 | 3.46% |
| ARSENIC† | 562.2 | 0.2188 | mg/L | 0.00177 | 1.094 | mg/L | 0.0088 | 0.81% |
| BARIUM† | 25658.5 | 0.2805 | mg/L | 0.00147 | 1.402 | mg/L | 0.0074 | 0.53% |
| BERYLLIUM† | 1197908.9 | 0.2092 | mg/L | 0.00137 | 1.046 | mg/L | 0.0069 | 0.66% |
| CADMIUM† | 8070.1 | 0.2046 | mg/L | 0.00131 | 1.023 | mg/L | 0.0066 | 0.64% |
| CHROMIUM† | 26024.4 | 0.2052 | mg/L | 0.00174 | 1.026 | mg/L | 0.0087 | 0.85% |
| COBALT† | 6212.5 | 0.1998 | mg/L | 0.00126 | 0.9992 | mg/L | 0.00632 | 0.63% |
| COPPER† | 31807.7 | 0.2098 | mg/L | 0.00258 | 1.049 | mg/L | 0.0129 | 1.23% |
| MANGANESE† | 84194.6 | 0.2073 | mg/L | 0.00136 | 1.036 | mg/L | 0.0068 | 0.66% |
| MOLYBDENUM† | 6379.1 | 0.2106 | mg/L | 0.00126 | 1.053 | mg/L | 0.0063 | 0.60% |
| NICKEL† | 13351.6 | 0.2021 | mg/L | 0.00079 | 1.011 | mg/L | 0.0039 | 0.39% |
| LEAD† | 2653.1 | 0.2056 | mg/L | 0.00280 | 1.028 | mg/L | 0.0140 | 1.36% |
| SELENIUM† | 813.4 | 0.2139 | mg/L | 0.00598 | 1.070 | mg/L | 0.0299 | 2.79% |
| SILVER† | 48291.4 | 0.1998 | mg/L | 0.00126 | 0.9989 | mg/L | 0.00631 | 0.63% |
| THALLIUM† | 745.8 | 0.2128 | mg/L | 0.00138 | 1.064 | mg/L | 0.0069 | 0.65% |
| VANADIUM† | 106647.5 | 0.2298 | mg/L | 0.00545 | 1.149 | mg/L | 0.0272 | 2.37% |
| ZINC† | 14499.7 | 0.2013 | mg/L | 0.00092 | 1.006 | mg/L | 0.0046 | 0.46% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 107511.2 | 7.953 | mg/L | 0.0571 | 39.77 | mg/L | 0.285 | 0.72% |
| IRON† | 2940.5 | 0.191 | mg/L | 0.0008 | 0.956 | mg/L | 0.0042 | 0.44% |

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 1043880.0 | 12.5 mg/L | 0.09 | 62.3 mg/L | 0.44 | 0.71% |

**Sequence No.:** 122
**Sample ID:** 10020428-13A
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 87
**Date Collected:** 2/19/10 8:22:35 PM
**Sample Prep Volume:**
**Data Type:** Original

**Mean Data:** 10020428-13A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18072188.7 | 9.737 | mg/L | 0.0157 | | | | 0.16% |
| ALUMINUM† | 248774.0 | 13.83 | mg/L | 0.139 | 13.83 | mg/L | 0.139 | 1.00% |
| ANTIMONY† | 2.2 | 0.0039 | mg/L | 0.00303 | 0.0039 | mg/L | 0.00303 | 78.11% |
| ARSENIC† | 18.4 | 0.0078 | mg/L | 0.00260 | 0.0078 | mg/L | 0.00260 | 33.39% |
| BARIUM† | 1969.9 | 0.0244 | mg/L | 0.00009 | 0.0244 | mg/L | 0.00009 | 0.37% |
| BERYLLIUM† | 27480.7 | 0.0084 | mg/L | 0.00002 | 0.0084 | mg/L | 0.00002 | 0.23% |
| CADMIUM† | 1628.8 | 0.0450 | mg/L | 0.00041 | 0.0450 | mg/L | 0.00041 | 0.91% |
| CHROMIUM† | 321.7 | 0.0053 | mg/L | 0.00049 | 0.0053 | mg/L | 0.00049 | 9.32% |
| COBALT† | 2372.3 | 0.0785 | mg/L | 0.00061 | 0.0785 | mg/L | 0.00061 | 0.78% |
| COPPER† | 2340.5 | 0.0210 | mg/L | 0.00060 | 0.0210 | mg/L | 0.00060 | 2.85% |
| MANGANESE† | 1129217.5 | 2.750 | mg/L | 0.0057 | 2.750 | mg/L | 0.0057 | 0.21% |
| MOLYBDENUM† | 32.1 | 0.0039 | mg/L | 0.00044 | 0.0039 | mg/L | 0.00044 | 11.29% |
| NICKEL† | 1836.2 | 0.0309 | mg/L | 0.00044 | 0.0309 | mg/L | 0.00044 | 1.42% |
| LEAD† | 6.1 | 0.0034 | mg/L | 0.00230 | 0.0034 | mg/L | 0.00230 | 67.40% |
| SELENIUM† | -30.9 | 0.0014 | mg/L | 0.01002 | 0.0014 | mg/L | 0.01002 | 713.23% |
| SILVER† | -104.2 | 0.0030 | mg/L | 0.00041 | 0.0030 | mg/L | 0.00041 | 13.62% |
| THALLIUM† | -0.9 | -0.0008 | mg/L | 0.00341 | -0.0008 | mg/L | 0.00341 | 414.94% |
| VANADIUM† | 7119.0 | 0.0053 | mg/L | 0.00347 | 0.0053 | mg/L | 0.00347 | 65.90% |
| ZINC† | 6114.6 | 0.0876 | mg/L | 0.00003 | 0.0876 | mg/L | 0.00003 | 0.03% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 153692.5 | 11.37 | mg/L | 0.099 | 11.37 | mg/L | 0.099 | 0.87% |
| IRON† | 603.1 | 0.040 | mg/L | 0.0008 | 0.040 | mg/L | 0.0008 | 2.08% |
| CALCIUM† | 2187204.3 | 26.1 | mg/L | 0.04 | 26.1 | mg/L | 0.04 | 0.16% |

**Sequence No.:** 123
**Sample ID:** 10020428-20A
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 88
**Date Collected:** 2/19/10 8:27:44 PM
**Sample Prep Volume:**
**Data Type:** Original

**Mean Data:** 10020428-20A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17588817.1 | 9.477 | mg/L | 0.0336 | | | | 0.36% |
| ALUMINUM† | 21493.1 | 1.408 | mg/L | 0.0106 | 1.408 | mg/L | 0.0106 | 0.75% |
| ANTIMONY† | -14.3 | 0.0023 | mg/L | 0.00279 | 0.0023 | mg/L | 0.00279 | 122.72% |
| ARSENIC† | 29.9 | 0.0172 | mg/L | 0.00355 | 0.0172 | mg/L | 0.00355 | 20.70% |
| BARIUM† | 3670.0 | 0.0428 | mg/L | 0.00015 | 0.0428 | mg/L | 0.00015 | 0.34% |
| BERYLLIUM† | 61531.3 | 0.0142 | mg/L | 0.00007 | 0.0142 | mg/L | 0.00007 | 0.46% |
| CADMIUM† | 20.1 | 0.0063 | mg/L | 0.00026 | 0.0063 | mg/L | 0.00026 | 4.15% |
| CHROMIUM† | 716.0 | 0.0083 | mg/L | 0.00025 | 0.0083 | mg/L | 0.00025 | 3.03% |
| COBALT† | 1532.4 | 0.0520 | mg/L | 0.00053 | 0.0520 | mg/L | 0.00053 | 1.01% |
| COPPER† | 170.5 | 0.0026 | mg/L | 0.00050 | 0.0026 | mg/L | 0.00050 | 18.96% |
| MANGANESE† | 669271.6 | 1.632 | mg/L | 0.0147 | 1.632 | mg/L | 0.0147 | 0.90% |
| MOLYBDENUM† | -64.1 | 0.0032 | mg/L | 0.00062 | 0.0032 | mg/L | 0.00062 | 19.54% |
| NICKEL† | 4262.4 | 0.0652 | mg/L | 0.00037 | 0.0652 | mg/L | 0.00037 | 0.58% |
| LEAD† | 86.0 | 0.0145 | mg/L | 0.00013 | 0.0145 | mg/L | 0.00013 | 0.91% |
| SELENIUM† | -78.1 | -0.0161 | mg/L | 0.00450 | -0.0161 | mg/L | 0.00450 | 28.01% |
| SILVER† | -2471.2 | 0.0043 | mg/L | 0.00009 | 0.0043 | mg/L | 0.00009 | 2.01% |
| THALLIUM† | 49.5 | 0.0059 | mg/L | 0.00172 | 0.0059 | mg/L | 0.00172 | 29.11% |
| VANADIUM† | 15360.1 | 0.0139 | mg/L | 0.00321 | 0.0139 | mg/L | 0.00321 | 23.13% |
| ZINC† | 5344.2 | 0.0724 | mg/L | 0.00066 | 0.0724 | mg/L | 0.00066 | 0.91% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1404087.1 | 104.2 | mg/L | 0.85 | 104.2 | mg/L | 0.85 | 0.82% |

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 593979.4 | 35.4 mg/L | 0.31 | 35.4 mg/L | 0.31 | 0.86% |
| CALCIUM† | 12030326.1 | 144 mg/L | 0.1 | 144 mg/L | 0.1 | 0.06% |

Sequence No.: 124
Sample ID: 10020428-02A
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 89
Date Collected: 2/19/10 8:32:44 PM
Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-02A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17663970.8 | 9.517 | mg/L | 0.0295 | | | | 0.31% |
| ALUMINUM† | 3369571.9 | 186.8 | mg/L | 1.03 | 186.8 | mg/L | 1.03 | 0.55% |
| ANTIMONY† | -39.7 | -0.0150 | mg/L | 0.00429 | -0.0150 | mg/L | 0.00429 | 28.62% |
| ARSENIC† | 51.9 | 0.0452 | mg/L | 0.00198 | 0.0452 | mg/L | 0.00198 | 4.38% |
| BARIUM† | 1622.3 | 0.0210 | mg/L | 0.00028 | 0.0210 | mg/L | 0.00028 | 1.31% |
| BERYLLIUM† | 139600.4 | 0.0276 | mg/L | 0.00024 | 0.0276 | mg/L | 0.00024 | 0.89% |
| CADMIUM† | -65.4 | 0.0088 | mg/L | 0.00044 | 0.0088 | mg/L | 0.00044 | 5.01% |
| CHROMIUM† | 10655.8 | 0.0857 | mg/L | 0.00027 | 0.0857 | mg/L | 0.00027 | 0.31% |
| COBALT† | 5073.3 | 0.1639 | mg/L | 0.00107 | 0.1639 | mg/L | 0.00107 | 0.65% |
| COPPER† | -2574.8 | -0.0550 | mg/L | 0.00187 | -0.0550 | mg/L | 0.00187 | 3.39% |
| MANGANESE† | 1728673.7 | 4.216 | mg/L | 0.0226 | 4.216 | mg/L | 0.0226 | 0.54% |
| MOLYBDENUM† | -363.7 | 0.0031 | mg/L | 0.00042 | 0.0031 | mg/L | 0.00042 | 13.64% |
| NICKEL† | 15162.0 | 0.2199 | mg/L | 0.00152 | 0.2199 | mg/L | 0.00152 | 0.69% |
| LEAD† | -183.8 | 0.0142 | mg/L | 0.00070 | 0.0142 | mg/L | 0.00070 | 4.92% |
| SELENIUM† | -336.4 | -0.0036 | mg/L | 0.00712 | -0.0036 | mg/L | 0.00712 | 196.07% |
| SILVER† | -12276.0 | 0.0088 | mg/L | 0.00010 | 0.0088 | mg/L | 0.00010 | 1.18% |
| THALLIUM† | 84.9 | -0.0154 | mg/L | 0.00324 | -0.0154 | mg/L | 0.00324 | 20.96% |
| VANADIUM† | 66522.8 | 0.1838 | mg/L | 0.00605 | 0.1838 | mg/L | 0.00605 | 3.29% |
| ZINC† | 25682.6 | 0.3682 | mg/L | 0.00101 | 0.3682 | mg/L | 0.00101 | 0.27% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1048221.1 | 79.31 | mg/L | 0.423 | 79.31 | mg/L | 0.423 | 0.53% |
| IRON† | 3009194.2 | 179 | mg/L | 1.0 | 179 | mg/L | 1.0 | 0.55% |
| CALCIUM† | 6573768.2 | 78.4 | mg/L | 0.41 | 78.4 | mg/L | 0.41 | 0.53% |

Sequence No.: 125
Sample ID: CCV
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 2/19/10 8:37:59 PM
Sample Prep Volume:
Data Type: Original

Mean Data: CCV

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17899944.3 | 9.645 | mg/L | 0.0054 | | | | 0.06% |
| ALUMINUM† | 11320.0 | 0.6523 | mg/L | 0.03793 | 0.6523 | mg/L | 0.03793 | 5.81% |
| QC value greater than the upper limit for ALUMINUM Recovery = 130.45% | | | | | | | | |
| ANTIMONY† | 1542.7 | 0.4991 | mg/L | 0.00417 | 0.4991 | mg/L | 0.00417 | 0.84% |
| QC value within limits for ANTIMONY Recovery = 99.83% | | | | | | | | |
| ARSENIC† | 1293.2 | 0.5024 | mg/L | 0.00327 | 0.5024 | mg/L | 0.00327 | 0.65% |
| QC value within limits for ARSENIC Recovery = 100.47% | | | | | | | | |
| BARIUM† | 45309.1 | 0.4929 | mg/L | 0.00463 | 0.4929 | mg/L | 0.00463 | 0.94% |
| QC value within limits for BARIUM Recovery = 98.59% | | | | | | | | |
| BERYLLIUM† | 2837642.1 | 0.4906 | mg/L | 0.00104 | 0.4906 | mg/L | 0.00104 | 0.21% |
| QC value within limits for BERYLLIUM Recovery = 98.12% | | | | | | | | |
| CADMIUM† | 19376.7 | 0.4847 | mg/L | 0.00112 | 0.4847 | mg/L | 0.00112 | 0.23% |
| QC value within limits for CADMIUM Recovery = 96.95% | | | | | | | | |
| CHROMIUM† | 62788.8 | 0.4912 | mg/L | 0.00466 | 0.4912 | mg/L | 0.00466 | 0.95% |
| QC value within limits for CHROMIUM Recovery = 98.25% | | | | | | | | |
| COBALT† | 15349.5 | 0.4885 | mg/L | 0.00136 | 0.4885 | mg/L | 0.00136 | 0.28% |
| QC value within limits for COBALT Recovery = 97.70% | | | | | | | | |
| COPPER† | 73013.7 | 0.4742 | mg/L | 0.00362 | 0.4742 | mg/L | 0.00362 | 0.76% |
| QC value within limits for COPPER Recovery = 94.85% | | | | | | | | |
| MANGANESE† | 203972.9 | 0.4987 | mg/L | 0.00532 | 0.4987 | mg/L | 0.00532 | 1.07% |
| QC value within limits for MANGANESE Recovery = 99.75% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| MOLYBDENUM† | 15061.8 | 0.4934 mg/L | 0.00196 | 0.4934 mg/L | 0.00196 | 0.40% |
| QC value within limits for MOLYBDENUM Recovery = 98.68% | | | | | | |
| NICKEL† | 33095.2 | 0.4956 mg/L | 0.00526 | 0.4956 mg/L | 0.00526 | 1.06% |
| QC value within limits for NICKEL Recovery = 99.12% | | | | | | |
| LEAD† | 6453.5 | 0.4959 mg/L | 0.00070 | 0.4959 mg/L | 0.00070 | 0.14% |
| QC value within limits for LEAD Recovery = 99.18% | | | | | | |
| SELENIUM† | 1899.6 | 0.4949 mg/L | 0.00477 | 0.4949 mg/L | 0.00477 | 0.96% |
| QC value within limits for SELENIUM Recovery = 98.98% | | | | | | |
| SILVER† | 117752.7 | 0.4823 mg/L | 0.00455 | 0.4823 mg/L | 0.00455 | 0.94% |
| QC value within limits for SILVER Recovery = 96.45% | | | | | | |
| THALLIUM† | 1821.5 | 0.5206 mg/L | 0.00349 | 0.5206 mg/L | 0.00349 | 0.67% |
| QC value within limits for THALLIUM Recovery = 104.12% | | | | | | |
| VANADIUM† | 230464.6 | 0.5030 mg/L | 0.00601 | 0.5030 mg/L | 0.00601 | 1.20% |
| QC value within limits for VANADIUM Recovery = 100.59% | | | | | | |
| ZINC† | 35484.0 | 0.4874 mg/L | 0.00360 | 0.4874 mg/L | 0.00360 | 0.74% |
| QC value within limits for ZINC Recovery = 97.47% | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 7101.4 | 0.5346 mg/L | 0.01483 | 0.5346 mg/L | 0.01483 | 2.77% |
| QC value within limits for MAGNESIUM Recovery = 106.92% | | | | | | |
| IRON† | 10037.1 | 0.630 mg/L | 0.0309 | 0.630 mg/L | 0.0309 | 4.91% |
| QC value greater than the upper limit for IRON Recovery = 125.91% | | | | | | |
| CALCIUM† | 44149.6 | 0.545 mg/L | 0.0184 | 0.545 mg/L | 0.0184 | 3.38% |
| QC value within limits for CALCIUM Recovery = 108.95% | | | | | | |

QC Failed. Continue with analysis.

==========

**Sequence No.:** 126 **Autosampler Location:** 7
**Sample ID:** CCB **Date Collected:** 2/19/10 8:43:07 PM
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type:** Original

---

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18011037.5 | 9.704 | mg/L | 0.0711 | | | | 0.73% |
| ALUMINUM† | 450.4 | 0.0313 | mg/L | 0.00459 | 0.0313 | mg/L | 0.00459 | 14.67% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | 14.9 | 0.0067 | mg/L | 0.00090 | 0.0067 | mg/L | 0.00090 | 13.42% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | 5.0 | 0.0026 | mg/L | 0.00271 | 0.0026 | mg/L | 0.00271 | 105.83% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | -7.8 | 0.0030 | mg/L | 0.00040 | 0.0030 | mg/L | 0.00040 | 13.53% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -471.9 | 0.0036 | mg/L | 0.00008 | 0.0036 | mg/L | 0.00008 | 2.38% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | 44.0 | 0.0058 | mg/L | 0.00018 | 0.0058 | mg/L | 0.00018 | 3.10% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 182.9 | 0.0042 | mg/L | 0.00023 | 0.0042 | mg/L | 0.00023 | 5.52% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -59.3 | 0.0017 | mg/L | 0.00043 | 0.0017 | mg/L | 0.00043 | 25.50% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 144.6 | 0.0059 | mg/L | 0.00078 | 0.0059 | mg/L | 0.00078 | 13.17% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | 64.9 | 0.0025 | mg/L | 0.00010 | 0.0025 | mg/L | 0.00010 | 3.76% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | 22.0 | 0.0036 | mg/L | 0.00029 | 0.0036 | mg/L | 0.00029 | 8.07% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 220.2 | 0.0069 | mg/L | 0.00024 | 0.0069 | mg/L | 0.00024 | 3.50% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | 32.4 | 0.0054 | mg/L | 0.00174 | 0.0054 | mg/L | 0.00174 | 32.19% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | -5.6 | 0.0021 | mg/L | 0.00233 | 0.0021 | mg/L | 0.00233 | 111.69% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | 31.6 | 0.0035 | mg/L | 0.00028 | 0.0035 | mg/L | 0.00028 | 7.78% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | -1.4 | -0.0009 | mg/L | 0.00445 | -0.0009 | mg/L | 0.00445 | 470.58% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 5173.2 | 0.0139 | mg/L | 0.00447 | 0.0139 | mg/L | 0.00447 | 32.09% |

QC value within limits for VANADIUM Recovery = Not calculated
ZINC† -108.3 0.0033 mg/L 0.00037 0.0033 mg/L 0.00037 11.17%
QC value within limits for ZINC Recovery = Not calculated
ARGON Saturated2
Saturated in preshot (code 2)
MAGNESIUM† -332.4 -0.0210 mg/L 0.01534 -0.0210 mg/L 0.01534 72.93%
QC value within limits for MAGNESIUM Recovery = Not calculated
IRON† -24.3 0.002 mg/L 0.0023 0.002 mg/L 0.0023 96.89%
QC value within limits for IRON Recovery = Not calculated
CALCIUM† -1069.3 0.004 mg/L 0.0011 0.004 mg/L 0.0011 26.46%
QC value within limits for CALCIUM Recovery = Not calculated
All analytes passed QC.

---

**Sequence No.:** 127 **Autosampler Location:** 4
**Sample ID:** ICSA **Date Collected:** 2/19/10 8:47:57 PM
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type:** Original

---

**Mean Data: ICSA**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16267961.8 | 8.765 | mg/L | 0.0174 | | | | 0.20% |
| ALUMINUM† | 9446759.7 | 524.2 | mg/L | 0.38 | 524.2 | mg/L | 0.38 | 0.07% |
| QC value within limits for ALUMINUM Recovery = 104.83% | | | | | | | | |
| ANTIMONY† | -79.0 | -0.0222 | mg/L | 0.00403 | -0.0222 | mg/L | 0.00403 | 18.15% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | -151.9 | 0.0066 | mg/L | 0.00370 | 0.0066 | mg/L | 0.00370 | 56.09% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | 672.2 | 0.0111 | mg/L | 0.00117 | 0.0111 | mg/L | 0.00117 | 10.48% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -8089.9 | 0.0022 | mg/L | 0.00002 | 0.0022 | mg/L | 0.00002 | 0.88% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | -266.0 | 0.0130 | mg/L | 0.00063 | 0.0130 | mg/L | 0.00063 | 4.82% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 2306.9 | 0.0207 | mg/L | 0.00019 | 0.0207 | mg/L | 0.00019 | 0.94% |
| QC value greater than the upper limit for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -130.8 | -0.0006 | mg/L | 0.00073 | -0.0006 | mg/L | 0.00073 | 132.46% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 14374.3 | -0.0029 | mg/L | 0.00063 | -0.0029 | mg/L | 0.00063 | 21.44% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -8521.0 | -0.0006 | mg/L | 0.00005 | -0.0006 | mg/L | 0.00005 | 7.30% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | -1071.0 | -0.0005 | mg/L | 0.00102 | -0.0005 | mg/L | 0.00102 | 192.17% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 1520.0 | 0.0023 | mg/L | 0.00047 | 0.0023 | mg/L | 0.00047 | 20.36% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | -852.1 | 0.0041 | mg/L | 0.00120 | 0.0041 | mg/L | 0.00120 | 29.31% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | -877.0 | 0.0008 | mg/L | 0.01105 | 0.0008 | mg/L | 0.01105 | >999.9% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -31790.7 | 0.0190 | mg/L | 0.00039 | 0.0190 | mg/L | 0.00039 | 2.06% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | 304.8 | -0.0159 | mg/L | 0.00865 | -0.0159 | mg/L | 0.00865 | 54.27% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 35461.9 | 0.0234 | mg/L | 0.00246 | 0.0234 | mg/L | 0.00246 | 10.48% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | -1588.0 | -0.0150 | mg/L | 0.00029 | -0.0150 | mg/L | 0.00029 | 1.94% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7132084.1 | 532.0 | mg/L | 1.43 | 532.0 | mg/L | 1.43 | 0.27% |
| QC value within limits for MAGNESIUM Recovery = 106.40% | | | | | | | | |
| IRON† | 7890551.1 | 471 | mg/L | 1.5 | 471 | mg/L | 1.5 | 0.32% |
| QC value within limits for IRON Recovery = 94.12% | | | | | | | | |
| CALCIUM† | 42904934.5 | 512 | mg/L | 0.3 | 512 | mg/L | 0.3 | 0.06% |
| QC value within limits for CALCIUM Recovery = 102.35% | | | | | | | | |

QC Failed. Continue with analysis.

Sequence No.: 128
Sample ID: ICSAB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 2/19/10 8:53:21 PM
Sample Prep Volume:
Data Type: Original

Mean Data: ICSAB

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16177964.5 | 8.717 | mg/L | 0.0047 | | | | 0.05% |
| ALUMINUM† | 9390373.3 | 521.2 | mg/L | 0.45 | 521.2 | mg/L | 0.45 | 0.09% |
| QC value within limits for ALUMINUM Recovery = 104.23% | | | | | | | | |
| ANTIMONY† | 32621.6 | 10.47 | mg/L | 0.046 | 10.47 | mg/L | 0.046 | 0.44% |
| QC value within limits for ANTIMONY Recovery = 104.70% | | | | | | | | |
| ARSENIC† | 27501.0 | 10.78 | mg/L | 0.055 | 10.78 | mg/L | 0.055 | 0.51% |
| QC value within limits for ARSENIC Recovery = 107.85% | | | | | | | | |
| BARIUM† | 272985.7 | 2.955 | mg/L | 0.0061 | 2.955 | mg/L | 0.0061 | 0.21% |
| QC value within limits for BARIUM Recovery = 98.50% | | | | | | | | |
| BERYLLIUM† | 6155429.2 | 1.060 | mg/L | 0.0008 | 1.060 | mg/L | 0.0008 | 0.07% |
| QC value within limits for BERYLLIUM Recovery = 106.00% | | | | | | | | |
| CADMIUM† | 133148.8 | 3.318 | mg/L | 0.0190 | 3.318 | mg/L | 0.0190 | 0.57% |
| QC value within limits for CADMIUM Recovery = 110.60% | | | | | | | | |
| CHROMIUM† | 389330.8 | 3.032 | mg/L | 0.0069 | 3.032 | mg/L | 0.0069 | 0.23% |
| QC value within limits for CHROMIUM Recovery = 101.05% | | | | | | | | |
| COBALT† | 90245.7 | 2.855 | mg/L | 0.0106 | 2.855 | mg/L | 0.0106 | 0.37% |
| QC value within limits for COBALT Recovery = 95.15% | | | | | | | | |
| COPPER† | 515059.6 | 3.220 | mg/L | 0.0147 | 3.220 | mg/L | 0.0147 | 0.46% |
| QC value within limits for COPPER Recovery = 107.32% | | | | | | | | |
| MANGANESE† | 819807.1 | 2.015 | mg/L | 0.0041 | 2.015 | mg/L | 0.0041 | 0.20% |
| QC value within limits for MANGANESE Recovery = 100.73% | | | | | | | | |
| MOLYBDENUM† | 92361.4 | 3.042 | mg/L | 0.0089 | 3.042 | mg/L | 0.0089 | 0.29% |
| QC value within limits for MOLYBDENUM Recovery = 101.39% | | | | | | | | |
| NICKEL† | 193398.5 | 2.855 | mg/L | 0.0048 | 2.855 | mg/L | 0.0048 | 0.17% |
| QC value within limits for NICKEL Recovery = 95.17% | | | | | | | | |
| LEAD† | 126374.5 | 9.715 | mg/L | 0.0370 | 9.715 | mg/L | 0.0370 | 0.38% |
| QC value within limits for LEAD Recovery = 97.15% | | | | | | | | |
| SELENIUM† | 19672.6 | 5.314 | mg/L | 0.0479 | 5.314 | mg/L | 0.0479 | 0.90% |
| QC value within limits for SELENIUM Recovery = 106.29% | | | | | | | | |
| SILVER† | 662224.2 | 2.838 | mg/L | 0.0176 | 2.838 | mg/L | [illegible] | [illegible] |
| QC value within limits for SILVER Recovery = 94.59% | | | | | | | | |
| THALLIUM† | 35360.5 | 10.02 | mg/L | 0.044 | 10.02 | mg/L | 0.044 | 0.44% |
| QC value within limits for THALLIUM Recovery = 100.22% | | | | | | | | |
| VANADIUM† | 1468672.1 | 3.132 | mg/L | 0.0106 | 3.132 | mg/L | 0.0106 | 0.34% |
| QC value within limits for VANADIUM Recovery = 104.40% | | | | | | | | |
| ZINC† | 207697.3 | 2.830 | mg/L | 0.0091 | 2.830 | mg/L | 0.0091 | 0.32% |
| QC value within limits for ZINC Recovery = 94.34% | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 6997927.0 | 522.0 | mg/L | 0.83 | 522.0 | mg/L | 0.83 | 0.16% |
| QC value within limits for MAGNESIUM Recovery = 104.40% | | | | | | | | |
| IRON† | 7752729.0 | 463 | mg/L | 0.9 | 463 | mg/L | 0.9 | 0.20% |
| QC value within limits for IRON Recovery = 92.51% | | | | | | | | |
| CALCIUM† | 42430585.0 | 506 | mg/L | 0.2 | 506 | mg/L | 0.2 | 0.04% |
| QC value within limits for CALCIUM Recovery = 101.22% | | | | | | | | |

All analytes passed QC.

Sequence No.: 129
Sample ID: RINSE BLANK
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 90
Date Collected: 2/19/10 8:58:08 PM
Sample Prep Volume:
Data Type: Original

Mean Data: RINSE BLANK

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17991166.8 | 9.694 | mg/L | 0.0107 | | | | 0.11% |
| ALUMINUM† | 7198.1 | 0.4059 | mg/L | 0.11856 | 0.4059 | mg/L | 0.11856 | 29.21% |

| | | | | | | |
|---|---|---|---|---|---|---|
| ANTIMONY† | 35.3 | 0.0133 mg/L | 0.00020 | 0.0133 mg/L | 0.00020 | 1.52% |
| ARSENIC† | 26.5 | 0.0110 mg/L | 0.00378 | 0.0110 mg/L | 0.00378 | 34.35% |
| BARIUM† | 135.5 | 0.0045 mg/L | 0.00071 | 0.0045 mg/L | 0.00071 | 15.68% |
| BERYLLIUM† | 1690.7 | 0.0039 mg/L | 0.00022 | 0.0039 mg/L | 0.00022 | 5.65% |
| CADMIUM† | 121.1 | 0.0077 mg/L | 0.00092 | 0.0077 mg/L | 0.00092 | 11.95% |
| CHROMIUM† | 314.2 | 0.0052 mg/L | 0.00085 | 0.0052 mg/L | 0.00085 | 16.24% |
| COBALT† | -8.0 | 0.0033 mg/L | 0.00065 | 0.0033 mg/L | 0.00065 | 19.52% |
| COPPER† | 1518.2 | 0.0147 mg/L | 0.00190 | 0.0147 mg/L | 0.00190 | 12.94% |
| MANGANESE† | 228.0 | 0.0029 mg/L | 0.00040 | 0.0029 mg/L | 0.00040 | 13.61% |
| MOLYBDENUM† | 104.8 | 0.0063 mg/L | 0.00044 | 0.0063 mg/L | 0.00044 | 7.02% |
| NICKEL† | 316.2 | 0.0083 mg/L | 0.00045 | 0.0083 mg/L | 0.00045 | 5.40% |
| LEAD† | 160.1 | 0.0152 mg/L | 0.00165 | 0.0152 mg/L | 0.00165 | 10.85% |
| SELENIUM† | 14.3 | 0.0074 mg/L | 0.00105 | 0.0074 mg/L | 0.00105 | 14.21% |
| SILVER† | 769.8 | 0.0067 mg/L | 0.00105 | 0.0067 mg/L | 0.00105 | 15.72% |
| THALLIUM† | 52.3 | 0.0143 mg/L | 0.00452 | 0.0143 mg/L | 0.00452 | 31.53% |
| VANADIUM† | 7518.1 | 0.0190 mg/L | 0.00127 | 0.0190 mg/L | 0.00127 | 6.68% |
| ZINC† | 292.8 | 0.0088 mg/L | 0.00127 | 0.0088 mg/L | 0.00127 | 14.43% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 5216.2 | 0.3932 mg/L | 0.13400 | 0.3932 mg/L | 0.13400 | 34.08% |
| IRON† | 6698.0 | 0.403 mg/L | 0.1283 | 0.403 mg/L | 0.1283 | 31.80% |
| CALCIUM† | 31809.8 | 0.396 mg/L | 0.1297 | 0.396 mg/L | 0.1297 | 32.73% |

==========

**Sequence No.: 130** **Autosampler Location: 91**
**Sample ID: RINSE BLANK** **Date Collected: 2/19/10 9:03:00 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

Mean Data: RINSE BLANK

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17985636.9 | 9.691 | mg/L | 0.0676 | | | | 0.70% |
| ALUMINUM† | 1331.8 | 0.0803 | mg/L | 0.01817 | 0.0803 | mg/L | 0.01817 | 22.63% |
| ANTIMONY† | 12.3 | 0.0059 | mg/L | 0.00310 | 0.0059 | mg/L | 0.00310 | 52.44% |
| ARSENIC† | 12.3 | 0.0054 | mg/L | 0.00544 | 0.0054 | mg/L | 0.00544 | 100.01% |
| BARIUM† | -14.1 | 0.0029 | mg/L | 0.00018 | 0.0029 | mg/L | 0.00018 | 6.27% |
| BERYLLIUM† | -1935.7 | 0.0033 | mg/L | 0.00005 | 0.0033 | mg/L | 0.00005 | 1.50% |
| CADMIUM† | 39.5 | 0.0057 | mg/L | 0.00065 | 0.0057 | mg/L | 0.00065 | 11.50% |
| CHROMIUM† | 146.6 | 0.0039 | mg/L | 0.00056 | 0.0039 | mg/L | 0.00056 | 14.44% |
| COBALT† | -73.2 | 0.0013 | mg/L | 0.00046 | 0.0013 | mg/L | 0.00046 | 36.49% |
| COPPER† | 471.8 | 0.0080 | mg/L | 0.00052 | 0.0080 | mg/L | 0.00052 | 6.51% |
| MANGANESE† | -211.8 | 0.0019 | mg/L | 0.00011 | 0.0019 | mg/L | 0.00011 | 5.80% |
| MOLYBDENUM† | 32.6 | 0.0039 | mg/L | 0.00023 | 0.0039 | mg/L | 0.00023 | 5.78% |
| NICKEL† | 213.0 | 0.0068 | mg/L | 0.00051 | 0.0068 | mg/L | 0.00051 | 7.52% |
| LEAD† | 56.0 | 0.0072 | mg/L | 0.00109 | 0.0072 | mg/L | 0.00109 | 15.10% |
| SELENIUM† | -11.6 | 0.0006 | mg/L | 0.00388 | 0.0006 | mg/L | 0.00388 | 686.51% |
| SILVER† | -25.6 | 0.0033 | mg/L | 0.00023 | 0.0033 | mg/L | 0.00023 | 6.97% |
| THALLIUM† | 14.8 | 0.0037 | mg/L | 0.00045 | 0.0037 | mg/L | 0.00045 | 12.34% |
| VANADIUM† | 6091.4 | 0.0159 | mg/L | 0.00455 | 0.0159 | mg/L | 0.00455 | 28.65% |
| ZINC† | -53.6 | 0.0040 | mg/L | 0.00019 | 0.0040 | mg/L | 0.00019 | 4.75% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 478.3 | 0.0394 | mg/L | 0.01311 | 0.0394 | mg/L | 0.01311 | 33.30% |
| IRON† | 756.6 | 0.049 | mg/L | 0.0122 | 0.049 | mg/L | 0.0122 | 24.94% |
| CALCIUM† | 2137.4 | 0.042 | mg/L | 0.0176 | 0.042 | mg/L | 0.0176 | 41.74% |

==========

**Sequence No.: 131** **Autosampler Location: 92**
**Sample ID: MBLK-87096** **Date Collected: 2/19/10 9:07:51 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

Mean Data: MBLK-87096

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18053500.0 | 9.727 | mg/L | 0.0646 | | | | 0.66% |

| | | | | | | |
|---|---|---|---|---|---|---|
| ALUMINUM† | 1364.4 | 0.0821 mg/L | 0.01119 | 0.0821 mg/L | 0.01119 | 13.64% |
| ANTIMONY† | -4.0 | 0.0007 mg/L | 0.00495 | 0.0007 mg/L | 0.00495 | 720.25% |
| ARSENIC† | 9.8 | 0.0045 mg/L | 0.00294 | 0.0045 mg/L | 0.00294 | 65.82% |
| BARIUM† | -4.0 | 0.0030 mg/L | 0.00007 | 0.0030 mg/L | 0.00007 | 2.41% |
| BERYLLIUM† | -2053.0 | 0.0033 mg/L | 0.00009 | 0.0033 mg/L | 0.00009 | 2.70% |
| CADMIUM† | 34.9 | 0.0056 mg/L | 0.00006 | 0.0056 mg/L | 0.00006 | 1.03% |
| CHROMIUM† | 62.9 | 0.0033 mg/L | 0.00010 | 0.0033 mg/L | 0.00010 | 2.93% |
| COBALT† | -66.4 | 0.0015 mg/L | 0.00029 | 0.0015 mg/L | 0.00029 | 19.36% |
| COPPER† | 183.7 | 0.0061 mg/L | 0.00101 | 0.0061 mg/L | 0.00101 | 16.43% |
| MANGANESE† | -269.2 | 0.0017 mg/L | 0.00012 | 0.0017 mg/L | 0.00012 | 6.79% |
| MOLYBDENUM† | 14.3 | 0.0033 mg/L | 0.00038 | 0.0033 mg/L | 0.00038 | 11.44% |
| NICKEL† | 194.9 | 0.0065 mg/L | 0.00038 | 0.0065 mg/L | 0.00038 | 5.90% |
| LEAD† | 47.5 | 0.0066 mg/L | 0.00076 | 0.0066 mg/L | 0.00076 | 11.56% |
| SELENIUM† | -20.1 | -0.0016 mg/L | 0.00141 | -0.0016 mg/L | 0.00141 | 86.75% |
| SILVER† | -126.5 | 0.0029 mg/L | 0.00037 | 0.0029 mg/L | 0.00037 | 12.64% |
| THALLIUM† | 7.2 | 0.0015 mg/L | 0.00589 | 0.0015 mg/L | 0.00589 | 393.58% |
| VANADIUM† | 5463.1 | 0.0145 mg/L | 0.00438 | 0.0145 mg/L | 0.00438 | 30.14% |
| ZINC† | 15.5 | 0.0050 mg/L | 0.00039 | 0.0050 mg/L | 0.00039 | 7.79% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 431.3 | 0.0359 mg/L | 0.01054 | 0.0359 mg/L | 0.01054 | 29.34% |
| IRON† | 778.4 | 0.050 mg/L | 0.0059 | 0.050 mg/L | 0.0059 | 11.66% |
| CALCIUM† | 3524.6 | 0.059 mg/L | 0.0054 | 0.059 mg/L | 0.0054 | 9.22% |

==========

**Sequence No.:** 132
**Sample ID:** LCS-87096
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 93
**Date Collected:** 2/19/10 9:12:42 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** LCS-87096

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18077077.1 | 9.740 | mg/L | 0.0487 | | | | 0.50% |
| ALUMINUM† | 93934.2 | 5.223 | mg/L | 0.0372 | 5.223 | mg/L | 0.0372 | 0.71% |
| ANTIMONY† | 336.1 | 0.1103 | mg/L | 0.00513 | 0.1103 | mg/L | 0.00513 | 4.65% |
| ARSENIC† | 298.0 | 0.1170 | mg/L | 0.00220 | 0.1170 | mg/L | 0.00220 | 1.88% |
| BARIUM† | 9913.0 | 0.1102 | mg/L | 0.00058 | 0.1102 | mg/L | 0.00058 | 0.53% |
| BERYLLIUM† | 616698.0 | 0.1095 | mg/L | 0.00050 | 0.1095 | mg/L | 0.00050 | 0.46% |
| CADMIUM† | 4145.4 | 0.1076 | mg/L | 0.00097 | 0.1076 | mg/L | 0.00097 | 0.90% |
| CHROMIUM† | 13674.5 | 0.1091 | mg/L | 0.00115 | 0.1091 | mg/L | 0.00115 | 1.05% |
| COBALT† | 3231.6 | 0.1057 | mg/L | 0.00019 | 0.1057 | mg/L | 0.00019 | 0.18% |
| COPPER† | 16873.3 | 0.1124 | mg/L | 0.00041 | 0.1124 | mg/L | 0.00041 | 0.36% |
| MANGANESE† | 43277.8 | 0.1079 | mg/L | 0.00069 | 0.1079 | mg/L | 0.00069 | 0.64% |
| MOLYBDENUM† | 3179.2 | 0.1068 | mg/L | 0.00071 | 0.1068 | mg/L | 0.00071 | 0.67% |
| NICKEL† | 7249.6 | 0.1111 | mg/L | 0.00117 | 0.1111 | mg/L | 0.00117 | 1.05% |
| LEAD† | 1412.6 | 0.1116 | mg/L | 0.00050 | 0.1116 | mg/L | 0.00050 | 0.45% |
| SELENIUM† | 2035.1 | 0.5323 | mg/L | 0.00783 | 0.5323 | mg/L | 0.00783 | 1.47% |
| SILVER† | 25291.0 | 0.1079 | mg/L | 0.00034 | 0.1079 | mg/L | 0.00034 | 0.32% |
| THALLIUM† | 418.5 | 0.1181 | mg/L | 0.00076 | 0.1181 | mg/L | 0.00076 | 0.65% |
| VANADIUM† | 56449.5 | 0.1253 | mg/L | 0.00391 | 0.1253 | mg/L | 0.00391 | 3.12% |
| ZINC† | 7425.3 | 0.1058 | mg/L | 0.00057 | 0.1058 | mg/L | 0.00057 | 0.54% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 75670.7 | 5.652 | mg/L | 0.0242 | 5.652 | mg/L | 0.0242 | 0.43% |
| IRON† | 89209.4 | 5.33 | mg/L | 0.026 | 5.33 | mg/L | 0.026 | 0.49% |
| CALCIUM† | 456527.2 | 5.46 | mg/L | 0.033 | 5.46 | mg/L | 0.033 | 0.61% |

==========

**Sequence No.:** 133
**Sample ID:** 10020428-19A
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 94
**Date Collected:** 2/19/10 9:17:36 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-19A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| YTTRIUM | 17883546.2 | 9.636 mg/L | 0.0476 | | | 0.49% |
| ALUMINUM† | 1011.0 | 0.0710 mg/L | 0.00309 | 0.0710 mg/L | 0.00309 | 4.35% |
| ANTIMONY† | 3.0 | 0.0032 mg/L | 0.00586 | 0.0032 mg/L | 0.00586 | 185.31% |
| ARSENIC† | 34.2 | 0.0140 mg/L | 0.00213 | 0.0140 mg/L | 0.00213 | 15.27% |
| BARIUM† | 3167.7 | 0.0373 mg/L | 0.00025 | 0.0373 mg/L | 0.00025 | 0.68% |
| BERYLLIUM† | -2241.1 | 0.0033 mg/L | 0.00005 | 0.0033 mg/L | 0.00005 | 1.68% |
| CADMIUM† | 44.2 | 0.0058 mg/L | 0.00005 | 0.0058 mg/L | 0.00005 | 0.89% |
| CHROMIUM† | 139.4 | 0.0039 mg/L | 0.00042 | 0.0039 mg/L | 0.00042 | 10.89% |
| COBALT† | -73.5 | 0.0013 mg/L | 0.00033 | 0.0013 mg/L | 0.00033 | 26.64% |
| COPPER† | 573.5 | 0.0088 mg/L | 0.00031 | 0.0088 mg/L | 0.00031 | 3.55% |
| MANGANESE† | 3138.9 | 0.0100 mg/L | 0.00002 | 0.0100 mg/L | 0.00002 | 0.22% |
| MOLYBDENUM† | 141.5 | 0.0075 mg/L | 0.00060 | 0.0075 mg/L | 0.00060 | 8.05% |
| NICKEL† | 249.5 | 0.0073 mg/L | 0.00018 | 0.0073 mg/L | 0.00018 | 2.50% |
| LEAD† | 36.7 | 0.0057 mg/L | 0.00067 | 0.0057 mg/L | 0.00067 | 11.59% |
| SELENIUM† | -19.8 | -0.0016 mg/L | 0.00156 | -0.0016 mg/L | 0.00156 | 98.16% |
| SILVER† | -190.5 | 0.0027 mg/L | 0.00004 | 0.0027 mg/L | 0.00004 | 1.65% |
| THALLIUM† | 2.2 | 0.0001 mg/L | 0.00347 | 0.0001 mg/L | 0.00347 | >999.9% |
| VANADIUM† | 9881.7 | 0.0223 mg/L | 0.00339 | 0.0223 mg/L | 0.00339 | 15.26% |
| ZINC† | 95.9 | 0.0058 mg/L | 0.00010 | 0.0058 mg/L | 0.00010 | 1.68% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 42540.5 | 3.149 mg/L | 0.0143 | 3.149 mg/L | 0.0143 | 0.45% |
| IRON† | 508.3 | 0.035 mg/L | 0.0030 | 0.035 mg/L | 0.0030 | 8.77% |
| CALCIUM† | 472070.8 | 5.65 mg/L | 0.024 | 5.65 mg/L | 0.024 | 0.43% |

==========

**Sequence No.:** 134
**Sample ID:** 10020428-19ASD
**Analyst:** KL
**Sample Wt:**
**Dilution:** 5X

**Autosampler Location:** 95
**Date Collected:** 2/19/10 9:22:28 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-19ASD

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18056000.2 | 9.729 | mg/L | 0.0437 | | | | 0.45% |
| ALUMINUM† | 300.2 | 0.0246 | mg/L | 0.00456 | 0.1228 | mg/L | 0.02282 | 18.58% |
| ANTIMONY† | 1.7 | 0.0026 | mg/L | 0.00131 | 0.0128 | mg/L | 0.00657 | 51.40% |
| ARSENIC† | 20.7 | 0.0087 | mg/L | 0.00070 | 0.0436 | mg/L | 0.00352 | 8.07% |
| BARIUM† | 571.8 | 0.0092 | mg/L | 0.00012 | 0.0461 | mg/L | 0.00058 | 1.26% |
| BERYLLIUM† | -2469.5 | 0.0032 | mg/L | 0.00001 | 0.0161 | mg/L | 0.00006 | 0.38% |
| CADMIUM† | 36.6 | 0.0056 | mg/L | 0.00029 | 0.0280 | mg/L | 0.00147 | 5.25% |
| CHROMIUM† | 99.0 | 0.0035 | mg/L | 0.00045 | 0.0177 | mg/L | 0.00225 | 12.70% |
| COBALT† | -79.6 | 0.0011 | mg/L | 0.00012 | 0.0053 | mg/L | 0.00061 | 11.44% |
| COPPER† | 194.0 | 0.0062 | mg/L | 0.00034 | 0.0312 | mg/L | 0.00172 | 5.51% |
| MANGANESE† | 334.2 | 0.0032 | mg/L | 0.00003 | 0.0160 | mg/L | 0.00014 | 0.87% |
| MOLYBDENUM† | 40.3 | 0.0042 | mg/L | 0.00042 | 0.0209 | mg/L | 0.00212 | 10.14% |
| NICKEL† | 200.8 | 0.0066 | mg/L | 0.00040 | 0.0331 | mg/L | 0.00198 | 5.99% |
| LEAD† | 39.3 | 0.0059 | mg/L | 0.00059 | 0.0297 | mg/L | 0.00294 | 9.90% |
| SELENIUM† | 2.1 | 0.0041 | mg/L | 0.00282 | 0.0204 | mg/L | 0.01411 | 69.10% |
| SILVER† | -120.7 | 0.0029 | mg/L | 0.00040 | 0.0146 | mg/L | 0.00201 | 13.72% |
| THALLIUM† | -3.2 | -0.0015 | mg/L | 0.00629 | -0.0073 | mg/L | 0.03147 | 431.07% |
| VANADIUM† | 6017.5 | 0.0154 | mg/L | 0.00289 | 0.0770 | mg/L | 0.01445 | 18.76% |
| ZINC† | -122.9 | 0.0030 | mg/L | 0.00015 | 0.0152 | mg/L | 0.00073 | 4.82% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7532.9 | 0.5604 | mg/L | 0.00179 | 2.802 | mg/L | 0.0089 | 0.32% |
| IRON† | -116.7 | -0.003 | mg/L | 0.0012 | -0.015 | mg/L | 0.0062 | 40.12% |
| CALCIUM† | 84728.3 | 1.03 | mg/L | 0.000 | 5.14 | mg/L | 0.002 | 0.05% |

==========

**Sequence No.:** 135
**Sample ID:** 10020428-19AMS
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 96
**Date Collected:** 2/19/10 9:27:19 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-19AMS

Mean Corrected Calib Sample

| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17862411.8 | 9.624 | mg/L | 0.0839 | | | | 0.87% |
| ALUMINUM† | 91265.6 | 5.083 | mg/L | 0.0596 | 5.083 | mg/L | 0.0596 | 1.17% |
| ANTIMONY† | 332.6 | 0.1094 | mg/L | 0.00429 | 0.1094 | mg/L | 0.00429 | 3.92% |
| ARSENIC† | 315.6 | 0.1239 | mg/L | 0.00314 | 0.1239 | mg/L | 0.00314 | 2.53% |
| BARIUM† | 12866.6 | 0.1422 | mg/L | 0.00103 | 0.1422 | mg/L | 0.00103 | 0.73% |
| BERYLLIUM† | 594656.0 | 0.1057 | mg/L | 0.00114 | 0.1057 | mg/L | 0.00114 | 1.07% |
| CADMIUM† | 4184.9 | 0.1085 | mg/L | 0.00094 | 0.1085 | mg/L | 0.00094 | 0.86% |
| CHROMIUM† | 13081.5 | 0.1045 | mg/L | 0.00064 | 0.1045 | mg/L | 0.00064 | 0.61% |
| COBALT† | 3113.8 | 0.1019 | mg/L | 0.00059 | 0.1019 | mg/L | 0.00059 | 0.58% |
| COPPER† | 16925.7 | 0.1130 | mg/L | 0.00156 | 0.1130 | mg/L | 0.00156 | 1.38% |
| MANGANESE† | 44388.0 | 0.1106 | mg/L | 0.00117 | 0.1106 | mg/L | 0.00117 | 1.06% |
| MOLYBDENUM† | 3222.3 | 0.1081 | mg/L | 0.00136 | 0.1081 | mg/L | 0.00136 | 1.26% |
| NICKEL† | 6953.1 | 0.1067 | mg/L | 0.00108 | 0.1067 | mg/L | 0.00108 | 1.01% |
| LEAD† | 1382.3 | 0.1092 | mg/L | 0.00163 | 0.1092 | mg/L | 0.00163 | 1.49% |
| SELENIUM† | 2049.7 | 0.5361 | mg/L | 0.00904 | 0.5361 | mg/L | 0.00904 | 1.69% |
| SILVER† | 25351.0 | 0.1081 | mg/L | 0.00103 | 0.1081 | mg/L | 0.00103 | 0.95% |
| THALLIUM† | 390.8 | 0.1101 | mg/L | 0.00237 | 0.1101 | mg/L | 0.00237 | 2.15% |
| VANADIUM† | 57152.7 | 0.1249 | mg/L | 0.00639 | 0.1249 | mg/L | 0.00639 | 5.11% |
| ZINC† | 7597.5 | 0.1079 | mg/L | 0.00100 | 0.1079 | mg/L | 0.00100 | 0.92% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 116555.8 | 8.673 | mg/L | 0.0925 | 8.673 | mg/L | 0.0925 | 1.07% |
| IRON† | 87025.4 | 5.20 | mg/L | 0.059 | 5.20 | mg/L | 0.059 | 1.14% |
| CALCIUM† | 917217.6 | 11.0 | mg/L | 0.12 | 11.0 | mg/L | 0.12 | 1.13% |

==========

**Sequence No.:** 136
**Sample ID:** 10020428-19AMSD
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 97
**Date Collected:** 2/19/10 9:32:13 PM
**Sample Prep Volume:**
**Data Type:** Original

---

Mean Data: 10020428-19AMSD

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17923946.3 | 9.657 | mg/L | 0.0311 | | | | 0.32% |
| ALUMINUM† | 87965.8 | 4.900 | mg/L | 0.0176 | 4.900 | mg/L | 0.0176 | 0.36% |
| ANTIMONY† | 311.5 | 0.1026 | mg/L | 0.00138 | 0.1026 | mg/L | 0.00138 | 1.35% |
| ARSENIC† | 293.2 | 0.1151 | mg/L | 0.00628 | 0.1151 | mg/L | 0.00628 | 5.46% |
| BARIUM† | 12257.0 | 0.1356 | mg/L | 0.00044 | 0.1356 | mg/L | 0.00044 | 0.32% |
| BERYLLIUM† | 572968.9 | 0.1020 | mg/L | 0.00030 | 0.1020 | mg/L | 0.00030 | 0.29% |
| CADMIUM† | 4031.5 | 0.1047 | mg/L | 0.00042 | 0.1047 | mg/L | 0.00042 | 0.40% |
| CHROMIUM† | 12407.2 | 0.0993 | mg/L | 0.00071 | 0.0993 | mg/L | 0.00071 | 0.71% |
| COBALT† | 2978.4 | 0.0977 | mg/L | 0.00001 | 0.0977 | mg/L | 0.00001 | 0.01% |
| COPPER† | 16204.2 | 0.1083 | mg/L | 0.00085 | 0.1083 | mg/L | 0.00085 | 0.78% |
| MANGANESE† | 43413.7 | 0.1082 | mg/L | 0.00018 | 0.1082 | mg/L | 0.00018 | 0.17% |
| MOLYBDENUM† | 3074.4 | 0.1033 | mg/L | 0.00066 | 0.1033 | mg/L | 0.00066 | 0.64% |
| NICKEL† | 6618.8 | 0.1018 | mg/L | 0.00030 | 0.1018 | mg/L | 0.00030 | 0.29% |
| LEAD† | 1342.8 | 0.1062 | mg/L | 0.00232 | 0.1062 | mg/L | 0.00232 | 2.18% |
| SELENIUM† | 1982.2 | 0.5185 | mg/L | 0.00478 | 0.5185 | mg/L | 0.00478 | 0.92% |
| SILVER† | 24915.4 | 0.1062 | mg/L | 0.00066 | 0.1062 | mg/L | 0.00066 | 0.62% |
| THALLIUM† | 392.1 | 0.1106 | mg/L | 0.00581 | 0.1106 | mg/L | 0.00581 | 5.25% |
| VANADIUM† | 55757.2 | 0.1220 | mg/L | 0.00291 | 0.1220 | mg/L | 0.00291 | 2.39% |
| ZINC† | 7181.6 | 0.1023 | mg/L | 0.00050 | 0.1023 | mg/L | 0.00050 | 0.49% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 112825.5 | 8.395 | mg/L | 0.0190 | 8.395 | mg/L | 0.0190 | 0.23% |
| IRON† | 84445.0 | 5.05 | mg/L | 0.017 | 5.05 | mg/L | 0.017 | 0.33% |
| CALCIUM† | 887729.8 | 10.6 | mg/L | 0.04 | 10.6 | mg/L | 0.04 | 0.34% |

==========

**Sequence No.:** 137
**Sample ID:** CCV
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 6
**Date Collected:** 2/19/10 9:37:07 PM
**Sample Prep Volume:**
**Data Type:** Original

---

Mean Data: CCV

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18039614.3 | 9.720 | mg/L | 0.0391 | | | | 0.40% |
| ALUMINUM† | 8906.2 | 0.5183 | mg/L | 0.00563 | 0.5183 | mg/L | 0.00563 | 1.09% |
| QC value within limits for ALUMINUM Recovery = 103.66% | | | | | | | | |
| ANTIMONY† | 1518.3 | 0.4913 | mg/L | 0.00211 | 0.4913 | mg/L | 0.00211 | 0.43% |
| QC value within limits for ANTIMONY Recovery = 98.26% | | | | | | | | |
| ARSENIC† | 1293.7 | 0.5025 | mg/L | 0.00059 | 0.5025 | mg/L | 0.00059 | 0.12% |
| QC value within limits for ARSENIC Recovery = 100.50% | | | | | | | | |
| BARIUM† | 44994.2 | 0.4895 | mg/L | 0.00460 | 0.4895 | mg/L | 0.00460 | 0.94% |
| QC value within limits for BARIUM Recovery = 97.91% | | | | | | | | |
| BERYLLIUM† | 2821755.6 | 0.4879 | mg/L | 0.00215 | 0.4879 | mg/L | 0.00215 | 0.44% |
| QC value within limits for BERYLLIUM Recovery = 97.58% | | | | | | | | |
| CADMIUM† | 19272.0 | 0.4821 | mg/L | 0.00141 | 0.4821 | mg/L | 0.00141 | 0.29% |
| QC value within limits for CADMIUM Recovery = 96.43% | | | | | | | | |
| CHROMIUM† | 62492.9 | 0.4889 | mg/L | 0.00415 | 0.4889 | mg/L | 0.00415 | 0.85% |
| QC value within limits for CHROMIUM Recovery = 97.79% | | | | | | | | |
| COBALT† | 15305.5 | 0.4871 | mg/L | 0.00061 | 0.4871 | mg/L | 0.00061 | 0.13% |
| QC value within limits for COBALT Recovery = 97.42% | | | | | | | | |
| COPPER† | 72819.9 | 0.4730 | mg/L | 0.00501 | 0.4730 | mg/L | 0.00501 | 1.06% |
| QC value within limits for COPPER Recovery = 94.61% | | | | | | | | |
| MANGANESE† | 200696.6 | 0.4908 | mg/L | 0.00397 | 0.4908 | mg/L | 0.00397 | 0.81% |
| QC value within limits for MANGANESE Recovery = 98.15% | | | | | | | | |
| MOLYBDENUM† | 14997.0 | 0.4913 | mg/L | 0.00130 | 0.4913 | mg/L | 0.00130 | 0.27% |
| QC value within limits for MOLYBDENUM Recovery = 98.26% | | | | | | | | |
| NICKEL† | 32904.4 | 0.4928 | mg/L | 0.00396 | 0.4928 | mg/L | 0.00396 | 0.80% |
| QC value within limits for NICKEL Recovery = 98.55% | | | | | | | | |
| LEAD† | 6403.3 | 0.4920 | mg/L | 0.00151 | 0.4920 | mg/L | 0.00151 | 0.31% |
| QC value within limits for LEAD Recovery = 98.41% | | | | | | | | |
| SELENIUM† | 1889.4 | 0.4922 | mg/L | 0.00877 | 0.4922 | mg/L | 0.00877 | 1.78% |
| QC value within limits for SELENIUM Recovery = 98.45% | | | | | | | | |
| SILVER† | 117450.8 | 0.4810 | mg/L | 0.00469 | 0.4810 | mg/L | 0.00469 | 0.98% |
| QC value within limits for SILVER Recovery = 96.20% | | | | | | | | |
| THALLIUM† | 1829.1 | 0.5228 | mg/L | 0.00151 | 0.5228 | mg/L | 0.00151 | 0.29% |
| QC value within limits for THALLIUM Recovery = 104.56% | | | | | | | | |
| VANADIUM† | 228648.5 | 0.4990 | mg/L | 0.00829 | 0.4990 | mg/L | 0.00829 | 1.66% |
| QC value within limits for VANADIUM Recovery = 99.80% | | | | | | | | |
| ZINC† | 35397.7 | 0.4862 | mg/L | 0.00461 | 0.4862 | mg/L | 0.00461 | 0.95% |
| QC value within limits for ZINC Recovery = 97.24% | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 6386.3 | 0.4805 | mg/L | 0.00224 | 0.4805 | mg/L | 0.00224 | 0.47% |
| QC value within limits for MAGNESIUM Recovery = 96.09% | | | | | | | | |
| IRON† | 7942.1 | 0.504 | mg/L | 0.0012 | 0.504 | mg/L | 0.0012 | 0.24% |
| QC value within limits for IRON Recovery = 100.88% | | | | | | | | |
| CALCIUM† | 39049.6 | 0.484 | mg/L | 0.0043 | 0.484 | mg/L | 0.0043 | 0.88% |
| QC value within limits for CALCIUM Recovery = 96.79% | | | | | | | | |

All analytes passed QC.

---

**Sequence No.:** 138
**Sample ID:** CCB
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 7
**Date Collected:** 2/19/10 9:42:16 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17897289.3 | 9.643 | mg/L | 0.0395 | | | | 0.41% |
| ALUMINUM† | 264.3 | 0.0212 | mg/L | 0.00912 | 0.0212 | mg/L | 0.00912 | 43.13% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | 11.7 | 0.0057 | mg/L | 0.00254 | 0.0057 | mg/L | 0.00254 | 44.68% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | 11.6 | 0.0051 | mg/L | 0.00292 | 0.0051 | mg/L | 0.00292 | 57.01% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | -10.0 | 0.0029 | mg/L | 0.00019 | 0.0029 | mg/L | 0.00019 | 6.35% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | 0.2 | 0.0036 | mg/L | 0.00010 | 0.0036 | mg/L | 0.00010 | 2.78% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| CADMIUM† | 50.9 | 0.0060 mg/L | 0.00004 | 0.0060 mg/L | 0.00004 | 0.60% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | |
| CHROMIUM† | 169.2 | 0.0041 mg/L | 0.00011 | 0.0041 mg/L | 0.00011 | 2.61% |
| QC value within limits for CHROMIUM Recovery = Not calculated | | | | | | |
| COBALT† | -72.2 | 0.0013 mg/L | 0.00051 | 0.0013 mg/L | 0.00051 | 39.47% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | |
| COPPER† | 199.9 | 0.0062 mg/L | 0.00028 | 0.0062 mg/L | 0.00028 | 4.42% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | |
| MANGANESE† | -181.9 | 0.0019 mg/L | 0.00008 | 0.0019 mg/L | 0.00008 | 4.14% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | |
| MOLYBDENUM† | 27.6 | 0.0038 mg/L | 0.00014 | 0.0038 mg/L | 0.00014 | 3.80% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | |
| NICKEL† | 233.7 | 0.0071 mg/L | 0.00054 | 0.0071 mg/L | 0.00054 | 7.55% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | |
| LEAD† | 41.4 | 0.0061 mg/L | 0.00107 | 0.0061 mg/L | 0.00107 | 17.51% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | |
| SELENIUM† | 2.0 | 0.0040 mg/L | 0.00106 | 0.0040 mg/L | 0.00106 | 26.20% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | |
| SILVER† | -54.5 | 0.0032 mg/L | 0.00017 | 0.0032 mg/L | 0.00017 | 5.33% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | |
| THALLIUM† | 5.5 | 0.0010 mg/L | 0.00276 | 0.0010 mg/L | 0.00276 | 268.17% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | |
| VANADIUM† | 7234.7 | 0.0184 mg/L | 0.00324 | 0.0184 mg/L | 0.00324 | 17.68% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | |
| ZINC† | -117.0 | 0.0032 mg/L | 0.00005 | 0.0032 mg/L | 0.00005 | 1.72% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | -405.3 | -0.0266 mg/L | 0.00851 | -0.0266 mg/L | 0.00851 | 32.01% |
| QC value within limits for MAGNESIUM Recovery = Not calculated | | | | | | |
| IRON† | -288.8 | -0.013 mg/L | 0.0015 | -0.013 mg/L | 0.0015 | 11.34% |
| QC value within limits for IRON Recovery = Not calculated | | | | | | |
| CALCIUM† | -1757.1 | -0.004 mg/L | 0.0032 | -0.004 mg/L | 0.0032 | 75.62% |
| QC value within limits for CALCIUM Recovery = Not calculated | | | | | | |

All analytes passed QC.

---

**Sequence No.:** 139
**Sample ID:** 10020428-19APDS
**Analyst:** KL
**Sample Wt:**
**Dilution:** 5X

**Autosampler Location:** 98
**Date Collected:** 2/19/10 9:47:05 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-19APDS

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17998890.1 | 9.698 | mg/L | 0.0116 | | | | 0.12% |
| ALUMINUM† | 3655.9 | 0.2181 | mg/L | 0.00788 | 1.090 | mg/L | 0.0394 | 3.61% |
| ANTIMONY† | 631.1 | 0.2053 | mg/L | 0.00449 | 1.027 | mg/L | 0.0224 | 2.19% |
| ARSENIC† | 548.1 | 0.2133 | mg/L | 0.00437 | 1.067 | mg/L | 0.0218 | 2.05% |
| BARIUM† | 18689.9 | 0.2051 | mg/L | 0.00066 | 1.026 | mg/L | 0.0033 | 0.32% |
| BERYLLIUM† | 1135839.1 | 0.1986 | mg/L | 0.00156 | 0.9928 | mg/L | 0.00781 | 0.79% |
| CADMIUM† | 7799.3 | 0.1979 | mg/L | 0.00111 | 0.9896 | mg/L | 0.00555 | 0.56% |
| CHROMIUM† | 25125.8 | 0.1982 | mg/L | 0.00186 | 0.9912 | mg/L | 0.00928 | 0.94% |
| COBALT† | 6109.9 | 0.1966 | mg/L | 0.00050 | 0.9830 | mg/L | 0.00250 | 0.25% |
| COPPER† | 29719.3 | 0.1960 | mg/L | 0.00196 | 0.9802 | mg/L | 0.00978 | 1.00% |
| MANGANESE† | 82168.9 | 0.2023 | mg/L | 0.00179 | 1.012 | mg/L | 0.0089 | 0.88% |
| MOLYBDENUM† | 6063.0 | 0.2003 | mg/L | 0.00080 | 1.002 | mg/L | 0.0040 | 0.40% |
| NICKEL† | 13174.7 | 0.1995 | mg/L | 0.00048 | 0.9974 | mg/L | 0.00242 | 0.24% |
| LEAD† | 2600.1 | 0.2015 | mg/L | 0.00136 | 1.008 | mg/L | 0.0068 | 0.67% |
| SELENIUM† | 757.6 | 0.1995 | mg/L | 0.00059 | 0.9974 | mg/L | 0.00296 | 0.30% |
| SILVER† | 46330.3 | 0.1918 | mg/L | 0.00177 | 0.9590 | mg/L | 0.00886 | 0.92% |
| THALLIUM† | 723.9 | 0.2066 | mg/L | 0.00278 | 1.033 | mg/L | 0.0139 | 1.35% |
| VANADIUM† | 97741.9 | 0.2144 | mg/L | 0.00590 | 1.072 | mg/L | 0.0295 | 2.75% |
| ZINC† | 14143.0 | 0.1971 | mg/L | 0.00074 | 0.9853 | mg/L | 0.00372 | 0.38% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 10289.5 | 0.7661 | mg/L | 0.00424 | 3.830 | mg/L | 0.0212 | 0.55% |
| IRON† | 3099.3 | 0.200 | mg/L | 0.0006 | 0.999 | mg/L | 0.0029 | 0.29% |
| CALCIUM† | 102989.7 | 1.25 | mg/L | 0.009 | 6.23 | mg/L | 0.043 | 0.70% |

Sequence No.: 140
Sample ID: 10020428-19APDSD
Analyst: KL
Sample Wt:
Dilution: 5X

Autosampler Location: 99
Date Collected: 2/19/10 9:52:03 PM

Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-19APDSD

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17894607.2 | 9.642 | mg/L | 0.0594 | | | | 0.62% |
| ALUMINUM† | 3775.5 | 0.2252 | mg/L | 0.00293 | 1.126 | mg/L | 0.0146 | 1.30% |
| ANTIMONY† | 637.6 | 0.2075 | mg/L | 0.00603 | 1.037 | mg/L | 0.0302 | 2.91% |
| ARSENIC† | 551.2 | 0.2145 | mg/L | 0.00339 | 1.073 | mg/L | 0.0169 | 1.58% |
| BARIUM† | 19149.0 | 0.2101 | mg/L | 0.00039 | 1.050 | mg/L | 0.0019 | 0.19% |
| BERYLLIUM† | 1164796.5 | 0.2035 | mg/L | 0.00127 | 1.018 | mg/L | 0.0063 | 0.62% |
| CADMIUM† | 7973.7 | 0.2022 | mg/L | 0.00066 | 1.011 | mg/L | 0.0033 | 0.33% |
| CHROMIUM† | 25774.1 | 0.2033 | mg/L | 0.00155 | 1.016 | mg/L | 0.0077 | 0.76% |
| COBALT† | 6278.9 | 0.2019 | mg/L | 0.00047 | 1.010 | mg/L | 0.0024 | 0.23% |
| COPPER† | 30504.3 | 0.2011 | mg/L | 0.00175 | 1.005 | mg/L | 0.0087 | 0.87% |
| MANGANESE† | 84279.5 | 0.2075 | mg/L | 0.00106 | 1.037 | mg/L | 0.0053 | 0.51% |
| MOLYBDENUM† | 6221.3 | 0.2055 | mg/L | 0.00056 | 1.027 | mg/L | 0.0028 | 0.27% |
| NICKEL† | 13496.7 | 0.2043 | mg/L | 0.00067 | 1.021 | mg/L | 0.0034 | 0.33% |
| LEAD† | 2674.5 | 0.2072 | mg/L | 0.00096 | 1.036 | mg/L | 0.0048 | 0.46% |
| SELENIUM† | 794.7 | 0.2091 | mg/L | 0.00337 | 1.045 | mg/L | 0.0169 | 1.61% |
| SILVER† | 47411.6 | 0.1962 | mg/L | 0.00153 | 0.9810 | mg/L | 0.00764 | 0.78% |
| THALLIUM† | 741.2 | 0.2115 | mg/L | 0.00335 | 1.058 | mg/L | 0.0168 | 1.59% |
| VANADIUM† | 102161.4 | 0.2240 | mg/L | 0.00364 | 1.120 | mg/L | 0.0182 | 1.62% |
| ZINC† | 14410.1 | 0.2007 | mg/L | 0.00035 | 1.003 | mg/L | 0.0018 | 0.17% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 10688.4 | 0.7956 | mg/L | 0.00238 | 3.978 | mg/L | 0.0119 | 0.30% |
| IRON† | 3114.9 | 0.201 | mg/L | 0.0013 | 1.01 | mg/L | 0.006 | 0.63% |
| CALCIUM† | 107756.7 | 1.30 | mg/L | 0.008 | 6.51 | mg/L | 0.042 | 0.65% |

Sequence No.: 141
Sample ID: 10020428-22A
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 100
Date Collected: 2/19/10 9:57:01 PM

Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-22A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17692829.6 | 9.533 | mg/L | 0.0245 | | | | 0.26% |
| ALUMINUM† | 127726.2 | 7.178 | mg/L | 0.1079 | 7.178 | mg/L | 0.1079 | 1.50% |
| ANTIMONY† | -3.2 | 0.0029 | mg/L | 0.00061 | 0.0029 | mg/L | 0.00061 | 20.67% |
| ARSENIC† | 2.9 | 0.0046 | mg/L | 0.00281 | 0.0046 | mg/L | 0.00281 | 60.53% |
| BARIUM† | 1176.5 | 0.0158 | mg/L | 0.00014 | 0.0158 | mg/L | 0.00014 | 0.86% |
| BERYLLIUM† | 57757.4 | 0.0135 | mg/L | 0.00006 | 0.0135 | mg/L | 0.00006 | 0.43% |
| CADMIUM† | 153.8 | 0.0092 | mg/L | 0.00015 | 0.0092 | mg/L | 0.00015 | 1.64% |
| CHROMIUM† | 3734.6 | 0.0318 | mg/L | 0.00021 | 0.0318 | mg/L | 0.00021 | 0.66% |
| COBALT† | 1235.3 | 0.0426 | mg/L | 0.00060 | 0.0426 | mg/L | 0.00060 | 1.40% |
| COPPER† | 45.4 | 0.0019 | mg/L | 0.00126 | 0.0019 | mg/L | 0.00126 | 64.79% |
| MANGANESE† | 708694.6 | 1.728 | mg/L | 0.0228 | 1.728 | mg/L | 0.0228 | 1.32% |
| MOLYBDENUM† | -49.3 | 0.0028 | mg/L | 0.00029 | 0.0028 | mg/L | 0.00029 | 10.55% |
| NICKEL† | 3151.8 | 0.0493 | mg/L | 0.00021 | 0.0493 | mg/L | 0.00021 | 0.42% |
| LEAD† | 48.9 | 0.0099 | mg/L | 0.00116 | 0.0099 | mg/L | 0.00116 | 11.77% |
| SELENIUM† | -29.3 | -0.0010 | mg/L | 0.00319 | -0.0010 | mg/L | 0.00319 | 314.73% |
| SILVER† | -1487.1 | 0.0043 | mg/L | 0.00071 | 0.0043 | mg/L | 0.00071 | 16.53% |
| THALLIUM† | 16.4 | -0.0008 | mg/L | 0.00023 | -0.0008 | mg/L | 0.00023 | 29.64% |
| VANADIUM† | 25284.7 | 0.0544 | mg/L | 0.00639 | 0.0544 | mg/L | 0.00639 | 11.75% |
| ZINC† | 7904.6 | 0.1125 | mg/L | 0.00060 | 0.1125 | mg/L | 0.00060 | 0.53% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 419444.5 | 31.24 | mg/L | 0.378 | 31.24 | mg/L | 0.378 | 1.21% |
| IRON† | 376780.8 | 22.5 | mg/L | 0.28 | 22.5 | mg/L | 0.28 | 1.24% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CALCIUM† | 5335335.0 | 63.7 | mg/L | 0.44 | 63.7 | mg/L | 0.44 | 0.70% |

Sequence No.: 142
Sample ID: 10020428-23A
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 101
Date Collected: 2/19/10 10:02:12 PM

Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-23A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17369683.6 | 9.359 | mg/L | 0.0047 | | | | 0.05% |
| ALUMINUM† | 7588496.1 | 420.7 | mg/L | 0.32 | 420.7 | mg/L | 0.32 | 0.08% |
| ANTIMONY† | -52.5 | -0.0164 | mg/L | 0.00205 | -0.0164 | mg/L | 0.00205 | 12.55% |
| ARSENIC† | 154.2 | 0.0915 | mg/L | 0.00545 | 0.0915 | mg/L | 0.00545 | 5.96% |
| BARIUM† | 1545.3 | 0.0204 | mg/L | 0.00020 | 0.0204 | mg/L | 0.00020 | 0.96% |
| BERYLLIUM† | 238519.5 | 0.0446 | mg/L | 0.00017 | 0.0446 | mg/L | 0.00017 | 0.38% |
| CADMIUM† | 665.5 | 0.0284 | mg/L | 0.00021 | 0.0284 | mg/L | 0.00021 | 0.75% |
| CHROMIUM† | 18445.4 | 0.1463 | mg/L | 0.00103 | 0.1463 | mg/L | 0.00103 | 0.71% |
| COBALT† | 13768.0 | 0.4385 | mg/L | 0.00247 | 0.4385 | mg/L | 0.00247 | 0.56% |
| COPPER† | -959.8 | -0.0538 | mg/L | 0.00041 | -0.0538 | mg/L | 0.00041 | 0.77% |
| MANGANESE† | 4898734.5 | 11.93 | mg/L | 0.027 | 11.93 | mg/L | 0.027 | 0.22% |
| MOLYBDENUM† | -520.6 | 0.0013 | mg/L | 0.00006 | 0.0013 | mg/L | 0.00006 | 4.44% |
| NICKEL† | 39176.9 | 0.5744 | mg/L | 0.00297 | 0.5744 | mg/L | 0.00297 | 0.52% |
| LEAD† | 9.9 | 0.0360 | mg/L | 0.00105 | 0.0360 | mg/L | 0.00105 | 2.91% |
| SELENIUM† | -478.2 | 0.0592 | mg/L | 0.00164 | 0.0592 | mg/L | 0.00164 | 2.78% |
| SILVER† | -15867.7 | 0.0093 | mg/L | 0.00032 | 0.0093 | mg/L | 0.00032 | 3.42% |
| THALLIUM† | 153.9 | -0.0065 | mg/L | 0.00594 | -0.0065 | mg/L | 0.00594 | 91.59% |
| VANADIUM† | 110973.7 | 0.1928 | mg/L | 0.00388 | 0.1928 | mg/L | 0.00388 | 2.01% |
| ZINC† | 129544.1 | 1.792 | mg/L | 0.0076 | 1.792 | mg/L | 0.0076 | 0.42% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1910183.4 | 143.5 | mg/L | 0.26 | 143.5 | mg/L | 0.26 | 0.18% |
| IRON† | 3836148.2 | 229 | mg/L | 0.3 | 229 | mg/L | 0.3 | 0.15% |
| CALCIUM† | 14692945.4 | 175 | mg/L | 0.1 | 175 | mg/L | 0.1 | 0.04% |

Sequence No.: 143
Sample ID: 10020428-29A
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 102
Date Collected: 2/19/10 10:07:39 PM

Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-29A

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17660907.7 | 9.516 | mg/L | 0.0316 | | | | 0.33% |
| ALUMINUM† | 598744.3 | 33.27 | mg/L | 0.176 | 33.27 | mg/L | 0.176 | 0.53% |
| ANTIMONY† | 3.9 | 0.0063 | mg/L | 0.00247 | 0.0063 | mg/L | 0.00247 | 39.29% |
| ARSENIC† | 36.9 | 0.0150 | mg/L | 0.00470 | 0.0150 | mg/L | 0.00470 | 31.25% |
| BARIUM† | 2118.4 | 0.0261 | mg/L | 0.00037 | 0.0261 | mg/L | 0.00037 | 1.40% |
| BERYLLIUM† | 31683.6 | 0.0091 | mg/L | 0.00001 | 0.0091 | mg/L | 0.00001 | 0.14% |
| CADMIUM† | 7988.1 | 0.2026 | mg/L | 0.00173 | 0.2026 | mg/L | 0.00173 | 0.85% |
| CHROMIUM† | 2275.7 | 0.0205 | mg/L | 0.00007 | 0.0205 | mg/L | 0.00007 | 0.33% |
| COBALT† | 2157.2 | 0.0717 | mg/L | 0.00054 | 0.0717 | mg/L | 0.00054 | 0.75% |
| COPPER† | 24065.6 | 0.1624 | mg/L | 0.00015 | 0.1624 | mg/L | 0.00015 | 0.09% |
| MANGANESE† | 1192460.2 | 2.904 | mg/L | 0.0117 | 2.904 | mg/L | 0.0117 | 0.40% |
| MOLYBDENUM† | -1.9 | 0.0029 | mg/L | 0.00023 | 0.0029 | mg/L | 0.00023 | 8.11% |
| NICKEL† | 8759.3 | 0.1338 | mg/L | 0.00103 | 0.1338 | mg/L | 0.00103 | 0.77% |
| LEAD† | 2600.7 | 0.2015 | mg/L | 0.00092 | 0.2015 | mg/L | 0.00092 | 0.46% |
| SELENIUM† | -12.7 | 0.0143 | mg/L | 0.00542 | 0.0143 | mg/L | 0.00542 | 37.80% |
| SILVER† | -309.7 | 0.0024 | mg/L | 0.00005 | 0.0024 | mg/L | 0.00005 | 2.23% |
| THALLIUM† | 18.4 | 0.0046 | mg/L | 0.00671 | 0.0046 | mg/L | 0.00671 | 147.39% |
| VANADIUM† | 12422.5 | -0.0002 | mg/L | 0.00291 | -0.0002 | mg/L | 0.00291 | >999.9% |
| ZINC† | 51346.1 | 0.7065 | mg/L | 0.00260 | 0.7065 | mg/L | 0.00260 | 0.37% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 365537.7 | 27.03 | mg/L | 0.099 | 27.03 | mg/L | 0.099 | 0.37% |

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 12444.3 | 0.747 mg/L | 0.0536 | 0.747 mg/L | 0.0536 | 7.18% |
| CALCIUM† | 5303006.9 | 63.3 mg/L | 0.28 | 63.3 mg/L | 0.28 | 0.44% |

**Sequence No.: 144** Autosampler Location: 103
**Sample ID: 10020428-30A** Date Collected: 2/19/10 10:12:52 PM
**Analyst: KL**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

**Mean Data: 10020428-30A**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17584434.0 | 9.475 | mg/L | 0.1055 | | | | 1.11% |
| ALUMINUM† | 295283.8 | 16.39 | mg/L | 0.090 | 16.39 | mg/L | 0.090 | 0.55% |
| ANTIMONY† | 9.0 | 0.0046 | mg/L | 0.00088 | 0.0046 | mg/L | 0.00088 | 19.22% |
| ARSENIC† | 9.4 | 0.0074 | mg/L | 0.00430 | 0.0074 | mg/L | 0.00430 | 58.27% |
| BARIUM† | 1132.4 | 0.0154 | mg/L | 0.00026 | 0.0154 | mg/L | 0.00026 | 1.67% |
| BERYLLIUM† | 56679.1 | 0.0134 | mg/L | 0.00007 | 0.0134 | mg/L | 0.00007 | 0.51% |
| CADMIUM† | 4043.1 | 0.1056 | mg/L | 0.00118 | 0.1056 | mg/L | 0.00118 | 1.11% |
| CHROMIUM† | 973.7 | 0.0103 | mg/L | 0.00020 | 0.0103 | mg/L | 0.00020 | 1.90% |
| COBALT† | 2381.6 | 0.0788 | mg/L | 0.00077 | 0.0788 | mg/L | 0.00077 | 0.98% |
| COPPER† | 1967.8 | 0.0123 | mg/L | 0.00024 | 0.0123 | mg/L | 0.00024 | 1.92% |
| MANGANESE† | 399517.4 | 0.9754 | mg/L | 0.00530 | 0.9754 | mg/L | 0.00530 | 0.54% |
| MOLYBDENUM† | -53.3 | 0.0027 | mg/L | 0.00033 | 0.0027 | mg/L | 0.00033 | 12.27% |
| NICKEL† | 7409.7 | 0.1126 | mg/L | 0.00154 | 0.1126 | mg/L | 0.00154 | 1.37% |
| LEAD† | 76.3 | 0.0120 | mg/L | 0.00035 | 0.0120 | mg/L | 0.00035 | 2.91% |
| SELENIUM† | -30.7 | 0.0026 | mg/L | 0.00321 | 0.0026 | mg/L | 0.00321 | 122.98% |
| SILVER† | -1661.5 | 0.0037 | mg/L | 0.00015 | 0.0037 | mg/L | 0.00015 | 4.09% |
| THALLIUM† | 19.7 | 0.0001 | mg/L | 0.00310 | 0.0001 | mg/L | 0.00310 | >999.9% |
| VANADIUM† | 15383.6 | 0.0388 | mg/L | 0.00586 | 0.0388 | mg/L | 0.00586 | 15.12% |
| ZINC† | 26032.2 | 0.3616 | mg/L | 0.00334 | 0.3616 | mg/L | 0.00334 | 0.92% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 380911.7 | 28.39 | mg/L | 0.189 | 28.39 | mg/L | 0.189 | 0.67% |
| IRON† | 382480.8 | 22.8 | mg/L | 0.15 | 22.8 | mg/L | 0.15 | 0.65% |
| CALCIUM† | 1273322.9 | 15.2 | mg/L | 0.09 | 15.2 | mg/L | 0.09 | 0.58% |

**Sequence No.: 145** Autosampler Location: 104
**Sample ID: 10020428-31A** Date Collected: 2/19/10 10:17:46 PM
**Analyst: KL**
**Sample Wt:** Sample Prep Volume:
**Dilution:** Data Type: Original

**Mean Data: 10020428-31A**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17592141.7 | 9.479 | mg/L | 0.0315 | | | | 0.33% |
| ALUMINUM† | 2457243.1 | 136.3 | mg/L | 0.19 | 136.3 | mg/L | 0.19 | 0.14% |
| ANTIMONY† | -54.6 | -0.0200 | mg/L | 0.00220 | -0.0200 | mg/L | 0.00220 | 11.01% |
| ARSENIC† | 131.9 | 0.0792 | mg/L | 0.00185 | 0.0792 | mg/L | 0.00185 | 2.34% |
| BARIUM† | 1642.4 | 0.0212 | mg/L | 0.00015 | 0.0212 | mg/L | 0.00015 | 0.72% |
| BERYLLIUM† | 152703.0 | 0.0298 | mg/L | 0.00008 | 0.0298 | mg/L | 0.00008 | 0.27% |
| CADMIUM† | 116.7 | 0.0139 | mg/L | 0.00037 | 0.0139 | mg/L | 0.00037 | 2.66% |
| CHROMIUM† | 7710.8 | 0.0628 | mg/L | 0.00055 | 0.0628 | mg/L | 0.00055 | 0.88% |
| COBALT† | 5451.2 | 0.1758 | mg/L | 0.00123 | 0.1758 | mg/L | 0.00123 | 0.70% |
| COPPER† | -2464.1 | -0.0584 | mg/L | 0.00051 | -0.0584 | mg/L | 0.00051 | 0.88% |
| MANGANESE† | 1960551.1 | 4.780 | mg/L | 0.0031 | 4.780 | mg/L | 0.0031 | 0.07% |
| MOLYBDENUM† | -411.6 | 0.0027 | mg/L | 0.00039 | 0.0027 | mg/L | 0.00039 | 14.35% |
| NICKEL† | 15228.1 | 0.2199 | mg/L | 0.00139 | 0.2199 | mg/L | 0.00139 | 0.63% |
| LEAD† | 45.5 | 0.0343 | mg/L | 0.00185 | 0.0343 | mg/L | 0.00185 | 5.39% |
| SELENIUM† | -331.1 | -0.0237 | mg/L | 0.00405 | -0.0237 | mg/L | 0.00405 | 17.10% |
| SILVER† | -13569.9 | 0.0092 | mg/L | 0.00042 | 0.0092 | mg/L | 0.00042 | 4.61% |
| THALLIUM† | 74.8 | -0.0224 | mg/L | 0.00166 | -0.0224 | mg/L | 0.00166 | 7.43% |
| VANADIUM† | 59570.4 | 0.1997 | mg/L | 0.00110 | 0.1997 | mg/L | 0.00110 | 0.55% |
| ZINC† | 26016.1 | 0.3740 | mg/L | 0.00146 | 0.3740 | mg/L | 0.00146 | 0.39% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| MAGNESIUM† | 1179092.5 | 89.18 mg/L | 0.053 | 89.18 mg/L | 0.053 | 0.06% |
| IRON† | 3319990.5 | 198 mg/L | 0.2 | 198 mg/L | 0.2 | 0.10% |
| CALCIUM† | 7999434.7 | 95.4 mg/L | 0.08 | 95.4 mg/L | 0.08 | 0.09% |

**Sequence No.: 146** **Autosampler Location: 105**
**Sample ID: 10020428-33A** **Date Collected: 2/19/10 10:23:02 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

**Mean Data: 10020428-33A**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17693184.9 | 9.533 | mg/L | 0.0562 | | | | 0.59% |
| ALUMINUM† | 127524.3 | 7.165 | mg/L | 0.0866 | 7.165 | mg/L | 0.0866 | 1.21% |
| ANTIMONY† | 8.3 | 0.0065 | mg/L | 0.00006 | 0.0065 | mg/L | 0.00006 | 0.97% |
| ARSENIC† | 7.6 | 0.0065 | mg/L | 0.00207 | 0.0065 | mg/L | 0.00207 | 31.94% |
| BARIUM† | 1164.0 | 0.0157 | mg/L | 0.00036 | 0.0157 | mg/L | 0.00036 | 2.27% |
| BERYLLIUM† | 55933.7 | 0.0132 | mg/L | 0.00011 | 0.0132 | mg/L | 0.00011 | 0.86% |
| CADMIUM† | 147.6 | 0.0091 | mg/L | 0.00021 | 0.0091 | mg/L | 0.00021 | 2.36% |
| CHROMIUM† | 3641.3 | 0.0311 | mg/L | 0.00024 | 0.0311 | mg/L | 0.00024 | 0.78% |
| COBALT† | 1209.5 | 0.0418 | mg/L | 0.00034 | 0.0418 | mg/L | 0.00034 | 0.80% |
| COPPER† | -8.1 | 0.0016 | mg/L | 0.00055 | 0.0016 | mg/L | 0.00055 | 34.90% |
| MANGANESE† | 702976.1 | 1.714 | mg/L | 0.0191 | 1.714 | mg/L | 0.0191 | 1.11% |
| MOLYBDENUM† | -47.2 | 0.0028 | mg/L | 0.00037 | 0.0028 | mg/L | 0.00037 | 12.89% |
| NICKEL† | 3127.3 | 0.0490 | mg/L | 0.00079 | 0.0490 | mg/L | 0.00079 | 1.61% |
| LEAD† | 38.8 | 0.0091 | mg/L | 0.00161 | 0.0091 | mg/L | 0.00161 | 17.74% |
| SELENIUM† | -42.2 | -0.0044 | mg/L | 0.00964 | -0.0044 | mg/L | 0.00964 | 221.62% |
| SILVER† | -1554.6 | 0.0040 | mg/L | 0.00042 | 0.0040 | mg/L | 0.00042 | 10.68% |
| THALLIUM† | 25.4 | 0.0018 | mg/L | 0.00489 | 0.0018 | mg/L | 0.00489 | 267.20% |
| VANADIUM† | 25611.0 | 0.0552 | mg/L | 0.00619 | 0.0552 | mg/L | 0.00619 | 11.20% |
| ZINC† | 7922.6 | 0.1128 | mg/L | 0.00074 | 0.1128 | mg/L | 0.00074 | 0.66% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 416104.4 | 30.99 | mg/L | 0.337 | 30.99 | mg/L | 0.337 | 1.09% |
| IRON† | 374271.2 | 22.3 | mg/L | 0.25 | 22.3 | mg/L | 0.25 | 1.11% |
| CALCIUM† | 5230549.5 | 62.4 | mg/L | 0.34 | 62.4 | mg/L | 0.34 | 0.54% |

**Sequence No.: 147** **Autosampler Location: 1**
**Sample ID: CCV** **Date Collected: 2/19/10 10:28:13 PM**
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17965947.4 | 9.680 | mg/L | 0.0059 | | | | 0.06% |
| ALUMINUM† | 9306.6 | 0.5407 | mg/L | 0.00109 | 0.5407 | mg/L | 0.00109 | 0.20% |
| QC value within limits for ALUMINUM Recovery = 108.15% | | | | | | | | |
| ANTIMONY† | 1537.8 | 0.4976 | mg/L | 0.00447 | 0.4976 | mg/L | 0.00447 | 0.90% |
| QC value within limits for ANTIMONY Recovery = 99.52% | | | | | | | | |
| ARSENIC† | 1313.0 | 0.5100 | mg/L | 0.00659 | 0.5100 | mg/L | 0.00659 | 1.29% |
| QC value within limits for ARSENIC Recovery = 102.01% | | | | | | | | |
| BARIUM† | 45387.8 | 0.4938 | mg/L | 0.00127 | 0.4938 | mg/L | 0.00127 | 0.26% |
| QC value within limits for BARIUM Recovery = 98.76% | | | | | | | | |
| BERYLLIUM† | 2843205.8 | 0.4916 | mg/L | 0.00094 | 0.4916 | mg/L | 0.00094 | 0.19% |
| QC value within limits for BERYLLIUM Recovery = 98.31% | | | | | | | | |
| CADMIUM† | 19471.7 | 0.4871 | mg/L | 0.00135 | 0.4871 | mg/L | 0.00135 | 0.28% |
| QC value within limits for CADMIUM Recovery = 97.42% | | | | | | | | |
| CHROMIUM† | 62945.0 | 0.4925 | mg/L | 0.00140 | 0.4925 | mg/L | 0.00140 | 0.28% |
| QC value within limits for CHROMIUM Recovery = 98.49% | | | | | | | | |
| COBALT† | 15460.6 | 0.4920 | mg/L | 0.00143 | 0.4920 | mg/L | 0.00143 | 0.29% |
| QC value within limits for COBALT Recovery = 98.40% | | | | | | | | |
| COPPER† | 73176.5 | 0.4753 | mg/L | 0.00110 | 0.4753 | mg/L | 0.00110 | 0.23% |
| QC value within limits for COPPER Recovery = 95.06% | | | | | | | | |
| MANGANESE† | 203455.7 | 0.4975 | mg/L | 0.00087 | 0.4975 | mg/L | 0.00087 | 0.18% |

QC value within limits for MANGANESE Recovery = 99.49%

| | | | | | | |
|---|---|---|---|---|---|---|
| MOLYBDENUM† | 15170.3 | 0.4969 mg/L | 0.00184 | 0.4969 mg/L | 0.00184 | 0.37% |

QC value within limits for MOLYBDENUM Recovery = 99.38%

| | | | | | | |
|---|---|---|---|---|---|---|
| NICKEL† | 33263.8 | 0.4981 mg/L | 0.00126 | 0.4981 mg/L | 0.00126 | 0.25% |

QC value within limits for NICKEL Recovery = 99.62%

| | | | | | | |
|---|---|---|---|---|---|---|
| LEAD† | 6512.5 | 0.5004 mg/L | 0.00332 | 0.5004 mg/L | 0.00332 | 0.66% |

QC value within limits for LEAD Recovery = 100.07%

| | | | | | | |
|---|---|---|---|---|---|---|
| SELENIUM† | 1889.3 | 0.4922 mg/L | 0.00771 | 0.4922 mg/L | 0.00771 | 1.57% |

QC value within limits for SELENIUM Recovery = 98.44%

| | | | | | | |
|---|---|---|---|---|---|---|
| SILVER† | 118270.7 | 0.4843 mg/L | 0.00112 | 0.4843 mg/L | 0.00112 | 0.23% |

QC value within limits for SILVER Recovery = 96.87%

| | | | | | | |
|---|---|---|---|---|---|---|
| THALLIUM† | 1840.5 | 0.5260 mg/L | 0.00657 | 0.5260 mg/L | 0.00657 | 1.25% |

QC value within limits for THALLIUM Recovery = 105.21%

| | | | | | | |
|---|---|---|---|---|---|---|
| VANADIUM† | 230964.7 | 0.5040 mg/L | 0.00329 | 0.5040 mg/L | 0.00329 | 0.65% |

QC value within limits for VANADIUM Recovery = 100.81%

| | | | | | | |
|---|---|---|---|---|---|---|
| ZINC† | 35723.3 | 0.4906 mg/L | 0.00174 | 0.4906 mg/L | 0.00174 | 0.35% |

QC value within limits for ZINC Recovery = 98.13%

| | | | | | | |
|---|---|---|---|---|---|---|
| ARGON | Saturated2 | | | | | |

Saturated in preshot (code 2)

| | | | | | | |
|---|---|---|---|---|---|---|
| MAGNESIUM† | 6692.2 | 0.5034 mg/L | 0.00566 | 0.5034 mg/L | 0.00566 | 1.13% |

QC value within limits for MAGNESIUM Recovery = 100.69%

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 8536.9 | 0.540 mg/L | 0.0009 | 0.540 mg/L | 0.0009 | 0.17% |

QC value within limits for IRON Recovery = 108.03%

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 43520.7 | 0.537 mg/L | 0.0113 | 0.537 mg/L | 0.0113 | 2.10% |

QC value within limits for CALCIUM Recovery = 107.45%

All analytes passed QC.

---

**Sequence No.: 148** **Autosampler Location: 2**
**Sample ID: CCB** **Date Collected: 2/19/10 10:33:23 PM**
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 18038519.3 | 9.719 | mg/L | 0.0890 | | | | 0.92% |
| ALUMINUM† | 267.6 | 0.0211 | mg/L | 0.00311 | 0.0211 | mg/L | 0.00311 | 14.77% |

QC value within limits for ALUMINUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ANTIMONY† | 6.7 | 0.0041 | mg/L | 0.00169 | 0.0041 | mg/L | 0.00169 | 41.05% |

QC value within limits for ANTIMONY Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ARSENIC† | 13.1 | 0.0057 | mg/L | 0.00411 | 0.0057 | mg/L | 0.00411 | 71.64% |

QC value within limits for ARSENIC Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BARIUM† | -32.8 | 0.0027 | mg/L | 0.00012 | 0.0027 | mg/L | 0.00012 | 4.28% |

QC value within limits for BARIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BERYLLIUM† | 201.4 | 0.0037 | mg/L | 0.00007 | 0.0037 | mg/L | 0.00007 | 1.89% |

QC value within limits for BERYLLIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CADMIUM† | 39.4 | 0.0057 | mg/L | 0.00035 | 0.0057 | mg/L | 0.00035 | 6.16% |

QC value within limits for CADMIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHROMIUM† | 100.3 | 0.0035 | mg/L | 0.00052 | 0.0035 | mg/L | 0.00052 | 14.63% |

QC value within limits for CHROMIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| COBALT† | -71.7 | 0.0013 | mg/L | 0.00059 | 0.0013 | mg/L | 0.00059 | 45.29% |

QC value within limits for COBALT Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| COPPER† | 163.6 | 0.0060 | mg/L | 0.00084 | 0.0060 | mg/L | 0.00084 | 14.01% |

QC value within limits for COPPER Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MANGANESE† | 215.9 | 0.0029 | mg/L | 0.00018 | 0.0029 | mg/L | 0.00018 | 6.06% |

QC value within limits for MANGANESE Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MOLYBDENUM† | 31.0 | 0.0039 | mg/L | 0.00012 | 0.0039 | mg/L | 0.00012 | 2.98% |

QC value within limits for MOLYBDENUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NICKEL† | 248.5 | 0.0073 | mg/L | 0.00051 | 0.0073 | mg/L | 0.00051 | 6.98% |

QC value within limits for NICKEL Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LEAD† | 42.6 | 0.0062 | mg/L | 0.00105 | 0.0062 | mg/L | 0.00105 | 16.89% |

QC value within limits for LEAD Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SELENIUM† | -13.0 | 0.0002 | mg/L | 0.00187 | 0.0002 | mg/L | 0.00187 | >999.9% |

QC value within limits for SELENIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SILVER† | -43.6 | 0.0032 | mg/L | 0.00009 | 0.0032 | mg/L | 0.00009 | 2.83% |

QC value within limits for SILVER Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| THALLIUM† | 14.7 | 0.0037 | mg/L | 0.00153 | 0.0037 | mg/L | 0.00153 | 41.91% |

QC value within limits for THALLIUM Recovery = Not calculated

```
VANADIUM†                3991.5      0.0114 mg/L       0.00609      0.0114 mg/L       0.00609  53.51%
   QC value within limits for VANADIUM  Recovery = Not calculated
ZINC†                    -132.3      0.0030 mg/L       0.00004      0.0030 mg/L       0.00004   1.35%
   QC value within limits for ZINC  Recovery = Not calculated
ARGON                 Saturated2
   Saturated in preshot (code 2)
MAGNESIUM†               -397.6     -0.0259 mg/L       0.00817     -0.0259 mg/L       0.00817  31.50%
   QC value within limits for MAGNESIUM  Recovery = Not calculated
IRON†                    -138.6      -0.005 mg/L        0.0033      -0.005 mg/L        0.0033  71.32%
   QC value within limits for IRON  Recovery = Not calculated
CALCIUM†                -2384.5      -0.012 mg/L        0.0018      -0.012 mg/L        0.0018  15.68%
   QC value within limits for CALCIUM  Recovery = Not calculated
All analytes passed QC.
```

---

**Sequence No.: 149** **Autosampler Location: 4**
**Sample ID: ICSA** **Date Collected: 2/19/10 10:38:12 PM**
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

---

**Mean Data: ICSA**

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16165811.3 | 8.710 | mg/L | 0.0151 | | | | 0.17% |
| ALUMINUM† | 9473649.5 | 525.7 | mg/L | 0.21 | 525.7 | mg/L | 0.21 | 0.04% |
| QC value within limits for ALUMINUM Recovery = 105.13% | | | | | | | | |
| ANTIMONY† | -90.5 | -0.0259 | mg/L | 0.00243 | -0.0259 | mg/L | 0.00243 | 9.39% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | -149.2 | 0.0082 | mg/L | 0.00504 | 0.0082 | mg/L | 0.00504 | 61.70% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | 571.3 | 0.0101 | mg/L | 0.00024 | 0.0101 | mg/L | 0.00024 | 2.35% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -7300.3 | 0.0024 | mg/L | 0.00006 | 0.0024 | mg/L | 0.00006 | 2.38% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | -255.2 | 0.0134 | mg/L | 0.00063 | 0.0134 | mg/L | 0.00063 | 4.73% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 2302.1 | 0.0207 | mg/L | 0.00056 | 0.0207 | mg/L | 0.00056 | 2.70% |
| QC value greater than the upper limit for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -185.3 | -0.0023 | mg/L | 0.00055 | -0.0023 | mg/L | 0.00055 | 24.04% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 14755.7 | -0.0014 | mg/L | 0.00167 | -0.0014 | mg/L | 0.00167 | 119.43% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -8575.0 | -0.0006 | mg/L | 0.00014 | -0.0006 | mg/L | 0.00014 | 22.93% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | -1101.4 | -0.0013 | mg/L | 0.00069 | -0.0013 | mg/L | 0.00069 | 55.32% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 1538.3 | 0.0024 | mg/L | 0.00012 | 0.0024 | mg/L | 0.00012 | 5.15% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | -839.0 | 0.0057 | mg/L | 0.00048 | 0.0057 | mg/L | 0.00048 | 8.53% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | -879.8 | 0.0007 | mg/L | 0.01186 | 0.0007 | mg/L | 0.01186 | >999.9% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -31390.7 | 0.0219 | mg/L | 0.00083 | 0.0219 | mg/L | 0.00083 | 3.80% |
| QC value greater than the upper limit for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | 318.7 | -0.0128 | mg/L | 0.00299 | -0.0128 | mg/L | 0.00299 | 23.30% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 36619.4 | 0.0270 | mg/L | 0.00222 | 0.0270 | mg/L | 0.00222 | 8.22% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | -1560.3 | -0.0146 | mg/L | 0.00016 | -0.0146 | mg/L | 0.00016 | 1.11% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7192311.1 | 536.5 | mg/L | 1.10 | 536.5 | mg/L | 1.10 | 0.21% |
| QC value within limits for MAGNESIUM Recovery = 107.30% | | | | | | | | |
| IRON† | 7957607.0 | 475 | mg/L | 1.2 | 475 | mg/L | 1.2 | 0.26% |
| QC value within limits for IRON Recovery = 94.92% | | | | | | | | |
| CALCIUM† | 43140525.2 | 515 | mg/L | 0.5 | 515 | mg/L | 0.5 | 0.09% |
| QC value within limits for CALCIUM Recovery = 102.92% | | | | | | | | |

QC Failed. Continue with analysis.

Sequence No.: 150
Sample ID: ICSAB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 2/19/10 10:43:37 PM
Sample Prep Volume:
Data Type: Original

Mean Data: ICSAB

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16003753.5 | 8.623 | mg/L | 0.0304 | | | | 0.35% |
| ALUMINUM† | 9402276.4 | 521.8 | mg/L | 0.29 | 521.8 | mg/L | 0.29 | 0.06% |
| QC value within limits for ALUMINUM Recovery = 104.36% | | | | | | | | |
| ANTIMONY† | 33001.5 | 10.59 | mg/L | 0.090 | 10.59 | mg/L | 0.090 | 0.85% |
| QC value within limits for ANTIMONY Recovery = 105.92% | | | | | | | | |
| ARSENIC† | 27682.2 | 10.86 | mg/L | 0.063 | 10.86 | mg/L | 0.063 | 0.58% |
| QC value within limits for ARSENIC Recovery = 108.56% | | | | | | | | |
| BARIUM† | 276453.9 | 2.993 | mg/L | 0.0200 | 2.993 | mg/L | 0.0200 | 0.67% |
| QC value within limits for BARIUM Recovery = 99.75% | | | | | | | | |
| BERYLLIUM† | 6176024.0 | 1.063 | mg/L | 0.0006 | 1.063 | mg/L | 0.0006 | 0.06% |
| QC value within limits for BERYLLIUM Recovery = 106.35% | | | | | | | | |
| CADMIUM† | 134476.3 | 3.351 | mg/L | 0.0264 | 3.351 | mg/L | 0.0264 | 0.79% |
| QC value within limits for CADMIUM Recovery = 111.70% | | | | | | | | |
| CHROMIUM† | 394536.3 | 3.072 | mg/L | 0.0215 | 3.072 | mg/L | 0.0215 | 0.70% |
| QC value within limits for CHROMIUM Recovery = 102.40% | | | | | | | | |
| COBALT† | 91279.6 | 2.887 | mg/L | 0.0206 | 2.887 | mg/L | 0.0206 | 0.71% |
| QC value within limits for COBALT Recovery = 96.24% | | | | | | | | |
| COPPER† | 520440.6 | 3.253 | mg/L | 0.0247 | 3.253 | mg/L | 0.0247 | 0.76% |
| QC value within limits for COPPER Recovery = 108.42% | | | | | | | | |
| MANGANESE† | 828098.9 | 2.035 | mg/L | 0.0136 | 2.035 | mg/L | 0.0136 | 0.67% |
| QC value within limits for MANGANESE Recovery = 101.75% | | | | | | | | |
| MOLYBDENUM† | 93235.3 | 3.070 | mg/L | 0.0232 | 3.070 | mg/L | 0.0232 | 0.75% |
| QC value within limits for MOLYBDENUM Recovery = 102.35% | | | | | | | | |
| NICKEL† | 195923.1 | 2.892 | mg/L | 0.0184 | 2.892 | mg/L | 0.0184 | 0.64% |
| QC value within limits for NICKEL Recovery = 96.41% | | | | | | | | |
| LEAD† | 128058.2 | 9.844 | mg/L | 0.0835 | 9.844 | mg/L | 0.0835 | 0.85% |
| QC value within limits for LEAD Recovery = 98.44% | | | | | | | | |
| SELENIUM† | 19908.3 | 5.376 | mg/L | 0.0528 | 5.376 | mg/L | 0.0528 | 0.98% |
| QC value within limits for SELENIUM Recovery = 107.51% | | | | | | | | |
| SILVER† | 672336.7 | 2.881 | mg/L | 0.0178 | 2.881 | mg/L | 0.0178 | 0.62% |
| QC value within limits for SILVER Recovery = 96.03% | | | | | | | | |
| THALLIUM† | 35629.0 | 10.10 | mg/L | 0.091 | 10.10 | mg/L | 0.091 | 0.90% |
| QC value within limits for THALLIUM Recovery = 100.98% | | | | | | | | |
| VANADIUM† | 1490347.6 | 3.182 | mg/L | 0.0253 | 3.182 | mg/L | 0.0253 | 0.80% |
| QC value within limits for VANADIUM Recovery = 106.06% | | | | | | | | |
| ZINC† | 211444.7 | 2.881 | mg/L | 0.0178 | 2.881 | mg/L | 0.0178 | 0.62% |
| QC value within limits for ZINC Recovery = 96.04% | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7090961.7 | 529.0 | mg/L | 3.50 | 529.0 | mg/L | 3.50 | 0.66% |
| QC value within limits for MAGNESIUM Recovery = 105.79% | | | | | | | | |
| IRON† | 7859078.1 | 469 | mg/L | 2.9 | 469 | mg/L | 2.9 | 0.61% |
| QC value within limits for IRON Recovery = 93.78% | | | | | | | | |
| CALCIUM† | 42663383.9 | 509 | mg/L | 0.5 | 509 | mg/L | 0.5 | 0.09% |
| QC value within limits for CALCIUM Recovery = 101.78% | | | | | | | | |

All analytes passed QC.

Sequence No.: 151
Sample ID: RINSE BLANK
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 106
Date Collected: 2/19/10 10:48:24 PM
Sample Prep Volume:
Data Type: Original

Mean Data: RINSE BLANK

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17975048.6 | 9.685 | mg/L | 0.0531 | | | | 0.55% |

| | | | | | | |
|---|---|---|---|---|---|---|
| ALUMINUM† | 7143.5 | 0.4028 mg/L | 0.11696 | 0.4028 mg/L | 0.11696 | 29.04% |
| ANTIMONY† | 45.1 | 0.0164 mg/L | 0.00308 | 0.0164 mg/L | 0.00308 | 18.74% |
| ARSENIC† | 27.1 | 0.0112 mg/L | 0.00433 | 0.0112 mg/L | 0.00433 | 38.48% |
| BARIUM† | 141.7 | 0.0046 mg/L | 0.00080 | 0.0046 mg/L | 0.00080 | 17.38% |
| BERYLLIUM† | 2434.5 | 0.0041 mg/L | 0.00023 | 0.0041 mg/L | 0.00023 | 5.79% |
| CADMIUM† | 122.2 | 0.0077 mg/L | 0.00059 | 0.0077 mg/L | 0.00059 | 7.66% |
| CHROMIUM† | 409.2 | 0.0060 mg/L | 0.00013 | 0.0060 mg/L | 0.00013 | 2.26% |
| COBALT† | -21.8 | 0.0029 mg/L | 0.00039 | 0.0029 mg/L | 0.00039 | 13.66% |
| COPPER† | 1635.2 | 0.0154 mg/L | 0.00089 | 0.0154 mg/L | 0.00089 | 5.80% |
| MANGANESE† | 222.7 | 0.0029 mg/L | 0.00046 | 0.0029 mg/L | 0.00046 | 15.70% |
| MOLYBDENUM† | 111.6 | 0.0065 mg/L | 0.00032 | 0.0065 mg/L | 0.00032 | 4.97% |
| NICKEL† | 338.9 | 0.0086 mg/L | 0.00032 | 0.0086 mg/L | 0.00032 | 3.73% |
| LEAD† | 149.6 | 0.0144 mg/L | 0.00158 | 0.0144 mg/L | 0.00158 | 10.98% |
| SELENIUM† | -1.5 | 0.0033 mg/L | 0.00623 | 0.0033 mg/L | 0.00623 | 187.35% |
| SILVER† | 612.6 | 0.0060 mg/L | 0.00084 | 0.0060 mg/L | 0.00084 | 13.89% |
| THALLIUM† | 50.0 | 0.0137 mg/L | 0.00380 | 0.0137 mg/L | 0.00380 | 27.78% |
| VANADIUM† | 5940.0 | 0.0156 mg/L | 0.00383 | 0.0156 mg/L | 0.00383 | 24.55% |
| ZINC† | 259.6 | 0.0083 mg/L | 0.00126 | 0.0083 mg/L | 0.00126 | 15.17% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 5155.9 | 0.3887 mg/L | 0.12890 | 0.3887 mg/L | 0.12890 | 33.16% |
| IRON† | 6605.0 | 0.398 mg/L | 0.1293 | 0.398 mg/L | 0.1293 | 32.51% |
| CALCIUM† | 31979.1 | 0.398 mg/L | 0.1300 | 0.398 mg/L | 0.1300 | 32.65% |

**Sequence No.: 152** **Autosampler Location: 107**
**Sample ID: RINSE BLANK** **Date Collected: 2/19/10 10:53:16 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

**Mean Data: RINSE BLANK**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17915969.2 | 9.653 | mg/L | 0.0183 | | | | 0.19% |
| ALUMINUM† | 1452.1 | 0.0870 | mg/L | 0.01833 | 0.0870 | mg/L | 0.01833 | 21.08% |
| ANTIMONY† | 16.8 | 0.0073 | mg/L | 0.00084 | 0.0073 | mg/L | 0.00084 | 11.49% |
| ARSENIC† | 13.2 | 0.0058 | mg/L | 0.00110 | 0.0058 | mg/L | 0.00110 | 18.92% |
| BARIUM† | -26.3 | 0.0028 | mg/L | 0.00026 | 0.0028 | mg/L | 0.00026 | 9.33% |
| BERYLLIUM† | -1517.7 | 0.0034 | mg/L | 0.00005 | 0.0034 | mg/L | 0.00005 | 1.50% |
| CADMIUM† | 37.1 | 0.0056 | mg/L | 0.00007 | 0.0056 | mg/L | 0.00007 | 1.24% |
| CHROMIUM† | 136.2 | 0.0038 | mg/L | 0.00018 | 0.0038 | mg/L | 0.00018 | 4.63% |
| COBALT† | -66.9 | 0.0015 | mg/L | 0.00059 | 0.0015 | mg/L | 0.00059 | 40.34% |
| COPPER† | 584.3 | 0.0087 | mg/L | 0.00059 | 0.0087 | mg/L | 0.00059 | 6.73% |
| MANGANESE† | -265.5 | 0.0017 | mg/L | 0.00006 | 0.0017 | mg/L | 0.00006 | 3.67% |
| MOLYBDENUM† | 32.9 | 0.0039 | mg/L | 0.00040 | 0.0039 | mg/L | 0.00040 | 10.22% |
| NICKEL† | 251.1 | 0.0074 | mg/L | 0.00038 | 0.0074 | mg/L | 0.00038 | 5.18% |
| LEAD† | 64.1 | 0.0078 | mg/L | 0.00091 | 0.0078 | mg/L | 0.00091 | 11.65% |
| SELENIUM† | -5.5 | 0.0021 | mg/L | 0.00791 | 0.0021 | mg/L | 0.00791 | 368.50% |
| SILVER† | -32.8 | 0.0033 | mg/L | 0.00035 | 0.0033 | mg/L | 0.00035 | 10.71% |
| THALLIUM† | 25.7 | 0.0068 | mg/L | 0.00373 | 0.0068 | mg/L | 0.00373 | 54.94% |
| VANADIUM† | 6189.0 | 0.0161 | mg/L | 0.00409 | 0.0161 | mg/L | 0.00409 | 25.37% |
| ZINC† | -44.3 | 0.0042 | mg/L | 0.00037 | 0.0042 | mg/L | 0.00037 | 8.98% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 482.7 | 0.0398 | mg/L | 0.02408 | 0.0398 | mg/L | 0.02408 | 60.57% |
| IRON† | 834.4 | 0.054 | mg/L | 0.0158 | 0.054 | mg/L | 0.0158 | 29.40% |
| CALCIUM† | 2529.0 | 0.047 | mg/L | 0.0206 | 0.047 | mg/L | 0.0206 | 43.79% |

**Sequence No.: 153** **Autosampler Location: 108**
**Sample ID: MBLK-87103** **Date Collected: 2/19/10 10:58:08 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

**Mean Data: MBLK-87103**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| YTTRIUM | 17965787.1 | 9.680 mg/L | 0.0282 | | | 0.29% |
| ALUMINUM† | 2037.2 | 0.1195 mg/L | 0.00705 | 0.1195 mg/L | 0.00705 | 5.90% |
| ANTIMONY† | 7.6 | 0.0044 mg/L | 0.00306 | 0.0044 mg/L | 0.00306 | 69.23% |
| ARSENIC† | 10.3 | 0.0046 mg/L | 0.00321 | 0.0046 mg/L | 0.00321 | 69.52% |
| BARIUM† | 50.8 | 0.0036 mg/L | 0.00013 | 0.0036 mg/L | 0.00013 | 3.51% |
| BERYLLIUM† | -2029.2 | 0.0033 mg/L | 0.00001 | 0.0033 mg/L | 0.00001 | 0.42% |
| CADMIUM† | 40.8 | 0.0057 mg/L | 0.00030 | 0.0057 mg/L | 0.00030 | 5.25% |
| CHROMIUM† | 436.9 | 0.0062 mg/L | 0.00061 | 0.0062 mg/L | 0.00061 | 9.96% |
| COBALT† | -80.9 | 0.0010 mg/L | 0.00014 | 0.0010 mg/L | 0.00014 | 13.90% |
| COPPER† | 225.6 | 0.0064 mg/L | 0.00042 | 0.0064 mg/L | 0.00042 | 6.63% |
| MANGANESE† | -212.7 | 0.0019 mg/L | 0.00006 | 0.0019 mg/L | 0.00006 | 3.45% |
| MOLYBDENUM† | 51.1 | 0.0045 mg/L | 0.00051 | 0.0045 mg/L | 0.00051 | 11.25% |
| NICKEL† | 858.9 | 0.0164 mg/L | 0.00027 | 0.0164 mg/L | 0.00027 | 1.67% |
| LEAD† | 32.7 | 0.0055 mg/L | 0.00038 | 0.0055 mg/L | 0.00038 | 7.00% |
| SELENIUM† | -20.7 | -0.0018 mg/L | 0.00214 | -0.0018 mg/L | 0.00214 | 119.85% |
| SILVER† | -58.3 | 0.0032 mg/L | 0.00041 | 0.0032 mg/L | 0.00041 | 12.62% |
| THALLIUM† | 3.3 | 0.0004 mg/L | 0.00279 | 0.0004 mg/L | 0.00279 | 793.77% |
| VANADIUM† | 6762.4 | 0.0174 mg/L | 0.00153 | 0.0174 mg/L | 0.00153 | 8.75% |
| ZINC† | 2048.3 | 0.0329 mg/L | 0.00031 | 0.0329 mg/L | 0.00031 | 0.93% |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | 908.1 | 0.0718 mg/L | 0.00546 | 0.0718 mg/L | 0.00546 | 7.60% |
| IRON† | 1758.6 | 0.109 mg/L | 0.0038 | 0.109 mg/L | 0.0038 | 3.50% |
| CALCIUM† | 8088.1 | 0.113 mg/L | 0.0056 | 0.113 mg/L | 0.0056 | 4.97% |

**Sequence No.: 154**
**Sample ID: LCS-87103**
**Analyst: KL**
**Sample Wt:**
**Dilution:**

**Autosampler Location: 109**
**Date Collected: 2/19/10 11:03:00 PM**
**Sample Prep Volume:**
**Data Type: Original**

Mean Data: LCS-87103

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17939232.0 | 9.666 | mg/L | 0.0708 | | | | 0.73% |
| ALUMINUM† | 93231.3 | 5.184 | mg/L | 0.0540 | 5.184 | mg/L | 0.0540 | 1.04% |
| ANTIMONY† | 336.7 | 0.1105 | mg/L | 0.00209 | 0.1105 | mg/L | 0.00209 | 1.90% |
| ARSENIC† | 278.9 | 0.1095 | mg/L | 0.00343 | 0.1095 | mg/L | 0.00343 | 3.13% |
| BARIUM† | 9842.6 | 0.1095 | mg/L | 0.00054 | 0.1095 | mg/L | 0.00054 | 0.50% |
| BERYLLIUM† | 608011.3 | 0.1080 | mg/L | 0.00072 | 0.1080 | mg/L | 0.00072 | 0.66% |
| CADMIUM† | 4132.6 | 0.1072 | mg/L | 0.00086 | 0.1072 | mg/L | 0.00086 | 0.80% |
| CHROMIUM† | 13963.2 | 0.1114 | mg/L | 0.00042 | 0.1114 | mg/L | 0.00042 | 0.37% |
| COBALT† | 3201.1 | 0.1047 | mg/L | 0.00065 | 0.1047 | mg/L | 0.00065 | 0.62% |
| COPPER† | 16522.5 | 0.1101 | mg/L | 0.00112 | 0.1101 | mg/L | 0.00112 | 1.02% |
| MANGANESE† | 42631.0 | 0.1063 | mg/L | 0.00068 | 0.1063 | mg/L | 0.00068 | 0.64% |
| MOLYBDENUM† | 3184.0 | 0.1069 | mg/L | 0.00079 | 0.1069 | mg/L | 0.00079 | 0.74% |
| NICKEL† | 7254.9 | 0.1112 | mg/L | 0.00121 | 0.1112 | mg/L | 0.00121 | 1.09% |
| LEAD† | 1399.8 | 0.1106 | mg/L | 0.00046 | 0.1106 | mg/L | 0.00046 | 0.42% |
| SELENIUM† | 2024.5 | 0.5296 | mg/L | 0.00572 | 0.5296 | mg/L | 0.00572 | 1.08% |
| SILVER† | 24720.3 | 0.1055 | mg/L | 0.00094 | 0.1055 | mg/L | 0.00094 | 0.89% |
| THALLIUM† | 400.6 | 0.1129 | mg/L | 0.00157 | 0.1129 | mg/L | 0.00157 | 1.39% |
| VANADIUM† | 55552.2 | 0.1234 | mg/L | 0.00378 | 0.1234 | mg/L | 0.00378 | 3.07% |
| ZINC† | 8179.7 | 0.1161 | mg/L | 0.00051 | 0.1161 | mg/L | 0.00051 | 0.44% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 75168.7 | 5.614 | mg/L | 0.0453 | 5.614 | mg/L | 0.0453 | 0.81% |
| IRON† | 88914.5 | 5.31 | mg/L | 0.041 | 5.31 | mg/L | 0.041 | 0.77% |
| CALCIUM† | 456120.2 | 5.46 | mg/L | 0.049 | 5.46 | mg/L | 0.049 | 0.89% |

**Sequence No.: 155**
**Sample ID: 10020428-20B**
**Analyst: KL**
**Sample Wt:**
**Dilution:**

**Autosampler Location: 110**
**Date Collected: 2/19/10 11:07:54 PM**
**Sample Prep Volume:**
**Data Type: Original**

Mean Data: 10020428-20B

Mean Corrected Calib Sample

| Analyte | Intensity | Conc. | Units | Std.Dev. | Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17210039.4 | 9.273 | mg/L | 0.1001 | | | | 1.08% |
| ALUMINUM† | 9954.5 | 0.7911 | mg/L | 0.00678 | 0.7911 | mg/L | 0.00678 | 0.86% |
| ANTIMONY† | -1.0 | 0.0084 | mg/L | 0.00298 | 0.0084 | mg/L | 0.00298 | 35.59% |
| ARSENIC† | 15.9 | 0.0083 | mg/L | 0.00254 | 0.0083 | mg/L | 0.00254 | 30.69% |
| BARIUM† | 3641.1 | 0.0425 | mg/L | 0.00052 | 0.0425 | mg/L | 0.00052 | 1.21% |
| BERYLLIUM† | 41020.7 | 0.0107 | mg/L | 0.00006 | 0.0107 | mg/L | 0.00006 | 0.56% |
| CADMIUM† | 50.0 | 0.0063 | mg/L | 0.00019 | 0.0063 | mg/L | 0.00019 | 3.09% |
| CHROMIUM† | 695.1 | 0.0082 | mg/L | 0.00036 | 0.0082 | mg/L | 0.00036 | 4.36% |
| COBALT† | 1734.5 | 0.0584 | mg/L | 0.00039 | 0.0584 | mg/L | 0.00039 | 0.67% |
| COPPER† | 657.3 | 0.0127 | mg/L | 0.00036 | 0.0127 | mg/L | 0.00036 | 2.81% |
| MANGANESE† | 747780.8 | 1.822 | mg/L | 0.0205 | 1.822 | mg/L | 0.0205 | 1.13% |
| MOLYBDENUM† | -31.6 | 0.0026 | mg/L | 0.00034 | 0.0026 | mg/L | 0.00034 | 13.34% |
| NICKEL† | 4790.4 | 0.0743 | mg/L | 0.00117 | 0.0743 | mg/L | 0.00117 | 1.57% |
| LEAD† | 47.2 | 0.0081 | mg/L | 0.00149 | 0.0081 | mg/L | 0.00149 | 18.39% |
| SELENIUM† | -46.5 | -0.0082 | mg/L | 0.00274 | -0.0082 | mg/L | 0.00274 | 33.28% |
| SILVER† | -646.4 | 0.0042 | mg/L | 0.00012 | 0.0042 | mg/L | 0.00012 | 3.00% |
| THALLIUM† | 60.2 | 0.0143 | mg/L | 0.00361 | 0.0143 | mg/L | 0.00361 | 25.30% |
| VANADIUM† | 19377.1 | -0.0032 | mg/L | 0.00658 | -0.0032 | mg/L | 0.00658 | 204.78% |
| ZINC† | 5781.2 | 0.0747 | mg/L | 0.00073 | 0.0747 | mg/L | 0.00073 | 0.97% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1582669.2 | 117.1 | mg/L | 1.31 | 117.1 | mg/L | 1.31 | 1.12% |
| IRON† | 183176.0 | 10.9 | mg/L | 0.12 | 10.9 | mg/L | 0.12 | 1.05% |
| CALCIUM† | 13317051.2 | 159 | mg/L | 0.3 | 159 | mg/L | 0.3 | 0.19% |

**Sequence No.:** 156
**Sample ID:** 10020428-20BSD
**Analyst:** KL
**Sample Wt:**
**Dilution:** 5X

Autosampler Location: 111
Date Collected: 2/19/10 11:12:55 PM
Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-20BSD

| Analyte | Mean Corrected Intensity | Conc. | Calib Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17770530.8 | 9.575 | mg/L | 0.0603 | | | | 0.63% |
| ALUMINUM† | 2041.3 | 0.1634 | mg/L | 0.00352 | 0.8170 | mg/L | 0.01759 | 2.15% |
| ANTIMONY† | 4.7 | 0.0047 | mg/L | 0.00076 | 0.0236 | mg/L | 0.00379 | 16.06% |
| ARSENIC† | 10.3 | 0.0049 | mg/L | 0.00450 | 0.0246 | mg/L | 0.02251 | 91.54% |
| BARIUM† | 664.6 | 0.0102 | mg/L | 0.00035 | 0.0512 | mg/L | 0.00175 | 3.42% |
| BERYLLIUM† | 5739.4 | 0.0046 | mg/L | 0.00001 | 0.0231 | mg/L | 0.00005 | 0.21% |
| CADMIUM† | 40.0 | 0.0057 | mg/L | 0.00012 | 0.0287 | mg/L | 0.00060 | 2.07% |
| CHROMIUM† | 216.8 | 0.0045 | mg/L | 0.00038 | 0.0223 | mg/L | 0.00191 | 8.60% |
| COBALT† | 262.6 | 0.0119 | mg/L | 0.00026 | 0.0594 | mg/L | 0.00128 | 2.16% |
| COPPER† | 204.7 | 0.0069 | mg/L | 0.00039 | 0.0346 | mg/L | 0.00194 | 5.59% |
| MANGANESE† | 142741.1 | 0.3498 | mg/L | 0.00051 | 1.749 | mg/L | 0.0025 | 0.15% |
| MOLYBDENUM† | -5.0 | 0.0028 | mg/L | 0.00053 | 0.0142 | mg/L | 0.00263 | 18.53% |
| NICKEL† | 1117.1 | 0.0201 | mg/L | 0.00021 | 0.1006 | mg/L | 0.00107 | 1.06% |
| LEAD† | 32.2 | 0.0057 | mg/L | 0.00151 | 0.0284 | mg/L | 0.00756 | 26.58% |
| SELENIUM† | -13.1 | 0.0002 | mg/L | 0.00231 | 0.0010 | mg/L | 0.01155 | >999.9% |
| SILVER† | -301.7 | 0.0028 | mg/L | 0.00038 | 0.0141 | mg/L | 0.00189 | 13.39% |
| THALLIUM† | 23.1 | 0.0056 | mg/L | 0.00174 | 0.0280 | mg/L | 0.00870 | 31.09% |
| VANADIUM† | 9079.2 | 0.0133 | mg/L | 0.00220 | 0.0667 | mg/L | 0.01102 | 16.51% |
| ZINC† | 967.5 | 0.0163 | mg/L | 0.00009 | 0.0814 | mg/L | 0.00046 | 0.56% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 298611.1 | 22.10 | mg/L | 0.060 | 110.5 | mg/L | 0.30 | 0.27% |
| IRON† | 34515.2 | 2.06 | mg/L | 0.003 | 10.3 | mg/L | 0.02 | 0.16% |
| CALCIUM† | 2502319.4 | 29.9 | mg/L | 0.38 | 149 | mg/L | 1.9 | 1.26% |

**Sequence No.:** 157
**Sample ID:** 10020428-20BMS
**Analyst:** KL
**Sample Wt:**
**Dilution:**

Autosampler Location: 112
Date Collected: 2/19/10 11:18:04 PM
Sample Prep Volume:
Data Type: Original

Mean Data: 10020428-20BMS

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17198719.3 | 9.267 | mg/L | 0.0549 | | | | 0.59% |
| ALUMINUM† | 106308.0 | 6.142 | mg/L | 0.0426 | 6.142 | mg/L | 0.0426 | 0.69% |
| ANTIMONY† | 333.8 | 0.1162 | mg/L | 0.00462 | 0.1162 | mg/L | 0.00462 | 3.98% |
| ARSENIC† | 291.2 | 0.1158 | mg/L | 0.00308 | 0.1158 | mg/L | 0.00308 | 2.66% |
| BARIUM† | 13181.1 | 0.1456 | mg/L | 0.00135 | 0.1456 | mg/L | 0.00135 | 0.93% |
| BERYLLIUM† | 661955.0 | 0.1172 | mg/L | 0.00071 | 0.1172 | mg/L | 0.00071 | 0.61% |
| CADMIUM† | 4196.7 | 0.1092 | mg/L | 0.00099 | 0.1092 | mg/L | 0.00099 | 0.91% |
| CHROMIUM† | 13924.7 | 0.1111 | mg/L | 0.00133 | 0.1111 | mg/L | 0.00133 | 1.20% |
| COBALT† | 4952.2 | 0.1600 | mg/L | 0.00136 | 0.1600 | mg/L | 0.00136 | 0.85% |
| COPPER† | 17476.7 | 0.1198 | mg/L | 0.00170 | 0.1198 | mg/L | 0.00170 | 1.42% |
| MANGANESE† | 793186.3 | 1.933 | mg/L | 0.0114 | 1.933 | mg/L | 0.0114 | 0.59% |
| MOLYBDENUM† | 3161.0 | 0.1069 | mg/L | 0.00085 | 0.1069 | mg/L | 0.00085 | 0.80% |
| NICKEL† | 11718.3 | 0.1770 | mg/L | 0.00204 | 0.1770 | mg/L | 0.00204 | 1.15% |
| LEAD† | 1363.2 | 0.1093 | mg/L | 0.00143 | 0.1093 | mg/L | 0.00143 | 1.31% |
| SELENIUM† | 2037.9 | 0.5334 | mg/L | 0.00795 | 0.5334 | mg/L | 0.00795 | 1.49% |
| SILVER† | 24418.3 | 0.1077 | mg/L | 0.00090 | 0.1077 | mg/L | 0.00090 | 0.84% |
| THALLIUM† | 419.9 | 0.1161 | mg/L | 0.00106 | 0.1161 | mg/L | 0.00106 | 0.91% |
| VANADIUM† | 69375.0 | 0.1053 | mg/L | 0.00540 | 0.1053 | mg/L | 0.00540 | 5.12% |
| ZINC† | 13500.7 | 0.1797 | mg/L | 0.00170 | 0.1797 | mg/L | 0.00170 | 0.94% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1661584.3 | 123.0 | mg/L | 0.79 | 123.0 | mg/L | 0.79 | 0.64% |
| IRON† | 272863.6 | 16.3 | mg/L | 0.10 | 16.3 | mg/L | 0.10 | 0.64% |
| CALCIUM† | 13769863.3 | 164 | mg/L | 0.1 | 164 | mg/L | 0.1 | 0.09% |

**Sequence No.:** 158
**Sample ID:** 10020428-20BMSD
**Analyst:** KL
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 113
**Date Collected:** 2/19/10 11:23:05 PM
**Sample Prep Volume:**
**Data Type:** Original

**Mean Data:** 10020428-20BMSD

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17103109.0 | 9.215 | mg/L | 0.0888 | | | | 0.96% |
| ALUMINUM† | 105340.3 | 6.091 | mg/L | 0.0600 | 6.091 | mg/L | 0.0600 | 0.99% |
| ANTIMONY† | 336.7 | 0.1172 | mg/L | 0.00527 | 0.1172 | mg/L | 0.00527 | 4.49% |
| ARSENIC† | 307.5 | 0.1222 | mg/L | 0.00270 | 0.1222 | mg/L | 0.00270 | 2.21% |
| BARIUM† | 13220.4 | 0.1460 | mg/L | 0.00140 | 0.1460 | mg/L | 0.00140 | 0.96% |
| BERYLLIUM† | 655993.6 | 0.1162 | mg/L | 0.00102 | 0.1162 | mg/L | 0.00102 | 0.88% |
| CADMIUM† | 4190.7 | 0.1090 | mg/L | 0.00149 | 0.1090 | mg/L | 0.00149 | 1.37% |
| CHROMIUM† | 13840.8 | 0.1104 | mg/L | 0.00120 | 0.1104 | mg/L | 0.00120 | 1.09% |
| COBALT† | 4944.0 | 0.1598 | mg/L | 0.00094 | 0.1598 | mg/L | 0.00094 | 0.59% |
| COPPER† | 17368.8 | 0.1192 | mg/L | 0.00120 | 0.1192 | mg/L | 0.00120 | 1.01% |
| MANGANESE† | 792159.1 | 1.931 | mg/L | 0.0170 | 1.931 | mg/L | 0.0170 | 0.88% |
| MOLYBDENUM† | 3167.1 | 0.1071 | mg/L | 0.00133 | 0.1071 | mg/L | 0.00133 | 1.25% |
| NICKEL† | 11717.5 | 0.1770 | mg/L | 0.00163 | 0.1770 | mg/L | 0.00163 | 0.92% |
| LEAD† | 1351.4 | 0.1084 | mg/L | 0.00421 | 0.1084 | mg/L | 0.00421 | 3.88% |
| SELENIUM† | 2020.0 | 0.5287 | mg/L | 0.00538 | 0.5287 | mg/L | 0.00538 | 1.02% |
| SILVER† | 24630.6 | 0.1085 | mg/L | 0.00039 | 0.1085 | mg/L | 0.00039 | 0.36% |
| THALLIUM† | 434.9 | 0.1204 | mg/L | 0.00321 | 0.1204 | mg/L | 0.00321 | 2.66% |
| VANADIUM† | 70360.0 | 0.1071 | mg/L | 0.00469 | 0.1071 | mg/L | 0.00469 | 4.38% |
| ZINC† | 13209.0 | 0.1757 | mg/L | 0.00163 | 0.1757 | mg/L | 0.00163 | 0.93% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 1660407.2 | 122.9 | mg/L | 1.15 | 122.9 | mg/L | 1.15 | 0.93% |
| IRON† | 270838.3 | 16.2 | mg/L | 0.14 | 16.2 | mg/L | 0.14 | 0.86% |
| CALCIUM† | 13915518.3 | 166 | mg/L | 2.3 | 166 | mg/L | 2.3 | 1.39% |

**Sequence No.:** 159
**Sample ID:** CCV
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 1
**Date Collected:** 2/19/10 11:28:06 PM
**Sample Prep Volume:**
**Data Type:** Original

Mean Data: CCV

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17714305.2 | 9.544 | mg/L | 0.0033 | | | | 0.03% |
| ALUMINUM† | 9038.7 | 0.5261 | mg/L | 0.00688 | 0.5261 | mg/L | 0.00688 | 1.31% |
| QC value within limits for ALUMINUM Recovery = 105.22% | | | | | | | | |
| ANTIMONY† | 1548.6 | 0.5010 | mg/L | 0.00233 | 0.5010 | mg/L | 0.00233 | 0.47% |
| QC value within limits for ANTIMONY Recovery = 100.21% | | | | | | | | |
| ARSENIC† | 1316.8 | 0.5115 | mg/L | 0.00324 | 0.5115 | mg/L | 0.00324 | 0.63% |
| QC value within limits for ARSENIC Recovery = 102.30% | | | | | | | | |
| BARIUM† | 45300.9 | 0.4928 | mg/L | 0.00271 | 0.4928 | mg/L | 0.00271 | 0.55% |
| QC value within limits for BARIUM Recovery = 98.57% | | | | | | | | |
| BERYLLIUM† | 2850984.2 | 0.4929 | mg/L | 0.00161 | 0.4929 | mg/L | 0.00161 | 0.33% |
| QC value within limits for BERYLLIUM Recovery = 98.58% | | | | | | | | |
| CADMIUM† | 19461.0 | 0.4868 | mg/L | 0.00197 | 0.4868 | mg/L | 0.00197 | 0.41% |
| QC value within limits for CADMIUM Recovery = 97.36% | | | | | | | | |
| CHROMIUM† | 62822.0 | 0.4915 | mg/L | 0.00303 | 0.4915 | mg/L | 0.00303 | 0.62% |
| QC value within limits for CHROMIUM Recovery = 98.30% | | | | | | | | |
| COBALT† | 15420.4 | 0.4907 | mg/L | 0.00222 | 0.4907 | mg/L | 0.00222 | 0.45% |
| QC value within limits for COBALT Recovery = 98.15% | | | | | | | | |
| COPPER† | 72881.9 | 0.4734 | mg/L | 0.00316 | 0.4734 | mg/L | 0.00316 | 0.67% |
| QC value within limits for COPPER Recovery = 94.68% | | | | | | | | |
| MANGANESE† | 202847.9 | 0.4960 | mg/L | 0.00351 | 0.4960 | mg/L | 0.00351 | 0.71% |
| QC value within limits for MANGANESE Recovery = 99.20% | | | | | | | | |
| MOLYBDENUM† | 15172.2 | 0.4970 | mg/L | 0.00189 | 0.4970 | mg/L | 0.00189 | 0.38% |
| QC value within limits for MOLYBDENUM Recovery = 99.40% | | | | | | | | |
| NICKEL† | 33188.6 | 0.4970 | mg/L | 0.00373 | 0.4970 | mg/L | 0.00373 | 0.75% |
| QC value within limits for NICKEL Recovery = 99.40% | | | | | | | | |
| LEAD† | 6513.6 | 0.5004 | mg/L | 0.00222 | 0.5004 | mg/L | 0.00222 | 0.44% |
| QC value within limits for LEAD Recovery = 100.09% | | | | | | | | |
| SELENIUM† | 1916.0 | 0.4991 | mg/L | 0.00487 | 0.4991 | mg/L | 0.00487 | 0.98% |
| QC value within limits for SELENIUM Recovery = 99.82% | | | | | | | | |
| SILVER† | 117527.2 | 0.4813 | mg/L | 0.00363 | 0.4813 | mg/L | 0.00363 | 0.75% |
| QC value within limits for SILVER Recovery = 96.26% | | | | | | | | |
| THALLIUM† | 1843.0 | 0.5268 | mg/L | 0.00348 | 0.5268 | mg/L | 0.00348 | 0.66% |
| QC value within limits for THALLIUM Recovery = 105.35% | | | | | | | | |
| VANADIUM† | 232379.5 | 0.5070 | mg/L | 0.00385 | 0.5070 | mg/L | 0.00385 | 0.76% |
| QC value within limits for VANADIUM Recovery = 101.41% | | | | | | | | |
| ZINC† | 35661.2 | 0.4898 | mg/L | 0.00292 | 0.4898 | mg/L | 0.00292 | 0.60% |
| QC value within limits for ZINC Recovery = 97.96% | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7476.2 | 0.5611 | mg/L | 0.02316 | 0.5611 | mg/L | 0.02316 | 4.13% |
| QC value greater than the upper limit for MAGNESIUM Recovery = 112.21% | | | | | | | | |
| IRON† | 7986.0 | 0.507 | mg/L | 0.0045 | 0.507 | mg/L | 0.0045 | 0.89% |
| QC value within limits for IRON Recovery = 101.49% | | | | | | | | |
| CALCIUM† | 49935.1 | 0.614 | mg/L | 0.0337 | 0.614 | mg/L | 0.0337 | 5.49% |
| QC value greater than the upper limit for CALCIUM Recovery = 122.75% | | | | | | | | |

QC Failed. Continue with analysis.

---

**Sequence No.:** 160
**Sample ID:** CCB
**Analyst:**
**Sample Wt:**
**Dilution:**

**Autosampler Location:** 2
**Date Collected:** 2/19/10 11:33:16 PM
**Sample Prep Volume:**
**Data Type:** Original

---

Mean Data: CCB

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17652207.2 | 9.511 | mg/L | 0.0569 | | | | 0.60% |
| ALUMINUM† | 337.6 | 0.0255 | mg/L | 0.00352 | 0.0255 | mg/L | 0.00352 | 13.82% |
| QC value within limits for ALUMINUM Recovery = Not calculated | | | | | | | | |
| ANTIMONY† | 20.2 | 0.0084 | mg/L | 0.00035 | 0.0084 | mg/L | 0.00035 | 4.12% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | -5.5 | -0.0015 | mg/L | 0.00699 | -0.0015 | mg/L | 0.00699 | 454.75% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | -9.8 | 0.0029 | mg/L | 0.00016 | 0.0029 | mg/L | 0.00016 | 5.55% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -801.3 | 0.0035 | mg/L | 0.00010 | 0.0035 | mg/L | 0.00010 | 2.95% |

QC value within limits for BERYLLIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| CADMIUM† | 50.0 | 0.0059 mg/L | 0.00042 | 0.0059 mg/L | 0.00042 | 7.10% |

QC value within limits for CADMIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| CHROMIUM† | 160.0 | 0.0040 mg/L | 0.00022 | 0.0040 mg/L | 0.00022 | 5.60% |

QC value within limits for CHROMIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| COBALT† | -91.5 | 0.0007 mg/L | 0.00067 | 0.0007 mg/L | 0.00067 | 97.83% |

QC value within limits for COBALT Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| COPPER† | 342.2 | 0.0072 mg/L | 0.00013 | 0.0072 mg/L | 0.00013 | 1.80% |

QC value within limits for COPPER Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| MANGANESE† | -52.9 | 0.0022 mg/L | 0.00017 | 0.0022 mg/L | 0.00017 | 7.58% |

QC value within limits for MANGANESE Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| MOLYBDENUM† | 42.2 | 0.0042 mg/L | 0.00051 | 0.0042 mg/L | 0.00051 | 11.94% |

QC value within limits for MOLYBDENUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| NICKEL† | 302.8 | 0.0081 mg/L | 0.00030 | 0.0081 mg/L | 0.00030 | 3.72% |

QC value within limits for NICKEL Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| LEAD† | 44.7 | 0.0064 mg/L | 0.00278 | 0.0064 mg/L | 0.00278 | 43.73% |

QC value within limits for LEAD Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| SELENIUM† | -10.0 | 0.0010 mg/L | 0.00143 | 0.0010 mg/L | 0.00143 | 150.07% |

QC value within limits for SELENIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| SILVER† | -137.3 | 0.0029 mg/L | 0.00024 | 0.0029 mg/L | 0.00024 | 8.46% |

QC value within limits for SILVER Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| THALLIUM† | 0.1 | -0.0005 mg/L | 0.00182 | -0.0005 mg/L | 0.00182 | 350.79% |

QC value within limits for THALLIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| VANADIUM† | 10402.4 | 0.0252 mg/L | 0.00500 | 0.0252 mg/L | 0.00500 | 19.88% |

QC value greater than the upper limit for VANADIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| ZINC† | -112.6 | 0.0032 mg/L | 0.00027 | 0.0032 mg/L | 0.00027 | 8.23% |

QC value within limits for ZINC Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| ARGON | Saturated2 | | | | | |

Saturated in preshot (code 2)

| | | | | | | |
|---|---|---|---|---|---|---|
| MAGNESIUM† | -485.6 | -0.0326 mg/L | 0.00536 | -0.0326 mg/L | 0.00536 | 16.45% |

QC value within limits for MAGNESIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | -435.9 | -0.022 mg/L | 0.0022 | -0.022 mg/L | 0.0022 | 10.37% |

QC value within limits for IRON Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | -2233.6 | -0.010 mg/L | 0.0034 | -0.010 mg/L | 0.0034 | 34.45% |

QC value within limits for CALCIUM Recovery = Not calculated

QC Failed. Continue with analysis.

---

**Sequence No.:** 161
**Sample ID:** 10020428-20BPDS
**Analyst:** KL
**Sample Wt:**
**Dilution:** 5X

**Autosampler Location:** 114
**Date Collected:** 2/19/10 11:38:05 PM
**Sample Prep Volume:**
**Data Type:** Original

---

**Mean Data:** 10020428-20BPDS

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17550062.6 | 9.456 | mg/L | 0.0374 | | | | 0.40% |
| ALUMINUM† | 5827.2 | 0.3840 | mg/L | 0.00811 | 1.920 | mg/L | 0.0406 | 2.11% |
| ANTIMONY† | 660.3 | 0.2160 | mg/L | 0.00266 | 1.080 | mg/L | 0.0133 | 1.23% |
| ARSENIC† | 562.7 | 0.2193 | mg/L | 0.00414 | 1.096 | mg/L | 0.0207 | 1.89% |
| BARIUM† | 19132.5 | 0.2099 | mg/L | 0.00059 | 1.049 | mg/L | 0.0030 | 0.28% |
| BERYLLIUM† | 1197325.9 | 0.2091 | mg/L | 0.00133 | 1.046 | mg/L | 0.0066 | 0.63% |
| CADMIUM† | 7953.9 | 0.2018 | mg/L | 0.00061 | 1.009 | mg/L | 0.0031 | 0.30% |
| CHROMIUM† | 25685.0 | 0.2026 | mg/L | 0.00118 | 1.013 | mg/L | 0.0059 | 0.58% |
| COBALT† | 6571.4 | 0.2112 | mg/L | 0.00056 | 1.056 | mg/L | 0.0028 | 0.26% |
| COPPER† | 30292.4 | 0.2004 | mg/L | 0.00117 | 1.002 | mg/L | 0.0058 | 0.58% |
| MANGANESE† | 236117.0 | 0.5770 | mg/L | 0.00367 | 2.885 | mg/L | 0.0184 | 0.64% |
| MOLYBDENUM† | 6330.9 | 0.2092 | mg/L | 0.00070 | 1.046 | mg/L | 0.0035 | 0.34% |
| NICKEL† | 14366.0 | 0.2171 | mg/L | 0.00058 | 1.085 | mg/L | 0.0029 | 0.27% |
| LEAD† | 2628.2 | 0.2040 | mg/L | 0.00037 | 1.020 | mg/L | 0.0018 | 0.18% |
| SELENIUM† | 760.5 | 0.2003 | mg/L | 0.00120 | 1.001 | mg/L | 0.0060 | 0.60% |
| SILVER† | 46885.5 | 0.1947 | mg/L | 0.00138 | 0.9737 | mg/L | 0.00691 | 0.71% |
| THALLIUM† | 750.4 | 0.2137 | mg/L | 0.00227 | 1.068 | mg/L | 0.0113 | 1.06% |
| VANADIUM† | 106930.5 | 0.2250 | mg/L | 0.00273 | 1.125 | mg/L | 0.0136 | 1.21% |
| ZINC† | 15441.0 | 0.2130 | mg/L | 0.00068 | 1.065 | mg/L | 0.0034 | 0.32% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 321059.1 | 23.76 | mg/L | 0.146 | 118.8 | mg/L | 0.73 | 0.61% |
| IRON† | 39964.1 | 2.40 | mg/L | 0.016 | 12.0 | mg/L | 0.08 | 0.66% |

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 2676266.6 | 31.9 mg/L | 0.21 | 160 mg/L | 1.1 | 0.66% |

**Sequence No.: 162** **Autosampler Location: 115**
**Sample ID: 10020428-20BPDSD** **Date Collected: 2/19/10 11:43:05 PM**
**Analyst: KL**
**Sample Wt:** **Sample Prep Volume:**
**Dilution: 5X** **Data Type: Original**

**Mean Data: 10020428-20BPDSD**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17527653.9 | 9.444 | mg/L | 0.0213 | | | | 0.23% |
| ALUMINUM† | 5824.3 | 0.3848 | mg/L | 0.00436 | 1.924 | mg/L | 0.0218 | 1.13% |
| ANTIMONY† | 662.6 | 0.2168 | mg/L | 0.00090 | 1.084 | mg/L | 0.0045 | 0.42% |
| ARSENIC† | 563.9 | 0.2197 | mg/L | 0.00441 | 1.099 | mg/L | 0.0221 | 2.01% |
| BARIUM† | 19254.0 | 0.2112 | mg/L | 0.00136 | 1.056 | mg/L | 0.0068 | 0.64% |
| BERYLLIUM† | 1216888.7 | 0.2125 | mg/L | 0.00139 | 1.062 | mg/L | 0.0070 | 0.66% |
| CADMIUM† | 8018.1 | 0.2034 | mg/L | 0.00090 | 1.017 | mg/L | 0.0045 | 0.44% |
| CHROMIUM† | 26258.0 | 0.2070 | mg/L | 0.00133 | 1.035 | mg/L | 0.0067 | 0.64% |
| COBALT† | 6613.3 | 0.2125 | mg/L | 0.00183 | 1.063 | mg/L | 0.0091 | 0.86% |
| COPPER† | 30889.1 | 0.2042 | mg/L | 0.00105 | 1.021 | mg/L | 0.0053 | 0.52% |
| MANGANESE† | 239986.7 | 0.5864 | mg/L | 0.00370 | 2.932 | mg/L | 0.0185 | 0.63% |
| MOLYBDENUM† | 6367.1 | 0.2104 | mg/L | 0.00099 | 1.052 | mg/L | 0.0049 | 0.47% |
| NICKEL† | 14474.6 | 0.2187 | mg/L | 0.00061 | 1.093 | mg/L | 0.0030 | 0.28% |
| LEAD† | 2644.7 | 0.2053 | mg/L | 0.00064 | 1.026 | mg/L | 0.0032 | 0.31% |
| SELENIUM† | 757.4 | 0.1995 | mg/L | 0.00230 | 0.9973 | mg/L | 0.01150 | 1.15% |
| SILVER† | 47700.6 | 0.1981 | mg/L | 0.00194 | 0.9903 | mg/L | 0.00969 | 0.98% |
| THALLIUM† | 740.8 | 0.2109 | mg/L | 0.00486 | 1.055 | mg/L | 0.0243 | 2.30% |
| VANADIUM† | 110328.6 | 0.2322 | mg/L | 0.00467 | 1.161 | mg/L | 0.0233 | 2.01% |
| ZINC† | 15564.5 | 0.2146 | mg/L | 0.00107 | 1.073 | mg/L | 0.0054 | 0.50% |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 326110.2 | 24.14 | mg/L | 0.126 | 120.7 | mg/L | 0.63 | 0.52% |
| IRON† | 40524.2 | 2.43 | mg/L | 0.020 | 12.2 | mg/L | 0.10 | 0.82% |
| CALCIUM† | 2719055.8 | 32.4 | mg/L | 0.21 | 162 | mg/L | 1.1 | 0.65% |

**Sequence No.: 163** **Autosampler Location: 1**
**Sample ID: CCV** **Date Collected: 2/19/10 11:48:05 PM**
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type: Original**

**Mean Data: CCV**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17666571.0 | 9.519 | mg/L | 0.0671 | | | | 0.70% |
| ALUMINUM† | 8976.7 | 0.5228 | mg/L | 0.00355 | 0.5228 | mg/L | 0.00355 | 0.68% |
| QC value within limits for ALUMINUM Recovery = 104.55% | | | | | | | | |
| ANTIMONY† | 1540.4 | 0.4984 | mg/L | 0.00536 | 0.4984 | mg/L | 0.00536 | 1.07% |
| QC value within limits for ANTIMONY Recovery = 99.68% | | | | | | | | |
| ARSENIC† | 1323.7 | 0.5142 | mg/L | 0.00031 | 0.5142 | mg/L | 0.00031 | 0.06% |
| QC value within limits for ARSENIC Recovery = 102.84% | | | | | | | | |
| BARIUM† | 45662.8 | 0.4968 | mg/L | 0.00377 | 0.4968 | mg/L | 0.00377 | 0.76% |
| QC value within limits for BARIUM Recovery = 99.35% | | | | | | | | |
| BERYLLIUM† | 2870068.8 | 0.4962 | mg/L | 0.00402 | 0.4962 | mg/L | 0.00402 | 0.81% |
| QC value within limits for BERYLLIUM Recovery = 99.23% | | | | | | | | |
| CADMIUM† | 19529.3 | 0.4885 | mg/L | 0.00241 | 0.4885 | mg/L | 0.00241 | 0.49% |
| QC value within limits for CADMIUM Recovery = 97.70% | | | | | | | | |
| CHROMIUM† | 63266.4 | 0.4950 | mg/L | 0.00404 | 0.4950 | mg/L | 0.00404 | 0.82% |
| QC value within limits for CHROMIUM Recovery = 98.99% | | | | | | | | |
| COBALT† | 15474.6 | 0.4925 | mg/L | 0.00263 | 0.4925 | mg/L | 0.00263 | 0.53% |
| QC value within limits for COBALT Recovery = 98.49% | | | | | | | | |
| COPPER† | 73433.6 | 0.4770 | mg/L | 0.00382 | 0.4770 | mg/L | 0.00382 | 0.80% |
| QC value within limits for COPPER Recovery = 95.39% | | | | | | | | |
| MANGANESE† | 203792.7 | 0.4983 | mg/L | 0.00417 | 0.4983 | mg/L | 0.00417 | 0.84% |
| QC value within limits for MANGANESE Recovery = 99.66% | | | | | | | | |
| MOLYBDENUM† | 15214.5 | 0.4984 | mg/L | 0.00364 | 0.4984 | mg/L | 0.00364 | 0.73% |

QC value within limits for MOLYBDENUM Recovery = 99.67%

| | | | | | | |
|---|---|---|---|---|---|---|
| NICKEL† | 33408.9 | 0.5003 mg/L | 0.00425 | 0.5003 mg/L | 0.00425 | 0.85% |

QC value within limits for NICKEL Recovery = 100.05%

| | | | | | | |
|---|---|---|---|---|---|---|
| LEAD† | 6550.1 | 0.5032 mg/L | 0.00316 | 0.5032 mg/L | 0.00316 | 0.63% |

QC value within limits for LEAD Recovery = 100.65%

| | | | | | | |
|---|---|---|---|---|---|---|
| SELENIUM† | 1908.6 | 0.4972 mg/L | 0.00280 | 0.4972 mg/L | 0.00280 | 0.56% |

QC value within limits for SELENIUM Recovery = 99.43%

| | | | | | | |
|---|---|---|---|---|---|---|
| SILVER† | 118595.3 | 0.4857 mg/L | 0.00471 | 0.4857 mg/L | 0.00471 | 0.97% |

QC value within limits for SILVER Recovery = 97.13%

| | | | | | | |
|---|---|---|---|---|---|---|
| THALLIUM† | 1855.4 | 0.5303 mg/L | 0.00621 | 0.5303 mg/L | 0.00621 | 1.17% |

QC value within limits for THALLIUM Recovery = 106.07%

| | | | | | | |
|---|---|---|---|---|---|---|
| VANADIUM† | 235166.0 | 0.5131 mg/L | 0.00795 | 0.5131 mg/L | 0.00795 | 1.55% |

QC value within limits for VANADIUM Recovery = 102.62%

| | | | | | | |
|---|---|---|---|---|---|---|
| ZINC† | 35976.4 | 0.4941 mg/L | 0.00363 | 0.4941 mg/L | 0.00363 | 0.73% |

QC value within limits for ZINC Recovery = 98.82%

ARGON Saturated2

Saturated in preshot (code 2)

| | | | | | | |
|---|---|---|---|---|---|---|
| MAGNESIUM† | 6397.3 | 0.4812 mg/L | 0.00457 | 0.4812 mg/L | 0.00457 | 0.95% |

QC value within limits for MAGNESIUM Recovery = 96.24%

| | | | | | | |
|---|---|---|---|---|---|---|
| IRON† | 7783.4 | 0.496 mg/L | 0.0016 | 0.496 mg/L | 0.0016 | 0.33% |

QC value within limits for IRON Recovery = 99.13%

| | | | | | | |
|---|---|---|---|---|---|---|
| CALCIUM† | 41047.0 | 0.508 mg/L | 0.0090 | 0.508 mg/L | 0.0090 | 1.78% |

QC value within limits for CALCIUM Recovery = 101.55%

All analytes passed QC.

---

**Sequence No.:** 164 **Autosampler Location:** 2
**Sample ID:** CCB **Date Collected:** 2/19/10 11:53:14 PM
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type:** Original

---

**Mean Data: CCB**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17805400.9 | 9.594 | mg/L | 0.0228 | | | | 0.24% |
| ALUMINUM† | 254.8 | 0.0206 | mg/L | 0.00356 | 0.0206 | mg/L | 0.00356 | 17.32% |

QC value within limits for ALUMINUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ANTIMONY† | 15.8 | 0.0070 | mg/L | 0.00058 | 0.0070 | mg/L | 0.00058 | 8.31% |

QC value within limits for ANTIMONY Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ARSENIC† | 12.7 | 0.0056 | mg/L | 0.00402 | 0.0056 | mg/L | 0.00402 | 72.28% |

QC value within limits for ARSENIC Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BARIUM† | 11.2 | 0.0032 | mg/L | 0.00001 | 0.0032 | mg/L | 0.00001 | 0.40% |

QC value within limits for BARIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BERYLLIUM† | -182.8 | 0.0036 | mg/L | 0.00009 | 0.0036 | mg/L | 0.00009 | 2.44% |

QC value within limits for BERYLLIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CADMIUM† | 41.3 | 0.0057 | mg/L | 0.00031 | 0.0057 | mg/L | 0.00031 | 5.48% |

QC value within limits for CADMIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHROMIUM† | 106.4 | 0.0036 | mg/L | 0.00056 | 0.0036 | mg/L | 0.00056 | 15.60% |

QC value within limits for CHROMIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| COBALT† | -74.8 | 0.0012 | mg/L | 0.00043 | 0.0012 | mg/L | 0.00043 | 35.55% |

QC value within limits for COBALT Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| COPPER† | 294.4 | 0.0069 | mg/L | 0.00094 | 0.0069 | mg/L | 0.00094 | 13.73% |

QC value within limits for COPPER Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MANGANESE† | -94.5 | 0.0021 | mg/L | 0.00008 | 0.0021 | mg/L | 0.00008 | 3.93% |

QC value within limits for MANGANESE Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MOLYBDENUM† | 45.0 | 0.0043 | mg/L | 0.00036 | 0.0043 | mg/L | 0.00036 | 8.28% |

QC value within limits for MOLYBDENUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NICKEL† | 287.4 | 0.0079 | mg/L | 0.00025 | 0.0079 | mg/L | 0.00025 | 3.10% |

QC value within limits for NICKEL Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LEAD† | 50.4 | 0.0068 | mg/L | 0.00187 | 0.0068 | mg/L | 0.00187 | 27.61% |

QC value within limits for LEAD Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SELENIUM† | -9.4 | 0.0011 | mg/L | 0.00223 | 0.0011 | mg/L | 0.00223 | 200.24% |

QC value within limits for SELENIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| SILVER† | -191.0 | 0.0026 | mg/L | 0.00042 | 0.0026 | mg/L | 0.00042 | 15.86% |

QC value within limits for SILVER Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| THALLIUM† | 17.5 | 0.0045 | mg/L | 0.00613 | 0.0045 | mg/L | 0.00613 | 137.22% |

QC value within limits for THALLIUM Recovery = Not calculated

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| VANADIUM† | 6547.5 | 0.0169 | mg/L | 0.00270 | 0.0169 | mg/L | 0.00270 | 16.02% |

QC value within limits for VANADIUM Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| ZINC† | -121.4 | 0.0031 mg/L | 0.00049 | 0.0031 mg/L | 0.00049 | 15.83% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | |
| ARGON | Saturated2 | | | | | |
| Saturated in preshot (code 2) | | | | | | |
| MAGNESIUM† | -553.2 | -0.0376 mg/L | 0.00423 | -0.0376 mg/L | 0.00423 | 11.26% |
| QC value within limits for MAGNESIUM Recovery = Not calculated | | | | | | |
| IRON† | -429.1 | -0.022 mg/L | 0.0009 | -0.022 mg/L | 0.0009 | 4.26% |
| QC value within limits for IRON Recovery = Not calculated | | | | | | |
| CALCIUM† | -3269.4 | -0.022 mg/L | 0.0018 | -0.022 mg/L | 0.0018 | 8.30% |
| QC value within limits for CALCIUM Recovery = Not calculated | | | | | | |

All analytes passed QC.

---

**Sequence No.:** 165 **Autosampler Location:** 4
**Sample ID:** ICSA **Date Collected:** 2/19/10 11:58:04 PM
**Analyst:**
**Sample Wt:** **Sample Prep Volume:**
**Dilution:** **Data Type:** Original

---

**Mean Data: ICSA**

| Analyte | Mean Corrected Intensity | Calib Conc. | Calib Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 16154913.2 | 8.704 | mg/L | 0.0099 | | | | 0.11% |
| ALUMINUM† | 9478534.6 | 525.9 | mg/L | 0.42 | 525.9 | mg/L | 0.42 | 0.08% |
| QC value within limits for ALUMINUM Recovery = 105.19% | | | | | | | | |
| ANTIMONY† | -109.6 | -0.0319 | mg/L | 0.00680 | -0.0319 | mg/L | 0.00680 | 21.31% |
| QC value within limits for ANTIMONY Recovery = Not calculated | | | | | | | | |
| ARSENIC† | -136.6 | 0.0127 | mg/L | 0.00747 | 0.0127 | mg/L | 0.00747 | 58.85% |
| QC value within limits for ARSENIC Recovery = Not calculated | | | | | | | | |
| BARIUM† | 627.3 | 0.0107 | mg/L | 0.00018 | 0.0107 | mg/L | 0.00018 | 1.71% |
| QC value within limits for BARIUM Recovery = Not calculated | | | | | | | | |
| BERYLLIUM† | -7912.3 | 0.0023 | mg/L | 0.00004 | 0.0023 | mg/L | 0.00004 | 1.76% |
| QC value within limits for BERYLLIUM Recovery = Not calculated | | | | | | | | |
| CADMIUM† | -263.0 | 0.0131 | mg/L | 0.00038 | 0.0131 | mg/L | 0.00038 | 2.89% |
| QC value within limits for CADMIUM Recovery = Not calculated | | | | | | | | |
| CHROMIUM† | 2314.0 | 0.0208 | mg/L | 0.00050 | 0.0208 | mg/L | 0.00050 | 2.39% |
| QC value greater than the upper limit for CHROMIUM Recovery = Not calculated | | | | | | | | |
| COBALT† | -179.1 | -0.0021 | mg/L | 0.00056 | -0.0021 | mg/L | 0.00056 | 26.93% |
| QC value within limits for COBALT Recovery = Not calculated | | | | | | | | |
| COPPER† | 14549.2 | -0.0020 | mg/L | 0.00079 | -0.0020 | mg/L | 0.00079 | 40.43% |
| QC value within limits for COPPER Recovery = Not calculated | | | | | | | | |
| MANGANESE† | -8698.5 | -0.0010 | mg/L | 0.00017 | -0.0010 | mg/L | 0.00017 | 16.49% |
| QC value within limits for MANGANESE Recovery = Not calculated | | | | | | | | |
| MOLYBDENUM† | -1099.8 | -0.0014 | mg/L | 0.00196 | -0.0014 | mg/L | 0.00196 | 140.46% |
| QC value within limits for MOLYBDENUM Recovery = Not calculated | | | | | | | | |
| NICKEL† | 1550.9 | 0.0027 | mg/L | 0.00016 | 0.0027 | mg/L | 0.00016 | 5.91% |
| QC value within limits for NICKEL Recovery = Not calculated | | | | | | | | |
| LEAD† | -862.6 | 0.0034 | mg/L | 0.00082 | 0.0034 | mg/L | 0.00082 | 23.74% |
| QC value within limits for LEAD Recovery = Not calculated | | | | | | | | |
| SELENIUM† | -907.5 | -0.0063 | mg/L | 0.00117 | -0.0063 | mg/L | 0.00117 | 18.46% |
| QC value within limits for SELENIUM Recovery = Not calculated | | | | | | | | |
| SILVER† | -31811.4 | 0.0193 | mg/L | 0.00057 | 0.0193 | mg/L | 0.00057 | 2.97% |
| QC value within limits for SILVER Recovery = Not calculated | | | | | | | | |
| THALLIUM† | 318.5 | -0.0122 | mg/L | 0.00428 | -0.0122 | mg/L | 0.00428 | 34.97% |
| QC value within limits for THALLIUM Recovery = Not calculated | | | | | | | | |
| VANADIUM† | 37267.6 | 0.0265 | mg/L | 0.00278 | 0.0265 | mg/L | 0.00278 | 10.47% |
| QC value within limits for VANADIUM Recovery = Not calculated | | | | | | | | |
| ZINC† | -1594.0 | -0.0151 | mg/L | 0.00048 | -0.0151 | mg/L | 0.00048 | 3.19% |
| QC value within limits for ZINC Recovery = Not calculated | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7150523.7 | 533.4 | mg/L | 2.11 | 533.4 | mg/L | 2.11 | 0.40% |
| QC value within limits for MAGNESIUM Recovery = 106.68% | | | | | | | | |
| IRON† | 7909335.6 | 472 | mg/L | 2.0 | 472 | mg/L | 2.0 | 0.43% |
| QC value within limits for IRON Recovery = 94.34% | | | | | | | | |
| CALCIUM† | 43220382.9 | 516 | mg/L | 0.2 | 516 | mg/L | 0.2 | 0.04% |
| QC value within limits for CALCIUM Recovery = 103.11% | | | | | | | | |

QC Failed. Continue with analysis.

---

Sequence No.: 166
Sample ID: ICSAB
Analyst:
Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 2/20/10 12:03:29 AM

Sample Prep Volume:
Data Type: Original

---

Mean Data: ICSAB

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 15970721.0 | 8.605 | mg/L | 0.0360 | | | | 0.42% |
| ALUMINUM† | 9414685.5 | 522.5 | mg/L | 0.12 | 522.5 | mg/L | 0.12 | 0.02% |
| QC value within limits for ALUMINUM Recovery = 104.50% | | | | | | | | |
| ANTIMONY† | 33121.0 | 10.63 | mg/L | 0.036 | 10.63 | mg/L | 0.036 | 0.34% |
| QC value within limits for ANTIMONY Recovery = 106.30% | | | | | | | | |
| ARSENIC† | 27768.5 | 10.89 | mg/L | 0.079 | 10.89 | mg/L | 0.079 | 0.73% |
| QC value within limits for ARSENIC Recovery = 108.90% | | | | | | | | |
| BARIUM† | 275966.2 | 2.987 | mg/L | 0.0086 | 2.987 | mg/L | 0.0086 | 0.29% |
| QC value within limits for BARIUM Recovery = 99.58% | | | | | | | | |
| BERYLLIUM† | 6187272.3 | 1.065 | mg/L | 0.0007 | 1.065 | mg/L | 0.0007 | 0.06% |
| QC value within limits for BERYLLIUM Recovery = 106.54% | | | | | | | | |
| CADMIUM† | 134913.6 | 3.362 | mg/L | 0.0182 | 3.362 | mg/L | 0.0182 | 0.54% |
| QC value within limits for CADMIUM Recovery = 112.06% | | | | | | | | |
| CHROMIUM† | 393558.1 | 3.065 | mg/L | 0.0087 | 3.065 | mg/L | 0.0087 | 0.29% |
| QC value within limits for CHROMIUM Recovery = 102.15% | | | | | | | | |
| COBALT† | 91537.7 | 2.895 | mg/L | 0.0161 | 2.895 | mg/L | 0.0161 | 0.56% |
| QC value within limits for COBALT Recovery = 96.51% | | | | | | | | |
| COPPER† | 519130.2 | 3.245 | mg/L | 0.0071 | 3.245 | mg/L | 0.0071 | 0.22% |
| QC value within limits for COPPER Recovery = 108.15% | | | | | | | | |
| MANGANESE† | 827902.2 | 2.035 | mg/L | 0.0061 | 2.035 | mg/L | 0.0061 | 0.30% |
| QC value within limits for MANGANESE Recovery = 101.73% | | | | | | | | |
| MOLYBDENUM† | 93687.5 | 3.085 | mg/L | 0.0149 | 3.085 | mg/L | 0.0149 | 0.48% |
| QC value within limits for MOLYBDENUM Recovery = 102.84% | | | | | | | | |
| NICKEL† | 195827.2 | 2.891 | mg/L | 0.0086 | 2.891 | mg/L | 0.0086 | 0.30% |
| QC value within limits for NICKEL Recovery = 96.37% | | | | | | | | |
| LEAD† | 128366.1 | 9.868 | mg/L | 0.0510 | 9.868 | mg/L | 0.0510 | 0.52% |
| QC value within limits for LEAD Recovery = 98.68% | | | | | | | | |
| SELENIUM† | 19921.4 | 5.379 | mg/L | 0.0434 | 5.379 | mg/L | 0.0434 | 0.81% |
| QC value within limits for SELENIUM Recovery = 107.59% | | | | | | | | |
| SILVER† | 675452.9 | 2.893 | mg/L | 0.0091 | 2.893 | mg/L | 0.0091 | 0.31% |
| QC value within limits for SILVER Recovery = 96.44% | | | | | | | | |
| THALLIUM† | 35780.1 | 10.14 | mg/L | 0.054 | 10.14 | mg/L | 0.054 | 0.53% |
| QC value within limits for THALLIUM Recovery = 101.41% | | | | | | | | |
| VANADIUM† | 1485322.9 | 3.170 | mg/L | 0.0123 | 3.170 | mg/L | 0.0123 | 0.39% |
| QC value within limits for VANADIUM Recovery = 105.66% | | | | | | | | |
| ZINC† | 211276.1 | 2.879 | mg/L | 0.0087 | 2.879 | mg/L | 0.0087 | 0.30% |
| QC value within limits for ZINC Recovery = 95.96% | | | | | | | | |
| ARGON | Saturated2 | | | | | | | |
| Saturated in preshot (code 2) | | | | | | | | |
| MAGNESIUM† | 7085553.4 | 528.6 | mg/L | 1.56 | 528.6 | mg/L | 1.56 | 0.29% |
| QC value within limits for MAGNESIUM Recovery = 105.71% | | | | | | | | |
| IRON† | 7843980.9 | 468 | mg/L | 1.4 | 468 | mg/L | 1.4 | 0.30% |
| QC value within limits for IRON Recovery = 93.60% | | | | | | | | |
| CALCIUM† | 42736787.3 | 510 | mg/L | 0.4 | 510 | mg/L | 0.4 | 0.08% |
| QC value within limits for CALCIUM Recovery = 101.95% | | | | | | | | |

All analytes passed QC.

---

Sequence No.: 167
Sample ID: RINSE BLANK
Analyst: KL
Sample Wt:
Dilution:

Autosampler Location: 116
Date Collected: 2/20/10 12:08:16 AM

Sample Prep Volume:
Data Type: Original

---

Mean Data: RINSE BLANK

| Analyte | Mean Corrected Intensity | Calib Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| YTTRIUM | 17722240.6 | 9.549 | mg/L | 0.0085 | | | | 0.09% |
| ALUMINUM† | 7324.1 | 0.4130 | mg/L | 0.11860 | 0.4130 | mg/L | 0.11860 | 28.71% |
| ANTIMONY† | 39.7 | 0.0147 | mg/L | 0.00573 | 0.0147 | mg/L | 0.00573 | 39.08% |

# METALS PREP AND ANALYTICAL RUN LOGS

SPL, Inc.

# PREP BATCH REPORT

Prep Batch ID: **87095**
Prep Code: **PR3010_6020**
Technician: **Savannah Alfred**


Prep Start Date: **2/12/2010 5:00:00 PM**
Prep End Date: **2/13/2010 5:00:00 AM**

| Sample ID | Matrix | Vial | pH | wt (Kg) | Ini vol (mL) | Surr Added | Spk Added | Homog | Fin Vol (mL) | Factor | SDG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10020428-01A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-02A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-03A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-04A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-05A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-06A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-07A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-08A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-08AMS | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-08AMSD | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-09A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-10A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-11A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-12A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-13A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-14A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-15A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-16A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-17A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-18A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-20A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| LCS-87095 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| MBLK-87095 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |

SPL, Inc.

# PREP BATCH REPORT

Prep Batch ID: **87096**
Prep Code: **PR3010_6020**
Technician: **Savannah Alfred**


Prep Start Date: **2/12/2010 5:00:00 PM**
Prep End Date: **2/13/2010 5:00:00 AM**

| Sample ID | Matrix | Vial | pH | wt (Kg) | Ini vol (mL) | Surr Added | Spk Added | Homog | Fin Vol (mL) | Factor | SDG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10020428-19A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-19AMS | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-19AMSD | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-21A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-22A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-23A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-24A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-25A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-26A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-27A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-28A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-29A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-30A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-31A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-32A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-33A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-34A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-35A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| LCS-87096 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| MBLK-87096 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |

# SPL, Inc.

# PREP BATCH REPORT

Prep Batch ID: **87103**
Prep Code: **PR3005_6010**
Technician: **Savannah Alfred**


Prep Start Date: **2/12/2010 2:00:00 PM**
Prep End Date: **2/12/2010 2:05:00 PM**

| Sample ID | Matrix | Vial | pH | wt (Kg) | Ini vol (mL) | Surr Added | Spk Added | Homog | Fin Vol (mL) | Factor | SDG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10020428-20B | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020428-27B | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-01E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-02E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-03E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-04E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| LCS-87103 | | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| MBLK-87103 | | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |

Analytical Sequence

**Method : 6010B 200.7**

| Seq. | Loc. | Sample ID |
|---|---|---|
| 1 | 7 | Calib Blank 1 06135-194-01 |
| 2 | 1 | Calib Std 1 07022-152-11 |
| 3 | 2 | Calib Std 2 06126-05-07 |
| 4 | 3 | Calib Std 3 -29-07 |
| 5 | 9 | Calib Std 4 -55-07 |
| 6 | 10 | Calib Std 5 -79-07 |
| 7 | 6 | ICV 06126-133-13 |
| 8 | 11 | LLICV 07022-154-02 |
| 9 | 7 | ICB 06135-194-01 |
| 10 | 6 | CCV 06126-271-14 |
| 11 | 12 | LLCCV 07022-154-02 |
| 12 | 7 | CCB 06135-194-01 |
| 13 | 4 | ICSA 06126-162-03 |
| 14 | 5 | ICSAB 06126-202-03 |
| 15 | 13 | RINSE BLANK |
| 16 | 14 | RINSE BLANK |
| 17 | 15 | MBLK-87221 |
| 18 | 16 | LCS-87221 |
| 19 | 17 | 10020634-03A |
| 20 | 18 | 10020634-03ASD |
| 21 | 19 | 10020634-03AMS |
| 22 | 20 | 10020634-03AMSD |
| 23 | 6 | CCV 06126-271-14 |
| 24 | 7 | CCB 06135-194-01 |
| 25 | 21 | 10020634-03APDS |
| 26 | 22 | 10020634-03APDSD |
| 27 | 23 | 10020683-01A |
| 28 | 24 | 10020540-01A |
| 29 | 25 | 10020541-03A |
| 30 | 6 | CCV |
| 31 | 7 | CCB |
| 32 | 4 | ICSA |
| 33 | 5 | ICSAB |
| 34 | 26 | RINSE BLANK |
| 35 | 27 | RINSE BLANK |
| 36 | 28 | MBLK-87220 |
| 37 | 29 | LCS-87220 |
| 38 | 30 | 10020643-04B |
| 39 | 31 | 10020643-04BSD |
| 40 | 32 | 10020643-04BMS |
| 41 | 33 | 10020643-04BMSD |
| 42 | 6 | CCV |
| 43 | 7 | CCB |
| 44 | 34 | 10020643-04BPDS |
| 45 | 35 | 10020643-04BPDSD |
| 46 | 36 | 10020643-05B |
| 47 | 37 | 10020643-09B |
| 48 | 38 | 10020625-02B |
| 49 | 39 | 10020627-02A |
| 50 | 40 | 10020628-01A |
| 51 | 41 | 10020629-03A |
| 52 | 42 | 10020630-03A |
| 53 | 43 | 10020631-03A |
| 54 | 6 | CCV |
| 55 | 7 | CCB |
| 56 | 44 | 10020632-03A |

10021910220V
02-19-10
SW





yttrium 07022-176-15

Analytical Sequence

Method : 6010B 200.7

| Seq. | Loc. | | Sample ID |
|---|---|---|---|
| 57 | 6 | QC | CCV |
| 58 | 7 | QC | CCB |
| 59 | 4 | QC | ICSA |
| 60 | 5 | QC | ICSAB |
| 61 | 45 | | RINSE BLANK |
| 62 | 46 | | RINSE BLANK |
| 63 | 47 | | MBLK-87222 |
| 64 | 48 | | LCS-87222 |
| 65 | 49 | | 10020624-01C |
| 66 | 50 | | 10020624-01CSD |
| 67 | 51 | | 10020624-01CMS |
| 68 | 52 | | 10020624-01CMSD |
| 69 | 6 | QC | CCV |
| 70 | 7 | QC | CCB |
| 71 | 53 | | 10020624-01CPDS |
| 72 | 54 | | 10020624-01CPDSD |
| 73 | 55 | | 10020624-02C |
| 74 | 56 | | 10020624-03C |
| 75 | 57 | | 10020624-04C |
| 76 | 58 | | 10020624-05C |
| 77 | 59 | | 10020624-06C |
| 78 | 60 | | 10020624-07C |
| 79 | 61 | | 10020624-08C |
| 80 | 62 | | 10020624-09C |
| 81 | 6 | QC | CCV |
| 82 | 7 | QC | CCB |
| 83 | 63 | | 10020624-10C |
| 84 | 64 | | 10020624-11C |
| 85 | 65 | | 10020624-12C |
| 86 | 66 | | 10020624-13C |
| 87 | 6 | QC | CCV |
| 88 | 11 | | LLCCV |
| 89 | 7 | QC | CCB |
| 90 | 4 | QC | ICSA |
| 91 | 5 | QC | ICSAB |
| 92 | 67 | | RINSE BLANK |
| 93 | 68 | | RINSE BLANK |
| 94 | 69 | | MBLK-87225 |
| 95 | 70 | | LCS-87225 |
| 96 | 71 | | 10020655-01B |
| 97 | 72 | | 10020655-01BSD |
| 98 | 73 | | 10020655-01BMS |
| 99 | 74 | | 10020655-01BMSD |
| 100 | 6 | QC | CCV |
| 101 | 11 | | LLCCV |
| 102 | 7 | QC | CCB |
| 103 | 75 | | 10020655-01BPDS |
| 104 | 76 | | 10020655-01BPDSD |
| 105 | 6 | QC | CCV |
| 106 | 11 | | LLCCV |
| 107 | 7 | QC | CCB |
| 108 | 4 | QC | ICSA |
| 109 | 5 | QC | ICSAB |
| 110 | 77 | | RINSE BLANK |
| 111 | 78 | | RINSE BLANK |
| 112 | 79 | | MBLK-87095 |

Analytical Sequence

Method : 6010B 200.7

| Seq. | Loc. | | Sample ID | Status |
|---|---|---|---|---|
| 113 | 80 | | LCS-87095 | |
| 114 | 81 | | 10020428-08A QC | |
| 115 | 82 | | 10020428-08ASD | |
| 116 | 83 | | 10020428-08AMS | |
| 117 | 84 | | 10020428-08AMSD | |
| 118 | 6 | QC | CCV | |
| 119 | 7 | QC | CCB | |
| 120 | 85 | | 10020428-08APDS | |
| 121 | 86 | | 10020428-08APDSD | |
| 122 | 87 | | 10020428-13A MW-06 | |
| 123 | 88 | | 10020428-20A BA-01 | |
| 124 | 89 | | 10020428-02A BA-09 | |
| 125 | 6 | QC | CCV | |
| 126 | 7 | QC | CCB | |
| 127 | 4 | QC | ICSA | |
| 128 | 5 | QC | ICSAB | |
| 129 | 90 | | RINSE BLANK | |
| 130 | 91 | | RINSE BLANK | |
| 131 | 92 | | MBLK-87096 | |
| 132 | 93 | | LCS-87096 | |
| 133 | 94 | | 10020428-19A QC | |
| 134 | 95 | | 10020428-19ASD | |
| 135 | 96 | | 10020428-19AMS | |
| 136 | 97 | | 10020428-19AMSD | |
| 137 | 6 | QC | CCV | |
| 138 | 7 | QC | CCB | |
| 139 | 98 | | 10020428-19APDS | |
| 140 | 99 | | 10020428-19APDSD | |
| 141 | 100 | | 10020428-22A PW-04 | |
| 142 | 101 | | 10020428-23A DW-02 | |
| 143 | 102 | | 10020428-29A BA-03 | |
| 144 | 103 | | 10020428-30A MW-02 | |
| 145 | 104 | | 10020428-31A MW-01 | |
| 146 | 105 | | 10020428-33A DUPLICATE #2 | |
| 147 | 1 | QC | CCV | |
| 148 | 2 | QC | CCB | |
| 149 | 4 | QC | ICSA | |
| 150 | 5 | QC | ICSAB | |
| 151 | 106 | | RINSE BLANK | |
| 152 | 107 | | RINSE BLANK | |
| 153 | 108 | | MBLK-87103 | |
| 154 | 109 | | LCS-87103 | |
| 155 | 110 | | 10020428-20B BA-01 | |
| 156 | 111 | | 10020428-20BSD | |
| 157 | 112 | | 10020428-20BMS | |
| 158 | 113 | | 10020428-20BMSD | |
| 159 | 1 | QC | CCV | |
| 160 | 2 | QC | CCB | |
| 161 | 114 | | 10020428-20BPDS | |
| 162 | 115 | | 10020428-20BPDSD | |
| 163 | 1 | QC | CCV | |
| 164 | 2 | QC | CCB | |
| 165 | 4 | QC | ICSA | |
| 166 | 5 | QC | ICSAB | |
| 167 | 116 | | RINSE BLANK | |
| 168 | 117 | | RINSE BLANK | |

Analytical Sequence

Method : 6010B 200.7

| Seq. | Loc. | | Sample ID | Status |
|---|---|---|---|---|
| 169 | 118 | | MBLK-87232 | |
| 170 | 119 | | LCS-87232 | |
| 171 | 120 | | 10020636-01A | |
| 172 | 121 | | 10020636-01ASD | |
| 173 | 122 | | 10020636-01AMS | |
| 174 | 123 | | 10020636-01AMSD | |
| 175 | 1 | QC | CCV | |
| 176 | 2 | QC | CCB | |
| 177 | 124 | | 10020636-01APDS | |
| 178 | 125 | | 10020636-01APDSD | |
| 179 | 126 | | 10020649-10A | |
| 180 | 127 | | 10020679-01A | |
| 181 | 128 | | 10020679-02A | |
| 182 | 129 | | 10020679-03A | |
| 183 | 130 | | 10020679-04A | |
| 184 | 131 | | 10020679-05A | |
| 185 | 132 | | 10020679-06A | |
| 186 | 133 | | 10020679-07A | |
| 187 | 1 | QC | CCV | |
| 188 | 2 | QC | CCB | |
| 189 | 134 | | 10020679-08A | |
| 190 | 135 | | 10020679-09A | |
| 191 | 136 | | 10020679-10A | |
| 192 | 1 | QC | CCV | |
| 193 | 2 | QC | CCB | |
| 194 | 4 | QC | ICSA | |
| 195 | 5 | QC | ICSAB | |
| 196 | 137 | | RINSE BLANK | |
| 197 | 138 | | RINSE BLANK | |

# METALS CLP-LIKE FORMS

# COVER PAGE - INORGANICS DATA PACKAGE

Lab Name: SPL Inc.

Lab Code: SPLLAF

SDG: 10020428

| Client Sample ID | Lab Sample ID | Date Collected | Date Received | Matrix |
|---|---|---|---|---|
| BA-01 | 10020428-20 | 2/9/10 14:19 | 2/11/10 17:20 | Water |
| BA-01A | 10020428-19 | 2/9/10 13:53 | 2/11/10 17:20 | Water |
| BA-03 | 10020428-29 | 2/10/10 15:57 | 2/11/10 17:20 | Water |
| BA-03A | 10020428-28 | 2/10/10 15:26 | 2/11/10 17:20 | Water |
| BA-05 | 10020428-25 | 2/10/10 12:38 | 2/11/10 17:20 | Water |
| BA-05A | 10020428-24 | 2/10/10 12:03 | 2/11/10 17:20 | Water |
| BA-09 | 10020428-02 | 2/8/10 11:21 | 2/11/10 17:20 | Water |
| BA-09A | 10020428-01 | 2/8/10 10:53 | 2/11/10 17:20 | Water |
| BB-01 | 10020428-14 | 2/9/10 11:50 | 2/11/10 17:20 | Water |
| BC-03 | 10020428-07 | 2/8/10 15:09 | 2/11/10 17:20 | Water |
| BC-07 | 10020428-08 | 2/9/10 8:19 | 2/11/10 17:20 | Water |
| BC-17 | 10020428-16 | 2/9/10 12:50 | 2/11/10 17:20 | Water |
| BC-19 | 10020428-10 | 2/9/10 9:11 | 2/11/10 17:20 | Water |
| BC-21R | 10020428-18 | 2/9/10 13:19 | 2/11/10 17:20 | Water |
| BC-25 | 10020428-11 | 2/9/10 9:43 | 2/11/10 17:20 | Water |
| DUPLICATE #1 | 10020428-32 | 2/9/10 0:00 | 2/11/10 17:20 | Water |
| DUPLICATE #2 | 10020428-33 | 2/10/10 0:00 | 2/11/10 17:20 | Water |
| DUPLICATE #3 | 10020428-34 | 2/10/10 0:00 | 2/11/10 17:20 | Water |
| DUPLICATE #4 | 10020428-35 | 2/10/10 0:00 | 2/11/10 17:20 | Water |
| DW-01 | 10020428-27 | 2/10/10 14:50 | 2/11/10 17:20 | Water |
| DW-02 | 10020428-23 | 2/10/10 11:40 | 2/11/10 17:20 | Water |
| DW-03 | 10020428-21 | 2/10/10 9:53 | 2/11/10 17:20 | Water |
| DW-04 | 10020428-09 | 2/9/10 8:48 | 2/11/10 17:20 | Water |
| MW-01 | 10020428-31 | 2/11/10 10:53 | 2/11/10 17:20 | Water |
| MW-02 | 10020428-30 | 2/11/10 10:20 | 2/11/10 17:20 | Water |
| MW-03 | 10020428-12 | 2/9/10 10:06 | 2/11/10 17:20 | Water |
| MW-04 | 10020428-03 | 2/8/10 11:51 | 2/11/10 17:20 | Water |
| MW-06 | 10020428-13 | 2/9/10 11:01 | 2/11/10 17:20 | Water |
| MW-A | 10020428-26 | 2/10/10 14:13 | 2/11/10 17:20 | Water |
| NORTH WELL | 10020428-17 | 2/9/10 12:55 | 2/11/10 17:20 | Water |
| PW-04 | 10020428-22 | 2/10/10 10:28 | 2/11/10 17:20 | Water |
| (b) (6) [redacted] WELL | 10020428-06 | 2/8/10 14:30 | 2/11/10 17:20 | Water |
| SOUTH WELL | 10020428-15 | 2/9/10 12:25 | 2/11/10 17:20 | Water |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory manager or the Manager's designee, as verified by the following signature.

Signature: Keran LaFleur

Name: KERAN LAFLEUR

Date: 2-25-10

Title: METALS SUPERVISOR

COVER PAGE - INORGANICS DATA PACKAGE

Lab Name: SPL Inc.

Lab Code: SPLLAF

SDG: 10020428

| Client Sample ID | Lab Sample ID | Date Collected | Date Received | Matrix |
|---|---|---|---|---|
| WW-04 | 10020428-05 | 2/8/10 14:20 | 2/11/10 17:20 | Water |
| WW-09 | 10020428-04 | 2/8/10 12:25 | 2/11/10 17:20 | Water |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory manager or the Manager's designee, as verified by the following signature.

Signature: Keran Lafleur

Date: 2-25-10

Name: KERAN LAFLEUR

Title: METALS SUPERVISOR

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BA-09A

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-01A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000504 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0234 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BA-09

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-02A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | 0.000687 | U | 0.000687 | 0.005 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 3.41 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.161 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 5 | 0.000735 | U | 0.000735 | 0.01 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | MW-04 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-03A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000524 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00770 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

WW-09

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-04A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000381 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0144 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

WW-04

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-05A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00297 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

(b) (6) WELL

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-06A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.00292 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0203 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BC-03

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-07A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000221 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00138 | J | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.00146 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| BC-07 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-08A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000163 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0129 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000783 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000220 | J | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

DW-04

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-09A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000534 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.000732 | J | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| BC-19 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-10A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000185 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00119 | J | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.00104 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BC-25

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-11A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000153 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00641 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| MW-03 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-12A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.00508 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.462 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.00141 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| MW-06 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-13A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.000493 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 2.25 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0191 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BB-01 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-14A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00319 | J | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.00591 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00421 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.00104 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

SOUTH WELL

Lab Name: SPL Inc.

Lab Code: SPLLAF

Matrix: Water

Level: LOW

% Moisture: 0

SDG: 10020428

Lab Sample ID: 10020428-15A

Date Received: 2/11/2010 5:20:00PM

Total/Dissolved: Total

Prep Method:

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000213 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00364 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BC-17

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-16A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.0209 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0709 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.00138 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

NORTH WELL

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-17A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000732 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00324 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BC-21R

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-18A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000162 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00642 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000979 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| BA-01A |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-19A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00417 | | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000339 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00660 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000237 | J | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| BA-01 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-20A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.000806 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 1.34 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0465 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | DW-03 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-21A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00180 | J | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.220 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.284 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0145 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| PW-04 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-22A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.000655 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 1.50 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0358 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| DW-02 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-23A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | 0.0460 | | 0.000687 | 0.005 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 9.15 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.388 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 5 | 0.000735 | U | 0.000735 | 0.01 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BA-05A

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-24A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0120 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BA-05

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-25A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 15.4 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0580 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| MW-A |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-26A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00402 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| DW-01 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-27A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.0648 | | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.00357 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 5.19 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0187 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BA-03A | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-28A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0238 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| BA-03 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-29A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.146 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 2.20 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0898 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | MW-02 | |
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-30A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.00150 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.728 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0775 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

MW-01

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-31A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | 0.00389 | J | 0.000687 | 0.005 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 3.57 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.150 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 5 | 0.000735 | U | 0.000735 | 0.01 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

DUPLICATE #1

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-32A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.0153 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0762 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.00139 | J | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| | |
|---|---|
| Client Sample ID | DUPLICATE #2 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-33A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.000508 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 1.43 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0326 | | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

DUPLICATE #3

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-34A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.00171 | J | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

DUPLICATE #4

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-35A |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Total |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00145 | U | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.000184 | J | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 0.0259 | | 0.000091 | 0.002 | N | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.000678 | U | 0.000678 | 0.002 | N | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 12:19 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457538 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 100.6 | 100.6 | P | 90 | 110 |
| Lead | 100 | 101.1 | 101.1 | P | 90 | 110 |
| Manganese | 100 | 98.44 | 98.4 | P | 90 | 110 |
| Nickel | 100 | 99.64 | 99.6 | P | 90 | 110 |
| Thallium | 100 | 101.0 | 101.0 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 17:07 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457628 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 105.2 | 105.2 | P | 90 | 110 |
| Lead | 100 | 106.6 | 106.6 | P | 90 | 110 |
| Manganese | 100 | 99.23 | 99.2 | P | 90 | 110 |
| Nickel | 100 | 97.90 | 97.9 | P | 90 | 110 |
| Thallium | 100 | 106.9 | 106.9 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 17:42 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457640 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 104.1 | 104.1 | P | 90 | 110 |
| Lead | 100 | 105.5 | 105.5 | P | 90 | 110 |
| Manganese | 100 | 93.26 | 93.3 | P | 90 | 110 |
| Nickel | 100 | 92.98 | 93.0 | P | 90 | 110 |
| Thallium | 100 | 105.2 | 105.2 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 18:14 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457652 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 105.2 | 105.2 | P | 90 | 110 |
| Lead | 100 | 108.8 | 108.8 | P | 90 | 110 |
| Manganese | 100 | 93.62 | 93.6 | P | 90 | 110 |
| Nickel | 100 | 93.56 | 93.6 | P | 90 | 110 |
| Thallium | 100 | 107.7 | 107.7 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 18:41 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457662 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 108.2 | 108.2 | P | 90 | 110 |
| Lead | 100 | 109.4 | 109.4 | P | 90 | 110 |
| Manganese | 100 | 91.72 | 91.7 | P | 90 | 110 |
| Nickel | 100 | 90.45 | 90.4 | P | 90 | 110 |
| Thallium | 100 | 109.2 | 109.2 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 19:16 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457674 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 104.7 | 104.7 | P | 90 | 110 |
| Lead | 100 | 106.3 | 106.3 | P | 90 | 110 |
| Manganese | 100 | 92.39 | 92.4 | P | 90 | 110 |
| Nickel | 100 | 92.68 | 92.7 | P | 90 | 110 |
| Thallium | 100 | 105.2 | 105.2 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 19:48 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457686 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 106.6 | 106.6 | P | 90 | 110 |
| Lead | 100 | 111.0 | 111.0 | P | 90 | 110 |
| Manganese | 100 | 92.11 | 92.1 | P | 90 | 110 |
| Nickel | 100 | 91.28 | 91.3 | P | 90 | 110 |
| Thallium | 100 | 108.4 | 108.4 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/15/10 20:07 | Sample Type: | CCV |
| RunID: | ICPMS_100215A-3457693 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 109.3 | 109.3 | P | 90 | 110 |
| Lead | 100 | 110.1 | 110.1 | P | 90 | 110 |
| Manganese | 100 | 91.25 | 91.3 | P | 90 | 110 |
| Nickel | 100 | 91.45 | 91.4 | P | 90 | 110 |
| Thallium | 100 | 109.8 | 109.8 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 9:48 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458547 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 102.6 | 102.6 | P | 90 | 110 |
| Lead | 100 | 96.79 | 96.8 | P | 90 | 110 |
| Thallium | 100 | 97.83 | 97.8 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 11:30 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458570 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 99.14 | 99.1 | P | 90 | 110 |
| Lead | 100 | 96.15 | 96.2 | P | 90 | 110 |
| Thallium | 100 | 96.59 | 96.6 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 12:48 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458580 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 98.68 | 98.7 | P | 90 | 110 |
| Lead | 100 | 97.26 | 97.3 | P | 90 | 110 |
| Thallium | 100 | 96.88 | 96.9 | P | 90 | 110 |

# CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 13:20 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458592 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 98.74 | 98.7 | P | 90 | 110 |
| Lead | 100 | 98.25 | 98.2 | P | 90 | 110 |
| Thallium | 100 | 98.58 | 98.6 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 13:47 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458601 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 99.22 | 99.2 | P | 90 | 110 |
| Lead | 100 | 95.36 | 95.4 | P | 90 | 110 |
| Thallium | 100 | 96.11 | 96.1 | P | 90 | 110 |

# INITIAL CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICV |
| Analysis | 2/15/10 12:05 | Sample Type: | ICV |
| RunID: | ICPMS_100215A-3457535 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 100.3 | 100.3 | P | 90 | 110 |
| Lead | 100 | 98.77 | 98.8 | P | 90 | 110 |
| Manganese | 100 | 97.01 | 97.0 | P | 90 | 110 |
| Nickel | 100 | 98.96 | 99.0 | P | 90 | 110 |
| Thallium | 100 | 100.2 | 100.2 | P | 90 | 110 |

# INITIAL CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICV |
| Analysis | 2/16/10 9:34 | Sample Type: | ICV |
| RunID: | ICPMS_100216A-3458544 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | QC Limits High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 100.7 | 100.7 | P | 90 | 110 |
| Lead | 100 | 99.81 | 99.8 | P | 90 | 110 |
| Thallium | 100 | 100.0 | 100.0 | P | 90 | 110 |

# INITIAL CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: ICB

Matrix: Water

Analysis Date: 2/15/10 12:16

Run ID: ICPMS_100215A-3457537

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.20 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# INITIAL CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: ICB

Matrix: Water

Analysis Date: 2/16/10 9:45

Run ID: ICPMS_100216A-3458546

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# METHOD BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | MBLK-87095 |
| Matrix: | Water | Total/Dissolved: | Total |
| Analysis Date: | 2/15/10 17:21 | | |
| Run ID: | ICPMS_100215A-3457632 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.00145 | U | 0.00145 | 0.004 | P | mg/L |
| 7439-92-1 | Lead | 0.000137 | U | 0.000137 | 0.001 | P | mg/L |
| 7439-96-5 | Manganese | 0.000277 | J | 0.0000914 | 0.002 | P | mg/L |
| 7440-02-0 | Nickel | 0.000678 | U | 0.000678 | 0.002 | P | mg/L |
| 7440-28-0 | Thallium | 0.000147 | U | 0.000147 | 0.002 | P | mg/L |

METHOD BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | MBLK-87096 |
| Matrix: | Water | Total/Dissolved: | Total |
| Analysis Date: | 2/15/10 18:55 | | |
| Run ID: | ICPMS_100215A-3457666 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.00145 | U | 0.00145 | 0.004 | P | mg/L |
| 7439-92-1 | Lead | 0.000137 | U | 0.000137 | 0.001 | P | mg/L |
| 7439-96-5 | Manganese | 0.000279 | J | 0.0000914 | 0.002 | P | mg/L |
| 7440-02-0 | Nickel | 0.000678 | U | 0.000678 | 0.002 | P | mg/L |
| 7440-28-0 | Thallium | 0.000147 | U | 0.000147 | 0.002 | P | mg/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 12:28

Run ID: ICPMS_100215A-3457540

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.21 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 17:12

Run ID: ICPMS_100215A-3457629

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.21 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 17:45

Run ID: ICPMS_100215A-3457641

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.22 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 18:17

Run ID: ICPMS_100215A-3457653

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.22 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 18:46

Run ID: ICPMS_100215A-3457663

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.23 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 19:19

Run ID: ICPMS_100215A-3457675

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.21 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 19:51

Run ID: ICPMS_100215A-3457687

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.36 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/15/10 20:12

Run ID: ICPMS_100215A-3457694

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.26 | J | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 9:55

Run ID: ICPMS_100216A-3458549

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCB |
| Matrix: | Water | | |
| Analysis Date: | 2/16/10 11:40 | | |
| Run ID: | ICPMS_100216A-3458571 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 12:50

Run ID: ICPMS_100216A-3458581

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 13:23

Run ID: ICPMS_100216A-3458593

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 13:49

Run ID: ICPMS_100216A-3458602

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/15/2010 12:32 Sol. A | | | 02/15/2010 12:34 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 91901.4 | 91.9 | | 95012.1 | 95.01 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.79711 | 0 | | 0.59973 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 35.1 | 87.73 | | - | 70-130 |
| Barium | 0 | 0 | 2.16554 | 0 | | 2.03581 | 0 | | - | - |
| Beryllium | 0 | 0 | 1.44574 | 0 | | 1.41764 | 0 | | - | - |
| Boron | 0 | 0 | 3.16493 | 0 | | 3.00098 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.6 | 0 | | 40 | 100.1 | | - | 70-130 |
| Calcium | 100000 | 100000 | 99739.6 | 99.74 | | 98006.1 | 98.01 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.61277 | 0 | | 83.1 | 103.9 | | - | 70-130 |
| Cobalt | 0 | 80 | 1.68625 | 0 | | 80.6 | 100.8 | | - | 70-130 |
| Copper | 0 | 80 | 1.53776 | 0 | | 75.1 | 93.86 | | - | 70-130 |
| Iron | 100000 | 100000 | 97428 | 97.43 | | 98057.5 | 98.06 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0.16521 | 0 | | 0.15684 | 0 | | - | - |
| Lithium | 0 | 0 | 1.24427 | 0 | | 1.44953 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 93168 | 93.17 | | 94636.3 | 94.64 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.5 | 0 | | 87.4 | 109.2 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 1993.9 | 99.69 | | 2009.9 | 100.5 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.2 | 0 | | 78.7 | 98.41 | | - | 70-130 |
| Potassium | 100000 | 100000 | 87529 | 87.53 | | 89528.7 | 89.53 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 1.03453 | 0 | | 40.2 | 100.6 | | - | 70-130 |
| Silver | 0 | 20 | 0.30467 | 0 | | 18.7 | 93.64 | | - | 70-130 |
| Sodium | 100000 | 100000 | 95925.5 | 95.93 | | 97181.4 | 97.18 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 3 | 0 | | 3 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0.6974 | 0 | | 0.66002 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2061.9 | 103.1 | | 2020.8 | 101 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 83.2 | 104 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 38.1 | 95.26 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/15/2010 17:15 Sol. A | | | 02/15/2010 17:18 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 95371 | 95.37 | | 100729 | 100.7 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.70693 | 0 | | 0.60245 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 34.2 | 85.53 | | - | 70-130 |
| Barium | 0 | 0 | 2.24054 | 0 | | 2.15651 | 0 | | - | - |
| Beryllium | 0 | 0 | 1.42135 | 0 | | 1.42799 | 0 | | - | - |
| Boron | 0 | 0 | 3.47639 | 0 | | 3.15662 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.4 | 0 | | 41.1 | 102.7 | | - | 70-130 |
| Calcium | 100000 | 100000 | 100063 | 100.1 | | 101556 | 101.6 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.49931 | 0 | | 82.2 | 102.7 | | - | 70-130 |
| Cobalt | 0 | 80 | 1.62889 | 0 | | 80.8 | 100.9 | | - | 70-130 |
| Copper | 0 | 80 | 1.46761 | 0 | | 74.4 | 93 | | - | 70-130 |
| Iron | 100000 | 100000 | 95725.4 | 95.72 | | 97536.4 | 97.54 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0.17981 | 0 | | 0.17603 | 0 | | - | - |
| Lithium | 0 | 0 | 1.69618 | 0 | | 1.72697 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 99287.9 | 99.29 | | 102956 | 103 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.3 | 0 | | 87 | 108.8 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2040.7 | 102 | | 2081.3 | 104.1 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.4 | 0 | | 78.1 | 97.62 | | - | 70-130 |
| Potassium | 100000 | 100000 | 94182.8 | 94.18 | | 97941.3 | 97.94 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 41 | 102.5 | | - | 70-130 |
| Silver | 0 | 20 | 0.31292 | 0 | | 19.1 | 95.6 | | - | 70-130 |
| Sodium | 100000 | 100000 | 99380.9 | 99.38 | | 103777 | 103.8 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 3.1 | 0 | | 3.1 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0.69359 | 0 | | 0.68072 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2040.7 | 102 | | 2075.1 | 103.8 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 83.6 | 104.5 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 37.8 | 94.59 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/15/2010 18:49 Sol. A | | | 02/15/2010 18:52 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 101160 | 101.2 | | 101174 | 101.2 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.65969 | 0 | | 0.56751 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 33.8 | 84.51 | | - | 70-130 |
| Barium | 0 | 0 | 2.12932 | 0 | | 2.09166 | 0 | | - | - |
| Beryllium | 0 | 0 | 1.42446 | 0 | | 1.43927 | 0 | | - | - |
| Boron | 0 | 0 | 4.09926 | 0 | | 4.0502 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.6 | 0 | | 41.2 | 102.9 | | - | 70-130 |
| Calcium | 100000 | 100000 | 98860.3 | 98.86 | | 100043 | 100 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.30098 | 0 | | 78.4 | 97.98 | | - | 70-130 |
| Cobalt | 0 | 80 | 1.58532 | 0 | | 77.1 | 96.42 | | - | 70-130 |
| Copper | 0 | 80 | 1.40927 | 0 | | 71.1 | 88.84 | | - | 70-130 |
| Iron | 100000 | 100000 | 90809.3 | 90.81 | | 92399.1 | 92.4 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0.17447 | 0 | | 0.18309 | 0 | | - | - |
| Lithium | 0 | 0 | 2.1 | 0 | | 2.1 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 106286 | 106.3 | | 105640 | 105.6 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7 | 0 | | 82.5 | 103.2 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2061.5 | 103.1 | | 2093.4 | 104.7 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.3 | 0 | | 74.2 | 92.71 | | - | 70-130 |
| Potassium | 100000 | 100000 | 102707 | 102.7 | | 102313 | 102.3 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 40.2 | 100.6 | | - | 70-130 |
| Silver | 0 | 20 | 0.30982 | 0 | | 19.1 | 95.49 | | - | 70-130 |
| Sodium | 100000 | 100000 | 106874 | 106.9 | | 107553 | 107.6 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 3.1 | 0 | | 3.1 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0.69762 | 0 | | 0.66221 | 0 | | - | - |
| Titanium | 2000 | 2000 | 1963.9 | 98.2 | | 1988.4 | 99.42 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 80.2 | 100.3 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 36.7 | 91.65 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/15/2010 20:15 Sol. A | | | 02/15/2010 20:18 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 109049 | 109 | | 105419 | 105.4 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.71154 | 0 | | 0.59997 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 33.7 | 84.24 | | - | 70-130 |
| Barium | 0 | 0 | 2.10122 | 0 | | 2.06432 | 0 | | - | - |
| Beryllium | 0 | 0 | 1.4495 | 0 | | 1.432 | 0 | | - | - |
| Boron | 0 | 0 | 5.20366 | 0 | | 4.71659 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.5 | 0 | | 41.8 | 104.4 | | - | 70-130 |
| Calcium | 100000 | 100000 | 102870 | 102.9 | | 99264.6 | 99.26 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.44057 | 0 | | 78.8 | 98.47 | | - | 70-130 |
| Cobalt | 0 | 80 | 1.66528 | 0 | | 76.6 | 95.76 | | - | 70-130 |
| Copper | 0 | 80 | 1.46835 | 0 | | 70.6 | 88.31 | | - | 70-130 |
| Iron | 100000 | 100000 | 95278.2 | 95.28 | | 92738.9 | 92.74 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0.17923 | 0 | | 0.17323 | 0 | | - | - |
| Lithium | 0 | 0 | 2.4 | 0 | | 2.4 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 114074 | 114.1 | | 110967 | 111 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.4 | 0 | | 81.8 | 102.3 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2101.2 | 105.1 | | 2054 | 102.7 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.2 | 0 | | 73.9 | 92.38 | | - | 70-130 |
| Potassium | 100000 | 100000 | 109046 | 109 | | 104950 | 105 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 40.4 | 101.1 | | - | 70-130 |
| Silver | 0 | 20 | 0.31164 | 0 | | 19 | 95.13 | | - | 70-130 |
| Sodium | 100000 | 100000 | 114034 | 114 | | 112260 | 112.3 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 3.1 | 0 | | 3.1 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0.68555 | 0 | | 0.69872 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2070 | 103.5 | | 2001.3 | 100.1 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 81.2 | 101.5 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 36.9 | 92.2 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/16/2010 09:59 Sol. A | | | 02/16/2010 10:02 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 98509.7 | 98.51 | | 99630.8 | 99.63 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.59059 | 0 | | 0.39566 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 35.5 | 88.65 | | - | 70-130 |
| Barium | 0 | 0 | 1.98322 | 0 | | 2.05368 | 0 | | - | - |
| Beryllium | 0 | 0 | 0.60207 | 0 | | 0.58538 | 0 | | - | - |
| Boron | 0 | 0 | 3.27314 | 0 | | 3.10447 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.5 | 0 | | 40.6 | 101.5 | | - | 70-130 |
| Calcium | 100000 | 100000 | 100007 | 100 | | 100604 | 100.6 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.62941 | 0 | | 84.2 | 105.3 | | - | 70-130 |
| Cobalt | 0 | 80 | 2.2 | 0 | | 82.1 | 102.6 | | - | 70-130 |
| Copper | 0 | 80 | 2.1 | 0 | | 75.5 | 94.42 | | - | 70-130 |
| Iron | 100000 | 100000 | 100468 | 100.5 | | 98520.5 | 98.52 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Lithium | 0 | 0 | 0.55779 | 0 | | 0.7471 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 96881.9 | 96.88 | | 101091 | 101.1 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.1 | 0 | | 88.1 | 110.1 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2061.1 | 103.1 | | 2038.4 | 101.9 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.9 | 0 | | 79.5 | 99.37 | | - | 70-130 |
| Potassium | 100000 | 100000 | 91806.2 | 91.81 | | 93877.8 | 93.88 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 38.5 | 96.29 | | - | 70-130 |
| Silver | 0 | 20 | 0 | 0 | | 18.8 | 93.94 | | - | 70-130 |
| Sodium | 100000 | 100000 | 99660.8 | 99.66 | | 101004 | 101 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 2.5 | 0 | | 2.5 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2107 | 105.4 | | 2101.2 | 105.1 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 84.6 | 105.7 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 39.4 | 98.48 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/16/2010 12:11 Sol. A | | | 02/16/2010 12:14 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 96194.1 | 96.19 | | 99470.7 | 99.47 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.49748 | 0 | | 0 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 36.9 | 92.14 | | - | 70-130 |
| Barium | 0 | 0 | 2.05386 | 0 | | 1.997 | 0 | | - | - |
| Beryllium | 0 | 0 | 0.6005 | 0 | | 0.58937 | 0 | | - | - |
| Boron | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.6 | 0 | | 41.6 | 104 | | - | 70-130 |
| Calcium | 100000 | 100000 | 97655.8 | 97.66 | | 97970.7 | 97.97 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.79738 | 0 | | 84.9 | 106.1 | | - | 70-130 |
| Cobalt | 0 | 80 | 2.2 | 0 | | 83 | 103.8 | | - | 70-130 |
| Copper | 0 | 80 | 2.1 | 0 | | 75.8 | 94.69 | | - | 70-130 |
| Iron | 100000 | 100000 | 98772.5 | 98.77 | | 99834.6 | 99.84 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Lithium | 0 | 0 | 0.76689 | 0 | | 0.8159 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 97663.1 | 97.66 | | 102878 | 102.9 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.1 | 0 | | 89.2 | 111.5 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2076.9 | 103.8 | | 2079.8 | 104 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.9 | 0 | | 79.6 | 99.46 | | - | 70-130 |
| Potassium | 100000 | 100000 | 90188.7 | 90.19 | | 96146.8 | 96.15 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 39.6 | 98.88 | | - | 70-130 |
| Silver | 0 | 20 | 0 | 0 | | 19.4 | 96.78 | | - | 70-130 |
| Sodium | 100000 | 100000 | 98668.5 | 98.67 | | 104082 | 104.1 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 2.6 | 0 | | 2.6 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2077.9 | 103.9 | | 2096 | 104.8 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 84.4 | 105.5 | | - | 70-130 |
| Zinc | 0 | 40 | 4.06889 | 0 | | 39 | 97.56 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/16/2010 13:52 Sol. A | | | 02/16/2010 13:55 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 100440 | 100.4 | | 99808.6 | 99.81 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.61386 | 0 | | 0.38315 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 35.9 | 89.87 | | - | 70-130 |
| Barium | 0 | 0 | 2.01866 | 0 | | 1.96087 | 0 | | - | - |
| Beryllium | 0 | 0 | 0.59292 | 0 | | 0.59593 | 0 | | - | - |
| Boron | 0 | 0 | 4.6991 | 0 | | 3.99805 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.3 | 0 | | 41.2 | 103 | | - | 70-130 |
| Calcium | 100000 | 100000 | 97618.4 | 97.62 | | 99002.5 | 99 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.30837 | 0 | | 80.9 | 101.1 | | - | 70-130 |
| Cobalt | 0 | 80 | 2.1 | 0 | | 77.2 | 96.5 | | - | 70-130 |
| Copper | 0 | 80 | 1.95662 | 0 | | 71.5 | 89.39 | | - | 70-130 |
| Iron | 100000 | 100000 | 96251.9 | 96.25 | | 95690.9 | 95.69 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Lithium | 0 | 0 | 1.19608 | 0 | | 1.06795 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 105156 | 105.2 | | 102507 | 102.5 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 6.9 | 0 | | 84.7 | 105.9 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2039.2 | 102 | | 2082.8 | 104.1 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.6 | 0 | | 74.9 | 93.67 | | - | 70-130 |
| Potassium | 100000 | 100000 | 98374.2 | 98.37 | | 96770.4 | 96.77 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 39.6 | 98.97 | | - | 70-130 |
| Silver | 0 | 20 | 0 | 0 | | 19.1 | 95.37 | | - | 70-130 |
| Sodium | 100000 | 100000 | 104624 | 104.6 | | 103262 | 103.3 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 2.6 | 0 | | 2.7 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2038 | 101.9 | | 2030.4 | 101.5 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 81.1 | 101.4 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 37.7 | 94.26 | | - | 70-130 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Ext. method:

Total/Diss.: Total Level:(low/med): LOW

Matrix Spike - Client SampleID: BC-07MS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | MS CONCENTRATION mg/L | C | MS % REC | Q | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.00145 | U | 0.08697 | | 86.97 | | 75 | 125 | P |
| Lead | 0.1 | 0.000163 | J | 0.09341 | | 93.2 | | 75 | 125 | P |
| Manganese | 0.1 | 0.0129 | | 0.09721 | | 84.3 | | 75 | 125 | P |
| Nickel | 0.1 | 0.000783 | J | 0.07987 | | 79.1 | | 75 | 125 | P |
| Thallium | 0.1 | 0.000220 | J | 0.09135 | | 91.1 | | 75 | 125 | P |

Matrix Spike - Client SampleID: BC-07MSD

| Analyte | SPIKE ADDED mg/L | MSD CONCENTRATION mg/L | C | MSD % REC | Q | % RPD | Q | QC LIMITS RPD | LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.07762 | | 77.62 | | 11.4 | | 20 | 75 | 125 | P |
| Lead | 0.1 | 0.08222 | | 82.1 | | 12.7 | | 20 | 75 | 125 | P |
| Manganese | 0.1 | 0.08531 | | 72.4 | N | 13.0 | | 20 | 75 | 125 | P |
| Nickel | 0.1 | 0.07132 | | 70.5 | N | 11.3 | | 20 | 75 | 125 | P |
| Thallium | 0.1 | 0.08192 | | 81.7 | | 10.9 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Ext. method:

Total/Diss.: Total Level:(low/med): LOW

Matrix Spike - Client SampleID: BA-01AMS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | MS CONCENTRATION mg/L | C | MS % REC | Q | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.00417 | | 0.08991 | | 85.7 | | 75 | 125 | P |
| Lead | 0.1 | 0.000339 | J | 0.09556 | | 95.2 | | 75 | 125 | P |
| Manganese | 0.1 | 0.00660 | | 0.08318 | | 76.6 | | 75 | 125 | P |
| Nickel | 0.1 | 0.000678 | U | 0.07623 | | 76.23 | | 75 | 125 | P |
| Thallium | 0.1 | 0.000237 | J | 0.09355 | | 93.3 | | 75 | 125 | P |

Matrix Spike - Client SampleID: BA-01AMSD

| Analyte | SPIKE ADDED mg/L | MSD CONCENTRATION mg/L | C | MSD % REC | Q | % RPD | Q | QC LIMITS RPD | LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.08652 | | 82.4 | | 3.84 | | 20 | 75 | 125 | P |
| Lead | 0.1 | 0.09022 | | 89.9 | | 5.75 | | 20 | 75 | 125 | P |
| Manganese | 0.1 | 0.08147 | | 74.9 | N | 2.08 | | 20 | 75 | 125 | P |
| Nickel | 0.1 | 0.07348 | | 73.48 | N | 3.67 | | 20 | 75 | 125 | P |
| Thallium | 0.1 | 0.08961 | | 89.4 | | 4.30 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# POST DIGESTION SPIKE/POST DIGESTION SPIKE DUPLICATE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Ext. method:

Total/Diss.: Total Level:(low/med): LOW

Matrix Spike - Client SampleID: BC-07PDS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | PDS CONCENTRATION mg/L | PDS % REC | Q | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.5 | 0.00145 | U | 0.4988 | 99.76 | | 75 | 125 | P |
| Lead | 0.5 | 0.000163 | J | 0.4950 | 99.0 | | 75 | 125 | P |
| Manganese | 0.5 | 0.0129 | | 0.4511 | 87.6 | | 75 | 125 | P |
| Nickel | 0.5 | 0.000783 | J | 0.4317 | 86.2 | | 75 | 125 | P |
| Thallium | 0.5 | 0.000220 | J | 0.4939 | 98.7 | | 75 | 125 | P |

| Analyte | SPIKE ADDED mg/L | PDSD CONCENTRATION mg/L | PDSD % REC | Q | % RPD | Q | RPD | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.5 | 0.5245 | 104.9 | | 5.02 | | 20 | 75 | 125 | P |
| Lead | 0.5 | 0.5290 | 106 | | 6.64 | | 20 | 75 | 125 | P |
| Manganese | 0.5 | 0.4831 | 94.0 | | 6.85 | | 20 | 75 | 125 | P |
| Nickel | 0.5 | 0.4585 | 91.5 | | 6.02 | | 20 | 75 | 125 | P |
| Thallium | 0.5 | 0.5250 | 105 | | 6.10 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# POST DIGESTION SPIKE/POST DIGESTION SPIKE DUPLICATE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Ext. method:

Total/Diss.: Total Level:(low/med): LOW

Matrix Spike - Client SampleID: BA-01APDS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | PDS CONCENTRATION mg/L | PDS % REC | Q | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.5 | 0.00417 | | 0.5202 | 103 | | 75 | 125 | P |
| Lead | 0.5 | 0.000339 | J | 0.5524 | 110 | | 75 | 125 | P |
| Manganese | 0.5 | 0.00660 | | 0.4767 | 94.0 | | 75 | 125 | P |
| Nickel | 0.5 | 0.000678 | U | 0.4642 | 92.84 | | 75 | 125 | P |
| Thallium | 0.5 | 0.000237 | J | 0.5486 | 110 | | 75 | 125 | P |

| Analyte | SPIKE ADDED mg/L | PDSD CONCENTRATION mg/L | PDSD % REC | Q | % RPD | Q | QC LIMITS RPD | LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.5 | 0.5251 | 104 | | 0.938 | | 20 | 75 | 125 | P |
| Lead | 0.5 | 0.5571 | 111 | | 0.847 | | 20 | 75 | 125 | P |
| Manganese | 0.5 | 0.4784 | 94.4 | | 0.356 | | 20 | 75 | 125 | P |
| Nickel | 0.5 | 0.4719 | 94.39 | | 1.65 | | 20 | 75 | 125 | P |
| Thallium | 0.5 | 0.5503 | 110 | | 0.309 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# LABORATORY CONTROL SAMPLE

LCS-87095

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Total/Dissolved: Total

Solid LCS Source:

Aqueous LCS Source:

| Analyte | M | Aqueous (mg/L) True | Found | %R | Limits | Solid (mg/kg) True | Found | C | %R | Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | P | 0.1 | 0.09557 | 95.57 | 80 - 120 | | | | | |
| Lead | P | 0.1 | 0.1105 | 110.5 | 80 - 120 | | | | | |
| Manganese | P | 0.1 | 0.09684 | 96.84 | 80 - 120 | | | | | |
| Nickel | P | 0.1 | 0.09450 | 94.50 | 80 - 120 | | | | | |
| Thallium | P | 0.1 | 0.1094 | 109.4 | 80 - 120 | | | | | |

00268

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# LABORATORY CONTROL SAMPLE

LCS-87096

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Total/Dissolved: Total

Solid LCS Source:

Aqueous LCS Source:

| Analyte | M | Aqueous (mg/L) True | Found | %R | Limits | Solid (mg/kg) True | Found | C | %R | Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | P | 0.1 | 0.09538 | 95.38 | 80 - 120 | | | | | |
| Lead | P | 0.1 | 0.1110 | 111.0 | 80 - 120 | | | | | |
| Manganese | P | 0.1 | 0.09043 | 90.43 | 80 - 120 | | | | | |
| Nickel | P | 0.1 | 0.08917 | 89.17 | 80 - 120 | | | | | |
| Thallium | P | 0.1 | 0.1114 | 111.4 | 80 - 120 | | | | | |

00269

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# ICP SERIAL DILUTIONS

| | | | |
|---|---|---|---|
| | | Client Sample ID | |
| | | BC-07SD | |
| Lab Name: | SPL Inc. | Lab Sample ID: | 10020428-08A |
| Lab Code: | SPLLAF | SDG: | 10020428 |
| Matrix: | Water | Concentration Units: | mg/L |
| Level: | LOW | | |
| Total/Diss.: | Total | | |

| Analyte | Initial Sample Results (I) | C | Serial Dilution Results (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.00145 | U | 0.007246 | U | | | P |
| Lead | 0.000163 | J | 0.0006865 | U | | | P |
| Manganese | 0.0129 | | 0.01472 | | | | P |
| Nickel | 0.000783 | J | 0.003392 | U | | | P |
| Thallium | 0.000220 | J | 0.000735 | U | | | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# ICP SERIAL DILUTIONS

Client Sample ID

BA-01ASD

Lab Name: SPL Inc.

Lab Code: SPLLAF

Matrix: Water

Level: LOW

Total/Diss.: Total

Lab Sample ID: 10020428-19A

SDG: 10020428

Concentration Units: mg/L

| Analyte | Initial Sample Results (I) | C | Serial Dilution Results (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.00417 | | 0.007246 | U | | | P |
| Lead | 0.000339 | J | 0.0006865 | U | | | P |
| Manganese | 0.00660 | | 0.007405 | J | | | P |
| Nickel | 0.000678 | U | 0.003392 | U | | | P |
| Thallium | 0.000237 | J | 0.000735 | U | | | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

METHOD DETECTION LIMITS

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Instrument ID Number: ICPMS Date: 11/21/2008

6020_W_ALL

| Analyte | Wavelength (nm) | Background | PQL mg/L | MDL mg/L | M |
|---|---|---|---|---|---|
| Arsenic | 75.000 | | 0.0040 | 0.0014 | P |
| Lead | 208.000 | | 0.0010 | 0.00014 | P |
| Manganese | 55.000 | | 0.0020 | 0.000091 | P |
| Nickel | 60.000 | | 0.0020 | 0.00068 | P |
| Thallium | 205.000 | | 0.0020 | 0.00015 | P |

# PREPARATION LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Method: SW3010A

Total/Diss.: Total

| Lab Sample ID | Client Sample ID | Preparation Date | Initial Weight (gram) | Initial Volume (ml) | Final Volume (ml) |
|---|---|---|---|---|---|
| 10020428-20A | BA-01 | 2/12/10 | 0 | 50 | 50 |
| 10020428-02A | BA-09 | 2/12/10 | 0 | 50 | 50 |
| 10020428-01A | BA-09A | 2/12/10 | 0 | 50 | 50 |
| 10020428-14A | BB-01 | 2/12/10 | 0 | 50 | 50 |
| 10020428-07A | BC-03 | 2/12/10 | 0 | 50 | 50 |
| 10020428-08A | BC-07 | 2/12/10 | 0 | 50 | 50 |
| 10020428-08AMS | BC-07MS | 2/12/10 | 0 | 50 | 50 |
| 10020428-08AMSD | BC-07MSD | 2/12/10 | 0 | 50 | 50 |
| 10020428-16A | BC-17 | 2/12/10 | 0 | 50 | 50 |
| 10020428-10A | BC-19 | 2/12/10 | 0 | 50 | 50 |
| 10020428-18A | BC-21R | 2/12/10 | 0 | 50 | 50 |
| 10020428-11A | BC-25 | 2/12/10 | 0 | 50 | 50 |
| 10020428-09A | DW-04 | 2/12/10 | 0 | 50 | 50 |
| LCS-87095 | LCS-87095 | 2/12/10 | 0 | 50 | 50 |
| MBLK-87095 | MBLK-87095 | 2/12/10 | 0 | 50 | 50 |
| 10020428-12A | MW-03 | 2/12/10 | 0 | 50 | 50 |
| 10020428-03A | MW-04 | 2/12/10 | 0 | 50 | 50 |
| 10020428-13A | MW-06 | 2/12/10 | 0 | 50 | 50 |
| 10020428-17A | NORTH WELL | 2/12/10 | 0 | 50 | 50 |
| 10020428-06A | (b) (6) [redacted] WELL | 2/12/10 | 0 | 50 | 50 |
| 10020428-15A | SOUTH WELL | 2/12/10 | 0 | 50 | 50 |
| 10020428-05A | WW-04 | 2/12/10 | 0 | 50 | 50 |
| 10020428-04A | WW-09 | 2/12/10 | 0 | 50 | 50 |

# PREPARATION LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Method: SW3010A

Total/Diss.: Total

| Lab Sample ID | Client Sample ID | Preparation Date | Initial Weight (gram) | Initial Volume (ml) | Final Volume (ml) |
|---|---|---|---|---|---|
| 10020428-19A | BA-01A | 2/12/10 | 0 | 50 | 50 |
| 10020428-19AMS | BA-01AMS | 2/12/10 | 0 | 50 | 50 |
| 10020428-19AMSD | BA-01AMSD | 2/12/10 | 0 | 50 | 50 |
| 10020428-29A | BA-03 | 2/12/10 | 0 | 50 | 50 |
| 10020428-28A | BA-03A | 2/12/10 | 0 | 50 | 50 |
| 10020428-25A | BA-05 | 2/12/10 | 0 | 50 | 50 |
| 10020428-24A | BA-05A | 2/12/10 | 0 | 50 | 50 |
| 10020428-32A | DUPLICATE #1 | 2/12/10 | 0 | 50 | 50 |
| 10020428-33A | DUPLICATE #2 | 2/12/10 | 0 | 50 | 50 |
| 10020428-34A | DUPLICATE #3 | 2/12/10 | 0 | 50 | 50 |
| 10020428-35A | DUPLICATE #4 | 2/12/10 | 0 | 50 | 50 |
| 10020428-27A | DW-01 | 2/12/10 | 0 | 50 | 50 |
| 10020428-23A | DW-02 | 2/12/10 | 0 | 50 | 50 |
| 10020428-21A | DW-03 | 2/12/10 | 0 | 50 | 50 |
| LCS-87096 | LCS-87096 | 2/12/10 | 0 | 50 | 50 |
| MBLK-87096 | MBLK-87096 | 2/12/10 | 0 | 50 | 50 |
| 10020428-31A | MW-01 | 2/12/10 | 0 | 50 | 50 |
| 10020428-30A | MW-02 | 2/12/10 | 0 | 50 | 50 |
| 10020428-26A | MW-A | 2/12/10 | 0 | 50 | 50 |
| 10020428-22A | PW-04 | 2/12/10 | 0 | 50 | 50 |

# ANALYSIS RUN LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Method: SW6020

Instrument ID: ICPMS Total/Dissolved: Total

Start Date: 2/15/2010 End Date: 2/15/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| ICV | ICV | 1 | 12:05 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICB | ICB | 1 | 12:16 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCV | CCV | 1 | 12:19 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 12:28 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 12:32 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 12:34 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| CCV | CCV | 1 | 17:07 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 17:12 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 17:15 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 17:18 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| MBLK-87095 | MBLK-87095 | 1 | 17:21 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| LCS-87095 | LCS-87095 | 1 | 17:23 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-08A | BC-07 | 1 | 17:26 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-08ASD | BC-07SD | 5 | 17:29 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-08AMS | BC-07MS | 1 | 17:31 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-08AMSD | BC-07MSD | 1 | 17:34 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-08APDS | BC-07PDS | 5 | 17:37 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-08APDSD | BC-07PDSD | 5 | 17:39 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| CCV | CCV | 1 | 17:42 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 17:45 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-01A | BA-09A | 1 | 17:47 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-02A | BA-09 | 1 | 17:50 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-03A | MW-04 | 1 | 17:53 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-04A | WW-09 | 1 | 17:55 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-05A | WW-04 | 1 | 17:58 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-06A | (b) (6) [redacted] WELL | 1 | 18:01 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-07A | BC-03 | 1 | 18:03 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-09A | DW-04 | 1 | 18:06 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-10A | BC-19 | 1 | 18:09 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-11A | BC-25 | 1 | 18:12 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| CCV | CCV | 1 | 18:14 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |

# ANALYSIS RUN LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Method: SW6020

Instrument ID: ICPMS Total/Dissolved: Total

Start Date: 2/15/2010 End Date: 2/15/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| CCB | CCB | 1 | 18:17 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-12A | MW-03 | 1 | 18:20 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-13A | MW-06 | 1 | 18:22 | | | | | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-14A | BB-01 | 1 | 18:25 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-15A | SOUTH WELL | 1 | 18:28 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-16A | BC-17 | 1 | 18:30 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-17A | NORTH WELL | 1 | 18:33 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-18A | BC-21R | 1 | 18:36 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-20A | BA-01 | 1 | 18:38 | | | | | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| CCV | CCV | 1 | 18:41 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 18:46 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 18:49 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 18:52 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| MBLK-87096 | MBLK-87096 | 1 | 18:55 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| LCS-87096 | LCS-87096 | 1 | 18:57 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-19A | BA-01A | 1 | 19:00 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-19ASD | BA-01ASD | 5 | 19:03 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-19AMS | BA-01AMS | 1 | 19:05 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-19AMSD | BA-01AMSD | 1 | 19:08 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-19APDS | BA-01APDS | 5 | 19:11 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-19APDSD | BA-01APDSD | 5 | 19:13 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| CCV | CCV | 1 | 19:16 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 19:19 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-21A | DW-03 | 1 | 19:21 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-22A | PW-04 | 1 | 19:24 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-23A | DW-02 | 1 | 19:27 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-24A | BA-05A | 1 | 19:29 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-25A | BA-05 | 1 | 19:32 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-26A | MW-A | 1 | 19:35 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-27A | DW-01 | 1 | 19:37 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-28A | BA-03A | 1 | 19:40 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |

# ANALYSIS RUN LOG

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Method: SW6020

Instrument ID: ICPMS

Total/Dissolved: Total

Start Date: 2/15/2010 End Date: 2/15/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| 10020428-29A | BA-03 | 1 | 19:43 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-30A | MW-02 | 1 | 19:45 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| CCV | CCV | 1 | 19:48 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 19:51 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-31A | MW-01 | 1 | 19:54 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-32A | DUPLICATE #1 | 1 | 19:56 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-33A | DUPLICATE #2 | 1 | 19:59 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-34A | DUPLICATE #3 | 1 | 20:02 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| 10020428-35A | DUPLICATE #4 | 1 | 20:04 | | | | | | | | | | | | | | | X | | | X | | | | | | | | | | |
| CCV | CCV | 1 | 20:07 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 20:12 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 20:15 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 20:18 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |

00277

# ANALYSIS RUN LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Method: SW6020

Instrument ID: ICPMS Total/Dissolved: Total

Start Date: 2/16/2010 End Date: 2/16/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| ICV | ICV | 1 | 09:34 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICB | ICB | 1 | 09:45 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCV | CCV | 1 | 09:48 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 09:55 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 09:59 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 10:02 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| CCV | CCV | 1 | 11:30 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 11:40 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 12:11 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 12:14 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| 10020428-02A | BA-09 | 5 | 12:22 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-21A | DW-03 | 1 | 12:37 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-22A | PW-04 | 1 | 12:40 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| CCV | CCV | 1 | 12:48 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 12:50 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-23A | DW-02 | 5 | 12:53 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-24A | BA-05A | 1 | 12:58 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-25A | BA-05 | 1 | 13:01 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-26A | MW-A | 1 | 13:04 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-27A | DW-01 | 1 | 13:06 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-28A | BA-03A | 1 | 13:09 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-29A | BA-03 | 1 | 13:12 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-30A | MW-02 | 1 | 13:17 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| CCV | CCV | 1 | 13:20 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 13:23 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-31A | MW-01 | 5 | 13:31 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-32A | DUPLICATE #1 | 1 | 13:36 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-33A | DUPLICATE #2 | 1 | 13:39 | | | | | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-34A | DUPLICATE #3 | 1 | 13:41 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| 10020428-35A | DUPLICATE #4 | 1 | 13:44 | | | | X | | | | | | | | | X | | | | | | | | | | | | | X | | |
| CCV | CCV | 1 | 13:47 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |

# ANALYSIS RUN LOG

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Method: SW6020

Instrument ID: ICPMS

Total/Dissolved: Total

Start Date: 2/16/2010 End Date: 2/16/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| CCB | CCB | 1 | 13:49 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 13:52 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 13:55 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |

00279

# COVER PAGE - INORGANICS DATA PACKAGE

Lab Name: SPL Inc.

Lab Code: SPLLAF

SDG: 10020428

| Client Sample ID | Lab Sample ID | Date Collected | Date Received | Matrix |
|---|---|---|---|---|
| BA-01 | 10020428-20 | 2/9/10 14:19 | 2/11/10 17:20 | Water |
| DW-01 | 10020428-27 | 2/10/10 14:50 | 2/11/10 17:20 | Water |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory manager or the Manager's designee, as verified by the following signature.

Signature: Keran LaFleur

Date: 2-25-10

Name: KERAN LAFLEUR

Title: METALS SUPERVISOR

# INORGANIC ANALYSIS DATA SHEET

Client Sample ID

BA-01

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-20B |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Dissolved |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7439-92-1 | Lead | 1 | 0.000137 | U | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 1.59 | | 0.000091 | 0.002 | | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0546 | | 0.000678 | 0.009 | | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

# INORGANIC ANALYSIS DATA SHEET

| Client Sample ID |
|---|
| DW-01 |

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | 10020428-27B |
| Matrix: | Water | Date Received: | 2/11/2010 5:20:00PM |
| Level: | LOW | Total/Dissolved: | Dissolved |
| % Moisture: | 0 | Prep Method: | |

| CAS No. | Analyte | DF | Conc. | C | MDL | PQL | Q | M | Units |
|---|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1 | 0.00290 | J | 0.00145 | 0.004 | | P | mg/L |
| 7439-92-1 | Lead | 1 | 0.00283 | | 0.000137 | 0.001 | | P | mg/L |
| 7439-96-5 | Manganese | 1 | 6.21 | | 0.000091 | 0.002 | | P | mg/L |
| 7440-02-0 | Nickel | 1 | 0.0220 | | 0.000678 | 0.009 | | P | mg/L |
| 7440-28-0 | Thallium | 1 | 0.000147 | U | 0.000147 | 0.002 | | P | mg/L |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 9:48 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458547 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 102.6 | 102.6 | P | 90 | 110 |
| Lead | 100 | 96.79 | 96.8 | P | 90 | 110 |
| Manganese | 100 | 98.14 | 98.1 | P | 90 | 110 |
| Nickel | 100 | 97.31 | 97.3 | P | 90 | 110 |
| Thallium | 100 | 97.83 | 97.8 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 10:58 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458560 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 103.6 | 103.6 | P | 90 | 110 |
| Lead | 100 | 97.55 | 97.6 | P | 90 | 110 |
| Manganese | 100 | 100.7 | 100.7 | P | 90 | 110 |
| Nickel | 100 | 97.08 | 97.1 | P | 90 | 110 |
| Thallium | 100 | 97.17 | 97.2 | P | 90 | 110 |

CONTINUING CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | CCV |
| Analysis | 2/16/10 11:30 | Sample Type: | CCV |
| RunID: | ICPMS_100216A-3458570 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 99.14 | 99.1 | P | 90 | 110 |
| Lead | 100 | 96.15 | 96.2 | P | 90 | 110 |
| Manganese | 100 | 98.44 | 98.4 | P | 90 | 110 |
| Nickel | 100 | 94.98 | 95.0 | P | 90 | 110 |
| Thallium | 100 | 96.59 | 96.6 | P | 90 | 110 |

# INITIAL CALIBRATION VERIFICATION

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICV |
| Analysis | 2/16/10 9:34 | Sample Type: | ICV |
| RunID: | ICPMS_100216A-3458544 | Concentration Units: | ug/L |

| Analyte | True | Found | %R | M | QC Limits Low | High |
|---|---|---|---|---|---|---|
| Arsenic | 100 | 100.7 | 100.7 | P | 90 | 110 |
| Lead | 100 | 99.81 | 99.8 | P | 90 | 110 |
| Manganese | 100 | 96.91 | 96.9 | P | 90 | 110 |
| Nickel | 100 | 95.51 | 95.5 | P | 90 | 110 |
| Thallium | 100 | 100.0 | 100.0 | P | 90 | 110 |

# INITIAL CALIBRATION BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | ICB |
| Matrix: | Water | | |
| Analysis Date: | 2/16/10 9:45 | | |
| Run ID: | ICPMS_100216A-3458546 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.091 | U | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# METHOD BLANK

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | SDG: | 10020428 |
| Lab Code: | SPLLAF | Lab Sample ID: | MBLK-87103 |
| Matrix: | Water | Total/Dissolved: | Dissolved |
| Analysis Date: | 2/16/10 10:33 | | |
| Run ID: | ICPMS_100216A-3458553 | | |

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 0.00145 | U | 0.00145 | 0.004 | P | mg/L |
| 7439-92-1 | Lead | 0.000137 | U | 0.000137 | 0.001 | P | mg/L |
| 7439-96-5 | Manganese | 0.000220 | J | 0.0000914 | 0.002 | P | mg/L |
| 7440-02-0 | Nickel | 0.00877 | J | 0.000678 | 0.009 | P | mg/L |
| 7440-28-0 | Thallium | 0.000147 | U | 0.000147 | 0.002 | P | mg/L |

CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 9:55

Run ID: ICPMS_100216A-3458549

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.091 | U | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 11:05

Run ID: ICPMS_100216A-3458562

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.091 | U | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# CONTINUING CALIBRATION BLANK

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Lab Sample ID: CCB

Matrix: Water

Analysis Date: 2/16/10 11:40

Run ID: ICPMS_100216A-3458571

| CAS No. | Analyte | Conc. | C | MDL | PQL | M | Units |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | 1.4 | U | 1.4 | 4.0 | P | ug/L |
| 7439-92-1 | Lead | 0.14 | U | 0.14 | 1.0 | P | ug/L |
| 7439-96-5 | Manganese | 0.091 | U | 0.091 | 2.0 | P | ug/L |
| 7440-02-0 | Nickel | 0.68 | U | 0.68 | 2.0 | P | ug/L |
| 7440-28-0 | Thallium | 0.15 | U | 0.15 | 2.0 | P | ug/L |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/16/2010 09:59 Sol. A | | | 02/16/2010 10:02 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 98509.7 | 98.51 | | 99630.8 | 99.63 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.59059 | 0 | | 0.39566 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 35.5 | 88.65 | | - | 70-130 |
| Barium | 0 | 0 | 1.98322 | 0 | | 2.05368 | 0 | | - | - |
| Beryllium | 0 | 0 | 0.60207 | 0 | | 0.58538 | 0 | | - | - |
| Boron | 0 | 0 | 3.27314 | 0 | | 3.10447 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.5 | 0 | | 40.6 | 101.5 | | - | 70-130 |
| Calcium | 100000 | 100000 | 100007 | 100 | | 100604 | 100.6 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.62941 | 0 | | 84.2 | 105.3 | | - | 70-130 |
| Cobalt | 0 | 80 | 2.2 | 0 | | 82.1 | 102.6 | | - | 70-130 |
| Copper | 0 | 80 | 2.1 | 0 | | 75.5 | 94.42 | | - | 70-130 |
| Iron | 100000 | 100000 | 100468 | 100.5 | | 98520.5 | 98.52 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Lithium | 0 | 0 | 0.55779 | 0 | | 0.7471 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 96881.9 | 96.88 | | 101091 | 101.1 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.1 | 0 | | 88.1 | 110.1 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2061.1 | 103.1 | | 2038.4 | 101.9 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.9 | 0 | | 79.5 | 99.37 | | - | 70-130 |
| Potassium | 100000 | 100000 | 91806.2 | 91.81 | | 93877.8 | 93.88 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 38.5 | 96.29 | | - | 70-130 |
| Silver | 0 | 20 | 0 | 0 | | 18.8 | 93.94 | | - | 70-130 |
| Sodium | 100000 | 100000 | 99660.8 | 99.66 | | 101004 | 101 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 2.5 | 0 | | 2.5 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2107 | 105.4 | | 2101.2 | 105.1 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 84.6 | 105.7 | | - | 70-130 |
| Zinc | 0 | 40 | 0 | 0 | | 39.4 | 98.48 | | - | 70-130 |

# ICP INTERFERENCE CHECK SAMPLE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF ICS Source: Lab ICS Mix

Dissolved: Total

ICP ID Number: ICPMS Concentration Units: ug/L

| Analyte | True | | Found | | | | | | QC Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/16/2010 12:11 Sol. A | | | 02/16/2010 12:14 Sol. AB | | | | |
| | Sol. A | Sol. AB | Found | % R | Q | Found | % R | Q | Sol. A | Sol. AB |
| Aluminum | 100000 | 100000 | 96194.1 | 96.19 | | 99470.7 | 99.47 | | 70-130 | 70-130 |
| Antimony | 0 | 0 | 0.49748 | 0 | | 0 | 0 | | - | - |
| Arsenic | 0 | 40 | 0 | 0 | | 36.9 | 92.14 | | - | 70-130 |
| Barium | 0 | 0 | 2.05386 | 0 | | 1.997 | 0 | | - | - |
| Beryllium | 0 | 0 | 0.6005 | 0 | | 0.58937 | 0 | | - | - |
| Boron | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Cadmium | 0 | 40 | 2.6 | 0 | | 41.6 | 104 | | - | 70-130 |
| Calcium | 100000 | 100000 | 97655.8 | 97.66 | | 97970.7 | 97.97 | | 70-130 | 70-130 |
| Chromium | 0 | 80 | 1.79738 | 0 | | 84.9 | 106.1 | | - | 70-130 |
| Cobalt | 0 | 80 | 2.2 | 0 | | 83 | 103.8 | | - | 70-130 |
| Copper | 0 | 80 | 2.1 | 0 | | 75.8 | 94.69 | | - | 70-130 |
| Iron | 100000 | 100000 | 98772.5 | 98.77 | | 99834.6 | 99.84 | | 70-130 | 70-130 |
| Lead | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Lithium | 0 | 0 | 0.76689 | 0 | | 0.8159 | 0 | | - | - |
| Magnesium | 100000 | 100000 | 97663.1 | 97.66 | | 102878 | 102.9 | | 70-130 | 70-130 |
| Manganese | 0 | 80 | 7.1 | 0 | | 89.2 | 111.5 | | - | 70-130 |
| Molybdenum | 2000 | 2000 | 2076.9 | 103.8 | | 2079.8 | 104 | | 70-130 | 70-130 |
| Nickel | 0 | 80 | 2.9 | 0 | | 79.6 | 99.46 | | - | 70-130 |
| Potassium | 100000 | 100000 | 90188.7 | 90.19 | | 96146.8 | 96.15 | | 70-130 | 70-130 |
| Selenium | 0 | 40 | 0 | 0 | | 39.6 | 98.88 | | - | 70-130 |
| Silver | 0 | 20 | 0 | 0 | | 19.4 | 96.78 | | - | 70-130 |
| Sodium | 100000 | 100000 | 98668.5 | 98.67 | | 104082 | 104.1 | | 70-130 | 70-130 |
| Strontium | 0 | 0 | 2.6 | 0 | | 2.6 | 0 | | - | - |
| Thallium | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Tin | 0 | 0 | 0 | 0 | | 0 | 0 | | - | - |
| Titanium | 2000 | 2000 | 2077.9 | 103.9 | | 2096 | 104.8 | | 70-130 | 70-130 |
| Vanadium | 0 | 80 | 0 | 0 | | 84.4 | 105.5 | | - | 70-130 |
| Zinc | 0 | 40 | 4.06889 | 0 | | 39 | 97.56 | | - | 70-130 |

# MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Ext. method:

Total/Diss.: Dissolved Level:(low/med): LOW

Matrix Spike - Client SampleID: BA-01MS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | MS CONCENTRATION mg/L | C | MS % REC | Q | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.00145 | U | 0.05396 | | 53.96 | N | 75 | 125 | P |
| Lead | 0.1 | 0.000137 | U | 0.08715 | | 87.15 | | 75 | 125 | P |
| Manganese | 0.1 | 1.59 | | 1.634 | | 47.0 | | 75 | 125 | P |
| Nickel | 0.1 | 0.0546 | | 0.1314 | | 76.8 | | 75 | 125 | P |
| Thallium | 0.1 | 0.000147 | U | 0.08616 | | 86.16 | | 75 | 125 | P |

Matrix Spike - Client SampleID: BA-01MSD

| Analyte | SPIKE ADDED mg/L | MSD CONCENTRATION mg/L | C | MSD % REC | Q | % RPD | Q | QC LIMITS RPD | LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.1 | 0.05466 | | 54.66 | N | 1.29 | | 20 | 75 | 125 | P |
| Lead | 0.1 | 0.09142 | | 91.42 | | 4.78 | | 20 | 75 | 125 | P |
| Manganese | 0.1 | 1.743 | | 156 | | 6.46 | | 20 | 75 | 125 | P |
| Nickel | 0.1 | 0.1374 | | 82.8 | | 4.46 | | 20 | 75 | 125 | P |
| Thallium | 0.1 | 0.09094 | | 90.94 | | 5.40 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# POST DIGESTION SPIKE/POST DIGESTION SPIKE DUPLICATE

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF Ext. method:

Total/Diss.: Dissolved Level:(low/med): LOW

Matrix Spike - Client SampleID: BA-01PDS

| Analyte | SPIKE ADDED mg/L | SAMPLE CONCENTRATION mg/L | C | PDS CONCENTRATION mg/L | PDS % REC | Q | QC LIMITS LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.5 | 0.00145 | U | 0.4266 | 85.31 | | 75 | 125 | P |
| Lead | 0.5 | 0.000137 | U | 0.4562 | 91.24 | | 75 | 125 | P |
| Manganese | 0.5 | 1.59 | | 2.198 | 122 | | 75 | 125 | P |
| Nickel | 0.5 | 0.0546 | | 0.5088 | 90.8 | | 75 | 125 | P |
| Thallium | 0.5 | 0.000147 | U | 0.4583 | 91.67 | | 75 | 125 | P |

| Analyte | SPIKE ADDED mg/L | PDSD CONCENTRATION mg/L | PDSD % REC | Q | % RPD | Q | QC LIMITS RPD | LOW | HIGH | M |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.5 | 0.4495 | 89.91 | | 5.23 | | 20 | 75 | 125 | P |
| Lead | 0.5 | 0.4775 | 95.49 | | 4.56 | | 20 | 75 | 125 | P |
| Manganese | 0.5 | 2.301 | 143 | N | 4.58 | | 20 | 75 | 125 | P |
| Nickel | 0.5 | 0.5332 | 95.7 | | 4.68 | | 20 | 75 | 125 | P |
| Thallium | 0.5 | 0.4773 | 95.46 | | 4.06 | | 20 | 75 | 125 | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# LABORATORY CONTROL SAMPLE

LCS-87103

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Total/Dissolved: Dissolved

Solid LCS Source:

Aqueous LCS Source:

| Analyte | M | Aqueous (mg/L) True | Found | %R | Limits | Solid (mg/kg) True | Found | C | %R | Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | P | 0.1 | 0.09143 | 91.43 | 80 - 120 | | | | | |
| Lead | P | 0.1 | 0.09884 | 98.84 | 80 - 120 | | | | | |
| Manganese | P | 0.1 | 0.1016 | 101.6 | 80 - 120 | | | | | |
| Nickel | P | 0.1 | 0.09937 | 99.37 | 80 - 120 | | | | | |
| Thallium | P | 0.1 | 0.09885 | 98.85 | 80 - 120 | | | | | |

00296

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

# ICP SERIAL DILUTIONS

Client Sample ID

BA-01SD

| | | | |
|---|---|---|---|
| Lab Name: | SPL Inc. | Lab Sample ID: | 10020428-20B |
| Lab Code: | SPLLAF | SDG: | 10020428 |
| Matrix: | Water | Concentration Units: | mg/L |
| Level: | LOW | | |
| Total/Diss.: | Dissolved | | |

| Analyte | Initial Sample Results (I) | C | Serial Dilution Results (S) | C | % Difference | Q | M |
|---|---|---|---|---|---|---|---|
| Lead | 0.000137 | U | 0.0006865 | U | | | P |
| Manganese | 1.59 | | 1.678 | | 5.79 | | P |
| Nickel | 0.0546 | | 0.06267 | | | | P |
| Thallium | 0.000147 | U | 0.000735 | U | | | P |

All percent recovery and RPD values for samples and QC samples were calculated using raw results prior to rounding and are correct as reported. Due to rounding and significant digits, percent recovery and RPD values calculated using displayed results might differ slightly from those reported.

METHOD DETECTION LIMITS

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Instrument ID Number: ICPMS Date: 11/21/2008

6020_D

| Analyte | Wavelength (nm) | Background | PQL mg/L | MDL mg/L | M |
|---|---|---|---|---|---|
| Arsenic | | | 0.0040 | 0.0014 | P |
| Lead | | | 0.0010 | 0.00014 | P |
| Manganese | | | 0.0020 | 0.000091 | P |
| Nickel | | | 0.0090 | 0.00068 | P |
| Thallium | | | 0.0020 | 0.00015 | P |

# PREPARATION LOG

Lab Name: SPL Inc. SDG: 10020428

Lab Code: SPLLAF

Method: SW3005

Total/Diss.: Dissolved

| Lab Sample ID | Client Sample ID | Preparation Date | Initial Weight (gram) | Initial Volume (ml) | Final Volume (ml) |
|---|---|---|---|---|---|
| 10020428-20B | BA-01 | 2/12/10 | 0 | 100 | 100 |
| 10020428-20BMS | BA-01MS | 2/12/10 | 0 | 100 | 100 |
| 10020428-20BMSD | BA-01MSD | 2/12/10 | 0 | 100 | 100 |
| 10020428-27B | DW-01 | 2/12/10 | 0 | 100 | 100 |
| LCS-87103 | LCS-87103 | 2/12/10 | 0 | 100 | 100 |
| MBLK-87103 | MBLK-87103 | 2/12/10 | 0 | 100 | 100 |

# ANALYSIS RUN LOG

Lab Name: SPL Inc.

SDG: 10020428

Lab Code: SPLLAF

Method: SW6020

Instrument ID: ICPMS

Total/Dissolved: Dissolved

Start Date: 2/16/2010 End Date: 2/16/2010

| Lab Sample No. | Client Sample No. | DF | Time | % R | Analytes | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Mo | Hg | Ni | K | Se | Sn | Sr | Ag | Na | Ti | Tl | V | Zn |
| ICV | ICV | 1 | 09:34 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICB | ICB | 1 | 09:45 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCV | CCV | 1 | 09:48 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 09:55 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 09:59 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 10:02 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| MBLK-87103 | MBLK-87103 | 1 | 10:33 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| LCS-87103 | LCS-87103 | 1 | 10:35 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-20B | BA-01 | 1 | 10:39 | | | | | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-20BSD | BA-01SD | 5 | 10:42 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-20BMS | BA-01MS | 1 | 10:45 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-20BMSD | BA-01MSD | 1 | 10:47 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-20BPDS | BA-01PDS | 5 | 10:50 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| CCV | CCV | 1 | 10:58 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 11:05 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| 10020428-20BPDSD | BA-01PDSD | 5 | 11:08 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| 10020428-27B | DW-01 | 1 | 11:11 | | | | X | | | | | | | | | X | | X | | | X | | | | | | | | X | | |
| CCV | CCV | 1 | 11:30 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| CCB | CCB | 1 | 11:40 | | | | X | X | | X | | X | | | | X | | X | | | X | | X | | | X | | | X | | |
| ICSA | ICSA | 1 | 12:11 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |
| ICSAB | ICSAB | 1 | 12:14 | | X | | X | X | | X | X | X | | | X | X | X | X | | | X | | X | | | X | | | X | | |

00300

# METALS RAW DATA

1002150930MS
2-15-10
RD

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 1 | Cal Blank | | Blank |
| 2 | Std 1 | | Standard |
| 3 | Std 2 | | Standard |
| 4 | Std 3 | | Standard |
| 5 | Std 4 | | Standard |
| 6 | Std 5 | | Standard |
| 7 | QC Std 1 | | QC Std |
| 1 | QC Std 2 | | QC Std |
| 8 | QC Std 3 | | QC Std |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 2 | Sample |
| 10 | ICSAB | 3 | Spike - 2 of 2 |

00302

# Run List

## Sample File Name: 11.18.08.sam

| | AS Loc. | Sample ID | | Batch Index | Sample Type |
|---|---|---|---|---|---|
| | 127 | MBLK-87071 6020-W-ALL | | 4 | Sample |
| | 128 | LCS-87071 | | 5 | Sample |
| | 129 | 10020393-05A As, Ba, Cd, Cr, Pb, Se, Ag | | 6 | Sample |
| | 130 | 10020393-05ASD | | 7 | Sample |
| | 131 | 10020393-05AMS | | 8 | Sample |
| | 132 | 10020393-05AMSD | | 9 | Sample |
| | 133 | 10020393-05APDS | | 10 | Sample |
| | 134 | 10020393-05APDSD | | 11 | Sample |
| | 7 | QC Std 4 | | | QC Std |
| | 1 | QC Std 5 | | | QC Std |
| | 8 | QC Std 6 | | | QC Std |
| | 135 | 10020388-01E As, Ba, Cd, Cr, Pb, Mn, Ag | Se Rep 1 | 12 | Sample |
| | 136 | 10020388-02E | | 13 | Sample |
| | 137 | 10020388-03E | | 14 | Sample |
| | 138 | 10020388-04E Ba, Cd, Cr, Pb, Mn, Ag | | 15 | Sample |
| | 139 | 10020388-05E As, Ba, Cd, Cr, Pb, Mn, Ag | Se Rep 1 | 16 | Sample |
| | 140 | 10020393-06A As, Ba, Cd, Cr, Pb, Se, Ag | | 17 | Sample |
| | 141 | 10020393-07A Ba, Cd, Cr, Pb, Ag | | 18 | Sample |
| x5 | 142 | 10020388-04E N/R | | 19 | Sample |
| x25 | 143 | 10020388-04E As, | Se Rep 1 | 20 | Sample |
| x5 | 144 | 10020393-07A As, Se | | 21 | Sample |
| | 7 | QC Std 4 | ICPMS_100215A | | QC Std |
| | 1 | QC Std 5 | ICPMS_100215B | | QC Std |
| | 8 | QC Std 6 | | | QC Std |
| | 9 | ICSA | [illegible] 2-16-10 | 22 | Sample |
| | 10 | ICSAB | | 23 | Spike - 2 of 22 |

00303

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 112 | MBLK-87074 6020-D | 21 | Sample |
| 113 | LCS-87074 | 22 | Sample |
| 114 | 10020388-01F Mn | 23 | Sample |
| 115 | 10020388-01FSD | 24 | Sample |
| 116 | 10020388-01FMS | 25 | Sample |
| 117 | 10020388-01FMSD | 26 | Sample |
| 118 | 10020388-01FPDS | 27 | Sample |
| 119 | 10020388-01FPDSD | 28 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 120 | 10020388-02F | 29 | Sample |
| 121 | 10020388-03F | 30 | Sample |
| 122 | 10020388-04F | 31 | Sample |
| 123 | 10020388-05F | 32 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 33 | Sample |
| 10 | ICSAB | 34 | Sample |
| 301 | MBLK-87101 6020-W-ALL | 35 | Sample |
| 302 | LCS-87101 | 36 | Sample |
| 303 | 10020427-02C As,Ba,Cd,Cr,Pb,Se,Ag | 37 | Sample |
| 304 | 10020427-02CSD | 38 | Sample |
| 305 | 10020427-02CMS | 39 | Sample |
| 306 | 10020427-02CMSD | 40 | Sample |
| 307 | 10020427-02CPDS | 41 | Sample |
| 308 | 10020427-02CPDSD | 42 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 309 | 10020427-01C | 43 | Sample |
| 310 | 10020427-03C | 44 | Sample |
| 311 | 10020427-04C | 45 | Sample |
| 312 | 10020427-05C | 46 | Sample |
| 313 | 10020427-06C | 47 | Sample |
| 314 | 10020427-07C | 48 | Sample |
| 315 | 10020461-01D As,Ba,Cd,Cr,Pb,Mn,Ag Se Rep1 | 49 | Sample |
| 316 | 10020461-02D Ba,Cd,Cr,Pb,Mn,Ag Ø As,Se - needs dilution | 50 | Sample |
| 317 | 10020461-03D As,Ba,Cd,Cr,Pb,Mn,Ag Se Rep1 | 51 | Sample |
| 318 | 10020461-04D | 52 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| | | 00304 | |

| | | | |
|---|---|---|---|
| 9 | ICSA | 53 | Sample |
| 10 | ICSAB | 54 | Sample |
| 101 | MBLK-87086 6020-S-ALL | 55 | Sample |
| 102 | LCS-87086 | 56 | Sample |
| 103 | 10020393-01A As, Ba, Cd, Cr, Pb, Se, Ag | 57 | Sample |
| 104 | 10020393-01ASD | 58 | Sample |
| 105 | 10020393-01AMS | 59 | Sample |
| 106 | 10020393-01AMSD | 60 | Sample |
| 107 | 10020393-01APDS | 61 | Sample |
| 108 | 10020393-01APDSD | 62 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 109 | 10020393-02A | 63 | Sample |
| 110 | 10020393-03A | 64 | Sample |
| 111 | 10020393-04A | 65 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 66 | Sample |
| 10 | ICSAB | 67 | Sample |
| 201 | MBLK-87095 6020-W-ALL | 68 | Sample |
| 202 | LCS-87095 | 69 | Sample |
| 203 | 10020428-08A As, Pb, Mn, Ni, TL | 70 | Sample |
| 204 | 10020428-08ASD | 71 | Sample |
| 205 | 10020428-08AMS | 72 | Sample |
| 206 | 10020428-08AMSD | 73 | Sample |
| 207 | 10020428-08APDS | 74 | Sample |
| 208 | 10020428-08APDSD | 75 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 209 | 10020428-01A | 76 | Sample |
| 210 | 10020428-02A Mn, Ni ~~As, Pb, TL~~ | 77 | Sample |
| 211 | 10020428-03A As, Pb, Mn, Ni, TL | 78 | Sample |
| 212 | 10020428-04A | 79 | Sample |
| 213 | 10020428-05A | 80 | Sample |
| 214 | 10020428-06A | 81 | Sample |
| 215 | 10020428-07A | 82 | Sample |
| 216 | 10020428-09A | 83 | Sample |
| 217 | 10020428-10A | 84 | Sample |
| 218 | 10020428-11A | 85 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 219 | 10020428-12A | 86 | Sample |
| 220 | 10020428-13A Mn, Ni ~~As, Pb, TL~~ Pb, TL | 87 | Sample |
| 221 | 10020428-14A As, Pb, Mn, Ni, TL | 88 | Sample |
| 222 | 10020428-15A | 89 | Sample |
| 223 | 10020428-16A | 90 | Sample |
| 224 | 10020428-17A | 91 | Sample |
| 225 | 10020428-18A | 92 | Sample |
| 226 | 10020428-20A Mn, Ni ~~As, Pb, TL~~ | 93 | Sample |
| | | | |

00305

| | | | |
|---|---|---|---|
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 94 | Sample |
| 10 | ICSAB | 95 | Sample |
| 227 | MBLK-87096 6020_W_ALL | 96 | Sample |
| 228 | LCS-87096 | 97 | Sample |
| 229 | 10020428-19A As, Pb, Mn, Ni, TL | 98 | Sample |
| 230 | 10020428-19ASD | 99 | Sample |
| 231 | 10020428-19AMS | 100 | Sample |
| 232 | 10020428-19AMSD | 101 | Sample |
| 233 | 10020428-19APDS | 102 | Sample |
| 234 | 10020428-19APDSD | 103 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 235 | 10020428-21A Mn, Ni Ø As, Pb, TL | 104 | Sample |
| 236 | 10020428-22A | 105 | Sample |
| 237 | 10020428-23A | 106 | Sample |
| 238 | 10020428-24A | 107 | Sample |
| 239 | 10020428-25A | 108 | Sample |
| 240 | 10020428-26A | 109 | Sample |
| 241 | 10020428-27A | 110 | Sample |
| 242 | 10020428-28A | 111 | Sample |
| 243 | 10020428-29A | 112 | Sample |
| 244 | 10020428-30A | 113 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 245 | 10020428-31A | 114 | Sample |
| 246 | 10020428-32A | 115 | Sample |
| 247 | 10020428-33A | 116 | Sample |
| 248 | 10020428-34A | 117 | Sample |
| 249 | 10020428-35A | 118 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 119 | Sample |
| 10 | ICSAB | 120 | Sample |

**00306**

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 1 | Cal Blank | | Blank |
| 2 | Std 1 | | Standard |
| 3 | Std 2 | | Standard |
| 4 | Std 3 | | Standard |
| 5 | Std 4 | | Standard |
| 6 | Std 5 | | Standard |
| 7 | QC Std 1 | | QC Std |
| 1 | QC Std 2 | | QC Std |
| 8 | QC Std 3 | | QC Std |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 2 | Sample |
| 10 | ICSAB | 3 | Spike - 2 of 2 |

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 127 | MBLK-87071 | 4 | Sample |
| 128 | LCS-87071 | 5 | Sample |
| 129 | 10020393-05A | 6 | Sample |
| 130 | 10020393-05ASD | 7 | Sample |
| 131 | 10020393-05AMS | 8 | Sample |
| 132 | 10020393-05AMSD | 9 | Sample |
| 133 | 10020393-05APDS | 10 | Sample |
| 134 | 10020393-05APDSD | 11 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 135 | 10020388-01E | 12 | Sample |
| 136 | 10020388-02E | 13 | Sample |
| 137 | 10020388-03E | 14 | Sample |
| 138 | 10020388-04E | 15 | Sample |
| 139 | 10020388-05E | 16 | Sample |
| 140 | 10020393-06A | 17 | Sample |
| 141 | 10020393-07A | 18 | Sample |
| 142 | 10020388-04E | 19 | Sample |
| 143 | 10020388-04E | 20 | Sample |
| 144 | 10020393-07A | 21 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 22 | Sample |
| 10 | ICSAB | 23 | Spike - 2 of 22 |

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 112 | MBLK-87074 | 21 | Sample |
| 113 | LCS-87074 | 22 | Sample |
| 114 | 10020388-01F | 23 | Sample |
| 115 | 10020388-01FSD | 24 | Sample |
| 116 | 10020388-01FMS | 25 | Sample |
| 117 | 10020388-01FMSD | 26 | Sample |
| 118 | 10020388-01FPDS | 27 | Sample |
| 119 | 10020388-01FPDSD | 28 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 120 | 10020388-02F | 29 | Sample |
| 121 | 10020388-03F | 30 | Sample |
| 122 | 10020388-04F | 31 | Sample |
| 123 | 10020388-05F | 32 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 33 | Sample |
| 10 | ICSAB | 34 | Sample |
| 301 | MBLK-87101 | 35 | Sample |
| 302 | LCS-87101 | 36 | Sample |
| 303 | 10020427-02C | 37 | Sample |
| 304 | 10020427-02CSD | 38 | Sample |
| 305 | 10020427-02CMS | 39 | Sample |
| 306 | 10020427-02CMSD | 40 | Sample |
| 307 | 10020427-02CPDS | 41 | Sample |
| 308 | 10020427-02CPDSD | 42 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 309 | 10020427-01C | 43 | Sample |
| 310 | 10020427-03C | 44 | Sample |
| 311 | 10020427-04C | 45 | Sample |
| 312 | 10020427-05C | 46 | Sample |
| 313 | 10020427-06C | 47 | Sample |
| 314 | 10020427-07C | 48 | Sample |
| 315 | 10020461-01D | 49 | Sample |
| 316 | 10020461-02D | 50 | Sample |
| 317 | 10020461-03D | 51 | Sample |
| 318 | 10020461-04D | 52 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |

00309

| | | | |
|---|---|---|---|
| 9 | ICSA | 53 | Sample |
| 10 | ICSAB | 54 | Sample |
| 101 | MBLK-87086 | 55 | Sample |
| 102 | LCS-87086 | 56 | Sample |
| 103 | 10020393-01A | 57 | Sample |
| 104 | 10020393-01ASD | 58 | Sample |
| 105 | 10020393-01AMS | 59 | Sample |
| 106 | 10020393-01AMSD | 60 | Sample |
| 107 | 10020393-01APDS | 61 | Sample |
| 108 | 10020393-01APDSD | 62 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 109 | 10020393-02A | 63 | Sample |
| 110 | 10020393-03A | 64 | Sample |
| 111 | 10020393-04A | 65 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 66 | Sample |
| 10 | ICSAB | 67 | Sample |
| 201 | MBLK-87095 | 68 | Sample |
| 202 | LCS-87095 | 69 | Sample |
| 203 | 10020428-08A | 70 | Sample |
| 204 | 10020428-08ASD | 71 | Sample |
| 205 | 10020428-08AMS | 72 | Sample |
| 206 | 10020428-08AMSD | 73 | Sample |
| 207 | 10020428-08APDS | 74 | Sample |
| 208 | 10020428-08APDSD | 75 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 209 | 10020428-01A | 76 | Sample |
| 210 | 10020428-02A | 77 | Sample |
| 211 | 10020428-03A | 78 | Sample |
| 212 | 10020428-04A | 79 | Sample |
| 213 | 10020428-05A | 80 | Sample |
| 214 | 10020428-06A | 81 | Sample |
| 215 | 10020428-07A | 82 | Sample |
| 216 | 10020428-09A | 83 | Sample |
| 217 | 10020428-10A | 84 | Sample |
| 218 | 10020428-11A | 85 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 219 | 10020428-12A | 86 | Sample |
| 220 | 10020428-13A | 87 | Sample |
| 221 | 10020428-14A | 88 | Sample |
| 222 | 10020428-15A | 89 | Sample |
| 223 | 10020428-16A | 90 | Sample |
| 224 | 10020428-17A | 91 | Sample |
| 225 | 10020428-18A | 92 | Sample |
| 226 | 10020428-20A | 93 | Sample |
| | | | |

| | | | |
|---|---|---|---|
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 94 | Sample |
| 10 | ICSAB | 95 | Sample |
| 227 | MBLK-87096 | 96 | Sample |
| 228 | LCS-87096 | 97 | Sample |
| 229 | 10020428-19A | 98 | Sample |
| 230 | 10020428-19ASD | 99 | Sample |
| 231 | 10020428-19AMS | 100 | Sample |
| 232 | 10020428-19AMSD | 101 | Sample |
| 233 | 10020428-19APDS | 102 | Sample |
| 234 | 10020428-19APDSD | 103 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 235 | 10020428-21A | 104 | Sample |
| 236 | 10020428-22A | 105 | Sample |
| 237 | 10020428-23A | 106 | Sample |
| 238 | 10020428-24A | 107 | Sample |
| 239 | 10020428-25A | 108 | Sample |
| 240 | 10020428-26A | 109 | Sample |
| 241 | 10020428-27A | 110 | Sample |
| 242 | 10020428-28A | 111 | Sample |
| 243 | 10020428-29A | 112 | Sample |
| 244 | 10020428-30A | 113 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 245 | 10020428-31A | 114 | Sample |
| 246 | 10020428-32A | 115 | Sample |
| 247 | 10020428-33A | 116 | Sample |
| 248 | 10020428-34A | 117 | Sample |
| 249 | 10020428-35A | 118 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 119 | Sample |
| 10 | ICSAB | 120 | Sample |

# Instrument Tuning Report

File Name: default.tun
File Path: C:\elandata\Tuning\default.tun

| Analyte | Exact Mass | Meas. Mass | Mass DAC | Res. DAC | Meas. Pk. Width | Custom Res. |
|---|---|---|---|---|---|---|
| Be | 9.012 | 8.977 | 2034 | 2095 | 0.603 | |
| C | 12.000 | 11.979 | 2756 | 2105 | 0.600 | |
| Mg | 23.985 | 23.978 | 5661 | 2100 | 0.585 | |
| Co | 58.933 | 58.979 | 14157 | 2135 | 0.588 | |
| In | 114.904 | 114.878 | 27758 | 2215 | 0.605 | |
| Ce | 139.905 | 139.929 | 33843 | 2240 | 0.638 | |
| Pb | 207.977 | 207.978 | 50399 | 2340 | 0.635 | |
| U | 238.050 | 238.075 | 57709 | 2380 | 0.631 | |

# Daily Performance Report

**Sample ID: Sample**
Sample Date/Time: Monday, February 15, 2010 09:24:27
Sample Description:
Method File: C:\Elandata\Method\Daily.mth
Dataset File: C:\Elandata\DataSet\Daily Performance\Sample.1475
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 65
Current Dead Time (ns): 65

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD |
|---|---|---|---|---|---|---|
| | Be | 9.0 | 3236.7 | 3236.681 | 49.088 | 1.5 |
| | C | 12.0 | 997641.5 | 997641.476 | 3800.700 | 0.4 |
| | Mg | 24.0 | 52696.2 | 52696.151 | 225.858 | 0.4 |
| | Co | 58.9 | 71501.2 | 71501.204 | 813.682 | 1.1 |
| | In | 114.9 | 188889.2 | 188889.178 | 780.629 | 0.4 |
| | Pb | 208.0 | 78052.1 | 78052.080 | 678.883 | 0.9 |
| | U | 238.1 | 162398.3 | 162398.310 | 695.978 | 0.4 |
| ⌈> | Ce | 139.9 | 177697.2 | 177697.156 | 1633.971 | 0.9 |
| ⌊ | CeO | 155.9 | 1245.6 | 0.007 | 0.000 | 1.7 |
| ⌈> | Ba | 137.9 | 150155.7 | 150155.705 | 1168.471 | 0.8 |
| ⌊ | Ba++ | 69.0 | 1799.5 | 0.012 | 0.000 | 1.4 |
| | 220 | 220.0 | 0.4 | 0.433 | 0.190 | 43.9 |

### Current Optimization File Data

| Current Value | Description |
|---|---|
| 1.00 | Nebulizer Gas Flow [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 16.00 | Plasma Gas Flow |
| 9.00 | Lens Voltage |
| 1450.00 | ICP RF Power |
| -1725.00 | Analog Stage Voltage |
| 900.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset Std [QRO] |
| -17.00 | Cell Rod Offset Std [CRO] |
| 20.00 | Discriminator Threshold |
| -9.00 | Cell Path Voltage Std [CPV] |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.00 | DRC Mode NEB |
| -6.00 | DRC Mode QRO |
| -1.00 | DRC Mode CRO |
| -15.00 | DRC Mode CPV |
| 0.00 | Cell Gas A |
| 0.00 | Cell Gas B |

### Current Autolens Data

| Analyte | Mass | Num of Pts | DAC Value | Maximum Intensity |
|---|---|---|---|---|
| Be | 9 | 36 | 6.0 | 10489.9 |
| Co | 59 | 36 | 6.8 | 85833.8 |

| | | | | |
|---|---|---|---|---|
| In | 115 | 36 | 8.8 | 187973.0 |

# Quantitative Analysis - Summary Report

**Sample ID: Cal Blank**
Sample Date/Time: Monday, February 15, 2010 11:49:34
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\Cal Blank.001
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26737.081 | | | | | ug/L |
| | Li | 7 | 3061.277 | | | | | ug/L |
| | Be | 9 | 8.000 | | | | | ug/L |
| | B | 11 | 507.350 | | | | | ug/L |
| | Na | 23 | 12142.989 | | | | | ug/L |
| | Mg | 24 | 166.670 | | | | | ug/L |
| | Al | 27 | 768.372 | | | | | ug/L |
| | K | 39 | 58790.498 | | | | | ug/L |
| | Ca | 43 | 182.669 | | | | | ug/L |
| > | Sc | 45 | 357505.758 | | | | | ug/L |
| | Ti | 49 | 486.015 | | | | | ug/L |
| | Co | 59 | 26.667 | | | | | ug/L |
| | Ni | 60 | 16.000 | | | | | ug/L |
| | Ni | 62 | 33.333 | | | | | ug/L |
| | Cu | 63 | 76.000 | | | | | ug/L |
| | Cu | 65 | 40.000 | | | | | ug/L |
| | Zn | 66 | 112.001 | | | | | ug/L |
| | Zn | 67 | 1368.122 | | | | | ug/L |
| | Zn | 68 | 161.335 | | | | | ug/L |
| | V | 51 | -105.147 | | | | | ug/L |
| | Cr | 52 | 3426.096 | | | | | ug/L |
| | Cr | 53 | 15740.104 | | | | | ug/L |
| | Mn | 55 | 206.003 | | | | | ug/L |
| | Fe | 54 | 12418.136 | | | | | ug/L |
| | Fe | 57 | 639.360 | | | | | ug/L |
| | As | 75 | -180.908 | | | | | ug/L |
| | Se | 77 | 1642.842 | | | | | ug/L |
| | Se | 82 | 1.172 | | | | | ug/L |
| | Sr | 88 | 79.334 | | | | | ug/L |
| > | Y | 89 | 444767.052 | | | | | ug/L |
| | Mo | 95 | 11.333 | | | | | ug/L |
| | Mo | 97 | 9.333 | | | | | ug/L |
| | Mo | 98 | 23.854 | | | | | ug/L |
| | Ag | 107 | 4.667 | | | | | ug/L |
| | Ag | 109 | 2.667 | | | | | ug/L |
| | Cd | 111 | 2.000 | | | | | ug/L |
| | Cd | 114 | -2.668 | | | | | ug/L |

| | | | | |
|---|---|---|---|---|
| > | In | 115 | 189806.605 | ug/L |
| | Sn | 120 | 617.307 | ug/L |
| | Sb | 121 | 556.687 | ug/L |
| | Sb | 123 | 468.178 | ug/L |
| | Ba | 135 | 10.000 | ug/L |
| | Ba | 137 | 14.000 | ug/L |
| | Tb | 159 | 179486.025 | ug/L |
| > | Ho | 165 | 188960.538 | ug/L |
| | Tl | 203 | 6.667 | ug/L |
| | Tl | 205 | 3.333 | ug/L |
| | Pb | 208 | 30.000 | ug/L |
| | Kr | 83 | 20.533 | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 1**
Sample Date/Time: Monday, February 15, 2010 11:52:14
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\Std 1.002
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27406.895 | 0.004 | | | | ug/L |
| | Li | 7 | 4063.073 | 0.003 | | | | ug/L |
| | Be | 9 | 268.005 | 0.001 | | | | ug/L |
| | B | 11 | 770.705 | 0.001 | | | | ug/L |
| | Na | 23 | 20895.029 | 0.026 | | | | ug/L |
| | Mg | 24 | 5235.150 | 0.015 | | | | ug/L |
| | Al | 27 | 17306.116 | 0.048 | | | | ug/L |
| | K | 39 | 78162.612 | 0.060 | | | | ug/L |
| | Ca | 43 | 245.337 | 0.000 | | | | ug/L |
| > | Sc | 45 | 348185.227 | 348185.227 | | | | ug/L |
| | Ti | 49 | 636.693 | 0.000 | | | | ug/L |
| | Co | 59 | 2098.953 | 0.006 | | | | ug/L |
| | Ni | 60 | 398.677 | 0.001 | | | | ug/L |
| | Ni | 62 | 70.667 | 0.000 | | | | ug/L |
| | Cu | 63 | 1039.404 | 0.003 | | | | ug/L |
| | Cu | 65 | 462.681 | 0.001 | | | | ug/L |
| | Zn | 66 | 465.347 | 0.001 | | | | ug/L |
| | Zn | 67 | 1593.499 | 0.001 | | | | ug/L |
| | Zn | 68 | 386.677 | 0.001 | | | | ug/L |
| | V | 51 | 1966.617 | 0.006 | | | | ug/L |
| | Cr | 52 | 5274.476 | 0.006 | | | | ug/L |
| | Cr | 53 | 16743.546 | 0.004 | | | | ug/L |
| | Mn | 55 | 3268.028 | 0.009 | | | | ug/L |
| | Fe | 54 | 13321.577 | 0.004 | | | | ug/L |
| | Fe | 57 | 1170.756 | 0.002 | | | | ug/L |
| | As | 75 | -19.751 | 0.000 | | | | ug/L |
| | Se | 77 | 1796.210 | 0.000 | | | | ug/L |
| | Se | 82 | 152.983 | 0.000 | | | | ug/L |
| | Sr | 88 | 4197.813 | 0.009 | | | | ug/L |
| > | Y | 89 | 433794.483 | 433794.483 | | | | ug/L |
| | Mo | 95 | 522.685 | 0.001 | | | | ug/L |
| | Mo | 97 | 295.339 | 0.001 | | | | ug/L |
| | Mo | 98 | 798.489 | 0.002 | | | | ug/L |
| | Ag | 107 | 1328.115 | 0.007 | | | | ug/L |
| | Ag | 109 | 1252.102 | 0.007 | | | | ug/L |
| | Cd | 111 | 331.674 | 0.002 | | | | ug/L |
| | Cd | 114 | 769.431 | 0.004 | | | | ug/L |

| | | | | | |
|---|---|---|---|---|---|
| \|> | In | 115 | 183475.301 | 183475.301 | ug/L |
| \| | Sn | 120 | 2006.194 | 0.008 | ug/L |
| \| | Sb | 121 | 1292.109 | 0.004 | ug/L |
| \| | Sb | 123 | 1002.728 | 0.003 | ug/L |
| \| | Ba | 135 | 240.004 | 0.001 | ug/L |
| \| | Ba | 137 | 423.345 | 0.002 | ug/L |
| \| | Tb | 159 | 175671.235 | 0.004 | ug/L |
| \|> | Ho | 165 | 184228.426 | 184228.426 | ug/L |
| \| | Tl | 203 | 785.373 | 0.004 | ug/L |
| \| | Tl | 205 | 1898.901 | 0.010 | ug/L |
| \| | Pb | 208 | 2698.186 | 0.014 | ug/L |
| | Kr | 83 | 19.400 | -1.133 | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 2**
Sample Date/Time: Monday, February 15, 2010 11:54:55
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\Std 2.003
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27354.816 | 0.004 | | | | ug/L |
| | Li | 7 | 8067.562 | 0.015 | **5.000000** | 0.11 | 2.1 | ug/L |
| | Be | 9 | 1142.752 | 0.003 | **5.000000** | 0.61 | 12.2 | ug/L |
| | B | 11 | 1937.578 | 0.004 | **5.000000** | 0.51 | 10.3 | ug/L |
| | Na | 23 | 41679.479 | 0.085 | **50.000000** | 2.13 | 4.3 | ug/L |
| | Mg | 24 | 22131.815 | 0.063 | **50.000000** | 3.11 | 6.2 | ug/L |
| | Al | 27 | 77234.267 | 0.219 | **55.000000** | 0.46 | 0.8 | ug/L |
| | K | 39 | 137792.684 | 0.230 | **50.000000** | 4.86 | 9.7 | ug/L |
| | Ca | 43 | 392.010 | 0.001 | **50.000000** | 13.05 | 26.1 | ug/L |
| > | Sc | 45 | 349322.253 | 349322.253 | | | | ug/L |
| | Ti | 49 | 1142.085 | 0.002 | **5.000000** | 0.31 | 6.2 | ug/L |
| | Co | 59 | 9423.105 | 0.027 | **5.000000** | 0.30 | 6.0 | ug/L |
| | Ni | 60 | 1810.214 | 0.005 | **5.000000** | 0.48 | 9.5 | ug/L |
| | Ni | 62 | 320.007 | 0.001 | **5.000000** | 0.83 | 16.6 | ug/L |
| | Cu | 63 | 4489.310 | 0.013 | **5.000000** | 0.24 | 4.8 | ug/L |
| | Cu | 65 | 2122.960 | 0.006 | **5.000000** | 0.06 | 1.1 | ug/L |
| | Zn | 66 | 1445.470 | 0.004 | **5.000000** | 0.34 | 6.9 | ug/L |
| | Zn | 67 | 1769.537 | 0.001 | **5.000000** | 1.34 | 26.8 | ug/L |
| | Zn | 68 | 1070.741 | 0.003 | **5.000000** | 0.34 | 6.8 | ug/L |
| | V | 51 | 9918.754 | 0.029 | **5.000000** | 0.69 | 13.7 | ug/L |
| | Cr | 52 | 11626.114 | 0.024 | **5.000000** | 0.30 | 6.0 | ug/L |
| | Cr | 53 | 17690.323 | 0.007 | **5.000000** | 1.67 | 33.5 | ug/L |
| | Mn | 55 | 14072.197 | 0.040 | **5.000000** | 0.25 | 5.0 | ug/L |
| | Fe | 54 | 18819.646 | 0.019 | **50.000000** | 5.51 | 11.0 | ug/L |
| | Fe | 57 | 3410.089 | 0.008 | **50.000000** | 2.75 | 5.5 | ug/L |
| | As | 75 | 1108.107 | 0.003 | **5.000000** | 0.63 | 12.7 | ug/L |
| | Se | 77 | 2215.653 | 0.001 | **25.000000** | 2.28 | 9.1 | ug/L |
| | Se | 82 | 707.157 | 0.002 | **25.000000** | 0.35 | 1.4 | ug/L |
| | Sr | 88 | 18982.066 | 0.044 | **5.000000** | 0.15 | 3.1 | ug/L |
| > | Y | 89 | 430880.413 | 430880.413 | | | | ug/L |
| | Mo | 95 | 2397.707 | 0.006 | **5.000000** | 0.11 | 2.1 | ug/L |
| | Mo | 97 | 1477.475 | 0.003 | **5.000000** | 0.11 | 2.2 | ug/L |
| | Mo | 98 | 3691.407 | 0.009 | **5.000000** | 0.24 | 4.8 | ug/L |
| | Ag | 107 | 6367.970 | 0.035 | **5.000000** | 0.13 | 2.7 | ug/L |
| | Ag | 109 | 5987.663 | 0.033 | **5.000000** | 0.13 | 2.7 | ug/L |
| | Cd | 111 | 1531.319 | 0.008 | **5.000000** | 0.18 | 3.7 | ug/L |
| | Cd | 114 | 3347.543 | 0.018 | **5.000000** | 0.18 | 3.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 181925.562 | 181925.562 | | | | ug/L |
| \| | Sn | 120 | 6302.531 | 0.031 | **5.000000** | 0.15 | 2.9 | ug/L |
| \| | Sb | 121 | 4573.360 | 0.022 | **5.000000** | 0.16 | 3.3 | ug/L |
| \| | Sb | 123 | 3541.645 | 0.017 | **5.000000** | 0.08 | 1.7 | ug/L |
| \| | Ba | 135 | 1122.749 | 0.006 | **5.000000** | 0.23 | 4.5 | ug/L |
| \| | Ba | 137 | 1920.240 | 0.010 | **5.000000** | 0.19 | 3.9 | ug/L |
| \| | Tb | 159 | 175769.537 | 0.003 | | | | ug/L |
| \|> | Ho | 165 | 184555.161 | 184555.161 | | | | ug/L |
| \| | Tl | 203 | 3704.226 | 0.020 | **5.000000** | 0.24 | 4.8 | ug/L |
| \| | Tl | 205 | 8766.994 | 0.047 | **5.000000** | 0.03 | 0.5 | ug/L |
| \| | Pb | 208 | 12109.027 | 0.065 | **5.000000** | 0.04 | 0.9 | ug/L |
| | Kr | 83 | 18.333 | -2.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 3**
Sample Date/Time: Monday, February 15, 2010 11:57:35
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\Std 3.004
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25568.027 | -0.002 | | | | ug/L |
| | Li | 7 | 51690.537 | 0.138 | **49.993101** | 1.88 | 3.8 | ug/L |
| | Be | 9 | 11455.864 | 0.032 | **50.005298** | 2.02 | 4.0 | ug/L |
| | B | 11 | 14921.126 | 0.041 | **49.996344** | 0.82 | 1.6 | ug/L |
| | Na | 23 | 75570.697 | 0.180 | **101.581675** | 9.61 | 9.5 | ug/L |
| | Mg | 24 | 47412.590 | 0.134 | **101.023615** | 5.24 | 5.2 | ug/L |
| | Al | 27 | 212986.478 | 0.601 | **150.192975** | 5.02 | 3.3 | ug/L |
| | K | 39 | 205310.700 | 0.417 | **99.162092** | 9.92 | 10.0 | ug/L |
| | Ca | 43 | 745.370 | 0.002 | **103.860529** | 7.77 | 7.5 | ug/L |
| > | Sc | 45 | 353110.624 | 353110.624 | | | | ug/L |
| | Ti | 49 | 6688.242 | 0.018 | **49.994268** | 1.56 | 3.1 | ug/L |
| | Co | 59 | 91155.634 | 0.258 | **49.996627** | 0.80 | 1.6 | ug/L |
| | Ni | 60 | 18020.430 | 0.051 | **50.001202** | 1.76 | 3.5 | ug/L |
| | Ni | 62 | 2640.455 | 0.007 | **49.965110** | 4.18 | 8.4 | ug/L |
| | Cu | 63 | 43412.161 | 0.123 | **49.998475** | 0.62 | 1.2 | ug/L |
| | Cu | 65 | 20452.490 | 0.058 | **49.995112** | 0.86 | 1.7 | ug/L |
| | Zn | 66 | 13334.218 | 0.037 | **50.010214** | 1.48 | 3.0 | ug/L |
| | Zn | 67 | 3772.926 | 0.007 | **50.005329** | 4.43 | 8.9 | ug/L |
| | Zn | 68 | 9536.575 | 0.027 | **50.013103** | 0.63 | 1.3 | ug/L |
| | V | 51 | 94159.527 | 0.267 | **49.987672** | 0.23 | 0.5 | ug/L |
| | Cr | 52 | 83684.749 | 0.227 | **49.999513** | 0.47 | 0.9 | ug/L |
| | Cr | 53 | 26653.432 | 0.031 | **49.973587** | 1.73 | 3.5 | ug/L |
| | Mn | 55 | 137603.916 | 0.389 | **50.000636** | 0.68 | 1.4 | ug/L |
| | Fe | 54 | 25921.827 | 0.039 | **99.980570** | 4.18 | 4.2 | ug/L |
| | Fe | 57 | 6283.899 | 0.016 | **100.016771** | 1.74 | 1.7 | ug/L |
| | As | 75 | 14037.942 | 0.033 | **50.002204** | 1.85 | 3.7 | ug/L |
| | Se | 77 | 6944.467 | 0.012 | **249.975597** | 9.64 | 3.9 | ug/L |
| | Se | 82 | 6994.110 | 0.016 | **250.001284** | 7.95 | 3.2 | ug/L |
| | Sr | 88 | 187574.142 | 0.433 | **50.001080** | 1.52 | 3.0 | ug/L |
| > | Y | 89 | 432906.417 | 432906.417 | | | | ug/L |
| | Mo | 95 | 22860.603 | 0.053 | **49.993812** | 0.70 | 1.4 | ug/L |
| | Mo | 97 | 13997.396 | 0.032 | **49.988853** | 1.74 | 3.5 | ug/L |
| | Mo | 98 | 35639.438 | 0.082 | **49.995762** | 0.97 | 1.9 | ug/L |
| | Ag | 107 | 63082.287 | 0.347 | **49.999662** | 0.53 | 1.1 | ug/L |
| | Ag | 109 | 59163.348 | 0.325 | **49.999338** | 1.09 | 2.2 | ug/L |
| | Cd | 111 | 14813.919 | 0.081 | **49.996979** | 0.96 | 1.9 | ug/L |
| | Cd | 114 | 33454.180 | 0.184 | **50.005509** | 0.76 | 1.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 181957.355 | 181957.355 | | | | ug/L |
| \| | Sn | 120 | 58219.431 | 0.317 | **50.010629** | 0.65 | 1.3 | ug/L |
| \| | Sb | 121 | 41985.611 | 0.228 | **50.001569** | 0.34 | 0.7 | ug/L |
| L | Sb | 123 | 31959.017 | 0.173 | **49.998609** | 0.27 | 0.5 | ug/L |
| ⌈ | Ba | 135 | 10904.392 | 0.058 | **49.995266** | 0.57 | 1.1 | ug/L |
| \| | Ba | 137 | 18966.689 | 0.101 | **49.999574** | 0.79 | 1.6 | ug/L |
| \| | Tb | 159 | 178948.390 | 0.007 | | | | ug/L |
| \|> | Ho | 165 | 187008.646 | 187008.646 | | | | ug/L |
| \| | Tl | 203 | 36231.129 | 0.194 | **49.996076** | 0.80 | 1.6 | ug/L |
| \| | Tl | 205 | 87912.176 | 0.470 | **50.001618** | 0.26 | 0.5 | ug/L |
| L | Pb | 208 | 119050.847 | 0.636 | **49.999327** | 0.55 | 1.1 | ug/L |
| | Kr | 83 | 19.467 | -1.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 4**
Sample Date/Time: Monday, February 15, 2010 12:00:16
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\Std 4.005
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23543.301 | -0.007 | | | | ug/L |
| | Li | 7 | 101070.535 | 0.284 | **100.565677** | 3.24 | 3.2 | ug/L |
| | Be | 9 | 22865.957 | 0.066 | **100.382957** | 2.80 | 2.8 | ug/L |
| | B | 11 | 28997.928 | 0.083 | **100.197894** | 2.73 | 2.7 | ug/L |
| | Na | 23 | 632173.833 | 1.799 | **1000.186155** | 47.57 | 4.8 | ug/L |
| | Mg | 24 | 450419.667 | 1.305 | **999.920285** | 33.75 | 3.4 | ug/L |
| | Al | 27 | 1568784.803 | 4.546 | **1100.355614** | 32.15 | 2.9 | ug/L |
| | K | 39 | 1511365.744 | 4.217 | **1000.251933** | 54.60 | 5.5 | ug/L |
| | Ca | 43 | 5321.840 | 0.015 | **999.744133** | 6.81 | 0.7 | ug/L |
| > | Sc | 45 | 345019.890 | 345019.890 | | | | ug/L |
| | Ti | 49 | 12677.776 | 0.035 | **100.178756** | 2.18 | 2.2 | ug/L |
| | Co | 59 | 183728.584 | 0.533 | **100.561836** | 2.19 | 2.2 | ug/L |
| | Ni | 60 | 35828.598 | 0.104 | **100.314096** | 2.04 | 2.0 | ug/L |
| | Ni | 62 | 5327.178 | 0.015 | **100.660241** | 2.23 | 2.2 | ug/L |
| | Cu | 63 | 86329.820 | 0.250 | **100.338809** | 1.68 | 1.7 | ug/L |
| | Cu | 65 | 40435.362 | 0.117 | **100.232986** | 2.13 | 2.1 | ug/L |
| | Zn | 66 | 25688.162 | 0.074 | **99.872722** | 2.50 | 2.5 | ug/L |
| | Zn | 67 | 5955.639 | 0.013 | **100.458039** | 4.45 | 4.4 | ug/L |
| | Zn | 68 | 18700.036 | 0.054 | **100.226807** | 1.11 | 1.1 | ug/L |
| | V | 51 | 189888.394 | 0.551 | **100.567641** | 2.03 | 2.0 | ug/L |
| | Cr | 52 | 164125.907 | 0.466 | **100.460074** | 2.01 | 2.0 | ug/L |
| | Cr | 53 | 35553.307 | 0.059 | **99.921730** | 1.91 | 1.9 | ug/L |
| | Mn | 55 | 275239.745 | 0.797 | **100.433244** | 1.49 | 1.5 | ug/L |
| | Fe | 54 | 148289.203 | 0.395 | **1000.056557** | 20.20 | 2.0 | ug/L |
| | Fe | 57 | 56375.160 | 0.162 | **1000.035534** | 10.66 | 1.1 | ug/L |
| | As | 75 | 28415.535 | 0.065 | **99.861042** | 2.72 | 2.7 | ug/L |
| | Se | 77 | 12303.165 | 0.024 | **499.966825** | 10.22 | 2.0 | ug/L |
| | Se | 82 | 13960.802 | 0.032 | **499.129168** | 12.35 | 2.5 | ug/L |
| | Sr | 88 | 370966.211 | 0.850 | **99.667868** | 2.88 | 2.9 | ug/L |
| > | Y | 89 | 436680.315 | 436680.315 | | | | ug/L |
| | Mo | 95 | 45763.079 | 0.105 | **99.903920** | 2.68 | 2.7 | ug/L |
| | Mo | 97 | 27879.118 | 0.064 | **99.803429** | 3.59 | 3.6 | ug/L |
| | Mo | 98 | 71233.001 | 0.163 | **99.867574** | 3.19 | 3.2 | ug/L |
| | Ag | 107 | 124271.130 | 0.686 | **99.833636** | 0.77 | 0.8 | ug/L |
| | Ag | 109 | 117575.252 | 0.649 | **99.985764** | 1.89 | 1.9 | ug/L |
| | Cd | 111 | 29126.213 | 0.161 | **99.814595** | 1.69 | 1.7 | ug/L |
| | Cd | 114 | 65335.056 | 0.361 | **99.688371** | 1.58 | 1.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 181029.958 | 181029.958 | | | | ug/L |
| \| | Sn | 120 | 115619.770 | 0.635 | **100.072683** | 1.35 | 1.3 | ug/L |
| \| | Sb | 121 | 83794.708 | 0.460 | **100.141714** | 2.11 | 2.1 | ug/L |
| \| | Sb | 123 | 63043.201 | 0.346 | **99.951734** | 2.36 | 2.4 | ug/L |
| \| | Ba | 135 | 21416.453 | 0.115 | **99.843186** | 3.58 | 3.6 | ug/L |
| \| | Ba | 137 | 37404.074 | 0.201 | **99.905803** | 2.65 | 2.7 | ug/L |
| \| | Tb | 159 | 175991.931 | -0.002 | | | | ug/L |
| \|> | Ho | 165 | 185675.636 | 185675.636 | | | | ug/L |
| \| | Tl | 203 | 71695.432 | 0.386 | **99.965679** | 3.70 | 3.7 | ug/L |
| \| | Tl | 205 | 174453.739 | 0.940 | **100.005186** | 2.60 | 2.6 | ug/L |
| \| | Pb | 208 | 237731.999 | 1.280 | **100.126314** | 2.60 | 2.6 | ug/L |
| | Kr | 83 | 20.533 | 0.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 5**
Sample Date/Time: Monday, February 15, 2010 12:02:56
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\Std 5.006
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 19207.730 | -0.018 | | | | ug/L |
| | Li | 7 | 202469.983 | 0.589 | **201.461565** | 8.86 | 4.4 | ug/L |
| | Be | 9 | 46949.588 | 0.139 | **201.754527** | 6.45 | 3.2 | ug/L |
| | B | 11 | 59510.822 | 0.174 | **201.997097** | 7.18 | 3.6 | ug/L |
| | Na | 23 | 6251178.260 | 18.411 | **10001.695226** | 349.69 | 3.5 | ug/L |
| | Mg | 24 | 4505737.756 | 13.295 | **10001.336314** | 420.76 | 4.2 | ug/L |
| | Al | 27 | 14933093.384 | 44.058 | **10203.493346** | 147.41 | 1.4 | ug/L |
| | K | 39 | 14187598.929 | 41.702 | **9999.394149** | 639.67 | 6.4 | ug/L |
| | Ca | 43 | 50098.650 | 0.147 | **9999.118705** | 199.21 | 2.0 | ug/L |
| > | Sc | 45 | 338944.225 | 338944.225 | | | | ug/L |
| | Ti | 49 | 24599.945 | 0.071 | **200.362483** | 3.96 | 2.0 | ug/L |
| | Co | 59 | 355741.054 | 1.050 | **199.620039** | 6.14 | 3.1 | ug/L |
| | Ni | 60 | 68885.874 | 0.203 | **199.270308** | 5.67 | 2.8 | ug/L |
| | Ni | 62 | 10536.547 | 0.031 | **200.550665** | 4.73 | 2.4 | ug/L |
| | Cu | 63 | 164931.647 | 0.486 | **199.056063** | 6.25 | 3.1 | ug/L |
| | Cu | 65 | 78097.244 | 0.230 | **199.443219** | 4.92 | 2.5 | ug/L |
| | Zn | 66 | 50395.346 | 0.148 | **200.037516** | 7.68 | 3.8 | ug/L |
| | Zn | 67 | 9361.694 | 0.024 | **196.124926** | 3.86 | 2.0 | ug/L |
| | Zn | 68 | 35977.308 | 0.106 | **199.430295** | 6.04 | 3.0 | ug/L |
| | V | 51 | 372025.399 | 1.098 | **200.064955** | 1.21 | 0.6 | ug/L |
| | Cr | 52 | 315500.467 | 0.921 | **199.703045** | 2.26 | 1.1 | ug/L |
| | Cr | 53 | 51317.279 | 0.107 | **197.427178** | 3.63 | 1.8 | ug/L |
| | Mn | 55 | 539167.398 | 1.590 | **200.028962** | 3.77 | 1.9 | ug/L |
| | Fe | 54 | 1351644.401 | 3.953 | **9999.936904** | 77.98 | 0.8 | ug/L |
| | Fe | 57 | 546768.807 | 1.611 | **9999.753898** | 242.65 | 2.4 | ug/L |
| | As | 75 | 55494.842 | 0.131 | **200.011535** | 4.63 | 2.3 | ug/L |
| | Se | 77 | 22145.165 | 0.049 | **999.441399** | 30.37 | 3.0 | ug/L |
| | Se | 82 | 27615.922 | 0.065 | **1003.574399** | 28.02 | 2.8 | ug/L |
| | Sr | 88 | 745857.175 | 1.761 | **201.277067** | 4.17 | 2.1 | ug/L |
| > | Y | 89 | 423576.994 | 423576.994 | | | | ug/L |
| | Mo | 95 | 91374.189 | 0.216 | **201.102590** | 5.20 | 2.6 | ug/L |
| | Mo | 97 | 56254.290 | 0.133 | **201.455855** | 4.47 | 2.2 | ug/L |
| | Mo | 98 | 143439.609 | 0.339 | **201.402193** | 7.40 | 3.7 | ug/L |
| | Ag | 107 | 245165.628 | 1.392 | **200.491809** | 7.29 | 3.6 | ug/L |
| | Ag | 109 | 231342.503 | 1.314 | **200.431282** | 7.35 | 3.7 | ug/L |
| | Cd | 111 | 57810.627 | 0.328 | **200.733889** | 7.52 | 3.7 | ug/L |
| | Cd | 114 | 131236.086 | 0.745 | **201.127163** | 4.75 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 176196.014 | 176196.014 | | | | ug/L |
| \| | Sn | 120 | 230355.675 | 1.305 | **201.016240** | 4.90 | 2.4 | ug/L |
| \| | Sb | 121 | 163983.902 | 0.928 | **200.353643** | 7.90 | 3.9 | ug/L |
| \| | Sb | 123 | 125781.455 | 0.712 | **201.039284** | 6.46 | 3.2 | ug/L |
| \| | Ba | 135 | 44205.997 | 0.241 | **201.578997** | 2.51 | 1.2 | ug/L |
| \| | Ba | 137 | 75777.467 | 0.413 | **200.902427** | 4.20 | 2.1 | ug/L |
| \| | Tb | 159 | 173327.259 | -0.006 | | | | ug/L |
| \|> | Ho | 165 | 183623.909 | 183623.909 | | | | ug/L |
| \| | Tl | 203 | 142641.738 | 0.777 | **200.237704** | 2.59 | 1.3 | ug/L |
| \| | Tl | 205 | 345420.706 | 1.881 | **200.054186** | 2.90 | 1.5 | ug/L |
| \| | Pb | 208 | 469227.449 | 2.555 | **199.978365** | 1.44 | 0.7 | ug/L |
| | Kr | 83 | 22.667 | 2.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

File Name: 02-15.cal
File Path: C:\Elandata\System\02-15.cal
Calibration Type: External Calibration

| Analyte | Mass | Curve Type | Slope | Intercept | Corr. Coeff. |
|---|---|---|---|---|---|
| Li | 6.015 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Li | 7.016 | Simple Linear | 0.002941075 | -0.003647554 | 0.999761 |
| Be | 9.012 | Simple Linear | 0.000691421 | -0.000992701 | 0.999687 |
| B | 11.009 | Simple Linear | 0.000868946 | -0.001358801 | 0.999609 |
| Na | 22.990 | Simple Linear | 0.001841900 | -0.010805727 | 0.999997 |
| Mg | 23.985 | Simple Linear | 0.001329920 | -0.006112101 | 0.999998 |
| Al | 26.982 | Simple Linear | 0.004324330 | -0.065621098 | 0.999990 |
| K | 38.964 | Simple Linear | 0.004168328 | 0.021716205 | 1.000000 |
| Ca | 42.959 | Simple Linear | 0.000014726 | 0.000056119 | 0.999998 |
| Sc | 44.956 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Ti | 48.948 | Simple Linear | 0.000355435 | 0.000006797 | 0.999984 |
| Co | 58.933 | Simple Linear | 0.005255843 | 0.000391168 | 0.999952 |
| Ni | 59.933 | Simple Linear | 0.001017816 | 0.000380991 | 0.999937 |
| Ni | 61.928 | Simple Linear | 0.000155104 | -0.000111631 | 0.999920 |
| Cu | 62.930 | Simple Linear | 0.002436388 | 0.001447222 | 0.999901 |
| Cu | 64.928 | Simple Linear | 0.001152747 | 0.000403191 | 0.999964 |
| Zn | 65.926 | Simple Linear | 0.000740578 | 0.000237329 | 0.999998 |
| Zn | 66.927 | Simple Linear | 0.000116690 | 0.000907286 | 0.998519 |
| Zn | 67.925 | Simple Linear | 0.000529092 | 0.000186440 | 0.999962 |
| V | 50.944 | Simple Linear | 0.005492812 | -0.001040156 | 0.999965 |
| Cr | 51.941 | Simple Linear | 0.004610326 | 0.000573644 | 0.999969 |
| Cr | 52.941 | Simple Linear | 0.000520266 | 0.004667394 | 0.999354 |
| Mn | 54.938 | Simple Linear | 0.007957730 | -0.001561050 | 0.999980 |
| Fe | 53.940 | Simple Linear | 0.000395368 | -0.000537579 | 1.000000 |
| Fe | 56.935 | Simple Linear | 0.000161145 | 0.000053762 | 1.000000 |
| As | 74.922 | Simple Linear | 0.000658577 | -0.000262814 | 0.999998 |
| Se | 76.920 | Simple Linear | 0.000048396 | 0.000239968 | 0.999999 |
| Se | 81.917 | Simple Linear | 0.000065092 | -0.000103871 | 0.999947 |
| Sr | 87.906 | Simple Linear | 0.008776519 | -0.005427713 | 0.999831 |
| Y | 88.905 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Mo | 94.906 | Simple Linear | 0.001075872 | -0.000589144 | 0.999881 |
| Mo | 96.906 | Simple Linear | 0.000661885 | -0.000514739 | 0.999790 |
| Mo | 97.906 | Simple Linear | 0.001688677 | -0.001341594 | 0.999807 |
| Ag | 106.905 | Simple Linear | 0.006950317 | -0.001375924 | 0.999974 |
| Ag | 108.905 | Simple Linear | 0.006562104 | -0.001618478 | 0.999982 |
| Cd | 110.904 | Simple Linear | 0.001637496 | -0.000435519 | 0.999944 |
| Cd | 113.904 | Simple Linear | 0.003714235 | -0.001946610 | 0.999867 |
| In | 114.904 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Sn | 119.902 | Simple Linear | 0.006512217 | -0.004507829 | 0.999899 |
| Sb | 120.904 | Simple Linear | 0.004643963 | -0.002179653 | 0.999986 |
| Sb | 122.904 | Simple Linear | 0.003554901 | -0.002977972 | 0.999895 |
| Ba | 134.906 | Simple Linear | 0.001199504 | -0.001093054 | 0.999756 |
| Ba | 136.905 | Simple Linear | 0.002058972 | -0.001007523 | 0.999920 |
| Tb | 158.925 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Ho | 164.930 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Tl | 202.972 | Simple Linear | 0.003879771 | -0.000040584 | 0.999994 |
| Tl | 204.975 | Simple Linear | 0.009402132 | 0.000334501 | 1.000000 |
| Pb | 207.977 | Simple Linear | 0.012773091 | 0.000974111 | 0.999998 |

00333

| | | | | | |
|---|---|---|---|---|---|
| Kr | 82.914 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 1**
Sample Date/Time: Monday, February 15, 2010 12:05:37
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 1.007
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24620.863 | -0.003 | | | | ug/L |
| | Li | 7 | 100680.191 | 0.283 | **97.505896** | 6.39 | 6.6 | ug/L |
| | Be | 9 | 23025.748 | 0.067 | **97.848637** | 3.07 | 3.1 | ug/L |
| | B | 11 | 29871.228 | 0.085 | **99.486755** | 3.14 | 3.2 | ug/L |
| | Na | 23 | 3162085.967 | 9.121 | **4957.777571** | 86.46 | 1.7 | ug/L |
| | Mg | 24 | 2294597.763 | 6.644 | **5000.687203** | 127.14 | 2.5 | ug/L |
| | Al | 27 | 7496317.066 | 21.709 | **5035.360632** | 194.52 | 3.9 | ug/L |
| | K | 39 | 7498786.174 | 21.552 | **5165.105473** | 179.29 | 3.5 | ug/L |
| | Ca | 43 | 25488.833 | 0.073 | **4974.188162** | 159.06 | 3.2 | ug/L |
| > | Sc | 45 | 345428.231 | 345428.231 | | | | ug/L |
| | Ti | 49 | 12568.927 | 0.035 | **98.559782** | 2.58 | 2.6 | ug/L |
| | Co | 59 | 177503.783 | 0.514 | **97.719230** | 3.35 | 3.4 | ug/L |
| | Ni | 60 | 34925.123 | 0.101 | **98.961038** | 3.55 | 3.6 | ug/L |
| | Ni | 62 | 5293.822 | 0.015 | **98.958973** | 3.81 | 3.8 | ug/L |
| | Cu | 63 | 83329.644 | 0.241 | **98.370968** | 3.17 | 3.2 | ug/L |
| | Cu | 65 | 39432.868 | 0.114 | **98.624945** | 4.15 | 4.2 | ug/L |
| | Zn | 66 | 25332.312 | 0.073 | **98.298362** | 1.43 | 1.5 | ug/L |
| | Zn | 67 | 5740.815 | 0.013 | **101.916181** | 10.89 | 10.7 | ug/L |
| | Zn | 68 | 18006.398 | 0.052 | **97.355618** | 4.28 | 4.4 | ug/L |
| | V | 51 | 187150.403 | 0.542 | **98.905813** | 2.24 | 2.3 | ug/L |
| | Cr | 52 | 159907.826 | 0.454 | **98.245328** | 3.06 | 3.1 | ug/L |
| | Cr | 53 | 33352.828 | 0.053 | **92.052055** | 5.49 | 6.0 | ug/L |
| | Mn | 55 | 266164.974 | 0.770 | **97.005534** | 4.49 | 4.6 | ug/L |
| | Fe | 54 | 679251.430 | 1.933 | **4889.329372** | 186.29 | 3.8 | ug/L |
| | Fe | 57 | 268802.733 | 0.777 | **4819.478821** | 177.03 | 3.7 | ug/L |
| | As | 75 | 28153.157 | 0.066 | **100.275405** | 2.07 | 2.1 | ug/L |
| | Se | 77 | 11928.578 | 0.024 | **491.199589** | 20.96 | 4.3 | ug/L |
| | Se | 82 | 13882.457 | 0.032 | **496.819690** | 11.18 | 2.3 | ug/L |
| | Sr | 88 | 371851.833 | 0.863 | **99.000166** | 3.48 | 3.5 | ug/L |
| > | Y | 89 | 430691.765 | 430691.765 | | | | ug/L |
| | Mo | 95 | 45929.437 | 0.107 | **99.679842** | 3.84 | 3.9 | ug/L |
| | Mo | 97 | 28131.367 | 0.065 | **99.461831** | 3.71 | 3.7 | ug/L |
| | Mo | 98 | 71621.447 | 0.166 | **99.275555** | 4.27 | 4.3 | ug/L |
| | Ag | 107 | 121165.079 | 0.683 | **98.488426** | 2.45 | 2.5 | ug/L |
| | Ag | 109 | 114972.283 | 0.648 | **99.029905** | 1.72 | 1.7 | ug/L |
| | Cd | 111 | 28960.095 | 0.163 | **99.977052** | 2.45 | 2.4 | ug/L |
| | Cd | 114 | 65272.053 | 0.368 | **99.612823** | 2.35 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 177367.632 | 177367.632 | | | | ug/L |
| \| | Sn | 120 | 114386.223 | 0.642 | **99.227411** | 1.52 | 1.5 | ug/L |
| \| | Sb | 121 | 83277.704 | 0.467 | **100.943205** | 0.92 | 0.9 | ug/L |
| L | Sb | 123 | 63187.303 | 0.354 | **100.360738** | 1.14 | 1.1 | ug/L |
| Γ | Ba | 135 | 21238.619 | 0.116 | **97.808737** | 3.08 | 3.1 | ug/L |
| \| | Ba | 137 | 36560.720 | 0.200 | **97.679136** | 3.95 | 4.0 | ug/L |
| \| | Tb | 159 | 173114.351 | -0.002 | | | | ug/L |
| \|> | Ho | 165 | 182705.318 | 182705.318 | | | | ug/L |
| \| | Tl | 203 | 71216.851 | 0.390 | **100.497899** | 2.81 | 2.8 | ug/L |
| \| | Tl | 205 | 172128.075 | 0.942 | **100.188695** | 2.62 | 2.6 | ug/L |
| L | Pb | 208 | 230652.544 | 1.263 | **98.766550** | 2.24 | 2.3 | ug/L |
| | Kr | 83 | 21.267 | 0.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 97.506 | | |
| Be | 9 | 97.849 | | |
| B | 11 | 99.487 | | |
| Na | 23 | 99.156 | | |
| Mg | 24 | 100.014 | | |
| Al | 27 | 98.733 | | |
| K | 39 | 103.302 | | |
| Ca | 43 | 99.484 | | |
| Sc | 45 | | 96.622 | |
| Ti | 49 | 98.560 | | |
| Co | 59 | 97.719 | | |
| Ni | 60 | 98.961 | | |
| Ni | 62 | 98.959 | | |
| Cu | 63 | 98.371 | | |
| Cu | 65 | 98.625 | | |
| Zn | 66 | 98.298 | | |
| Zn | 67 | 101.916 | | |
| Zn | 68 | 97.356 | | |
| V | 51 | 98.906 | | |
| Cr | 52 | 98.245 | | |
| Cr | 53 | 92.052 | | |
| Mn | 55 | 97.006 | | |
| Fe | 54 | 97.787 | | |
| Fe | 57 | 96.390 | | |
| As | 75 | 100.275 | | |
| Se | 77 | 98.240 | | |
| Se | 82 | 99.364 | | |
| Sr | 88 | 99.000 | | |
| Y | 89 | | 96.835 | |
| Mo | 95 | 99.680 | | |
| Mo | 97 | 99.462 | | |
| Mo | 98 | 99.276 | | |
| Ag | 107 | 98.488 | | |
| Ag | 109 | 99.030 | | |
| Cd | 111 | 99.977 | | |
| Cd | 114 | 99.613 | | |
| In | 115 | | 93.447 | |
| Sn | 120 | 99.227 | | |
| Sb | 121 | 100.943 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 100.361 | |
| Ba | 135 | 97.809 | |
| Ba | 137 | 97.679 | |
| Tb | 159 | | |
| Ho | 165 | | 96.690 |
| Tl | 203 | 100.498 | |
| Tl | 205 | 100.189 | |
| Pb | 208 | 98.767 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 2**
Sample Date/Time: Monday, February 15, 2010 12:13:03
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 2.009
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28478.271 | 0.007 | | | | ug/L |
| | Li | 7 | 5207.764 | 0.006 | **3.443349** | 0.18 | 5.2 | ug/L |
| | Be | 9 | 476.015 | 0.001 | **3.391697** | 0.11 | 3.1 | ug/L |
| | B | 11 | 6677.568 | 0.018 | **22.122192** | 0.72 | 3.3 | ug/L |
| | Na | 23 | 76950.157 | 0.188 | **108.137272** | 6.29 | 5.8 | ug/L |
| | Mg | 24 | 22365.807 | 0.064 | **52.823948** | 0.64 | 1.2 | ug/L |
| | Al | 27 | 73741.930 | 0.211 | **63.978106** | 2.76 | 4.3 | ug/L |
| | K | 39 | 171695.415 | 0.332 | **74.402558** | 5.69 | 7.6 | ug/L |
| | Ca | 43 | 1233.433 | 0.003 | **204.002440** | 31.48 | 15.4 | ug/L |
| > | Sc | 45 | 346280.276 | 346280.276 | | | | ug/L |
| | Ti | 49 | 1102.079 | 0.002 | **5.123965** | 0.70 | 13.7 | ug/L |
| | Co | 59 | 3682.214 | 0.011 | **1.935875** | 0.07 | 3.4 | ug/L |
| | Ni | 60 | 790.707 | 0.002 | **1.824721** | 0.06 | 3.4 | ug/L |
| | Ni | 62 | 153.335 | 0.000 | **2.971312** | 0.21 | 7.0 | ug/L |
| | Cu | 63 | 1904.236 | 0.005 | **1.576814** | 0.06 | 3.7 | ug/L |
| | Cu | 65 | 900.053 | 0.002 | **1.807910** | 0.00 | 0.1 | ug/L |
| | Zn | 66 | 1736.196 | 0.005 | **6.029741** | 0.24 | 3.9 | ug/L |
| | Zn | 67 | 1754.867 | 0.001 | **2.878254** | 1.02 | 35.4 | ug/L |
| | Zn | 68 | 1414.797 | 0.004 | **6.512451** | 0.22 | 3.4 | ug/L |
| | V | 51 | 18658.892 | 0.054 | **10.057273** | 0.25 | 2.5 | ug/L |
| | Cr | 52 | 9937.749 | 0.019 | **4.026958** | 0.26 | 6.5 | ug/L |
| | Cr | 53 | 16801.000 | 0.005 | **-0.243745** | 4.80 | 1971.2 | ug/L |
| | Mn | 55 | 5946.298 | 0.017 | **2.283408** | 0.09 | 4.0 | ug/L |
| | Fe | 54 | 25386.257 | 0.039 | **99.095698** | 8.62 | 8.7 | ug/L |
| | Fe | 57 | 6125.773 | 0.016 | **98.478676** | 6.64 | 6.7 | ug/L |
| | As | 75 | 675.969 | 0.002 | **3.413503** | 0.27 | 8.0 | ug/L |
| | Se | 77 | 1676.850 | 0.000 | **-0.421563** | 2.70 | 639.8 | ug/L |
| | Se | 82 | 149.997 | 0.000 | **6.929908** | 0.27 | 3.9 | ug/L |
| | Sr | 88 | 3880.312 | 0.009 | **1.630132** | 0.02 | 1.1 | ug/L |
| > | Y | 89 | 428496.963 | 428496.963 | | | | ug/L |
| | Mo | 95 | 960.727 | 0.002 | **2.607020** | 0.07 | 2.7 | ug/L |
| | Mo | 97 | 552.020 | 0.001 | **2.692275** | 0.02 | 0.6 | ug/L |
| | Mo | 98 | 1479.923 | 0.003 | **2.808168** | 0.07 | 2.7 | ug/L |
| | Ag | 107 | 1274.106 | 0.007 | **1.225291** | 0.05 | 3.9 | ug/L |
| | Ag | 109 | 1234.766 | 0.007 | **1.302343** | 0.04 | 3.1 | ug/L |
| | Cd | 111 | 599.190 | 0.003 | **2.317358** | 0.06 | 2.4 | ug/L |
| | Cd | 114 | 1340.099 | 0.008 | **2.557067** | 0.08 | 3.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 177843.003 | 177843.003 | | | | ug/L |
| \| | Sn | 120 | 5802.831 | 0.029 | **5.203977** | 0.20 | 3.9 | ug/L |
| \| | Sb | 121 | 5234.448 | 0.027 | **6.176927** | 0.23 | 3.7 | ug/L |
| \| | Sb | 123 | 3980.780 | 0.020 | **6.441406** | 0.33 | 5.1 | ug/L |
| \| | Ba | 135 | 1095.411 | 0.006 | **5.957203** | 0.17 | 2.9 | ug/L |
| \| | Ba | 137 | 1850.889 | 0.010 | **5.463586** | 0.05 | 1.0 | ug/L |
| \| | Tb | 159 | 168876.159 | -0.009 | | | | ug/L |
| \|> | Ho | 165 | 179441.874 | 179441.874 | | | | ug/L |
| \| | Tl | 203 | 1476.808 | 0.008 | **2.122717** | 0.05 | 2.2 | ug/L |
| \| | Tl | 205 | 3441.437 | 0.019 | **2.003245** | 0.09 | 4.4 | ug/L |
| \| | Pb | 208 | 2320.804 | 0.013 | **0.924621** | 0.07 | 7.4 | ug/L |
| | Kr | 83 | 17.600 | -2.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 172.167 | | |
| Be | 9 | 169.585 | | |
| B | 11 | 110.611 | | |
| Na | 23 | 108.137 | | |
| Mg | 24 | 105.648 | | |
| Al | 27 | 127.956 | | |
| K | 39 | 99.203 | | |
| Ca | 43 | 102.001 | | |
| Sc | 45 | | 96.860 | |
| Ti | 49 | 102.479 | | |
| Co | 59 | 96.794 | | |
| Ni | 60 | 91.236 | | |
| Ni | 62 | 148.566 | | |
| Cu | 63 | 78.841 | | |
| Cu | 65 | 90.396 | | |
| Zn | 66 | 100.496 | | |
| Zn | 67 | 47.971 | | |
| Zn | 68 | 108.541 | | |
| V | 51 | 100.573 | | |
| Cr | 52 | 100.674 | | |
| Cr | 53 | -6.094 | | |
| Mn | 55 | 114.170 | | |
| Fe | 54 | 99.096 | | |
| Fe | 57 | 98.479 | | |
| As | 75 | 85.338 | | |
| Se | 77 | -8.431 | | |
| Se | 82 | 138.598 | | |
| Sr | 88 | 163.013 | | |
| Y | 89 | | 96.342 | |
| Mo | 95 | 130.351 | | |
| Mo | 97 | 134.614 | | |
| Mo | 98 | 140.408 | | |
| Ag | 107 | 122.529 | | |
| Ag | 109 | 130.234 | | |
| Cd | 111 | 115.868 | | |
| Cd | 114 | 127.853 | | |
| In | 115 | | 93.697 | |
| Sn | 120 | 130.099 | | |
| Sb | 121 | 123.539 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 128.828 | |
| Ba | 135 | 119.144 | |
| Ba | 137 | 109.272 | |
| Tb | 159 | | |
| Ho | 165 | | 94.963 |
| Tl | 203 | 106.136 | |
| Tl | 205 | 100.162 | |
| Pb | 208 | 92.462 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 3**
Sample Date/Time: Monday, February 15, 2010 12:16:25
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 3.010
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28633.709 | 0.009 | | | | ug/L |
| | Li | 7 | 3163.984 | 0.001 | **1.472361** | 0.04 | 2.7 | ug/L |
| | Be | 9 | 7.333 | -0.000 | **1.434361** | 0.00 | 0.3 | ug/L |
| | B | 11 | 791.374 | 0.001 | **2.589570** | 0.19 | 7.2 | ug/L |
| | Na | 23 | 12109.614 | 0.001 | **6.625058** | 2.16 | 32.6 | ug/L |
| | Mg | 24 | 200.003 | 0.000 | **4.685547** | 0.22 | 4.8 | ug/L |
| | Al | 27 | 906.720 | 0.001 | **15.290607** | 0.01 | 0.1 | ug/L |
| | K | 39 | 56439.996 | 0.000 | **-5.093871** | 2.12 | 41.6 | ug/L |
| | Ca | 43 | 169.335 | -0.000 | **-4.864706** | 9.10 | 187.1 | ug/L |
| > | Sc | 45 | 342257.254 | 342257.254 | | | | ug/L |
| | Ti | 49 | 492.016 | 0.000 | **0.199750** | 0.09 | 43.0 | ug/L |
| | Co | 59 | 29.333 | 0.000 | **-0.072344** | 0.00 | 4.3 | ug/L |
| | Ni | 60 | 13.333 | -0.000 | **-0.379879** | 0.02 | 4.5 | ug/L |
| | Ni | 62 | 33.333 | 0.000 | **0.747675** | 0.37 | 50.1 | ug/L |
| | Cu | 63 | 773.372 | 0.002 | **0.246754** | 0.05 | 21.7 | ug/L |
| | Cu | 65 | 396.010 | 0.001 | **0.557395** | 0.06 | 10.1 | ug/L |
| | Zn | 66 | 232.004 | 0.000 | **0.172460** | 0.07 | 39.8 | ug/L |
| | Zn | 67 | 1556.158 | 0.001 | **-1.589702** | 2.34 | 147.0 | ug/L |
| | Zn | 68 | 248.004 | 0.000 | **0.165469** | 0.19 | 117.7 | ug/L |
| | V | 51 | -174.074 | -0.000 | **0.152713** | 0.47 | 307.8 | ug/L |
| | Cr | 52 | 3317.382 | 0.000 | **-0.100590** | 0.01 | 11.9 | ug/L |
| | Cr | 53 | 16607.913 | 0.005 | **-0.294921** | 3.09 | 1047.0 | ug/L |
| | Mn | 55 | 210.670 | 0.000 | **0.201145** | 0.01 | 4.0 | ug/L |
| | Fe | 54 | 11796.214 | -0.000 | **0.678675** | 0.62 | 90.8 | ug/L |
| | Fe | 57 | 574.021 | -0.000 | **-1.020353** | 0.72 | 70.6 | ug/L |
| | As | 75 | -299.309 | -0.000 | **-0.063497** | 0.49 | 775.5 | ug/L |
| | Se | 77 | 1626.172 | 0.000 | **-1.651414** | 0.91 | 55.2 | ug/L |
| | Se | 82 | 1.127 | -0.000 | **1.595275** | 0.19 | 11.9 | ug/L |
| | Sr | 88 | 82.000 | 0.000 | **0.620274** | 0.00 | 0.6 | ug/L |
| > | Y | 89 | 421941.306 | 421941.306 | | | | ug/L |
| | Mo | 95 | 18.000 | 0.000 | **0.563616** | 0.02 | 2.8 | ug/L |
| | Mo | 97 | 12.000 | 0.000 | **0.789030** | 0.01 | 1.6 | ug/L |
| | Mo | 98 | 22.594 | -0.000 | **0.794436** | 0.00 | 0.4 | ug/L |
| | Ag | 107 | 6.000 | 0.000 | **0.199308** | 0.00 | 1.4 | ug/L |
| | Ag | 109 | 4.000 | 0.000 | **0.247976** | 0.00 | 0.7 | ug/L |
| | Cd | 111 | 3.167 | 0.000 | **0.270528** | 0.00 | 0.4 | ug/L |
| | Cd | 114 | 6.947 | 0.000 | **0.538491** | 0.00 | 0.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| > | In | 115 | 175920.328 | 175920.328 | | | | ug/L |
| | Sn | 120 | 503.325 | -0.000 | **0.631571** | 0.08 | 13.0 | ug/L |
| | Sb | 121 | 494.016 | -0.000 | **0.442013** | 0.04 | 10.0 | ug/L |
| | Sb | 123 | 414.426 | -0.000 | **0.806419** | 0.04 | 4.5 | ug/L |
| | Ba | 135 | 13.333 | 0.000 | **0.930184** | 0.02 | 2.5 | ug/L |
| | Ba | 137 | 11.333 | -0.000 | **0.484645** | 0.02 | 3.7 | ug/L |
| | Tb | 159 | 167056.609 | -0.001 | | | | ug/L |
| > | Ho | 165 | 176071.672 | 176071.672 | | | | ug/L |
| | Tl | 203 | 10.000 | 0.000 | **0.016012** | 0.01 | 31.8 | ug/L |
| | Tl | 205 | 25.333 | 0.000 | **-0.022128** | 0.01 | 31.8 | ug/L |
| | Pb | 208 | 141.334 | 0.001 | **-0.025860** | 0.00 | 14.3 | ug/L |
| | Kr | 83 | 17.800 | -2.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.735 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 94.868 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 92.684 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 93.179 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 12:19:28
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.011
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23931.344 | -0.004 | | | | ug/L |
| | Li | 7 | 100897.054 | 0.290 | **99.845167** | 2.96 | 3.0 | ug/L |
| | Be | 9 | 22923.461 | 0.068 | **99.498599** | 2.61 | 2.6 | ug/L |
| | B | 11 | 29238.173 | 0.085 | **99.492030** | 3.34 | 3.4 | ug/L |
| | Na | 23 | 3310445.610 | 9.764 | **5306.711080** | 185.35 | 3.5 | ug/L |
| | Mg | 24 | 2330140.955 | 6.895 | **5189.490162** | 236.83 | 4.6 | ug/L |
| | Al | 27 | 7486436.382 | 22.154 | **5138.289885** | 125.38 | 2.4 | ug/L |
| | K | 39 | 7702955.894 | 22.629 | **5423.495622** | 209.57 | 3.9 | ug/L |
| | Ca | 43 | 25157.113 | 0.074 | **5015.339371** | 146.96 | 2.9 | ug/L |
| > | Sc | 45 | 337990.761 | 337990.761 | | | | ug/L |
| | Ti | 49 | 12544.221 | 0.036 | **100.580570** | 0.57 | 0.6 | ug/L |
| | Co | 59 | 176207.476 | 0.521 | **99.118946** | 1.49 | 1.5 | ug/L |
| | Ni | 60 | 34417.521 | 0.102 | **99.644823** | 2.65 | 2.7 | ug/L |
| | Ni | 62 | 5085.682 | 0.015 | **97.183247** | 4.61 | 4.7 | ug/L |
| | Cu | 63 | 83160.505 | 0.246 | **100.318362** | 1.63 | 1.6 | ug/L |
| | Cu | 65 | 38935.629 | 0.115 | **99.502841** | 1.57 | 1.6 | ug/L |
| | Zn | 66 | 25333.657 | 0.075 | **100.472224** | 1.26 | 1.3 | ug/L |
| | Zn | 67 | 5285.816 | 0.012 | **93.495956** | 4.06 | 4.3 | ug/L |
| | Zn | 68 | 18225.567 | 0.053 | **100.737738** | 2.31 | 2.3 | ug/L |
| | V | 51 | 186139.112 | 0.551 | **100.525929** | 1.74 | 1.7 | ug/L |
| | Cr | 52 | 159333.967 | 0.462 | **100.068732** | 1.69 | 1.7 | ug/L |
| | Cr | 53 | 33113.118 | 0.054 | **94.752813** | 3.28 | 3.5 | ug/L |
| | Mn | 55 | 264403.498 | 0.782 | **98.441445** | 1.07 | 1.1 | ug/L |
| | Fe | 54 | 675952.826 | 1.966 | **4972.814226** | 78.42 | 1.6 | ug/L |
| | Fe | 57 | 269722.490 | 0.796 | **4941.114474** | 40.38 | 0.8 | ug/L |
| | As | 75 | 27597.035 | 0.066 | **100.594588** | 1.58 | 1.6 | ug/L |
| | Se | 77 | 11859.802 | 0.024 | **501.121342** | 3.11 | 0.6 | ug/L |
| | Se | 82 | 13723.912 | 0.033 | **502.611109** | 2.35 | 0.5 | ug/L |
| | Sr | 88 | 365977.405 | 0.870 | **99.700827** | 0.83 | 0.8 | ug/L |
| > | Y | 89 | 420787.318 | 420787.318 | | | | ug/L |
| | Mo | 95 | 45198.406 | 0.107 | **100.366116** | 0.88 | 0.9 | ug/L |
| | Mo | 97 | 27677.051 | 0.066 | **100.117071** | 1.65 | 1.6 | ug/L |
| | Mo | 98 | 70393.617 | 0.167 | **99.835493** | 1.43 | 1.4 | ug/L |
| | Ag | 107 | 120496.432 | 0.688 | **99.194796** | 1.60 | 1.6 | ug/L |
| | Ag | 109 | 114456.630 | 0.654 | **99.852789** | 2.40 | 2.4 | ug/L |
| | Cd | 111 | 28599.737 | 0.163 | **100.000795** | 2.21 | 2.2 | ug/L |
| | Cd | 114 | 64326.755 | 0.367 | **99.424409** | 1.47 | 1.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 175145.915 | 175145.915 | | | | ug/L |
| \| | Sn | 120 | 111400.819 | 0.633 | **97.870388** | 0.88 | 0.9 | ug/L |
| \| | Sb | 121 | 79397.689 | 0.450 | **97.475887** | 2.39 | 2.5 | ug/L |
| L | Sb | 123 | 59917.118 | 0.340 | **96.391901** | 1.59 | 1.6 | ug/L |
| Γ | Ba | 135 | 21232.598 | 0.119 | **100.322769** | 0.64 | 0.6 | ug/L |
| \| | Ba | 137 | 36337.629 | 0.204 | **99.617038** | 1.29 | 1.3 | ug/L |
| \| | Tb | 159 | 168982.603 | -0.000 | | | | ug/L |
| \|> | Ho | 165 | 177982.938 | 177982.938 | | | | ug/L |
| \| | Tl | 203 | 69109.760 | 0.388 | **100.086829** | 1.41 | 1.4 | ug/L |
| \| | Tl | 205 | 169121.012 | 0.950 | **101.035200** | 1.75 | 1.7 | ug/L |
| L | Pb | 208 | 230026.522 | 1.292 | **101.097874** | 1.01 | 1.0 | ug/L |
| | Kr | 83 | 19.933 | -0.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 99.845 | | |
| Be | 9 | 99.499 | | |
| B | 11 | 99.492 | | |
| Na | 23 | 106.134 | | |
| Mg | 24 | 103.790 | | |
| Al | 27 | 100.751 | | |
| K | 39 | 108.470 | | |
| Ca | 43 | 100.307 | | |
| Sc | 45 | | 94.541 | |
| Ti | 49 | 100.581 | | |
| Co | 59 | 99.119 | | |
| Ni | 60 | 99.645 | | |
| Ni | 62 | 97.183 | | |
| Cu | 63 | 100.318 | | |
| Cu | 65 | 99.503 | | |
| Zn | 66 | 100.472 | | |
| Zn | 67 | 93.496 | | |
| Zn | 68 | 100.738 | | |
| V | 51 | 100.526 | | |
| Cr | 52 | 100.069 | | |
| Cr | 53 | 94.753 | | |
| Mn | 55 | 98.441 | | |
| Fe | 54 | 99.456 | | |
| Fe | 57 | 98.822 | | |
| As | 75 | 100.595 | | |
| Se | 77 | 100.224 | | |
| Se | 82 | 100.522 | | |
| Sr | 88 | 99.701 | | |
| Y | 89 | | 94.608 | |
| Mo | 95 | 100.366 | | |
| Mo | 97 | 100.117 | | |
| Mo | 98 | 99.835 | | |
| Ag | 107 | 99.195 | | |
| Ag | 109 | 99.853 | | |
| Cd | 111 | 100.001 | | |
| Cd | 114 | 99.424 | | |
| In | 115 | | 92.276 | |
| Sn | 120 | 97.870 | | |
| Sb | 121 | 97.476 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 96.392 | |
| Ba | 135 | 100.323 | |
| Ba | 137 | 99.617 | |
| Tb | 159 | | |
| Ho | 165 | | 94.191 |
| Tl | 203 | 100.087 | |
| Tl | 205 | 101.035 | |
| Pb | 208 | 101.098 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Monday, February 15, 2010 12:25:14
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 5.012
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28770.220 | 0.008 | | | | ug/L |
| | Li | 7 | 5205.763 | 0.006 | **3.441683** | 0.15 | 4.5 | ug/L |
| | Be | 9 | 485.349 | 0.001 | **3.432064** | 0.18 | 5.2 | ug/L |
| | B | 11 | 6753.633 | 0.018 | **22.385560** | 0.62 | 2.8 | ug/L |
| | Na | 23 | 77690.715 | 0.191 | **109.363675** | 6.05 | 5.5 | ug/L |
| | Mg | 24 | 23435.720 | 0.067 | **55.192171** | 3.37 | 6.1 | ug/L |
| | Al | 27 | 74850.795 | 0.214 | **64.712178** | 1.60 | 2.5 | ug/L |
| | K | 39 | 180561.313 | 0.357 | **80.533143** | 2.40 | 3.0 | ug/L |
| | Ca | 43 | 1221.430 | 0.003 | **201.166230** | 7.59 | 3.8 | ug/L |
| > | Sc | 45 | 346070.485 | 346070.485 | | | | ug/L |
| | Ti | 49 | 1109.414 | 0.002 | **5.180361** | 0.87 | 16.8 | ug/L |
| | Co | 59 | 3779.595 | 0.011 | **1.989662** | 0.03 | 1.5 | ug/L |
| | Ni | 60 | 758.038 | 0.002 | **1.732421** | 0.14 | 8.2 | ug/L |
| | Ni | 62 | 132.001 | 0.000 | **2.575089** | 0.26 | 10.1 | ug/L |
| | Cu | 63 | 2004.928 | 0.006 | **1.697468** | 0.08 | 4.6 | ug/L |
| | Cu | 65 | 841.379 | 0.002 | **1.662264** | 0.13 | 7.9 | ug/L |
| | Zn | 66 | 1844.221 | 0.005 | **6.455874** | 0.34 | 5.3 | ug/L |
| | Zn | 67 | 1608.168 | 0.001 | **-0.733080** | 2.40 | 327.4 | ug/L |
| | Zn | 68 | 1262.770 | 0.003 | **5.690979** | 0.32 | 5.6 | ug/L |
| | V | 51 | 18933.239 | 0.055 | **10.200955** | 0.39 | 3.8 | ug/L |
| | Cr | 52 | 9836.287 | 0.019 | **3.963954** | 0.22 | 5.5 | ug/L |
| | Cr | 53 | 16231.111 | 0.003 | **-3.413670** | 3.25 | 95.1 | ug/L |
| | Mn | 55 | 5873.576 | 0.016 | **2.256434** | 0.02 | 1.0 | ug/L |
| | Fe | 54 | 25167.063 | 0.038 | **97.415700** | 2.22 | 2.3 | ug/L |
| | Fe | 57 | 6207.171 | 0.016 | **99.921546** | 4.43 | 4.4 | ug/L |
| | As | 75 | 754.084 | 0.002 | **3.664200** | 0.41 | 11.3 | ug/L |
| | Se | 77 | 1559.492 | -0.000 | **-6.601415** | 4.79 | 72.6 | ug/L |
| | Se | 82 | 159.266 | 0.000 | **7.223744** | 0.38 | 5.3 | ug/L |
| | Sr | 88 | 3916.331 | 0.009 | **1.631659** | 0.03 | 1.9 | ug/L |
| > | Y | 89 | 431777.096 | 431777.096 | | | | ug/L |
| | Mo | 95 | 1004.066 | 0.002 | **2.684231** | 0.13 | 4.7 | ug/L |
| | Mo | 97 | 618.025 | 0.001 | **2.909064** | 0.15 | 5.3 | ug/L |
| | Mo | 98 | 1607.355 | 0.004 | **2.967322** | 0.02 | 0.8 | ug/L |
| | Ag | 107 | 1254.102 | 0.007 | **1.203335** | 0.01 | 1.0 | ug/L |
| | Ag | 109 | 1219.430 | 0.007 | **1.283450** | 0.04 | 2.9 | ug/L |
| | Cd | 111 | 603.524 | 0.003 | **2.320443** | 0.06 | 2.5 | ug/L |
| | Cd | 114 | 1360.571 | 0.008 | **2.576066** | 0.10 | 3.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 178860.523 | 178860.523 | | | | ug/L |
| \| | Sn | 120 | 5909.586 | 0.030 | **5.266147** | 0.05 | 0.9 | ug/L |
| \| | Sb | 121 | 5543.998 | 0.028 | **6.511631** | 0.09 | 1.4 | ug/L |
| L | Sb | 123 | 4275.020 | 0.021 | **6.867199** | 0.13 | 1.9 | ug/L |
| ⌈ | Ba | 135 | 1046.071 | 0.006 | **5.769291** | 0.12 | 2.1 | ug/L |
| \| | Ba | 137 | 1882.897 | 0.011 | **5.593715** | 0.07 | 1.2 | ug/L |
| \| | Tb | 159 | 168511.847 | -0.003 | | | | ug/L |
| \|> | Ho | 165 | 177890.830 | 177890.830 | | | | ug/L |
| \| | Tl | 203 | 1432.801 | 0.008 | **2.078049** | 0.16 | 7.7 | ug/L |
| \| | Tl | 205 | 3514.803 | 0.020 | **2.064260** | 0.05 | 2.6 | ug/L |
| L | Pb | 208 | 2462.819 | 0.014 | **0.995274** | 0.02 | 2.3 | ug/L |
| | Kr | 83 | 17.400 | -3.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 172.084 | | |
| Be | 9 | 171.603 | | |
| B | 11 | 111.928 | | |
| Na | 23 | 109.364 | | |
| Mg | 24 | 110.384 | | |
| Al | 27 | 129.424 | | |
| K | 39 | 107.378 | | |
| Ca | 43 | 100.583 | | |
| Sc | 45 | | 96.801 | |
| Ti | 49 | 103.607 | | |
| Co | 59 | 99.483 | | |
| Ni | 60 | 86.621 | | |
| Ni | 62 | 128.754 | | |
| Cu | 63 | 84.873 | | |
| Cu | 65 | 83.113 | | |
| Zn | 66 | 107.598 | | |
| Zn | 67 | -12.218 | | |
| Zn | 68 | 94.850 | | |
| V | 51 | 102.010 | | |
| Cr | 52 | 99.099 | | |
| Cr | 53 | -85.342 | | |
| Mn | 55 | 112.822 | | |
| Fe | 54 | 97.416 | | |
| Fe | 57 | 99.922 | | |
| As | 75 | 91.605 | | |
| Se | 77 | -132.028 | | |
| Se | 82 | 144.475 | | |
| Sr | 88 | 163.166 | | |
| Y | 89 | | 97.079 | |
| Mo | 95 | 134.212 | | |
| Mo | 97 | 145.453 | | |
| Mo | 98 | 148.366 | | |
| Ag | 107 | 120.334 | | |
| Ag | 109 | 128.345 | | |
| Cd | 111 | 116.022 | | |
| Cd | 114 | 128.803 | | |
| In | 115 | | 94.233 | |
| Sn | 120 | 131.654 | | |
| Sb | 121 | 130.233 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 137.344 | |
| Ba | 135 | 115.386 | |
| Ba | 137 | 111.874 | |
| Tb | 159 | | |
| Ho | 165 | | 94.142 |
| Tl | 203 | 103.902 | |
| Tl | 205 | 103.213 | |
| Pb | 208 | 99.527 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 12:28:12
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.013
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28464.482 | 0.008 | | | | ug/L |
| | Li | 7 | 3154.647 | 0.001 | **1.459143** | 0.05 | 3.2 | ug/L |
| | Be | 9 | 9.333 | 0.000 | **1.442820** | 0.01 | 0.4 | ug/L |
| | B | 11 | 730.702 | 0.001 | **2.384034** | 0.18 | 7.7 | ug/L |
| | Na | 23 | 12643.726 | 0.003 | **7.472642** | 1.17 | 15.7 | ug/L |
| | Mg | 24 | 233.339 | 0.000 | **4.766527** | 0.53 | 11.1 | ug/L |
| | Al | 27 | 1131.751 | 0.001 | **15.440479** | 0.09 | 0.6 | ug/L |
| | K | 39 | 59865.726 | 0.010 | **-2.725650** | 2.55 | 93.5 | ug/L |
| | Ca | 43 | 157.335 | -0.000 | **-7.276989** | 3.90 | 53.5 | ug/L |
| > | Sc | 45 | 342733.593 | 342733.593 | | | | ug/L |
| | Ti | 49 | 480.682 | 0.000 | **0.102430** | 0.04 | 38.5 | ug/L |
| | Co | 59 | 44.000 | 0.000 | **-0.064286** | 0.01 | 9.5 | ug/L |
| | Ni | 60 | 18.667 | 0.000 | **-0.364983** | 0.02 | 6.1 | ug/L |
| | Ni | 62 | 29.333 | -0.000 | **0.671424** | 0.06 | 8.8 | ug/L |
| | Cu | 63 | 802.042 | 0.002 | **0.279403** | 0.01 | 5.0 | ug/L |
| | Cu | 65 | 345.341 | 0.001 | **0.427729** | 0.07 | 15.3 | ug/L |
| | Zn | 66 | 242.671 | 0.000 | **0.212928** | 0.07 | 30.8 | ug/L |
| | Zn | 67 | 1469.474 | 0.000 | **-3.770819** | 4.00 | 106.2 | ug/L |
| | Zn | 68 | 214.670 | 0.000 | **-0.020417** | 0.09 | 432.1 | ug/L |
| | V | 51 | 604.567 | 0.002 | **0.569884** | 0.61 | 106.5 | ug/L |
| | Cr | 52 | 3258.691 | -0.000 | **-0.140823** | 0.06 | 43.5 | ug/L |
| | Cr | 53 | 15848.990 | 0.002 | **-4.676591** | 3.62 | 77.3 | ug/L |
| | Mn | 55 | 225.337 | 0.000 | **0.206415** | 0.01 | 3.0 | ug/L |
| | Fe | 54 | 11423.967 | -0.001 | **-2.147483** | 2.49 | 116.1 | ug/L |
| | Fe | 57 | 591.356 | -0.000 | **-0.711857** | 1.39 | 195.0 | ug/L |
| | As | 75 | -345.143 | -0.000 | **-0.229640** | 0.63 | 274.1 | ug/L |
| | Se | 77 | 1557.491 | 0.000 | **-4.820477** | 4.42 | 91.7 | ug/L |
| | Se | 82 | 2.254 | 0.000 | **1.637700** | 0.08 | 5.0 | ug/L |
| | Sr | 88 | 78.667 | 0.000 | **0.619403** | 0.00 | 0.2 | ug/L |
| > | Y | 89 | 421003.888 | 421003.888 | | | | ug/L |
| | Mo | 95 | 12.000 | 0.000 | **0.550438** | 0.02 | 2.9 | ug/L |
| | Mo | 97 | 12.667 | 0.000 | **0.791529** | 0.02 | 2.8 | ug/L |
| | Mo | 98 | 26.447 | 0.000 | **0.799831** | 0.01 | 1.6 | ug/L |
| | Ag | 107 | 12.667 | 0.000 | **0.204879** | 0.00 | 0.8 | ug/L |
| | Ag | 109 | 10.000 | 0.000 | **0.253251** | 0.00 | 0.7 | ug/L |
| | Cd | 111 | 4.167 | 0.000 | **0.274160** | 0.00 | 0.4 | ug/L |
| | Cd | 114 | 14.608 | 0.000 | **0.550255** | 0.02 | 3.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 173980.149 | 173980.149 | | | | ug/L |
| \| | Sn | 120 | 448.637 | -0.001 | **0.588722** | 0.01 | 2.0 | ug/L |
| \| | Sb | 121 | 557.354 | 0.000 | **0.527891** | 0.02 | 3.5 | ug/L |
| \| | Sb | 123 | 408.925 | -0.000 | **0.804380** | 0.06 | 8.1 | ug/L |
| \| | Ba | 135 | 8.667 | -0.000 | **0.908610** | 0.04 | 4.3 | ug/L |
| \| | Ba | 137 | 18.000 | 0.000 | **0.503064** | 0.00 | 1.0 | ug/L |
| \| | Tb | 159 | 165965.822 | -0.005 | | | | ug/L |
| \|> | Ho | 165 | 175697.445 | 175697.445 | | | | ug/L |
| \| | Tl | 203 | 13.333 | 0.000 | **0.020937** | 0.01 | 56.3 | ug/L |
| \| | Tl | 205 | 22.667 | 0.000 | **-0.023744** | 0.01 | 22.6 | ug/L |
| \| | Pb | 208 | 112.667 | 0.000 | **-0.038494** | 0.00 | 12.3 | ug/L |
| | Kr | 83 | 18.667 | -1.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.868 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 94.657 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.662 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 92.981 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Monday, February 15, 2010 12:32:08
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSA.014
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26613.989 | 0.004 | | | | ug/L |
| | Li | 7 | 2909.885 | 0.000 | **1.244275** | 0.16 | 12.5 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **1.445740** | 0.02 | 1.5 | ug/L |
| | B | 11 | 952.726 | 0.001 | **3.164933** | 0.17 | 5.4 | ug/L |
| | Na | 23 | 59913207.795 | 176.674 | **95925.480718** | 2192.63 | 2.3 | ug/L |
| | Mg | 24 | 42014016.312 | 123.900 | **93167.976312** | 992.83 | 1.1 | ug/L |
| | Al | 27 | 134716759.869 | 397.346 | **91901.364255** | 1893.09 | 2.1 | ug/L |
| | K | 39 | 123728237.702 | 364.871 | **87529.008801** | 3617.01 | 4.1 | ug/L |
| | Ca | 43 | 498100.098 | 1.469 | **99739.606230** | 3242.03 | 3.3 | ug/L |
| > | Sc | 45 | 339130.171 | 339130.171 | | | | ug/L |
| | Ti | 49 | 248890.867 | 0.733 | **2061.871753** | 68.27 | 3.3 | ug/L |
| | Co | 59 | 3163.317 | 0.009 | **1.686251** | 0.04 | 2.2 | ug/L |
| | Ni | 60 | 906.720 | 0.003 | **2.207833** | 0.07 | 3.0 | ug/L |
| | Ni | 62 | 632.026 | 0.002 | **12.142437** | 1.56 | 12.9 | ug/L |
| | Cu | 63 | 1834.886 | 0.005 | **1.537763** | 0.13 | 8.7 | ug/L |
| | Cu | 65 | 985.397 | 0.003 | **2.078060** | 0.34 | 16.4 | ug/L |
| | Zn | 66 | 916.055 | 0.002 | **2.908528** | 0.36 | 12.3 | ug/L |
| | Zn | 67 | 1381.457 | 0.000 | **-5.646785** | 1.36 | 24.1 | ug/L |
| | Zn | 68 | 292.006 | 0.000 | **0.420467** | 0.13 | 29.9 | ug/L |
| | V | 51 | 981.017 | 0.003 | **0.773265** | 0.39 | 50.3 | ug/L |
| | Cr | 52 | 5963.646 | 0.008 | **1.612765** | 0.17 | 10.6 | ug/L |
| | Cr | 53 | 12595.646 | -0.007 | **-22.217232** | 1.54 | 6.9 | ug/L |
| | Mn | 55 | 19808.146 | 0.058 | **7.467659** | 0.31 | 4.2 | ug/L |
| | Fe | 54 | 13067574.159 | 38.519 | **97428.038905** | 4287.95 | 4.4 | ug/L |
| | Fe | 57 | 5386300.217 | 15.889 | **98598.612678** | 3724.32 | 3.8 | ug/L |
| | As | 75 | -287.040 | -0.000 | **0.016680** | 0.83 | 4970.2 | ug/L |
| | Se | 77 | 1988.257 | 0.001 | **12.103912** | 3.16 | 26.1 | ug/L |
| | Se | 82 | -14.952 | -0.000 | **1.034528** | 0.22 | 21.2 | ug/L |
| | Sr | 88 | 9367.033 | 0.021 | **3.023485** | 0.03 | 0.9 | ug/L |
| > | Y | 89 | 440104.199 | 440104.199 | | | | ug/L |
| | Mo | 95 | 958369.180 | 2.178 | **2024.886769** | 31.91 | 1.6 | ug/L |
| | Mo | 97 | 577408.747 | 1.312 | **1983.060231** | 14.88 | 0.8 | ug/L |
| | Mo | 98 | 1481014.853 | 3.366 | **1993.882874** | 36.14 | 1.8 | ug/L |
| | Ag | 107 | 140.668 | 0.001 | **0.304675** | 0.01 | 1.9 | ug/L |
| | Ag | 109 | 118.001 | 0.001 | **0.342509** | 0.01 | 3.2 | ug/L |
| | Cd | 111 | 697.365 | 0.004 | **2.579164** | 0.08 | 3.2 | ug/L |
| | Cd | 114 | 1196.055 | 0.007 | **2.282472** | 0.05 | 2.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 183555.949 | 183555.949 | | | | ug/L |
| \| | Sn | 120 | 603.349 | 0.000 | **0.697401** | 0.03 | 3.9 | ug/L |
| \| | Sb | 121 | 563.354 | 0.000 | **0.498657** | 0.02 | 4.5 | ug/L |
| L | Sb | 123 | 426.595 | -0.000 | **0.797111** | 0.09 | 11.7 | ug/L |
| ⌈ | Ba | 135 | 411.344 | 0.002 | **2.572946** | 0.10 | 4.1 | ug/L |
| \| | Ba | 137 | 708.033 | 0.003 | **2.165536** | 0.21 | 9.5 | ug/L |
| \| | Tb | 159 | 192406.274 | 0.007 | | | | ug/L |
| \|> | Ho | 165 | 201129.112 | 201129.112 | | | | ug/L |
| \| | Tl | 203 | 108.001 | 0.001 | **0.139988** | 0.01 | 10.5 | ug/L |
| \| | Tl | 205 | 267.338 | 0.001 | **0.104037** | 0.01 | 10.6 | ug/L |
| L | Pb | 208 | 652.011 | 0.003 | **0.165213** | 0.01 | 5.7 | ug/L |
| | Kr | 83 | 44.867 | 24.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.860 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 98.952 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 96.707 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 106.440 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Monday, February 15, 2010 12:34:48
Sample Type: Spike - 2 of 9
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSAB.015
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27218.526 | 0.005 | | | | ug/L |
| | Li | 7 | 3113.964 | 0.001 | **1.449531** | 0.04 | 2.9 | ug/L |
| | Be | 9 | 3.333 | -0.000 | **1.417637** | 0.01 | 0.9 | ug/L |
| | B | 11 | 904.720 | 0.001 | **3.000979** | 0.15 | 5.0 | ug/L |
| | Na | 23 | 60730736.946 | 178.988 | **97181.358951** | 90.20 | 0.1 | ug/L |
| | Mg | 24 | 42692675.265 | 125.853 | **94636.345457** | 532.87 | 0.6 | ug/L |
| | Al | 27 | 139358885.095 | 410.798 | **95012.103392** | 711.61 | 0.7 | ug/L |
| | K | 39 | 126643494.589 | 373.207 | **89528.686127** | 1703.38 | 1.9 | ug/L |
| | Ca | 43 | 489779.164 | 1.443 | **98006.076303** | 2287.02 | 2.3 | ug/L |
| > | Sc | 45 | 339238.827 | 339238.827 | | | | ug/L |
| | Ti | 49 | 244101.003 | 0.718 | **2020.762591** | 32.49 | 1.6 | ug/L |
| | Co | 59 | 143898.838 | 0.424 | **80.626874** | 1.11 | 1.4 | ug/L |
| | Ni | 60 | 27328.469 | 0.081 | **78.726998** | 0.44 | 0.6 | ug/L |
| | Ni | 62 | 4681.427 | 0.014 | **89.054093** | 4.10 | 4.6 | ug/L |
| | Cu | 63 | 62624.582 | 0.184 | **75.092390** | 1.00 | 1.3 | ug/L |
| | Cu | 65 | 29274.270 | 0.086 | **74.417207** | 0.95 | 1.3 | ug/L |
| | Zn | 66 | 9759.524 | 0.028 | **38.106005** | 1.09 | 2.8 | ug/L |
| | Zn | 67 | 2901.881 | 0.005 | **32.726023** | 1.14 | 3.5 | ug/L |
| | Zn | 68 | 6752.296 | 0.019 | **36.416162** | 0.24 | 0.6 | ug/L |
| | V | 51 | 154602.769 | 0.456 | **83.220730** | 0.97 | 1.2 | ug/L |
| | Cr | 52 | 133402.933 | 0.384 | **83.093925** | 0.34 | 0.4 | ug/L |
| | Cr | 53 | 27429.486 | 0.037 | **61.842376** | 3.00 | 4.9 | ug/L |
| | Mn | 55 | 235450.390 | 0.694 | **87.351871** | 1.86 | 2.1 | ug/L |
| | Fe | 54 | 13161620.053 | 38.768 | **98057.508900** | 2080.61 | 2.1 | ug/L |
| | Fe | 57 | 5321616.782 | 15.686 | **97340.379335** | 1102.70 | 1.1 | ug/L |
| | As | 75 | 9733.100 | 0.023 | **35.090933** | 1.10 | 3.1 | ug/L |
| | Se | 77 | 2788.505 | 0.003 | **51.591351** | 3.06 | 5.9 | ug/L |
| | Se | 82 | 1091.805 | 0.003 | **40.229260** | 0.86 | 2.1 | ug/L |
| | Sr | 88 | 9310.298 | 0.021 | **3.044258** | 0.03 | 1.1 | ug/L |
| > | Y | 89 | 433681.715 | 433681.715 | | | | ug/L |
| | Mo | 95 | 949511.218 | 2.189 | **2035.534803** | 21.82 | 1.1 | ug/L |
| | Mo | 97 | 578209.623 | 1.333 | **2015.018206** | 34.42 | 1.7 | ug/L |
| | Mo | 98 | 1471388.842 | 3.393 | **2009.914503** | 29.30 | 1.5 | ug/L |
| | Ag | 107 | 23503.189 | 0.129 | **18.727773** | 0.55 | 2.9 | ug/L |
| | Ag | 109 | 22474.787 | 0.123 | **19.014371** | 0.46 | 2.4 | ug/L |
| | Cd | 111 | 11885.509 | 0.065 | **40.034553** | 0.80 | 2.0 | ug/L |
| | Cd | 114 | 27271.844 | 0.149 | **40.764537** | 0.74 | 1.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 182517.015 | 182517.015 | | | | ug/L |
| \| | Sn | 120 | 555.328 | -0.000 | **0.660018** | 0.01 | 1.4 | ug/L |
| \| | Sb | 121 | 386.676 | -0.001 | **0.293992** | 0.00 | 1.0 | ug/L |
| \| | Sb | 123 | 295.754 | -0.001 | **0.599733** | 0.02 | 2.8 | ug/L |
| \| | Ba | 135 | 402.011 | 0.002 | **2.583247** | 0.12 | 4.7 | ug/L |
| \| | Ba | 137 | 636.026 | 0.003 | **2.035806** | 0.10 | 4.7 | ug/L |
| \| | Tb | 159 | 188169.785 | 0.014 | | | | ug/L |
| \|> | Ho | 165 | 195312.080 | 195312.080 | | | | ug/L |
| \| | Tl | 203 | 106.667 | 0.001 | **0.142372** | 0.04 | 30.1 | ug/L |
| \| | Tl | 205 | 271.338 | 0.001 | **0.110248** | 0.01 | 6.8 | ug/L |
| \| | Pb | 208 | 612.676 | 0.003 | **0.156841** | 0.02 | 12.7 | ug/L |
| | Kr | 83 | 44.067 | 23.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.890 | |
| Ti | 49 | | | |
| Co | 59 | | | 98.676 |
| Ni | 60 | | | 95.649 |
| Ni | 62 | | | 96.140 |
| Cu | 63 | | | 91.943 |
| Cu | 65 | | | 90.424 |
| Zn | 66 | | | 87.994 |
| Zn | 67 | | | 95.932 |
| Zn | 68 | | | 89.989 |
| V | 51 | | | 103.059 |
| Cr | 52 | | | 101.851 |
| Cr | 53 | | | 105.075 |
| Mn | 55 | | | 99.855 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 87.686 |
| Se | 77 | | | 98.719 |
| Se | 82 | | | 97.987 |
| Sr | 88 | | | |
| Y | 89 | | 97.508 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 92.115 |
| Ag | 109 | | | 93.359 |
| Cd | 111 | | | 93.638 |
| Cd | 114 | | | 96.205 |
| In | 115 | | 96.159 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 103.361 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 17:07:34
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.101
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24600.143 | 0.002 | | | | ug/L |
| | Li | 7 | 106772.137 | 0.325 | **111.747167** | 4.73 | 4.2 | ug/L |
| | Be | 9 | 24065.615 | 0.075 | **110.090382** | 3.46 | 3.1 | ug/L |
| | B | 11 | 30019.836 | 0.092 | **107.786283** | 1.62 | 1.5 | ug/L |
| | Na | 23 | 3146209.843 | 9.797 | **5324.909209** | 272.39 | 5.1 | ug/L |
| | Mg | 24 | 2311682.060 | 7.222 | **5435.278985** | 263.05 | 4.8 | ug/L |
| | Al | 27 | 7274301.080 | 22.724 | **5270.064775** | 202.91 | 3.9 | ug/L |
| | K | 39 | 7930479.116 | 24.616 | **5900.314570** | 391.24 | 6.6 | ug/L |
| | Ca | 43 | 24834.718 | 0.077 | **5228.164419** | 172.18 | 3.3 | ug/L |
| > | Sc | 45 | 320290.317 | 320290.317 | | | | ug/L |
| | Ti | 49 | 12042.086 | 0.036 | **101.958931** | 1.47 | 1.4 | ug/L |
| | Co | 59 | 166542.906 | 0.520 | **98.922710** | 4.77 | 4.8 | ug/L |
| | Ni | 60 | 32029.898 | 0.100 | **97.901891** | 4.27 | 4.4 | ug/L |
| | Ni | 62 | 4924.244 | 0.015 | **99.275612** | 4.20 | 4.2 | ug/L |
| | Cu | 63 | 77783.331 | 0.243 | **99.055510** | 3.64 | 3.7 | ug/L |
| | Cu | 65 | 37237.946 | 0.116 | **100.438683** | 2.75 | 2.7 | ug/L |
| | Zn | 66 | 23570.724 | 0.073 | **98.669369** | 2.56 | 2.6 | ug/L |
| | Zn | 67 | 5193.754 | 0.012 | **98.430422** | 4.32 | 4.4 | ug/L |
| | Zn | 68 | 17123.038 | 0.053 | **99.887413** | 3.11 | 3.1 | ug/L |
| | V | 51 | 179556.020 | 0.561 | **102.336105** | 1.95 | 1.9 | ug/L |
| | Cr | 52 | 151516.557 | 0.464 | **100.472450** | 4.05 | 4.0 | ug/L |
| | Cr | 53 | 31029.795 | 0.053 | **92.691330** | 4.74 | 5.1 | ug/L |
| | Mn | 55 | 252406.232 | 0.788 | **99.229604** | 4.62 | 4.7 | ug/L |
| | Fe | 54 | 641980.956 | 1.971 | **4987.103728** | 241.67 | 4.8 | ug/L |
| | Fe | 57 | 255208.443 | 0.796 | **4936.978897** | 229.51 | 4.6 | ug/L |
| | As | 75 | 26512.546 | 0.069 | **105.164046** | 3.65 | 3.5 | ug/L |
| | Se | 77 | 11009.874 | 0.025 | **507.154168** | 13.99 | 2.8 | ug/L |
| | Se | 82 | 13119.248 | 0.034 | **522.972807** | 17.35 | 3.3 | ug/L |
| | Sr | 88 | 352027.041 | 0.910 | **104.358506** | 3.78 | 3.6 | ug/L |
| > | Y | 89 | 386795.625 | 386795.625 | | | | ug/L |
| | Mo | 95 | 42883.261 | 0.111 | **103.615792** | 3.37 | 3.3 | ug/L |
| | Mo | 97 | 26383.848 | 0.068 | **103.860480** | 3.56 | 3.4 | ug/L |
| | Mo | 98 | 67012.566 | 0.173 | **103.410662** | 3.20 | 3.1 | ug/L |
| | Ag | 107 | 114672.462 | 0.709 | **102.181832** | 2.57 | 2.5 | ug/L |
| | Ag | 109 | 108558.714 | 0.671 | **102.515976** | 3.14 | 3.1 | ug/L |
| | Cd | 111 | 27425.471 | 0.170 | **103.808290** | 3.48 | 3.4 | ug/L |
| | Cd | 114 | 61741.968 | 0.382 | **103.286582** | 2.82 | 2.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 161865.414 | 161865.414 | | | | ug/L |
| \| | Sn | 120 | 107162.594 | 0.659 | **101.933819** | 3.51 | 3.4 | ug/L |
| \| | Sb | 121 | 75843.412 | 0.466 | **100.828948** | 4.24 | 4.2 | ug/L |
| \| | Sb | 123 | 57736.876 | 0.355 | **100.563821** | 3.62 | 3.6 | ug/L |
| \| | Ba | 135 | 20085.524 | 0.121 | **101.670765** | 5.60 | 5.5 | ug/L |
| \| | Ba | 137 | 34560.800 | 0.208 | **101.484392** | 5.02 | 4.9 | ug/L |
| \| | Tb | 159 | 155660.128 | -0.014 | | | | ug/L |
| \|> | Ho | 165 | 166379.588 | 166379.588 | | | | ug/L |
| \| | Tl | 203 | 69258.537 | 0.417 | **107.513227** | 7.66 | 7.1 | ug/L |
| \| | Tl | 205 | 167093.390 | 1.006 | **106.937754** | 5.57 | 5.2 | ug/L |
| \| | Pb | 208 | 226396.468 | 1.363 | **106.594618** | 5.52 | 5.2 | ug/L |
| | Kr | 83 | 21.267 | 0.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 111.747 | | |
| Be | 9 | 110.090 | | |
| B | 11 | 107.786 | | |
| Na | 23 | 106.498 | | |
| Mg | 24 | 108.706 | | |
| Al | 27 | 103.335 | | |
| K | 39 | 118.006 | | |
| Ca | 43 | 104.563 | | |
| Sc | 45 | | 89.590 | |
| Ti | 49 | 101.959 | | |
| Co | 59 | 98.923 | | |
| Ni | 60 | 97.902 | | |
| Ni | 62 | 99.276 | | |
| Cu | 63 | 99.056 | | |
| Cu | 65 | 100.439 | | |
| Zn | 66 | 98.669 | | |
| Zn | 67 | 98.430 | | |
| Zn | 68 | 99.887 | | |
| V | 51 | 102.336 | | |
| Cr | 52 | 100.472 | | |
| Cr | 53 | 92.691 | | |
| Mn | 55 | 99.230 | | |
| Fe | 54 | 99.742 | | |
| Fe | 57 | 98.740 | | |
| As | 75 | 105.164 | | |
| Se | 77 | 101.431 | | |
| Se | 82 | 104.595 | | |
| Sr | 88 | 104.359 | | |
| Y | 89 | | 86.966 | |
| Mo | 95 | 103.616 | | |
| Mo | 97 | 103.860 | | |
| Mo | 98 | 103.411 | | |
| Ag | 107 | 102.182 | | |
| Ag | 109 | 102.516 | | |
| Cd | 111 | 103.808 | | |
| Cd | 114 | 103.287 | | |
| In | 115 | | 85.279 | |
| Sn | 120 | 101.934 | | |
| Sb | 121 | 100.829 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 100.564 | |
| Ba | 135 | 101.671 | |
| Ba | 137 | 101.484 | |
| Tb | 159 | | |
| Ho | 165 | | 88.050 |
| Tl | 203 | 107.513 | |
| Tl | 205 | 106.938 | |
| Pb | 208 | 106.595 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Monday, February 15, 2010 17:10:16
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 5.102
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29540.186 | 0.016 | | | | ug/L |
| | Li | 7 | 5293.156 | 0.008 | **3.839549** | 0.24 | 6.3 | ug/L |
| | Be | 9 | 504.017 | 0.002 | **3.635496** | 0.10 | 2.8 | ug/L |
| | B | 11 | 7006.523 | 0.020 | **24.618866** | 0.30 | 1.2 | ug/L |
| | Na | 23 | 73584.731 | 0.191 | **109.753798** | 8.66 | 7.9 | ug/L |
| | Mg | 24 | 21830.961 | 0.066 | **54.501978** | 1.65 | 3.0 | ug/L |
| | Al | 27 | 73492.752 | 0.223 | **66.713002** | 0.21 | 0.3 | ug/L |
| | K | 39 | 166688.452 | 0.346 | **77.784460** | 5.03 | 6.5 | ug/L |
| | Ca | 43 | 1108.080 | 0.003 | **191.856609** | 21.66 | 11.3 | ug/L |
| > | Sc | 45 | 326607.271 | 326607.271 | | | | ug/L |
| | Ti | 49 | 1013.400 | 0.002 | **4.885795** | 0.08 | 1.5 | ug/L |
| | Co | 59 | 3350.063 | 0.010 | **1.862954** | 0.07 | 4.0 | ug/L |
| | Ni | 60 | 690.031 | 0.002 | **1.657176** | 0.13 | 7.8 | ug/L |
| | Ni | 62 | 113.334 | 0.000 | **2.355733** | 0.16 | 6.9 | ug/L |
| | Cu | 63 | 1846.222 | 0.005 | **1.638839** | 0.01 | 0.9 | ug/L |
| | Cu | 65 | 774.706 | 0.002 | **1.611173** | 0.16 | 10.0 | ug/L |
| | Zn | 66 | 1650.844 | 0.005 | **6.081834** | 0.18 | 2.9 | ug/L |
| | Zn | 67 | 1642.843 | 0.001 | **2.529123** | 4.64 | 183.5 | ug/L |
| | Zn | 68 | 1192.093 | 0.003 | **5.694124** | 0.46 | 8.1 | ug/L |
| | V | 51 | 18775.102 | 0.058 | **10.709162** | 0.35 | 3.2 | ug/L |
| | Cr | 52 | 9136.757 | 0.018 | **3.864833** | 0.07 | 1.8 | ug/L |
| | Cr | 53 | 14972.560 | 0.002 | **-5.484573** | 1.10 | 20.1 | ug/L |
| | Mn | 55 | 5431.251 | 0.016 | **2.213408** | 0.06 | 2.6 | ug/L |
| | Fe | 54 | 23432.542 | 0.037 | **94.962495** | 3.56 | 3.7 | ug/L |
| | Fe | 57 | 5802.856 | 0.016 | **98.817721** | 3.35 | 3.4 | ug/L |
| | As | 75 | 577.377 | 0.002 | **3.232547** | 0.79 | 24.4 | ug/L |
| | Se | 77 | 1460.805 | -0.000 | **-5.085186** | 2.19 | 43.1 | ug/L |
| | Se | 82 | 139.735 | 0.000 | **6.975657** | 0.37 | 5.4 | ug/L |
| | Sr | 88 | 3794.937 | 0.009 | **1.689683** | 0.05 | 2.9 | ug/L |
| > | Y | 89 | 396141.093 | 396141.093 | | | | ug/L |
| | Mo | 95 | 980.062 | 0.002 | **2.823270** | 0.06 | 2.0 | ug/L |
| | Mo | 97 | 579.355 | 0.001 | **2.955410** | 0.06 | 1.9 | ug/L |
| | Mo | 98 | 1460.066 | 0.004 | **2.945562** | 0.08 | 2.6 | ug/L |
| | Ag | 107 | 1179.424 | 0.007 | **1.231977** | 0.06 | 5.2 | ug/L |
| | Ag | 109 | 1096.745 | 0.007 | **1.266450** | 0.04 | 3.1 | ug/L |
| | Cd | 111 | 564.521 | 0.003 | **2.367896** | 0.08 | 3.5 | ug/L |
| | Cd | 114 | 1279.250 | 0.008 | **2.633956** | 0.06 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 163527.996 | 163527.996 | | | | ug/L |
| \| | Sn | 120 | 5550.661 | 0.031 | **5.404890** | 0.08 | 1.4 | ug/L |
| \| | Sb | 121 | 5768.830 | 0.032 | **7.433934** | 0.14 | 1.8 | ug/L |
| \| | Sb | 123 | 4326.467 | 0.024 | **7.586803** | 0.25 | 3.3 | ug/L |
| \| | Ba | 135 | 989.397 | 0.006 | **5.842508** | 0.37 | 6.4 | ug/L |
| \| | Ba | 137 | 1669.514 | 0.010 | **5.341883** | 0.13 | 2.5 | ug/L |
| \| | Tb | 159 | 156303.681 | -0.008 | | | | ug/L |
| \|> | Ho | 165 | 165918.639 | 165918.639 | | | | ug/L |
| \| | Tl | 203 | 1480.142 | 0.009 | **2.301410** | 0.07 | 3.2 | ug/L |
| \| | Tl | 205 | 3462.114 | 0.021 | **2.183539** | 0.16 | 7.2 | ug/L |
| \| | Pb | 208 | 2420.149 | 0.014 | **1.053261** | 0.01 | 1.2 | ug/L |
| | Kr | 83 | 17.067 | -3.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 191.977 | | |
| Be | 9 | 181.775 | | |
| B | 11 | 123.094 | | |
| Na | 23 | 109.754 | | |
| Mg | 24 | 109.004 | | |
| Al | 27 | 133.426 | | |
| K | 39 | 103.713 | | |
| Ca | 43 | 95.928 | | |
| Sc | 45 | | 91.357 | |
| Ti | 49 | 97.716 | | |
| Co | 59 | 93.148 | | |
| Ni | 60 | 82.859 | | |
| Ni | 62 | 117.787 | | |
| Cu | 63 | 81.942 | | |
| Cu | 65 | 80.559 | | |
| Zn | 66 | 101.364 | | |
| Zn | 67 | 42.152 | | |
| Zn | 68 | 94.902 | | |
| V | 51 | 107.092 | | |
| Cr | 52 | 96.621 | | |
| Cr | 53 | -137.114 | | |
| Mn | 55 | 110.670 | | |
| Fe | 54 | 94.962 | | |
| Fe | 57 | 98.818 | | |
| As | 75 | 80.814 | | |
| Se | 77 | -101.704 | | |
| Se | 82 | 139.513 | | |
| Sr | 88 | 168.968 | | |
| Y | 89 | | 89.067 | |
| Mo | 95 | 141.163 | | |
| Mo | 97 | 147.771 | | |
| Mo | 98 | 147.278 | | |
| Ag | 107 | 123.198 | | |
| Ag | 109 | 126.645 | | |
| Cd | 111 | 118.395 | | |
| Cd | 114 | 131.698 | | |
| In | 115 | | 86.155 | |
| Sn | 120 | 135.122 | | |
| Sb | 121 | 148.679 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 151.736 | |
| Ba | 135 | 116.850 | |
| Ba | 137 | 106.838 | |
| Tb | 159 | | |
| Ho | 165 | | 87.806 |
| Tl | 203 | 115.070 | |
| Tl | 205 | 109.177 | |
| Pb | 208 | 105.326 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 17:12:57
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.103
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 30034.306 | 0.018 | | | | ug/L |
| \| | Li | 7 | 3190.662 | 0.001 | **1.666626** | 0.09 | 5.1 | ug/L |
| \| | Be | 9 | 7.333 | 0.000 | **1.435895** | 0.01 | 0.7 | ug/L |
| \| | B | 11 | 760.704 | 0.001 | **2.623097** | 0.03 | 1.0 | ug/L |
| \| | Na | 23 | 12877.574 | 0.006 | **8.930134** | 2.92 | 32.7 | ug/L |
| \| | Mg | 24 | 533.354 | 0.001 | **5.472405** | 0.46 | 8.4 | ug/L |
| \| | Al | 27 | 1905.236 | 0.004 | **16.033568** | 0.05 | 0.3 | ug/L |
| \| | K | 39 | 54660.675 | 0.004 | **-4.335871** | 2.15 | 49.5 | ug/L |
| \| | Ca | 43 | 150.668 | -0.000 | **-6.930961** | 7.73 | 111.5 | ug/L |
| \|> | Sc | 45 | 325142.493 | 325142.493 | | | | ug/L |
| \| | Ti | 49 | 439.346 | -0.000 | **-0.039059** | 0.21 | 534.2 | ug/L |
| \| | Co | 59 | 29.333 | 0.000 | **-0.071479** | 0.00 | 4.7 | ug/L |
| \| | Ni | 60 | 9.333 | -0.000 | **-0.389995** | 0.01 | 2.5 | ug/L |
| \| | Ni | 62 | 29.333 | -0.000 | **0.697226** | 0.24 | 34.8 | ug/L |
| \| | Cu | 63 | 414.678 | 0.001 | **-0.158496** | 0.04 | 28.4 | ug/L |
| \| | Cu | 65 | 186.669 | 0.000 | **0.051428** | 0.03 | 67.8 | ug/L |
| \| | Zn | 66 | 137.335 | 0.000 | **-0.171391** | 0.12 | 71.5 | ug/L |
| \| | Zn | 67 | 1626.839 | 0.001 | **2.341363** | 2.24 | 95.5 | ug/L |
| \| | Zn | 68 | 152.002 | 0.000 | **-0.322647** | 0.06 | 19.0 | ug/L |
| \| | V | 51 | 978.932 | 0.003 | **0.788555** | 0.16 | 20.2 | ug/L |
| \| | Cr | 52 | 2999.918 | -0.000 | **-0.201651** | 0.01 | 6.7 | ug/L |
| \| | Cr | 53 | 14511.680 | 0.001 | **-7.780630** | 2.74 | 35.2 | ug/L |
| \| | Mn | 55 | 229.337 | 0.000 | **0.212435** | 0.00 | 1.5 | ug/L |
| \| | Fe | 54 | 10847.755 | -0.001 | **-2.076156** | 2.39 | 115.1 | ug/L |
| ⌊ | Fe | 57 | 577.355 | -0.000 | **-0.406691** | 0.37 | 90.6 | ug/L |
| ⌈ | As | 75 | -391.075 | -0.001 | **-0.472549** | 0.05 | 10.9 | ug/L |
| \| | Se | 77 | 1420.131 | -0.000 | **-7.661399** | 3.82 | 49.9 | ug/L |
| \| | Se | 82 | 3.009 | 0.000 | **1.671001** | 0.03 | 2.1 | ug/L |
| \| | Sr | 88 | 58.000 | -0.000 | **0.614698** | 0.00 | 0.4 | ug/L |
| \|> | Y | 89 | 398678.354 | 398678.354 | | | | ug/L |
| \| | Mo | 95 | 18.667 | 0.000 | **0.567406** | 0.01 | 0.9 | ug/L |
| \| | Mo | 97 | 11.333 | 0.000 | **0.788930** | 0.00 | 0.6 | ug/L |
| ⌊ | Mo | 98 | 27.260 | 0.000 | **0.803344** | 0.02 | 2.9 | ug/L |
| ⌈ | Ag | 107 | 4.667 | 0.000 | **0.198445** | 0.00 | 1.8 | ug/L |
| \| | Ag | 109 | 5.333 | 0.000 | **0.249400** | 0.00 | 0.8 | ug/L |
| \| | Cd | 111 | 2.167 | 0.000 | **0.267504** | 0.01 | 2.2 | ug/L |
| \| | Cd | 114 | 7.189 | 0.000 | **0.539608** | 0.01 | 1.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 165444.842 | 165444.842 | | | | ug/L |
| \| | Sn | 120 | 473.348 | -0.000 | **0.632390** | 0.02 | 3.4 | ug/L |
| \| | Sb | 121 | 523.351 | 0.000 | **0.519440** | 0.04 | 8.4 | ug/L |
| \| | Sb | 123 | 423.345 | 0.000 | **0.864282** | 0.05 | 6.2 | ug/L |
| \| | Ba | 135 | 12.000 | 0.000 | **0.926821** | 0.00 | 0.1 | ug/L |
| \| | Ba | 137 | 22.667 | 0.000 | **0.518770** | 0.02 | 4.3 | ug/L |
| \| | Tb | 159 | 157135.464 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 167644.780 | 167644.780 | | | | ug/L |
| \| | Tl | 203 | 22.000 | 0.000 | **0.035247** | 0.01 | 26.8 | ug/L |
| \| | Tl | 205 | 33.333 | 0.000 | **-0.016268** | 0.01 | 59.9 | ug/L |
| \| | Pb | 208 | 75.333 | 0.000 | **-0.053449** | 0.01 | 12.4 | ug/L |
| | Kr | 83 | 15.933 | -4.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.947 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 89.638 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 87.165 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.719 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Monday, February 15, 2010 17:15:38
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSA.104
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27761.441 | 0.012 | | | | ug/L |
| | Li | 7 | 3168.653 | 0.001 | **1.696176** | 0.07 | 4.1 | ug/L |
| | Be | 9 | 4.000 | -0.000 | **1.421346** | 0.01 | 0.6 | ug/L |
| | B | 11 | 986.063 | 0.002 | **3.476393** | 0.12 | 3.4 | ug/L |
| | Na | 23 | 58558445.202 | 183.039 | **99380.907903** | 3553.62 | 3.6 | ug/L |
| | Mg | 24 | 42227668.205 | 132.039 | **99287.938954** | 4764.42 | 4.8 | ug/L |
| | Al | 27 | 131876597.745 | 412.350 | **95370.969296** | 4717.17 | 4.9 | ug/L |
| | K | 39 | 125622414.766 | 392.606 | **94182.763091** | 4645.06 | 4.9 | ug/L |
| | Ca | 43 | 471632.882 | 1.474 | **100063.167000** | 1766.79 | 1.8 | ug/L |
| > | Sc | 45 | 320000.528 | 320000.528 | | | | ug/L |
| | Ti | 49 | 232474.766 | 0.725 | **2040.698309** | 62.56 | 3.1 | ug/L |
| | Co | 59 | 2887.209 | 0.009 | **1.628891** | 0.11 | 6.8 | ug/L |
| | Ni | 60 | 933.390 | 0.003 | **2.447851** | 0.22 | 9.1 | ug/L |
| | Ni | 62 | 582.689 | 0.002 | **11.865350** | 0.59 | 5.0 | ug/L |
| | Cu | 63 | 1674.849 | 0.005 | **1.467615** | 0.09 | 6.2 | ug/L |
| | Cu | 65 | 861.382 | 0.003 | **1.887513** | 0.11 | 5.9 | ug/L |
| | Zn | 66 | 728.035 | 0.002 | **2.328780** | 0.17 | 7.5 | ug/L |
| | Zn | 67 | 1457.472 | 0.001 | **-1.550034** | 1.19 | 77.0 | ug/L |
| | Zn | 68 | 285.339 | 0.000 | **0.479313** | 0.10 | 20.9 | ug/L |
| | V | 51 | 829.289 | 0.003 | **0.714622** | 0.30 | 41.8 | ug/L |
| | Cr | 52 | 5459.938 | 0.007 | **1.499309** | 0.14 | 9.6 | ug/L |
| | Cr | 53 | 12150.255 | -0.006 | **-20.604591** | 0.88 | 4.3 | ug/L |
| | Mn | 55 | 18355.889 | 0.057 | **7.335842** | 0.34 | 4.6 | ug/L |
| | Fe | 54 | 12115054.376 | 37.846 | **95725.353980** | 4621.36 | 4.8 | ug/L |
| | Fe | 57 | 4921563.087 | 15.388 | **95488.897939** | 5147.86 | 5.4 | ug/L |
| | As | 75 | -213.225 | -0.000 | **0.213041** | 0.19 | 87.7 | ug/L |
| | Se | 77 | 1996.926 | 0.001 | **21.331599** | 3.24 | 15.2 | ug/L |
| | Se | 82 | -18.424 | -0.000 | **0.850971** | 0.07 | 8.6 | ug/L |
| | Sr | 88 | 8716.939 | 0.022 | **3.068277** | 0.10 | 3.3 | ug/L |
| > | Y | 89 | 402203.112 | 402203.112 | | | | ug/L |
| | Mo | 95 | 885872.495 | 2.203 | **2048.487555** | 105.14 | 5.1 | ug/L |
| | Mo | 97 | 539666.646 | 1.342 | **2028.613086** | 97.90 | 4.8 | ug/L |
| | Mo | 98 | 1385102.511 | 3.445 | **2040.740981** | 88.31 | 4.3 | ug/L |
| | Ag | 107 | 138.668 | 0.001 | **0.312918** | 0.03 | 9.5 | ug/L |
| | Ag | 109 | 104.001 | 0.001 | **0.338538** | 0.01 | 3.0 | ug/L |
| | Cd | 111 | 588.022 | 0.003 | **2.386393** | 0.04 | 1.6 | ug/L |
| | Cd | 114 | 984.946 | 0.006 | **2.100361** | 0.13 | 6.1 | ug/L |

**00368**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 168875.019 | 168875.019 | | | | ug/L |
| \| | Sn | 120 | 550.020 | 0.000 | **0.693591** | 0.05 | 7.9 | ug/L |
| \| | Sb | 121 | 469.348 | -0.000 | **0.435570** | 0.05 | 11.9 | ug/L |
| \| | Sb | 123 | 337.341 | -0.000 | **0.706934** | 0.10 | 14.9 | ug/L |
| \| | Ba | 135 | 343.341 | 0.002 | **2.436693** | 0.16 | 6.6 | ug/L |
| \| | Ba | 137 | 670.696 | 0.004 | **2.240541** | 0.07 | 3.2 | ug/L |
| \| | Tb | 159 | 174334.765 | 0.006 | | | | ug/L |
| \|> | Ho | 165 | 182355.687 | 182355.687 | | | | ug/L |
| \| | Tl | 203 | 108.667 | 0.001 | **0.154936** | 0.00 | 1.9 | ug/L |
| \| | Tl | 205 | 268.005 | 0.001 | **0.119034** | 0.01 | 11.4 | ug/L |
| \| | Pb | 208 | 625.343 | 0.003 | **0.179806** | 0.01 | 5.7 | ug/L |
| | Kr | 83 | 45.667 | 25.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.509 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.430 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 88.972 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 96.505 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Monday, February 15, 2010 17:18:19
Sample Type: Spike - 2 of 66
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSAB.105
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28678.717 | 0.016 | | | | ug/L |
| | Li | 7 | 3153.313 | 0.001 | **1.726970** | 0.10 | 5.5 | ug/L |
| | Be | 9 | 5.333 | -0.000 | **1.427994** | 0.02 | 1.4 | ug/L |
| | B | 11 | 884.051 | 0.001 | **3.156620** | 0.18 | 5.6 | ug/L |
| | Na | 23 | 60298614.395 | 191.137 | **103777.415241** | 2907.78 | 2.8 | ug/L |
| | Mg | 24 | 43182817.842 | 136.918 | **102956.252152** | 4365.95 | 4.2 | ug/L |
| | Al | 27 | 137374193.490 | 435.522 | **100729.397731** | 2567.49 | 2.5 | ug/L |
| | K | 39 | 128774443.785 | 408.273 | **97941.260393** | 7299.74 | 7.5 | ug/L |
| | Ca | 43 | 471922.833 | 1.496 | **101555.720552** | 1705.05 | 1.7 | ug/L |
| > | Sc | 45 | 315492.164 | 315492.164 | | | | ug/L |
| | Ti | 49 | 233101.942 | 0.738 | **2075.116090** | 30.25 | 1.5 | ug/L |
| | Co | 59 | 134018.992 | 0.425 | **80.750430** | 2.25 | 2.8 | ug/L |
| | Ni | 60 | 25204.578 | 0.080 | **78.099463** | 3.10 | 4.0 | ug/L |
| | Ni | 62 | 4215.822 | 0.013 | **86.273553** | 0.75 | 0.9 | ug/L |
| | Cu | 63 | 57701.617 | 0.183 | **74.399513** | 1.54 | 2.1 | ug/L |
| | Cu | 65 | 27584.046 | 0.087 | **75.413511** | 2.01 | 2.7 | ug/L |
| | Zn | 66 | 9010.610 | 0.028 | **37.834287** | 1.45 | 3.8 | ug/L |
| | Zn | 67 | 2813.848 | 0.005 | **35.870587** | 1.73 | 4.8 | ug/L |
| | Zn | 68 | 6125.105 | 0.019 | **35.494865** | 1.11 | 3.1 | ug/L |
| | V | 51 | 144378.805 | 0.458 | **83.567052** | 1.31 | 1.6 | ug/L |
| | Cr | 52 | 122742.199 | 0.380 | **82.190889** | 0.89 | 1.1 | ug/L |
| | Cr | 53 | 25648.023 | 0.037 | **62.671983** | 1.72 | 2.8 | ug/L |
| | Mn | 55 | 218175.200 | 0.691 | **87.044809** | 2.34 | 2.7 | ug/L |
| | Fe | 54 | 12174500.183 | 38.562 | **97536.390813** | 2438.34 | 2.5 | ug/L |
| | Fe | 57 | 4945579.886 | 15.678 | **97289.734500** | 2939.34 | 3.0 | ug/L |
| | As | 75 | 8688.965 | 0.022 | **34.211578** | 0.90 | 2.6 | ug/L |
| | Se | 77 | 2771.833 | 0.003 | **62.847515** | 7.85 | 12.5 | ug/L |
| | Se | 82 | 1021.046 | 0.003 | **41.016138** | 0.75 | 1.8 | ug/L |
| | Sr | 88 | 8702.258 | 0.022 | **3.092265** | 0.09 | 3.1 | ug/L |
| > | Y | 89 | 397574.458 | 397574.458 | | | | ug/L |
| | Mo | 95 | 889736.905 | 2.239 | **2081.322077** | 77.53 | 3.7 | ug/L |
| | Mo | 97 | 542933.965 | 1.366 | **2064.806781** | 84.14 | 4.1 | ug/L |
| | Mo | 98 | 1396269.932 | 3.513 | **2081.321517** | 79.44 | 3.8 | ug/L |
| | Ag | 107 | 22076.320 | 0.132 | **19.119420** | 0.96 | 5.0 | ug/L |
| | Ag | 109 | 20893.009 | 0.124 | **19.211448** | 0.74 | 3.8 | ug/L |
| | Cd | 111 | 11221.014 | 0.067 | **41.080913** | 1.56 | 3.8 | ug/L |
| | Cd | 114 | 25107.115 | 0.150 | **40.801116** | 1.91 | 4.7 | ug/L |

**00371**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 167947.092 | 167947.092 | | | | ug/L |
| \| | Sn | 120 | 533.318 | -0.000 | **0.680720** | 0.04 | 5.8 | ug/L |
| \| | Sb | 121 | 334.007 | -0.001 | **0.265363** | 0.05 | 19.8 | ug/L |
| \| | Sb | 123 | 273.669 | -0.001 | **0.602449** | 0.02 | 3.9 | ug/L |
| \| | Ba | 135 | 364.009 | 0.002 | **2.547510** | 0.05 | 1.8 | ug/L |
| \| | Ba | 137 | 632.693 | 0.003 | **2.156505** | 0.17 | 7.7 | ug/L |
| \| | Tb | 159 | 173280.719 | 0.010 | | | | ug/L |
| \|> | Ho | 165 | 180559.410 | 180559.410 | | | | ug/L |
| \| | Tl | 203 | 100.667 | 0.001 | **0.145155** | 0.02 | 13.3 | ug/L |
| \| | Tl | 205 | 266.671 | 0.001 | **0.119681** | 0.01 | 7.0 | ug/L |
| \| | Pb | 208 | 610.676 | 0.003 | **0.176035** | 0.01 | 5.1 | ug/L |
| | Kr | 83 | 46.133 | 25.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 88.248 | |
| Ti | 49 | | | |
| Co | 59 | | | 98.902 |
| Ni | 60 | | | 94.565 |
| Ni | 62 | | | 93.010 |
| Cu | 63 | | | 91.165 |
| Cu | 65 | | | 91.907 |
| Zn | 66 | | | 88.764 |
| Zn | 67 | | | 93.552 |
| Zn | 68 | | | 87.539 |
| V | 51 | | | 103.566 |
| Cr | 52 | | | 100.864 |
| Cr | 53 | | | 104.096 |
| Mn | 55 | | | 99.636 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 84.996 |
| Se | 77 | | | 103.790 |
| Se | 82 | | | 100.413 |
| Sr | 88 | | | |
| Y | 89 | | 89.389 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 94.033 |
| Ag | 109 | | | 94.365 |
| Cd | 111 | | | 96.736 |
| Cd | 114 | | | 96.752 |
| In | 115 | | 88.483 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.554 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: MBLK-87095**
Sample Date/Time: Monday, February 15, 2010 17:21:01
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\MBLK-87095.106
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 32168.091 | 0.029 | | | | ug/L |
| | Li | 7 | 3536.814 | 0.003 | **2.188547** | 0.01 | 0.4 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **1.437025** | 0.01 | 0.9 | ug/L |
| | B | 11 | 2157.637 | 0.006 | **7.917484** | 0.74 | 9.4 | ug/L |
| | Na | 23 | 26512.606 | 0.051 | **33.568131** | 3.27 | 9.7 | ug/L |
| | Mg | 24 | 8671.571 | 0.027 | **25.252829** | 2.62 | 10.4 | ug/L |
| | Al | 27 | 42342.264 | 0.134 | **46.138232** | 3.69 | 8.0 | ug/L |
| | K | 39 | 82912.668 | 0.102 | **19.366324** | 6.98 | 36.0 | ug/L |
| | Ca | 43 | 312.006 | 0.000 | **29.422566** | 2.81 | 9.6 | ug/L |
| > | Sc | 45 | 311564.942 | 311564.942 | | | | ug/L |
| | Ti | 49 | 773.372 | 0.001 | **3.166434** | 0.93 | 29.5 | ug/L |
| | Co | 59 | 45.333 | 0.000 | **-0.060839** | 0.00 | 6.1 | ug/L |
| | Ni | 60 | 44.000 | 0.000 | **-0.279792** | 0.02 | 8.7 | ug/L |
| | Ni | 62 | 18.667 | -0.000 | **0.503908** | 0.03 | 6.1 | ug/L |
| | Cu | 63 | 421.345 | 0.001 | **-0.125320** | 0.04 | 30.1 | ug/L |
| | Cu | 65 | 220.003 | 0.001 | **0.166469** | 0.05 | 27.1 | ug/L |
| | Zn | 66 | 309.340 | 0.001 | **0.598600** | 0.15 | 25.0 | ug/L |
| | Zn | 67 | 1876.229 | 0.002 | **11.025312** | 0.36 | 3.3 | ug/L |
| | Zn | 68 | 294.672 | 0.000 | **0.590284** | 0.27 | 46.6 | ug/L |
| | V | 51 | 1762.848 | 0.006 | **1.274521** | 0.24 | 18.8 | ug/L |
| | Cr | 52 | 3292.038 | 0.001 | **0.092838** | 0.14 | 155.9 | ug/L |
| | Cr | 53 | 16926.605 | 0.010 | **10.951880** | 4.12 | 37.6 | ug/L |
| | Mn | 55 | 379.343 | 0.001 | **0.277432** | 0.02 | 8.1 | ug/L |
| | Fe | 54 | 19030.831 | 0.026 | **68.329492** | 10.83 | 15.8 | ug/L |
| | Fe | 57 | 1840.221 | 0.004 | **25.259894** | 3.51 | 13.9 | ug/L |
| | As | 75 | -448.836 | -0.001 | **-0.771975** | 0.57 | 74.0 | ug/L |
| | Se | 77 | 1940.245 | 0.001 | **24.578804** | 1.55 | 6.3 | ug/L |
| | Se | 82 | 4.155 | 0.000 | **1.724358** | 0.07 | 4.1 | ug/L |
| | Sr | 88 | 409.344 | 0.001 | **0.721398** | 0.01 | 0.9 | ug/L |
| > | Y | 89 | 378664.124 | 378664.124 | | | | ug/L |
| | Mo | 95 | 583.356 | 0.002 | **1.958624** | 0.18 | 9.1 | ug/L |
| | Mo | 97 | 372.676 | 0.001 | **2.234746** | 0.11 | 5.0 | ug/L |
| | Mo | 98 | 897.240 | 0.002 | **2.168163** | 0.13 | 5.8 | ug/L |
| | Ag | 107 | 8.667 | 0.000 | **0.202680** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 8.667 | 0.000 | **0.253186** | 0.01 | 2.5 | ug/L |
| | Cd | 111 | 5.000 | 0.000 | **0.279930** | 0.01 | 4.2 | ug/L |
| | Cd | 114 | 7.322 | 0.000 | **0.540899** | 0.01 | 1.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 151045.803 | 151045.803 | | | | ug/L |
| \| | Sn | 120 | 392.651 | -0.001 | **0.591925** | 0.00 | 0.7 | ug/L |
| \| | Sb | 121 | 263.338 | -0.001 | **0.212126** | 0.07 | 34.5 | ug/L |
| \| | Sb | 123 | 180.417 | -0.001 | **0.478827** | 0.06 | 12.9 | ug/L |
| \| | Ba | 135 | 14.000 | 0.000 | **0.942886** | 0.02 | 2.2 | ug/L |
| \| | Ba | 137 | 23.333 | 0.000 | **0.526016** | 0.02 | 3.8 | ug/L |
| \| | Tb | 159 | 145031.166 | -0.014 | | | | ug/L |
| \|> | Ho | 165 | 154997.262 | 154997.262 | | | | ug/L |
| \| | Tl | 203 | 3.333 | -0.000 | **0.006752** | 0.01 | 99.2 | ug/L |
| \| | Tl | 205 | 13.333 | 0.000 | **-0.028245** | 0.00 | 7.2 | ug/L |
| \| | Pb | 208 | 66.667 | 0.000 | **-0.054943** | 0.00 | 6.8 | ug/L |
| | Kr | 83 | 14.267 | -6.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.150 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 85.138 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 79.579 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 82.026 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: LCS-87095**
Sample Date/Time: Monday, February 15, 2010 17:23:42
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\LCS-87095.107
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27680.672 | 0.012 | | | | ug/L |
| | Li | 7 | 117070.700 | 0.361 | **123.878804** | 9.13 | 7.4 | ug/L |
| | Be | 9 | 24161.230 | 0.076 | **111.599052** | 7.11 | 6.4 | ug/L |
| | B | 11 | 31509.750 | 0.098 | **114.273005** | 7.01 | 6.1 | ug/L |
| | Na | 23 | 3282890.498 | 10.326 | **5611.869721** | 480.58 | 8.6 | ug/L |
| | Mg | 24 | 2353509.131 | 7.429 | **5590.916468** | 550.63 | 9.8 | ug/L |
| | Al | 27 | 7746820.221 | 24.416 | **5661.363907** | 297.13 | 5.2 | ug/L |
| | K | 39 | 7966781.093 | 24.964 | **5983.669760** | 430.28 | 7.2 | ug/L |
| | Ca | 43 | 23953.252 | 0.075 | **5090.508519** | 328.92 | 6.5 | ug/L |
| > | Sc | 45 | 317742.058 | 317742.058 | | | | ug/L |
| | Ti | 49 | 12037.430 | 0.037 | **103.024599** | 9.94 | 9.7 | ug/L |
| | Co | 59 | 160711.668 | 0.507 | **96.353498** | 6.82 | 7.1 | ug/L |
| | Ni | 60 | 30626.877 | 0.097 | **94.495160** | 6.76 | 7.2 | ug/L |
| | Ni | 62 | 4616.053 | 0.014 | **93.968622** | 7.20 | 7.7 | ug/L |
| | Cu | 63 | 74007.240 | 0.233 | **95.107561** | 6.71 | 7.1 | ug/L |
| | Cu | 65 | 34611.036 | 0.109 | **94.213732** | 5.42 | 5.8 | ug/L |
| | Zn | 66 | 19587.582 | 0.061 | **82.651054** | 5.14 | 6.2 | ug/L |
| | Zn | 67 | 5177.745 | 0.013 | **99.504224** | 13.82 | 13.9 | ug/L |
| | Zn | 68 | 14047.498 | 0.044 | **82.565366** | 7.12 | 8.6 | ug/L |
| | V | 51 | 176699.917 | 0.558 | **101.709322** | 8.01 | 7.9 | ug/L |
| | Cr | 52 | 149546.607 | 0.462 | **100.127690** | 8.32 | 8.3 | ug/L |
| | Cr | 53 | 33559.753 | 0.062 | **109.866042** | 14.66 | 13.3 | ug/L |
| | Mn | 55 | 243952.914 | 0.769 | **96.836910** | 7.56 | 7.8 | ug/L |
| | Fe | 54 | 619127.193 | 1.919 | **4854.613277** | 420.86 | 8.7 | ug/L |
| | Fe | 57 | 242517.649 | 0.763 | **4736.515353** | 379.01 | 8.0 | ug/L |
| | As | 75 | 23886.719 | 0.063 | **95.574709** | 8.82 | 9.2 | ug/L |
| | Se | 77 | 10071.928 | 0.023 | **460.940134** | 28.03 | 6.1 | ug/L |
| | Se | 82 | 11171.204 | 0.029 | **448.824159** | 31.21 | 7.0 | ug/L |
| | Sr | 88 | 366080.070 | 0.954 | **109.297462** | 6.45 | 5.9 | ug/L |
| > | Y | 89 | 384089.633 | 384089.633 | | | | ug/L |
| | Mo | 95 | 42373.799 | 0.110 | **103.157126** | 5.68 | 5.5 | ug/L |
| | Mo | 97 | 25927.657 | 0.068 | **102.826260** | 5.92 | 5.8 | ug/L |
| | Mo | 98 | 65487.601 | 0.171 | **101.809156** | 5.58 | 5.5 | ug/L |
| | Ag | 107 | 110869.399 | 0.723 | **104.156262** | 3.67 | 3.5 | ug/L |
| | Ag | 109 | 104857.260 | 0.683 | **104.372198** | 2.90 | 2.8 | ug/L |
| | Cd | 111 | 24971.812 | 0.163 | **99.654517** | 3.97 | 4.0 | ug/L |
| | Cd | 114 | 56785.788 | 0.370 | **100.174015** | 3.97 | 4.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 153507.069 | 153507.069 | | | | ug/L |
| \| | Sn | 120 | 101176.791 | 0.656 | **101.468299** | 5.20 | 5.1 | ug/L |
| \| | Sb | 121 | 76304.611 | 0.494 | **106.913975** | 3.08 | 2.9 | ug/L |
| \| | Sb | 123 | 57694.618 | 0.374 | **105.924063** | 4.28 | 4.0 | ug/L |
| \| | Ba | 135 | 19308.204 | 0.119 | **100.407555** | 2.92 | 2.9 | ug/L |
| \| | Ba | 137 | 33419.118 | 0.207 | **100.843446** | 4.04 | 4.0 | ug/L |
| \| | Tb | 159 | 151940.004 | -0.010 | | | | ug/L |
| \|> | Ho | 165 | 161780.145 | 161780.145 | | | | ug/L |
| \| | Tl | 203 | 68114.290 | 0.421 | **108.583020** | 4.09 | 3.8 | ug/L |
| \| | Tl | 205 | 166293.135 | 1.029 | **109.374946** | 5.56 | 5.1 | ug/L |
| \| | Pb | 208 | 228283.322 | 1.412 | **110.473726** | 5.80 | 5.2 | ug/L |
| | Kr | 83 | 18.000 | -2.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 88.877 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.357 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.876 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.616 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-08A**
Sample Date/Time: Monday, February 15, 2010 17:26:22
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-08A.108
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28957.798 | 0.015 | | | | ug/L |
| | Li | 7 | 61684.455 | 0.182 | **63.061249** | 1.46 | 2.3 | ug/L |
| | Be | 9 | 6.667 | -0.000 | **1.433167** | 0.01 | 0.7 | ug/L |
| | B | 11 | 26987.266 | 0.082 | **95.790803** | 1.32 | 1.4 | ug/L |
| | Na | 23 | 238274710.611 | 735.414 | **399275.301845** | 16528.98 | 4.1 | ug/L |
| | Mg | 24 | 15646859.201 | 48.293 | **36317.443172** | 738.93 | 2.0 | ug/L |
| | Al | 27 | 38432.445 | 0.116 | **42.109630** | 0.24 | 0.6 | ug/L |
| | K | 39 | 2735134.336 | 8.277 | **1980.585704** | 32.83 | 1.7 | ug/L |
| | Ca | 43 | 265150.604 | 0.818 | **55540.023841** | 1591.01 | 2.9 | ug/L |
| > | Sc | 45 | 323979.969 | 323979.969 | | | | ug/L |
| | Ti | 49 | 640.027 | 0.001 | **1.715294** | 0.40 | 23.6 | ug/L |
| | Co | 59 | 274.672 | 0.001 | **0.072640** | 0.02 | 23.7 | ug/L |
| | Ni | 60 | 396.010 | 0.001 | **0.782659** | 0.01 | 1.1 | ug/L |
| | Ni | 62 | 61.334 | 0.000 | **1.339203** | 0.05 | 3.6 | ug/L |
| | Cu | 63 | 2106.955 | 0.006 | **1.987916** | 0.05 | 2.7 | ug/L |
| | Cu | 65 | 176.002 | 0.000 | **0.024258** | 0.08 | 311.5 | ug/L |
| | Zn | 66 | 549.353 | 0.001 | **1.546579** | 0.16 | 10.3 | ug/L |
| | Zn | 67 | 2130.962 | 0.003 | **15.794560** | 1.29 | 8.2 | ug/L |
| | Zn | 68 | 1316.113 | 0.004 | **6.471426** | 0.59 | 9.1 | ug/L |
| | V | 51 | 3823.384 | 0.012 | **2.390336** | 0.45 | 18.7 | ug/L |
| | Cr | 52 | 3418.093 | 0.001 | **0.085090** | 0.09 | 101.0 | ug/L |
| | Cr | 53 | 15568.408 | 0.004 | **-1.233487** | 1.46 | 118.2 | ug/L |
| | Mn | 55 | 32881.467 | 0.101 | **12.877407** | 0.09 | 0.7 | ug/L |
| | Fe | 54 | 17725.478 | 0.020 | **51.882688** | 1.12 | 2.2 | ug/L |
| | Fe | 57 | 4157.790 | 0.011 | **68.207076** | 1.36 | 2.0 | ug/L |
| | As | 75 | -364.224 | -0.001 | **-0.394061** | 0.84 | 213.1 | ug/L |
| | Se | 77 | 2687.803 | 0.003 | **60.157773** | 3.72 | 6.2 | ug/L |
| | Se | 82 | 43.309 | 0.000 | **3.249154** | 0.09 | 2.7 | ug/L |
| | Sr | 88 | 1645381.442 | 4.190 | **478.084314** | 6.03 | 1.3 | ug/L |
| > | Y | 89 | 392650.978 | 392650.978 | | | | ug/L |
| | Mo | 95 | 2822.518 | 0.007 | **7.207411** | 0.24 | 3.4 | ug/L |
| | Mo | 97 | 1735.529 | 0.004 | **7.425574** | 0.22 | 3.0 | ug/L |
| | Mo | 98 | 4368.427 | 0.011 | **7.351336** | 0.07 | 0.9 | ug/L |
| | Ag | 107 | 17.333 | 0.000 | **0.210556** | 0.00 | 1.1 | ug/L |
| | Ag | 109 | 24.667 | 0.000 | **0.268787** | 0.00 | 1.7 | ug/L |
| | Cd | 111 | 7.167 | 0.000 | **0.287789** | 0.01 | 2.0 | ug/L |
| | Cd | 114 | 17.432 | 0.000 | **0.558030** | 0.01 | 2.3 | ug/L |

**00380**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 154855.175 | 154855.175 | | | | ug/L |
| \| | Sn | 120 | 442.578 | -0.000 | **0.631397** | 0.02 | 3.5 | ug/L |
| \| | Sb | 121 | 459.347 | 0.000 | **0.475933** | 0.08 | 16.6 | ug/L |
| \| | Sb | 123 | 381.003 | -0.000 | **0.834888** | 0.09 | 10.7 | ug/L |
| \| | Ba | 135 | 73611.255 | 0.450 | **376.223103** | 8.46 | 2.2 | ug/L |
| \| | Ba | 137 | 126923.418 | 0.776 | **377.504065** | 9.32 | 2.5 | ug/L |
| \| | Tb | 159 | 153394.396 | -0.012 | | | | ug/L |
| \|> | Ho | 165 | 163510.954 | 163510.954 | | | | ug/L |
| \| | Tl | 203 | 186.002 | 0.001 | **0.294658** | 0.06 | 19.7 | ug/L |
| \| | Tl | 205 | 395.344 | 0.002 | **0.219856** | 0.05 | 23.4 | ug/L |
| \| | Pb | 208 | 526.007 | 0.003 | **0.163172** | 0.03 | 18.4 | ug/L |
| | Kr | 83 | 20.133 | -0.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.622 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 88.282 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 81.586 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 86.532 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-08ASD**
Sample Date/Time: Monday, February 15, 2010 17:29:03
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-08ASD.109
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31989.946 | 0.022 | | | | ug/L |
| | Li | 7 | 15839.646 | 0.039 | **73.286838** | 6.04 | 8.2 | ug/L |
| | Be | 9 | 4.000 | -0.000 | **7.105341** | 0.05 | 0.6 | ug/L |
| | B | 11 | 6863.060 | 0.019 | **119.294010** | 4.52 | 3.8 | ug/L |
| | Na | 23 | 51130608.914 | 154.860 | **420410.499467** | 14255.76 | 3.4 | ug/L |
| | Mg | 24 | 3520739.691 | 10.668 | **40132.404031** | 2002.96 | 5.0 | ug/L |
| | Al | 27 | 10328.606 | 0.029 | **109.596549** | 2.69 | 2.5 | ug/L |
| | K | 39 | 597461.300 | 1.647 | **1949.492132** | 158.67 | 8.1 | ug/L |
| | Ca | 43 | 56591.516 | 0.171 | **58041.478344** | 3273.26 | 5.6 | ug/L |
| > | Sc | 45 | 330327.972 | 330327.972 | | | | ug/L |
| | Ti | 49 | 464.014 | 0.000 | **0.565965** | 1.98 | 350.5 | ug/L |
| | Co | 59 | 82.667 | 0.000 | **-0.205007** | 0.02 | 8.0 | ug/L |
| | Ni | 60 | 76.000 | 0.000 | **-0.963169** | 0.15 | 15.9 | ug/L |
| | Ni | 62 | 28.000 | -0.000 | **3.334595** | 0.47 | 14.0 | ug/L |
| | Cu | 63 | 464.681 | 0.001 | **-0.511945** | 0.42 | 82.6 | ug/L |
| | Cu | 65 | 56.000 | 0.000 | **-1.500287** | 0.24 | 15.8 | ug/L |
| | Zn | 66 | 189.336 | 0.000 | **0.147388** | 0.81 | 549.9 | ug/L |
| | Zn | 67 | 1773.538 | 0.002 | **27.336140** | 15.37 | 56.2 | ug/L |
| | Zn | 68 | 478.682 | 0.001 | **7.655838** | 0.61 | 7.9 | ug/L |
| | V | 51 | 1996.527 | 0.006 | **6.750550** | 1.80 | 26.7 | ug/L |
| | Cr | 52 | 3396.750 | 0.001 | **0.145306** | 0.48 | 331.9 | ug/L |
| | Cr | 53 | 17110.352 | 0.008 | **30.063921** | 18.07 | 60.1 | ug/L |
| | Mn | 55 | 7405.564 | 0.022 | **14.719094** | 0.71 | 4.8 | ug/L |
| | Fe | 54 | 12263.379 | 0.002 | **37.440490** | 20.85 | 55.7 | ug/L |
| | Fe | 57 | 1426.132 | 0.003 | **76.822012** | 1.27 | 1.7 | ug/L |
| | As | 75 | -442.435 | -0.001 | **-3.418698** | 1.08 | 31.6 | ug/L |
| | Se | 77 | 1968.252 | 0.001 | **108.926650** | 23.33 | 21.4 | ug/L |
| | Se | 82 | 11.194 | 0.000 | **9.955729** | 0.20 | 2.0 | ug/L |
| | Sr | 88 | 326207.009 | 0.827 | **473.982788** | 20.45 | 4.3 | ug/L |
| > | Y | 89 | 394682.418 | 394682.418 | | | | ug/L |
| | Mo | 95 | 559.354 | 0.001 | **9.213375** | 0.90 | 9.7 | ug/L |
| | Mo | 97 | 345.341 | 0.001 | **10.348135** | 1.05 | 10.1 | ug/L |
| | Mo | 98 | 915.982 | 0.002 | **10.687662** | 0.47 | 4.4 | ug/L |
| | Ag | 107 | 6.667 | 0.000 | **1.002522** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 8.667 | 0.000 | **1.264446** | 0.01 | 0.9 | ug/L |
| | Cd | 111 | 2.500 | 0.000 | **1.345862** | 0.03 | 1.9 | ug/L |
| | Cd | 114 | 4.717 | 0.000 | **2.679894** | 0.03 | 1.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 157738.566 | 157738.566 | | | | ug/L |
| \| | Sn | 120 | 435.320 | -0.000 | **3.081331** | 0.14 | 4.6 | ug/L |
| \| | Sb | 121 | 287.339 | -0.001 | **1.151624** | 0.14 | 12.3 | ug/L |
| L | Sb | 123 | 191.084 | -0.001 | **2.424156** | 0.09 | 3.6 | ug/L |
| ⌈ | Ba | 135 | 14600.511 | 0.091 | **382.269578** | 10.08 | 2.6 | ug/L |
| \| | Ba | 137 | 25496.864 | 0.158 | **386.711350** | 9.73 | 2.5 | ug/L |
| \| | Tb | 159 | 152261.808 | -0.005 | | | | ug/L |
| \|> | Ho | 165 | 161082.068 | 161082.068 | | | | ug/L |
| \| | Tl | 203 | 21.333 | 0.000 | **0.177225** | 0.05 | 26.4 | ug/L |
| \| | Tl | 205 | 62.667 | 0.000 | **0.020040** | 0.07 | 368.1 | ug/L |
| L | Pb | 208 | 118.000 | 0.001 | **-0.156740** | 0.03 | 16.6 | ug/L |
| | Kr | 83 | 17.733 | -2.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.398 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 88.739 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 83.105 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.246 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-08AMS**
Sample Date/Time: Monday, February 15, 2010 17:31:43
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-08AMS.110
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24006.140 | -0.000 | | | | ug/L |
| | Li | 7 | 172908.851 | 0.527 | **180.399272** | 8.68 | 4.8 | ug/L |
| | Be | 9 | 21730.657 | 0.067 | **98.720672** | 3.37 | 3.4 | ug/L |
| | B | 11 | 54642.745 | 0.168 | **194.627795** | 5.54 | 2.8 | ug/L |
| | Na | 23 | 243810550.863 | 754.968 | **409891.146533** | 16970.57 | 4.1 | ug/L |
| | Mg | 24 | 18122707.604 | 56.115 | **42199.190842** | 2152.53 | 5.1 | ug/L |
| | Al | 27 | 6979709.113 | 21.609 | **5012.249273** | 159.50 | 3.2 | ug/L |
| | K | 39 | 10054722.851 | 30.968 | **7424.126191** | 337.59 | 4.5 | ug/L |
| | Ca | 43 | 290805.918 | 0.900 | **61103.815539** | 1640.96 | 2.7 | ug/L |
| > | Sc | 45 | 323091.446 | 323091.446 | | | | ug/L |
| | Ti | 49 | 11265.580 | 0.034 | **94.247768** | 0.66 | 0.7 | ug/L |
| | Co | 59 | 143762.434 | 0.445 | **84.617518** | 3.98 | 4.7 | ug/L |
| | Ni | 60 | 26389.875 | 0.082 | **79.867299** | 3.23 | 4.0 | ug/L |
| | Ni | 62 | 4159.796 | 0.013 | **83.204472** | 7.67 | 9.2 | ug/L |
| | Cu | 63 | 63871.427 | 0.198 | **80.485753** | 2.24 | 2.8 | ug/L |
| | Cu | 65 | 29527.231 | 0.091 | **78.855545** | 1.87 | 2.4 | ug/L |
| | Zn | 66 | 17108.342 | 0.053 | **70.789919** | 2.64 | 3.7 | ug/L |
| | Zn | 67 | 4750.800 | 0.011 | **85.469278** | 2.56 | 3.0 | ug/L |
| | Zn | 68 | 13450.416 | 0.041 | **77.502944** | 2.08 | 2.7 | ug/L |
| | V | 51 | 166112.793 | 0.514 | **93.852952** | 1.09 | 1.2 | ug/L |
| | Cr | 52 | 134917.093 | 0.408 | **88.379148** | 1.16 | 1.3 | ug/L |
| | Cr | 53 | 30691.784 | 0.051 | **89.037351** | 4.68 | 5.3 | ug/L |
| | Mn | 55 | 249568.493 | 0.772 | **97.209139** | 2.07 | 2.1 | ug/L |
| | Fe | 54 | 548751.589 | 1.664 | **4210.132928** | 75.47 | 1.8 | ug/L |
| | Fe | 57 | 220965.521 | 0.682 | **4233.956352** | 108.34 | 2.6 | ug/L |
| | As | 75 | 22045.841 | 0.057 | **86.968412** | 2.20 | 2.5 | ug/L |
| | Se | 77 | 9843.628 | 0.022 | **441.010424** | 4.08 | 0.9 | ug/L |
| | Se | 82 | 10132.460 | 0.026 | **401.240701** | 8.82 | 2.2 | ug/L |
| | Sr | 88 | 1967018.867 | 5.051 | **576.076507** | 5.59 | 1.0 | ug/L |
| > | Y | 89 | 389449.913 | 389449.913 | | | | ug/L |
| | Mo | 95 | 42973.733 | 0.110 | **103.083510** | 1.29 | 1.3 | ug/L |
| | Mo | 97 | 26327.011 | 0.068 | **102.893923** | 3.98 | 3.9 | ug/L |
| | Mo | 98 | 66659.398 | 0.171 | **102.128291** | 1.65 | 1.6 | ug/L |
| | Ag | 107 | 93650.031 | 0.610 | **87.934637** | 0.44 | 0.5 | ug/L |
| | Ag | 109 | 87896.679 | 0.572 | **87.473230** | 0.97 | 1.1 | ug/L |
| | Cd | 111 | 21817.064 | 0.142 | **87.029292** | 1.53 | 1.8 | ug/L |
| | Cd | 114 | 49167.494 | 0.320 | **86.724795** | 1.10 | 1.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 153577.500 | 153577.500 | | | | ug/L |
| \| | Sn | 120 | 95588.922 | 0.619 | **95.777413** | 1.13 | 1.2 | ug/L |
| \| | Sb | 121 | 71827.174 | 0.465 | **100.551663** | 0.54 | 0.5 | ug/L |
| L | Sb | 123 | 54699.665 | 0.354 | **100.338167** | 0.71 | 0.7 | ug/L |
| Γ | Ba | 135 | 94078.516 | 0.575 | **479.905656** | 5.02 | 1.0 | ug/L |
| \| | Ba | 137 | 163461.900 | 0.998 | **485.373831** | 6.50 | 1.3 | ug/L |
| \| | Tb | 159 | 154766.916 | -0.005 | | | | ug/L |
| \|> | Ho | 165 | 163744.850 | 163744.850 | | | | ug/L |
| \| | Tl | 203 | 58627.300 | 0.358 | **92.297412** | 2.05 | 2.2 | ug/L |
| \| | Tl | 205 | 140687.709 | 0.859 | **91.351615** | 0.67 | 0.7 | ug/L |
| L | Pb | 208 | 195519.044 | 1.194 | **93.405016** | 1.00 | 1.1 | ug/L |
| | Kr | 83 | 22.333 | 1.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.374 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 87.563 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.913 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 86.656 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-08AMSD**
Sample Date/Time: Monday, February 15, 2010 17:34:24
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-08AMSD.111
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25416.948 | 0.005 | | | | ug/L |
| | Li | 7 | 149370.057 | 0.460 | **157.504158** | 5.69 | 3.6 | ug/L |
| | Be | 9 | 19451.919 | 0.061 | **89.611480** | 5.07 | 5.7 | ug/L |
| | B | 11 | 49116.180 | 0.153 | **177.133633** | 14.82 | 8.4 | ug/L |
| | Na | 23 | 217299248.389 | 681.006 | **369735.933143** | 14134.98 | 3.8 | ug/L |
| | Mg | 24 | 16099298.503 | 50.465 | **37950.359197** | 1642.91 | 4.3 | ug/L |
| | Al | 27 | 6127296.901 | 19.204 | **4456.184746** | 172.87 | 3.9 | ug/L |
| | K | 39 | 9046591.504 | 28.207 | **6761.847422** | 501.36 | 7.4 | ug/L |
| | Ca | 43 | 256347.926 | 0.803 | **54531.340455** | 2627.19 | 4.8 | ug/L |
| > | Sc | 45 | 319203.992 | 319203.992 | | | | ug/L |
| | Ti | 49 | 10037.214 | 0.030 | **84.687007** | 4.31 | 5.1 | ug/L |
| | Co | 59 | 124754.660 | 0.391 | **74.324658** | 3.61 | 4.9 | ug/L |
| | Ni | 60 | 23298.567 | 0.073 | **71.321617** | 2.10 | 2.9 | ug/L |
| | Ni | 62 | 3579.500 | 0.011 | **72.468222** | 3.48 | 4.8 | ug/L |
| | Cu | 63 | 55874.252 | 0.175 | **71.206204** | 3.00 | 4.2 | ug/L |
| | Cu | 65 | 25531.652 | 0.080 | **68.987229** | 3.24 | 4.7 | ug/L |
| | Zn | 66 | 15064.073 | 0.047 | **63.014997** | 2.47 | 3.9 | ug/L |
| | Zn | 67 | 4205.150 | 0.009 | **72.392085** | 4.96 | 6.9 | ug/L |
| | Zn | 68 | 11567.368 | 0.036 | **67.332048** | 4.02 | 6.0 | ug/L |
| | V | 51 | 144549.996 | 0.453 | **82.732818** | 3.18 | 3.8 | ug/L |
| | Cr | 52 | 118189.893 | 0.361 | **78.154766** | 3.12 | 4.0 | ug/L |
| | Cr | 53 | 27487.029 | 0.042 | **72.005445** | 6.00 | 8.3 | ug/L |
| | Mn | 55 | 216243.079 | 0.677 | **85.309786** | 3.83 | 4.5 | ug/L |
| | Fe | 54 | 485192.789 | 1.486 | **3760.532610** | 169.29 | 4.5 | ug/L |
| | Fe | 57 | 193602.062 | 0.605 | **3754.643251** | 159.03 | 4.2 | ug/L |
| | As | 75 | 19502.821 | 0.051 | **77.624853** | 1.39 | 1.8 | ug/L |
| | Se | 77 | 8649.531 | 0.019 | **381.152733** | 18.82 | 4.9 | ug/L |
| | Se | 82 | 8996.791 | 0.023 | **359.166468** | 7.71 | 2.1 | ug/L |
| | Sr | 88 | 1728649.750 | 4.472 | **510.146847** | 6.51 | 1.3 | ug/L |
| > | Y | 89 | 386617.640 | 386617.640 | | | | ug/L |
| | Mo | 95 | 37658.629 | 0.097 | **91.081831** | 1.48 | 1.6 | ug/L |
| | Mo | 97 | 22710.810 | 0.059 | **89.530204** | 2.18 | 2.4 | ug/L |
| | Mo | 98 | 58414.377 | 0.151 | **90.265783** | 1.91 | 2.1 | ug/L |
| | Ag | 107 | 80828.447 | 0.529 | **76.252507** | 1.91 | 2.5 | ug/L |
| | Ag | 109 | 76085.771 | 0.498 | **76.068941** | 1.43 | 1.9 | ug/L |
| | Cd | 111 | 18972.202 | 0.124 | **76.030368** | 1.76 | 2.3 | ug/L |
| | Cd | 114 | 42802.901 | 0.280 | **75.889383** | 1.41 | 1.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 152955.401 | 152955.401 | | | | ug/L |
| \| | Sn | 120 | 81921.185 | 0.533 | **82.466537** | 2.17 | 2.6 | ug/L |
| \| | Sb | 121 | 61332.889 | 0.398 | **86.218108** | 2.55 | 3.0 | ug/L |
| \| | Sb | 123 | 47158.794 | 0.306 | **86.913697** | 2.85 | 3.3 | ug/L |
| \| | Ba | 135 | 80123.883 | 0.499 | **417.314977** | 16.49 | 4.0 | ug/L |
| \| | Ba | 137 | 137631.190 | 0.858 | **417.174363** | 15.20 | 3.6 | ug/L |
| \| | Tb | 159 | 151864.893 | -0.004 | | | | ug/L |
| \|> | Ho | 165 | 160488.035 | 160488.035 | | | | ug/L |
| \| | Tl | 203 | 50434.841 | 0.314 | **81.041041** | 3.08 | 3.8 | ug/L |
| \| | Tl | 205 | 123630.995 | 0.771 | **81.921932** | 2.08 | 2.5 | ug/L |
| \| | Pb | 208 | 168649.828 | 1.051 | **82.215406** | 2.73 | 3.3 | ug/L |
| | Kr | 83 | 20.200 | -0.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.286 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.926 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.585 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 84.932 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-08APDS**
Sample Date/Time: Monday, February 15, 2010 17:37:05
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-08APDS.112
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28397.486 | 0.011 | | | | ug/L |
| | Li | 7 | 126509.426 | 0.373 | **640.717348** | 24.75 | 3.9 | ug/L |
| | Be | 9 | 24477.578 | 0.074 | **541.335028** | 28.25 | 5.2 | ug/L |
| | B | 11 | 37452.337 | 0.112 | **649.818044** | 19.95 | 3.1 | ug/L |
| | Na | 23 | 53022604.949 | 160.064 | **434536.962392** | 29513.46 | 6.8 | ug/L |
| | Mg | 24 | 5699282.061 | 17.205 | **64708.710695** | 3630.32 | 5.6 | ug/L |
| | Al | 27 | 7501075.621 | 22.637 | **26250.202088** | 1132.18 | 4.3 | ug/L |
| | K | 39 | 8642182.851 | 25.920 | **31066.080031** | 1436.43 | 4.6 | ug/L |
| | Ca | 43 | 79132.975 | 0.238 | **80888.919195** | 2422.30 | 3.0 | ug/L |
| > | Sc | 45 | 331529.672 | 331529.672 | | | | ug/L |
| | Ti | 49 | 11576.706 | 0.034 | **472.234925** | 16.54 | 3.5 | ug/L |
| | Co | 59 | 153665.519 | 0.464 | **440.810964** | 20.07 | 4.6 | ug/L |
| | Ni | 60 | 29257.550 | 0.088 | **431.722087** | 18.55 | 4.3 | ug/L |
| | Ni | 62 | 4593.372 | 0.014 | **447.508980** | 18.99 | 4.2 | ug/L |
| | Cu | 63 | 70288.454 | 0.212 | **431.991586** | 19.84 | 4.6 | ug/L |
| | Cu | 65 | 33120.497 | 0.100 | **431.353244** | 17.16 | 4.0 | ug/L |
| | Zn | 66 | 20687.796 | 0.062 | **417.865693** | 19.86 | 4.8 | ug/L |
| | Zn | 67 | 5030.978 | 0.011 | **447.778044** | 25.85 | 5.8 | ug/L |
| | Zn | 68 | 15005.298 | 0.045 | **422.007670** | 22.09 | 5.2 | ug/L |
| | V | 51 | 170786.801 | 0.516 | **470.462459** | 20.55 | 4.4 | ug/L |
| | Cr | 52 | 141644.601 | 0.418 | **452.659060** | 20.47 | 4.5 | ug/L |
| | Cr | 53 | 31384.566 | 0.051 | **442.278965** | 30.70 | 6.9 | ug/L |
| | Mn | 55 | 237509.532 | 0.716 | **451.110141** | 23.11 | 5.1 | ug/L |
| | Fe | 54 | 598781.026 | 1.773 | **22427.096333** | 1195.77 | 5.3 | ug/L |
| | Fe | 57 | 240118.554 | 0.723 | **22433.088877** | 1125.37 | 5.0 | ug/L |
| | As | 75 | 25246.640 | 0.065 | **498.820908** | 18.74 | 3.8 | ug/L |
| | Se | 77 | 10335.606 | 0.023 | **2344.144187** | 46.67 | 2.0 | ug/L |
| | Se | 82 | 12019.875 | 0.031 | **2385.988114** | 22.76 | 1.0 | ug/L |
| | Sr | 88 | 660519.024 | 1.701 | **972.271369** | 14.64 | 1.5 | ug/L |
| > | Y | 89 | 388244.045 | 388244.045 | | | | ug/L |
| | Mo | 95 | 42066.744 | 0.108 | **506.208419** | 12.60 | 2.5 | ug/L |
| | Mo | 97 | 25547.690 | 0.066 | **500.837347** | 6.46 | 1.3 | ug/L |
| | Mo | 98 | 64489.986 | 0.166 | **495.668664** | 8.66 | 1.7 | ug/L |
| | Ag | 107 | 104304.511 | 0.668 | **481.500442** | 15.32 | 3.2 | ug/L |
| | Ag | 109 | 97421.805 | 0.624 | **476.592041** | 15.18 | 3.2 | ug/L |
| | Cd | 111 | 24466.021 | 0.157 | **479.717787** | 15.99 | 3.3 | ug/L |
| | Cd | 114 | 54962.450 | 0.352 | **476.478116** | 17.24 | 3.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 156208.095 | 156208.095 | | | | ug/L |
| \| | Sn | 120 | 98256.770 | 0.626 | **484.199249** | 25.93 | 5.4 | ug/L |
| \| | Sb | 121 | 73743.339 | 0.469 | **507.723511** | 23.56 | 4.6 | ug/L |
| \| | Sb | 123 | 55987.600 | 0.356 | **505.099721** | 25.40 | 5.0 | ug/L |
| \| | Ba | 135 | 33053.548 | 0.200 | **838.949677** | 28.66 | 3.4 | ug/L |
| \| | Ba | 137 | 56334.924 | 0.341 | **830.959878** | 28.52 | 3.4 | ug/L |
| \| | Tb | 159 | 153968.627 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 165137.322 | 165137.322 | | | | ug/L |
| \| | Tl | 203 | 63349.911 | 0.384 | **494.584377** | 20.10 | 4.1 | ug/L |
| \| | Tl | 205 | 153390.745 | 0.929 | **493.945903** | 17.60 | 3.6 | ug/L |
| \| | Pb | 208 | 208943.889 | 1.266 | **495.004432** | 18.58 | 3.8 | ug/L |
| | Kr | 83 | 17.400 | -3.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.734 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 87.292 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 82.299 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.392 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-08APDSD**
Sample Date/Time: Monday, February 15, 2010 17:39:46
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-08APDSD.113
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27594.185 | 0.010 | | | | ug/L |
| | Li | 7 | 133192.267 | 0.401 | **687.741884** | 13.66 | 2.0 | ug/L |
| | Be | 9 | 25284.835 | 0.078 | **569.233694** | 17.42 | 3.1 | ug/L |
| | B | 11 | 38232.895 | 0.116 | **676.005268** | 29.72 | 4.4 | ug/L |
| | Na | 23 | 54108750.822 | 166.339 | **451572.453202** | 10741.25 | 2.4 | ug/L |
| | Mg | 24 | 5966543.298 | 18.345 | **68994.121005** | 1797.79 | 2.6 | ug/L |
| | Al | 27 | 7914620.763 | 24.331 | **28208.388945** | 556.13 | 2.0 | ug/L |
| | K | 39 | 9123126.246 | 27.886 | **33423.813021** | 647.44 | 1.9 | ug/L |
| | Ca | 43 | 79665.484 | 0.244 | **82964.747989** | 3189.19 | 3.8 | ug/L |
| > | Sc | 45 | 325336.758 | 325336.758 | | | | ug/L |
| | Ti | 49 | 12006.030 | 0.036 | **500.014229** | 9.08 | 1.8 | ug/L |
| | Co | 59 | 159602.888 | 0.491 | **466.342525** | 5.65 | 1.2 | ug/L |
| | Ni | 60 | 30492.991 | 0.094 | **458.485548** | 10.43 | 2.3 | ug/L |
| | Ni | 62 | 4552.013 | 0.014 | **451.855460** | 16.05 | 3.6 | ug/L |
| | Cu | 63 | 72198.600 | 0.222 | **452.197407** | 12.28 | 2.7 | ug/L |
| | Cu | 65 | 33740.504 | 0.104 | **447.734962** | 8.59 | 1.9 | ug/L |
| | Zn | 66 | 21177.126 | 0.065 | **435.786297** | 9.20 | 2.1 | ug/L |
| | Zn | 67 | 5093.686 | 0.012 | **468.116751** | 7.86 | 1.7 | ug/L |
| | Zn | 68 | 15394.056 | 0.047 | **441.331372** | 13.40 | 3.0 | ug/L |
| | V | 51 | 180444.935 | 0.555 | **506.214528** | 13.09 | 2.6 | ug/L |
| | Cr | 52 | 148045.183 | 0.446 | **482.601157** | 7.24 | 1.5 | ug/L |
| | Cr | 53 | 31586.068 | 0.053 | **465.219074** | 17.32 | 3.7 | ug/L |
| | Mn | 55 | 249750.802 | 0.767 | **483.057139** | 7.54 | 1.6 | ug/L |
| | Fe | 54 | 625509.852 | 1.888 | **23885.633572** | 339.66 | 1.4 | ug/L |
| | Fe | 57 | 249406.632 | 0.765 | **23734.274412** | 419.71 | 1.8 | ug/L |
| | As | 75 | 26257.558 | 0.069 | **524.485242** | 12.89 | 2.5 | ug/L |
| | Se | 77 | 10621.999 | 0.024 | **2453.609481** | 56.01 | 2.3 | ug/L |
| | Se | 82 | 12429.046 | 0.032 | **2496.133448** | 35.04 | 1.4 | ug/L |
| | Sr | 88 | 682182.908 | 1.778 | **1015.940415** | 26.09 | 2.6 | ug/L |
| > | Y | 89 | 383715.252 | 383715.252 | | | | ug/L |
| | Mo | 95 | 43716.607 | 0.114 | **532.092912** | 10.89 | 2.0 | ug/L |
| | Mo | 97 | 26690.241 | 0.070 | **529.197283** | 8.62 | 1.6 | ug/L |
| | Mo | 98 | 68313.565 | 0.178 | **530.988312** | 7.65 | 1.4 | ug/L |
| | Ag | 107 | 107424.297 | 0.699 | **503.991015** | 18.43 | 3.7 | ug/L |
| | Ag | 109 | 100641.454 | 0.655 | **500.336968** | 16.90 | 3.4 | ug/L |
| | Cd | 111 | 25172.959 | 0.164 | **501.617505** | 18.59 | 3.7 | ug/L |
| | Cd | 114 | 56647.162 | 0.369 | **499.014481** | 18.79 | 3.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 153730.486 | 153730.486 | | | | ug/L |
| \| | Sn | 120 | 103525.373 | 0.671 | **518.390909** | 21.76 | 4.2 | ug/L |
| \| | Sb | 121 | 77815.685 | 0.504 | **544.584700** | 23.19 | 4.3 | ug/L |
| \| | Sb | 123 | 59066.048 | 0.382 | **541.568128** | 25.00 | 4.6 | ug/L |
| \| | Ba | 135 | 33739.837 | 0.206 | **864.035163** | 41.91 | 4.9 | ug/L |
| \| | Ba | 137 | 58359.916 | 0.357 | **868.537793** | 42.40 | 4.9 | ug/L |
| \| | Tb | 159 | 151521.991 | -0.025 | | | | ug/L |
| \|> | Ho | 165 | 163800.670 | 163800.670 | | | | ug/L |
| \| | Tl | 203 | 66242.031 | 0.405 | **521.680800** | 20.56 | 3.9 | ug/L |
| \| | Tl | 205 | 161608.660 | 0.988 | **524.994024** | 19.37 | 3.7 | ug/L |
| \| | Pb | 208 | 221328.506 | 1.352 | **529.026704** | 21.05 | 4.0 | ug/L |
| | Kr | 83 | 19.800 | -0.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 91.002 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.273 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.993 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 86.685 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 17:42:29
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.114
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28478.838 | 0.010 | | | | ug/L |
| | Li | 7 | 118566.169 | 0.344 | **118.059717** | 1.07 | 0.9 | ug/L |
| | Be | 9 | 26578.511 | 0.079 | **115.572579** | 1.80 | 1.6 | ug/L |
| | B | 11 | 34122.887 | 0.100 | **116.546161** | 2.29 | 2.0 | ug/L |
| | Na | 23 | 3524864.528 | 10.437 | **5672.218342** | 242.60 | 4.3 | ug/L |
| | Mg | 24 | 2529457.748 | 7.514 | **5654.609840** | 227.11 | 4.0 | ug/L |
| | Al | 27 | 7966644.064 | 23.656 | **5485.575152** | 57.54 | 1.0 | ug/L |
| | K | 39 | 8696057.760 | 25.665 | **6152.041355** | 178.94 | 2.9 | ug/L |
| | Ca | 43 | 24889.540 | 0.073 | **4981.305157** | 59.98 | 1.2 | ug/L |
| > | Sc | 45 | 336719.581 | 336719.581 | | | | ug/L |
| | Ti | 49 | 12118.209 | 0.035 | **97.412250** | 2.51 | 2.6 | ug/L |
| | Co | 59 | 165573.865 | 0.492 | **93.472232** | 1.03 | 1.1 | ug/L |
| | Ni | 60 | 32004.453 | 0.095 | **92.980856** | 2.33 | 2.5 | ug/L |
| | Ni | 62 | 4780.152 | 0.014 | **91.647373** | 2.65 | 2.9 | ug/L |
| | Cu | 63 | 76755.769 | 0.228 | **92.883778** | 1.32 | 1.4 | ug/L |
| | Cu | 65 | 36316.218 | 0.108 | **93.126335** | 2.46 | 2.6 | ug/L |
| | Zn | 66 | 23204.289 | 0.069 | **92.324859** | 2.57 | 2.8 | ug/L |
| | Zn | 67 | 5225.776 | 0.012 | **92.404671** | 3.09 | 3.3 | ug/L |
| | Zn | 68 | 16735.529 | 0.049 | **92.734709** | 2.67 | 2.9 | ug/L |
| | V | 51 | 180546.632 | 0.537 | **97.862533** | 0.78 | 0.8 | ug/L |
| | Cr | 52 | 151631.453 | 0.441 | **95.478522** | 1.49 | 1.6 | ug/L |
| | Cr | 53 | 31561.966 | 0.050 | **86.571434** | 2.80 | 3.2 | ug/L |
| | Mn | 55 | 249536.983 | 0.741 | **93.263498** | 1.59 | 1.7 | ug/L |
| | Fe | 54 | 635770.896 | 1.854 | **4689.499236** | 53.39 | 1.1 | ug/L |
| | Fe | 57 | 254432.906 | 0.754 | **4678.193946** | 76.50 | 1.6 | ug/L |
| | As | 75 | 27211.788 | 0.068 | **104.142406** | 1.55 | 1.5 | ug/L |
| | Se | 77 | 11084.648 | 0.024 | **490.606171** | 12.96 | 2.6 | ug/L |
| | Se | 82 | 13473.545 | 0.034 | **518.380867** | 10.57 | 2.0 | ug/L |
| | Sr | 88 | 353222.723 | 0.882 | **101.062293** | 1.01 | 1.0 | ug/L |
| > | Y | 89 | 400653.090 | 400653.090 | | | | ug/L |
| | Mo | 95 | 43256.658 | 0.108 | **100.883589** | 0.65 | 0.6 | ug/L |
| | Mo | 97 | 26215.936 | 0.065 | **99.626139** | 1.23 | 1.2 | ug/L |
| | Mo | 98 | 66717.314 | 0.167 | **99.423036** | 3.05 | 3.1 | ug/L |
| | Ag | 107 | 114700.845 | 0.698 | **100.572626** | 1.35 | 1.3 | ug/L |
| | Ag | 109 | 108155.717 | 0.658 | **100.492231** | 1.07 | 1.1 | ug/L |
| | Cd | 111 | 27365.592 | 0.166 | **101.904364** | 0.94 | 0.9 | ug/L |
| | Cd | 114 | 61601.027 | 0.375 | **101.398302** | 1.26 | 1.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 164420.640 | 164420.640 | | | | ug/L |
| \| | Sn | 120 | 105526.251 | 0.639 | **98.749803** | 1.19 | 1.2 | ug/L |
| \| | Sb | 121 | 74976.407 | 0.453 | **98.028185** | 1.81 | 1.8 | ug/L |
| L | Sb | 123 | 56674.944 | 0.342 | **97.110799** | 1.04 | 1.1 | ug/L |
| ⌈ | Ba | 135 | 19729.942 | 0.116 | **97.313587** | 0.85 | 0.9 | ug/L |
| \| | Ba | 137 | 33869.761 | 0.199 | **96.900610** | 0.70 | 0.7 | ug/L |
| \| | Tb | 159 | 159838.044 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 170546.203 | 170546.203 | | | | ug/L |
| \| | Tl | 203 | 69434.730 | 0.407 | **104.936867** | 1.23 | 1.2 | ug/L |
| \| | Tl | 205 | 168715.080 | 0.989 | **105.171942** | 1.83 | 1.7 | ug/L |
| L | Pb | 208 | 229955.518 | 1.348 | **105.467925** | 2.39 | 2.3 | ug/L |
| | Kr | 83 | 18.400 | -2.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 118.060 | | |
| Be | 9 | 115.573 | | |
| B | 11 | 116.546 | | |
| Na | 23 | 113.444 | | |
| Mg | 24 | 113.092 | | |
| Al | 27 | 107.560 | | |
| K | 39 | 123.041 | | |
| Ca | 43 | 99.626 | | |
| Sc | 45 | | 94.186 | |
| Ti | 49 | 97.412 | | |
| Co | 59 | 93.472 | | |
| Ni | 60 | 92.981 | | |
| Ni | 62 | 91.647 | | |
| Cu | 63 | 92.884 | | |
| Cu | 65 | 93.126 | | |
| Zn | 66 | 92.325 | | |
| Zn | 67 | 92.405 | | |
| Zn | 68 | 92.735 | | |
| V | 51 | 97.863 | | |
| Cr | 52 | 95.479 | | |
| Cr | 53 | 86.571 | | |
| Mn | 55 | 93.263 | | |
| Fe | 54 | 93.790 | | |
| Fe | 57 | 93.564 | | |
| As | 75 | 104.142 | | |
| Se | 77 | 98.121 | | |
| Se | 82 | 103.676 | | |
| Sr | 88 | 101.062 | | |
| Y | 89 | | 90.082 | |
| Mo | 95 | 100.884 | | |
| Mo | 97 | 99.626 | | |
| Mo | 98 | 99.423 | | |
| Ag | 107 | 100.573 | | |
| Ag | 109 | 100.492 | | |
| Cd | 111 | 101.904 | | |
| Cd | 114 | 101.398 | | |
| In | 115 | | 86.625 | |
| Sn | 120 | 98.750 | | |
| Sb | 121 | 98.028 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 97.111 | |
| Ba | 135 | 97.314 | |
| Ba | 137 | 96.901 | |
| Tb | 159 | | |
| Ho | 165 | | 90.255 |
| Tl | 203 | 104.937 | |
| Tl | 205 | 105.172 | |
| Pb | 208 | 105.468 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 17:45:10
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.115
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 32997.769 | 0.023 | | | | ug/L |
| | Li | 7 | 3601.510 | 0.002 | **1.951721** | 0.14 | 7.0 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **1.446059** | 0.02 | 1.2 | ug/L |
| | B | 11 | 1442.136 | 0.003 | **4.837077** | 0.41 | 8.4 | ug/L |
| | Na | 23 | 18321.877 | 0.020 | **16.886700** | 2.93 | 17.4 | ug/L |
| | Mg | 24 | 866.722 | 0.002 | **6.174225** | 0.85 | 13.8 | ug/L |
| | Al | 27 | 3354.076 | 0.008 | **16.979152** | 0.42 | 2.5 | ug/L |
| | K | 39 | 61545.397 | 0.018 | **-0.966901** | 2.27 | 234.6 | ug/L |
| | Ca | 43 | 148.001 | -0.000 | **-8.823556** | 1.97 | 22.3 | ug/L |
| > | Sc | 45 | 338187.946 | 338187.946 | | | | ug/L |
| | Ti | 49 | 449.347 | -0.000 | **-0.108876** | 0.38 | 352.1 | ug/L |
| | Co | 59 | 56.000 | 0.000 | **-0.056915** | 0.01 | 19.6 | ug/L |
| | Ni | 60 | 18.000 | 0.000 | **-0.365758** | 0.01 | 3.6 | ug/L |
| | Ni | 62 | 29.333 | -0.000 | **0.674999** | 0.30 | 44.1 | ug/L |
| | Cu | 63 | 396.010 | 0.001 | **-0.200887** | 0.02 | 8.8 | ug/L |
| | Cu | 65 | 168.002 | 0.000 | **-0.014968** | 0.12 | 806.0 | ug/L |
| | Zn | 66 | 141.335 | 0.000 | **-0.179138** | 0.03 | 17.0 | ug/L |
| | Zn | 67 | 1673.516 | 0.001 | **1.896112** | 3.52 | 185.8 | ug/L |
| | Zn | 68 | 150.668 | -0.000 | **-0.362447** | 0.14 | 39.7 | ug/L |
| | V | 51 | 1366.291 | 0.004 | **0.979077** | 0.20 | 20.5 | ug/L |
| | Cr | 52 | 3173.988 | -0.000 | **-0.167303** | 0.04 | 22.1 | ug/L |
| | Cr | 53 | 15381.367 | 0.001 | **-6.138472** | 2.67 | 43.5 | ug/L |
| | Mn | 55 | 261.338 | 0.000 | **0.221066** | 0.01 | 4.8 | ug/L |
| | Fe | 54 | 11118.572 | -0.002 | **-3.308392** | 2.14 | 64.8 | ug/L |
| | Fe | 57 | 646.694 | 0.000 | **0.431818** | 0.23 | 54.1 | ug/L |
| | As | 75 | -238.291 | -0.000 | **0.109101** | 0.67 | 610.1 | ug/L |
| | Se | 77 | 1594.832 | 0.000 | **1.209819** | 1.09 | 89.9 | ug/L |
| | Se | 82 | 7.139 | 0.000 | **1.829099** | 0.20 | 11.2 | ug/L |
| | Sr | 88 | 166.668 | 0.000 | **0.645672** | 0.01 | 0.9 | ug/L |
| > | Y | 89 | 399527.163 | 399527.163 | | | | ug/L |
| | Mo | 95 | 98.001 | 0.000 | **0.752227** | 0.05 | 6.3 | ug/L |
| | Mo | 97 | 54.000 | 0.000 | **0.950278** | 0.04 | 3.7 | ug/L |
| | Mo | 98 | 135.928 | 0.000 | **0.964087** | 0.05 | 5.1 | ug/L |
| | Ag | 107 | 17.333 | 0.000 | **0.209700** | 0.00 | 0.3 | ug/L |
| | Ag | 109 | 20.667 | 0.000 | **0.263826** | 0.00 | 1.8 | ug/L |
| | Cd | 111 | 5.833 | 0.000 | **0.281194** | 0.01 | 3.8 | ug/L |
| | Cd | 114 | 11.263 | 0.000 | **0.546433** | 0.01 | 1.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 163211.139 | 163211.139 | | | | ug/L |
| \| | Sn | 120 | 509.325 | -0.000 | **0.672267** | 0.03 | 5.2 | ug/L |
| \| | Sb | 121 | 1461.474 | 0.006 | **1.768393** | 0.25 | 14.4 | ug/L |
| \| | Sb | 123 | 1134.499 | 0.004 | **2.101043** | 0.12 | 5.9 | ug/L |
| \| | Ba | 135 | 14.667 | 0.000 | **0.940564** | 0.02 | 2.6 | ug/L |
| \| | Ba | 137 | 24.667 | 0.000 | **0.524054** | 0.04 | 7.8 | ug/L |
| \| | Tb | 159 | 158160.371 | -0.004 | | | | ug/L |
| \|> | Ho | 165 | 167307.850 | 167307.850 | | | | ug/L |
| \| | Tl | 203 | 74.000 | 0.000 | **0.115577** | 0.02 | 20.0 | ug/L |
| \| | Tl | 205 | 142.668 | 0.001 | **0.053700** | 0.02 | 42.6 | ug/L |
| \| | Pb | 208 | 115.334 | 0.001 | **-0.034587** | 0.01 | 18.1 | ug/L |
| | Kr | 83 | 16.333 | -4.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.597 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 89.828 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 85.988 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.541 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-01A**
Sample Date/Time: Monday, February 15, 2010 17:47:53
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-01A.116
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 33210.854 | 0.026 | | | | ug/L |
| | Li | 7 | 22767.661 | 0.061 | **21.871160** | 0.67 | 3.1 | ug/L |
| | Be | 9 | 4.667 | -0.000 | **1.423912** | 0.01 | 0.4 | ug/L |
| | B | 11 | 31673.074 | 0.095 | **110.778280** | 0.37 | 0.3 | ug/L |
| | Na | 23 | 30190183.655 | 91.785 | **49837.307399** | 1876.66 | 3.8 | ug/L |
| | Mg | 24 | 1560980.003 | 4.747 | **3573.859116** | 69.36 | 1.9 | ug/L |
| | Al | 27 | 31196.474 | 0.093 | **36.617566** | 0.39 | 1.1 | ug/L |
| | K | 39 | 1559207.891 | 4.578 | **1093.008087** | 43.52 | 4.0 | ug/L |
| | Ca | 43 | 33251.720 | 0.101 | **6828.694652** | 96.06 | 1.4 | ug/L |
| > | Sc | 45 | 328829.013 | 328829.013 | | | | ug/L |
| | Ti | 49 | 667.362 | 0.001 | **1.865672** | 0.19 | 10.0 | ug/L |
| | Co | 59 | 265.338 | 0.001 | **0.064974** | 0.03 | 43.2 | ug/L |
| | Ni | 60 | 131.334 | 0.000 | **-0.025867** | 0.04 | 142.4 | ug/L |
| | Ni | 62 | 40.000 | 0.000 | **0.903213** | 0.14 | 15.3 | ug/L |
| | Cu | 63 | 644.027 | 0.002 | **0.122556** | 0.03 | 27.7 | ug/L |
| | Cu | 65 | 189.336 | 0.000 | **0.052776** | 0.05 | 86.7 | ug/L |
| | Zn | 66 | 480.015 | 0.001 | **1.227756** | 0.05 | 4.1 | ug/L |
| | Zn | 67 | 1993.593 | 0.002 | **11.397555** | 4.54 | 39.9 | ug/L |
| | Zn | 68 | 570.688 | 0.001 | **2.075753** | 0.37 | 17.7 | ug/L |
| | V | 51 | 6924.174 | 0.021 | **4.076062** | 0.66 | 16.3 | ug/L |
| | Cr | 52 | 3917.667 | 0.002 | **0.381585** | 0.18 | 47.0 | ug/L |
| | Cr | 53 | 17682.345 | 0.010 | **9.778502** | 6.40 | 65.4 | ug/L |
| | Mn | 55 | 60990.265 | 0.185 | **23.433370** | 0.67 | 2.9 | ug/L |
| | Fe | 54 | 19864.661 | 0.026 | **66.307115** | 3.22 | 4.9 | ug/L |
| | Fe | 57 | 2588.435 | 0.006 | **37.418172** | 0.65 | 1.7 | ug/L |
| | As | 75 | -181.229 | -0.000 | **0.299505** | 0.26 | 85.4 | ug/L |
| | Se | 77 | 2080.283 | 0.002 | **30.908202** | 10.26 | 33.2 | ug/L |
| | Se | 82 | 10.325 | 0.000 | **1.969392** | 0.02 | 1.1 | ug/L |
| | Sr | 88 | 178084.035 | 0.465 | **53.568331** | 2.28 | 4.2 | ug/L |
| > | Y | 89 | 383158.602 | 383158.602 | | | | ug/L |
| | Mo | 95 | 5115.034 | 0.013 | **12.933187** | 0.24 | 1.9 | ug/L |
| | Mo | 97 | 3064.611 | 0.008 | **12.832098** | 0.37 | 2.9 | ug/L |
| | Mo | 98 | 7928.010 | 0.021 | **13.016503** | 0.15 | 1.2 | ug/L |
| | Ag | 107 | 7.333 | 0.000 | **0.201464** | 0.00 | 1.5 | ug/L |
| | Ag | 109 | 7.333 | 0.000 | **0.251832** | 0.01 | 2.2 | ug/L |
| | Cd | 111 | 6.333 | 0.000 | **0.285396** | 0.01 | 2.9 | ug/L |
| | Cd | 114 | 18.219 | 0.000 | **0.560430** | 0.01 | 1.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 150213.088 | 150213.088 | | | | ug/L |
| \| | Sn | 120 | 411.319 | -0.001 | **0.614203** | 0.05 | 7.8 | ug/L |
| \| | Sb | 121 | 508.684 | 0.000 | **0.567740** | 0.08 | 13.3 | ug/L |
| L | Sb | 123 | 421.093 | 0.000 | **0.931940** | 0.07 | 7.4 | ug/L |
| ⌈ | Ba | 135 | 8491.351 | 0.053 | **45.017458** | 0.95 | 2.1 | ug/L |
| \| | Ba | 137 | 14700.034 | 0.092 | **44.977672** | 0.88 | 2.0 | ug/L |
| \| | Tb | 159 | 150371.265 | -0.012 | | | | ug/L |
| \|> | Ho | 165 | 160400.537 | 160400.537 | | | | ug/L |
| \| | Tl | 203 | 21.333 | 0.000 | **0.035474** | 0.02 | 43.3 | ug/L |
| \| | Tl | 205 | 47.333 | 0.000 | **-0.005939** | 0.01 | 122.3 | ug/L |
| L | Pb | 208 | 1212.037 | 0.007 | **0.503535** | 0.04 | 8.5 | ug/L |
| | Kr | 83 | 18.067 | -2.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 91.979 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.148 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 79.140 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 84.886 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-02A**
Sample Date/Time: Monday, February 15, 2010 17:50:34
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-02A.117
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 21381.037 | -0.017 | | | | ug/L |
| | Li | 7 | 202975.996 | 0.539 | **184.584588** | 6.67 | 3.6 | ug/L |
| | Be | 9 | 4775.484 | 0.013 | **20.044695** | 0.91 | 4.5 | ug/L |
| | B | 11 | 63414.632 | 0.170 | **196.855787** | 7.23 | 3.7 | ug/L |
| | Na | 23 | 167114637.493 | 451.006 | **244864.793113** | 10839.03 | 4.4 | ug/L |
| | Mg | 24 | 31331421.677 | 84.567 | **63592.449241** | 2587.35 | 4.1 | ug/L |
| | Al | 27 | 254136338.100 | 685.847 | **158617.122148** | 4498.62 | 2.8 | ug/L |
| | K | 39 | 7025704.354 | 18.808 | **4507.016663** | 276.80 | 6.1 | ug/L |
| | Ca | 43 | 350315.391 | 0.945 | **64153.638310** | 1886.67 | 2.9 | ug/L |
| > | Sc | 45 | 370655.549 | 370655.549 | | | | ug/L |
| | Ti | 49 | 2745.825 | 0.006 | **17.016704** | 1.69 | 10.0 | ug/L |
| | Co | 59 | 254471.135 | 0.687 | **130.597476** | 3.77 | 2.9 | ug/L |
| | Ni | 60 | 61023.851 | 0.165 | **161.389222** | 3.60 | 2.2 | ug/L |
| | Ni | 62 | 9619.345 | 0.026 | **167.540145** | 5.30 | 3.2 | ug/L |
| | Cu | 63 | 2028.268 | 0.005 | **1.564813** | 0.03 | 2.2 | ug/L |
| | Cu | 65 | 1434.800 | 0.004 | **2.913250** | 0.10 | 3.6 | ug/L |
| | Zn | 66 | 64243.214 | 0.173 | **233.369210** | 4.10 | 1.8 | ug/L |
| | Zn | 67 | 12259.096 | 0.029 | **242.971816** | 5.24 | 2.2 | ug/L |
| | Zn | 68 | 45085.142 | 0.121 | **228.725119** | 3.75 | 1.6 | ug/L |
| | V | 51 | 202138.183 | 0.546 | **99.555010** | 1.37 | 1.4 | ug/L |
| | Cr | 52 | 108868.540 | 0.284 | **61.524945** | 1.15 | 1.9 | ug/L |
| | Cr | 53 | 27103.696 | 0.029 | **46.965796** | 2.08 | 4.4 | ug/L |
| | Mn | 55 | 10053530.765 | 27.132 | **3409.746912** | 88.98 | 2.6 | ug/L |
| | Fe | 54 | 21476146.721 | 57.920 | **146497.482894** | 3605.78 | 2.5 | ug/L |
| | Fe | 57 | 8795584.405 | 23.736 | **147292.622969** | 4791.12 | 3.3 | ug/L |
| | As | 75 | 2001.013 | 0.001 | **2.655482** | 0.13 | 4.8 | ug/L |
| | Se | 77 | 2657.793 | -0.002 | **-51.680962** | 1.58 | 3.1 | ug/L |
| | Se | 82 | 64.594 | 0.000 | **2.089922** | 0.06 | 2.7 | ug/L |
| | Sr | 88 | 2935343.787 | 1.582 | **180.819511** | 2.90 | 1.6 | ug/L |
| > | Y | 89 | 1855503.976 | 1855503.976 | | | | ug/L |
| | Mo | 95 | 538.686 | 0.000 | **0.793798** | 0.00 | 0.5 | ug/L |
| | Mo | 97 | 337.341 | 0.000 | **1.020538** | 0.02 | 2.4 | ug/L |
| | Mo | 98 | 840.566 | 0.000 | **1.031009** | 0.01 | 0.7 | ug/L |
| | Ag | 107 | 104.001 | 0.001 | **0.278335** | 0.01 | 2.0 | ug/L |
| | Ag | 109 | 34.000 | 0.000 | **0.273486** | 0.00 | 1.5 | ug/L |
| | Cd | 111 | 143.668 | 0.001 | **0.751251** | 0.02 | 2.4 | ug/L |
| | Cd | 114 | 332.223 | 0.002 | **1.028870** | 0.02 | 1.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 178462.754 | 178462.754 | | | | ug/L |
| \| | Sn | 120 | 520.532 | -0.000 | **0.640289** | 0.03 | 4.5 | ug/L |
| \| | Sb | 121 | 510.017 | -0.000 | **0.452991** | 0.01 | 3.1 | ug/L |
| L | Sb | 123 | 424.501 | -0.000 | **0.812495** | 0.04 | 4.3 | ug/L |
| Γ | Ba | 135 | 3532.811 | 0.014 | **12.271823** | 0.17 | 1.4 | ug/L |
| \| | Ba | 137 | 6163.803 | 0.024 | **12.050403** | 0.48 | 4.0 | ug/L |
| \| | Tb | 159 | 247275.847 | 0.008 | | | | ug/L |
| \|> | Ho | 165 | 258273.229 | 258273.229 | | | | ug/L |
| \| | Tl | 203 | 27.333 | 0.000 | **0.028563** | 0.01 | 27.6 | ug/L |
| \| | Tl | 205 | 65.334 | 0.000 | **-0.010496** | 0.00 | 33.0 | ug/L |
| L | Pb | 208 | 3929.725 | 0.015 | **1.102831** | 0.06 | 5.5 | ug/L |
| | Kr | 83 | 111.601 | 91.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 103.678 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 417.186 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 94.023 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 136.681 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-03A**
Sample Date/Time: Monday, February 15, 2010 17:53:15
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-03A.118
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34509.433 | 0.029 | | | | ug/L |
| | Li | 7 | 21521.405 | 0.056 | **20.361518** | 0.38 | 1.9 | ug/L |
| | Be | 9 | 22.667 | 0.000 | **1.501732** | 0.05 | 3.3 | ug/L |
| | B | 11 | 10475.128 | 0.030 | **36.234819** | 0.95 | 2.6 | ug/L |
| | Na | 23 | 25565304.457 | 76.951 | **41783.952191** | 1018.14 | 2.4 | ug/L |
| | Mg | 24 | 1674233.165 | 5.041 | **3795.076076** | 71.36 | 1.9 | ug/L |
| | Al | 27 | 303851.910 | 0.913 | **226.245165** | 11.74 | 5.2 | ug/L |
| | K | 39 | 1832160.226 | 5.353 | **1278.993125** | 31.44 | 2.5 | ug/L |
| | Ca | 43 | 39926.053 | 0.120 | **8124.606359** | 135.75 | 1.7 | ug/L |
| > | Sc | 45 | 332126.898 | 332126.898 | | | | ug/L |
| | Ti | 49 | 806.709 | 0.001 | **2.986448** | 0.43 | 14.5 | ug/L |
| | Co | 59 | 792.041 | 0.002 | **0.365479** | 0.05 | 12.4 | ug/L |
| | Ni | 60 | 208.003 | 0.001 | **0.197422** | 0.07 | 35.7 | ug/L |
| | Ni | 62 | 62.667 | 0.000 | **1.331677** | 0.48 | 35.8 | ug/L |
| | Cu | 63 | 764.705 | 0.002 | **0.263808** | 0.02 | 6.3 | ug/L |
| | Cu | 65 | 320.007 | 0.001 | **0.389412** | 0.19 | 48.1 | ug/L |
| | Zn | 66 | 1148.086 | 0.003 | **3.926527** | 0.38 | 9.7 | ug/L |
| | Zn | 67 | 2106.956 | 0.003 | **13.835891** | 4.93 | 35.6 | ug/L |
| | Zn | 68 | 1184.091 | 0.003 | **5.532897** | 0.30 | 5.4 | ug/L |
| | V | 51 | 5502.071 | 0.017 | **3.260405** | 0.24 | 7.4 | ug/L |
| | Cr | 52 | 4152.455 | 0.003 | **0.508370** | 0.05 | 10.4 | ug/L |
| | Cr | 53 | 18154.743 | 0.011 | **11.459287** | 2.05 | 17.9 | ug/L |
| | Mn | 55 | 20032.739 | 0.060 | **7.704873** | 0.31 | 4.0 | ug/L |
| | Fe | 54 | 31992.444 | 0.062 | **157.150431** | 11.95 | 7.6 | ug/L |
| | Fe | 57 | 7773.276 | 0.022 | **133.829138** | 11.86 | 8.9 | ug/L |
| | As | 75 | -510.216 | -0.001 | **-0.974508** | 0.55 | 56.4 | ug/L |
| | Se | 77 | 2070.279 | 0.002 | **28.613654** | 2.07 | 7.2 | ug/L |
| | Se | 82 | 22.261 | 0.000 | **2.433982** | 0.19 | 7.7 | ug/L |
| | Sr | 88 | 291638.372 | 0.749 | **85.969503** | 1.97 | 2.3 | ug/L |
| > | Y | 89 | 389252.433 | 389252.433 | | | | ug/L |
| | Mo | 95 | 367.342 | 0.001 | **1.401184** | 0.06 | 4.6 | ug/L |
| | Mo | 97 | 224.670 | 0.001 | **1.618073** | 0.04 | 2.7 | ug/L |
| | Mo | 98 | 541.279 | 0.001 | **1.586207** | 0.03 | 1.6 | ug/L |
| | Ag | 107 | 10.667 | 0.000 | **0.204282** | 0.00 | 2.2 | ug/L |
| | Ag | 109 | 11.333 | 0.000 | **0.255628** | 0.00 | 1.2 | ug/L |
| | Cd | 111 | 8.333 | 0.000 | **0.292217** | 0.01 | 4.3 | ug/L |
| | Cd | 114 | 16.849 | 0.000 | **0.557178** | 0.01 | 2.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 155271.308 | 155271.308 | | | | ug/L |
| \| | Sn | 120 | 441.287 | -0.000 | **0.629237** | 0.03 | 4.9 | ug/L |
| \| | Sb | 121 | 516.684 | 0.000 | **0.554628** | 0.03 | 6.3 | ug/L |
| L | Sb | 123 | 425.424 | 0.000 | **0.914971** | 0.05 | 5.2 | ug/L |
| ⌈ | Ba | 135 | 16036.700 | 0.100 | **83.987257** | 1.44 | 1.7 | ug/L |
| \| | Ba | 137 | 28099.900 | 0.175 | **85.300909** | 1.25 | 1.5 | ug/L |
| \| | Tb | 159 | 150809.502 | -0.012 | | | | ug/L |
| \|> | Ho | 165 | 160857.189 | 160857.189 | | | | ug/L |
| \| | Tl | 203 | 12.000 | 0.000 | **0.020607** | 0.00 | 16.1 | ug/L |
| \| | Tl | 205 | 21.333 | 0.000 | **-0.023352** | 0.00 | 11.6 | ug/L |
| L | Pb | 208 | 1258.707 | 0.008 | **0.523857** | 0.02 | 3.7 | ug/L |
| | Kr | 83 | 17.733 | -2.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.901 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 87.518 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 81.805 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.127 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-04A**
Sample Date/Time: Monday, February 15, 2010 17:55:56
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-04A.119
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34662.993 | 0.032 | | | | ug/L |
| | Li | 7 | 12560.927 | 0.030 | **11.452837** | 0.28 | 2.5 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **1.447631** | 0.02 | 1.2 | ug/L |
| | B | 11 | 23284.527 | 0.070 | **82.320252** | 1.55 | 1.9 | ug/L |
| | Na | 23 | 38797597.718 | 119.273 | **64761.142701** | 1919.73 | 3.0 | ug/L |
| | Mg | 24 | 107887.532 | 0.331 | **253.410412** | 13.49 | 5.3 | ug/L |
| | Al | 27 | 20816.513 | 0.062 | **29.468691** | 0.44 | 1.5 | ug/L |
| | K | 39 | 811181.872 | 2.330 | **553.870062** | 33.45 | 6.0 | ug/L |
| | Ca | 43 | 5084.346 | 0.015 | **1023.229579** | 25.34 | 2.5 | ug/L |
| > | Sc | 45 | 325320.845 | 325320.845 | | | | ug/L |
| | Ti | 49 | 915.388 | 0.001 | **4.076686** | 0.31 | 7.5 | ug/L |
| | Co | 59 | 64.000 | 0.000 | **-0.051017** | 0.01 | 20.2 | ug/L |
| | Ni | 60 | 72.000 | 0.000 | **-0.200704** | 0.01 | 7.1 | ug/L |
| | Ni | 62 | 36.000 | 0.000 | **0.831052** | 0.06 | 7.5 | ug/L |
| | Cu | 63 | 2674.466 | 0.008 | **2.696157** | 0.24 | 8.8 | ug/L |
| | Cu | 65 | 1134.750 | 0.003 | **2.579047** | 0.06 | 2.2 | ug/L |
| | Zn | 66 | 486.682 | 0.001 | **1.278522** | 0.13 | 10.5 | ug/L |
| | Zn | 67 | 1890.899 | 0.002 | **9.230205** | 1.74 | 18.8 | ug/L |
| | Zn | 68 | 486.682 | 0.001 | **1.627509** | 0.32 | 19.8 | ug/L |
| | V | 51 | 2406.415 | 0.008 | **1.590220** | 0.18 | 11.4 | ug/L |
| | Cr | 52 | 4061.073 | 0.003 | **0.505298** | 0.11 | 21.3 | ug/L |
| | Cr | 53 | 19433.861 | 0.016 | **21.228053** | 0.37 | 1.8 | ug/L |
| | Mn | 55 | 36902.310 | 0.113 | **14.386583** | 0.50 | 3.4 | ug/L |
| | Fe | 54 | 17794.864 | 0.020 | **51.915937** | 3.70 | 7.1 | ug/L |
| | Fe | 57 | 1633.507 | 0.003 | **19.755260** | 1.88 | 9.5 | ug/L |
| | As | 75 | -442.464 | -0.001 | **-0.713247** | 0.56 | 78.3 | ug/L |
| | Se | 77 | 2251.663 | 0.002 | **38.455861** | 6.41 | 16.7 | ug/L |
| | Se | 82 | 13.618 | 0.000 | **2.095069** | 0.21 | 10.3 | ug/L |
| | Sr | 88 | 36414.716 | 0.094 | **11.276916** | 0.42 | 3.7 | ug/L |
| > | Y | 89 | 388615.882 | 388615.882 | | | | ug/L |
| | Mo | 95 | 484.015 | 0.001 | **1.681412** | 0.02 | 1.4 | ug/L |
| | Mo | 97 | 281.339 | 0.001 | **1.840369** | 0.18 | 9.7 | ug/L |
| | Mo | 98 | 739.223 | 0.002 | **1.889208** | 0.02 | 0.8 | ug/L |
| | Ag | 107 | 10.667 | 0.000 | **0.204679** | 0.00 | 2.0 | ug/L |
| | Ag | 109 | 6.667 | 0.000 | **0.251278** | 0.00 | 1.7 | ug/L |
| | Cd | 111 | 3.500 | 0.000 | **0.273785** | 0.00 | 1.3 | ug/L |
| | Cd | 114 | 6.515 | 0.000 | **0.539586** | 0.01 | 1.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 149945.606 | 149945.606 | | | | ug/L |
| \| | Sn | 120 | 411.310 | -0.001 | **0.614095** | 0.04 | 6.8 | ug/L |
| \| | Sb | 121 | 237.337 | -0.001 | **0.178635** | 0.00 | 2.3 | ug/L |
| \| | Sb | 123 | 191.000 | -0.001 | **0.502010** | 0.04 | 7.3 | ug/L |
| \| | Ba | 135 | 2016.264 | 0.013 | **11.472174** | 0.41 | 3.6 | ug/L |
| \| | Ba | 137 | 3433.434 | 0.022 | **10.976159** | 0.63 | 5.8 | ug/L |
| \| | Tb | 159 | 146705.278 | -0.025 | | | | ug/L |
| \|> | Ho | 165 | 158565.930 | 158565.930 | | | | ug/L |
| \| | Tl | 203 | 6.667 | 0.000 | **0.012204** | 0.00 | 15.3 | ug/L |
| \| | Tl | 205 | 10.000 | 0.000 | **-0.030706** | 0.00 | 12.0 | ug/L |
| \| | Pb | 208 | 950.690 | 0.006 | **0.381013** | 0.03 | 7.6 | ug/L |
| | Kr | 83 | 14.667 | -5.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.997 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 87.375 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 78.999 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 83.915 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-05A**
Sample Date/Time: Monday, February 15, 2010 17:58:36
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-05A.120
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35339.463 | 0.031 | | | | ug/L |
| | Li | 7 | 14871.706 | 0.036 | **13.449492** | 0.42 | 3.1 | ug/L |
| | Be | 9 | 4.000 | -0.000 | **1.420631** | 0.01 | 0.6 | ug/L |
| | B | 11 | 21038.734 | 0.061 | **72.336120** | 0.30 | 0.4 | ug/L |
| | Na | 23 | 43037070.317 | 128.679 | **69868.155697** | 1330.96 | 1.9 | ug/L |
| | Mg | 24 | 66049.058 | 0.197 | **152.772497** | 2.25 | 1.5 | ug/L |
| | Al | 27 | 33405.757 | 0.098 | **37.784559** | 0.87 | 2.3 | ug/L |
| | K | 39 | 407805.509 | 1.055 | **247.990582** | 12.75 | 5.1 | ug/L |
| | Ca | 43 | 2671.130 | 0.007 | **503.983806** | 7.00 | 1.4 | ug/L |
| > | Sc | 45 | 334384.935 | 334384.935 | | | | ug/L |
| | Ti | 49 | 670.029 | 0.001 | **1.793370** | 0.40 | 22.0 | ug/L |
| | Co | 59 | 64.000 | 0.000 | **-0.052239** | 0.01 | 15.2 | ug/L |
| | Ni | 60 | 80.667 | 0.000 | **-0.181286** | 0.01 | 7.9 | ug/L |
| | Ni | 62 | 26.667 | -0.000 | **0.634674** | 0.40 | 62.9 | ug/L |
| | Cu | 63 | 717.367 | 0.002 | **0.199177** | 0.02 | 9.0 | ug/L |
| | Cu | 65 | 173.335 | 0.000 | **0.003021** | 0.07 | 2229.6 | ug/L |
| | Zn | 66 | 312.006 | 0.001 | **0.515621** | 0.14 | 27.9 | ug/L |
| | Zn | 67 | 2064.278 | 0.002 | **12.316105** | 3.34 | 27.1 | ug/L |
| | Zn | 68 | 368.009 | 0.001 | **0.875157** | 0.20 | 22.6 | ug/L |
| | V | 51 | 2536.467 | 0.008 | **1.627960** | 1.18 | 72.5 | ug/L |
| | Cr | 52 | 4548.678 | 0.004 | **0.747799** | 0.08 | 11.1 | ug/L |
| | Cr | 53 | 21711.301 | 0.021 | **31.182612** | 4.45 | 14.3 | ug/L |
| | Mn | 55 | 7578.400 | 0.022 | **2.972034** | 0.08 | 2.8 | ug/L |
| | Fe | 54 | 17973.553 | 0.019 | **49.454283** | 1.31 | 2.7 | ug/L |
| | Fe | 57 | 1304.777 | 0.002 | **12.785694** | 0.78 | 6.1 | ug/L |
| | As | 75 | -457.588 | -0.001 | **-0.730600** | 1.00 | 137.4 | ug/L |
| | Se | 77 | 2520.413 | 0.003 | **50.014203** | 4.29 | 8.6 | ug/L |
| | Se | 82 | 4.345 | 0.000 | **1.724634** | 0.19 | 11.0 | ug/L |
| | Sr | 88 | 42314.740 | 0.106 | **12.751513** | 0.08 | 0.6 | ug/L |
| > | Y | 89 | 396719.864 | 396719.864 | | | | ug/L |
| | Mo | 95 | 650.694 | 0.002 | **2.048629** | 0.04 | 1.8 | ug/L |
| | Mo | 97 | 416.678 | 0.001 | **2.334081** | 0.17 | 7.5 | ug/L |
| | Mo | 98 | 1031.996 | 0.003 | **2.303354** | 0.12 | 5.2 | ug/L |
| | Ag | 107 | 6.000 | 0.000 | **0.200010** | 0.00 | 1.6 | ug/L |
| | Ag | 109 | 3.333 | 0.000 | **0.247783** | 0.00 | 1.2 | ug/L |
| | Cd | 111 | 3.333 | 0.000 | **0.272733** | 0.00 | 0.4 | ug/L |
| | Cd | 114 | 6.201 | 0.000 | **0.538680** | 0.01 | 1.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 154181.639 | 154181.639 | | | | ug/L |
| \| | Sn | 120 | 370.676 | -0.001 | **0.561931** | 0.05 | 8.4 | ug/L |
| \| | Sb | 121 | 263.338 | -0.001 | **0.205481** | 0.04 | 20.4 | ug/L |
| \| | Sb | 123 | 192.669 | -0.001 | **0.495271** | 0.03 | 5.5 | ug/L |
| \| | Ba | 135 | 1827.551 | 0.011 | **10.335805** | 0.32 | 3.1 | ug/L |
| \| | Ba | 137 | 3321.384 | 0.021 | **10.478524** | 0.31 | 3.0 | ug/L |
| \| | Tb | 159 | 151134.962 | -0.011 | | | | ug/L |
| \|> | Ho | 165 | 160895.959 | 160895.959 | | | | ug/L |
| \| | Tl | 203 | 6.000 | 0.000 | **0.010965** | 0.01 | 50.4 | ug/L |
| \| | Tl | 205 | 11.333 | 0.000 | **-0.029958** | 0.01 | 18.4 | ug/L |
| \| | Pb | 208 | 204.668 | 0.001 | **0.010921** | 0.01 | 93.6 | ug/L |
| | Kr | 83 | 15.533 | -5.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.533 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 89.197 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 81.231 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.148 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-06A**
Sample Date/Time: Monday, February 15, 2010 18:01:17
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-06A.121
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34669.912 | 0.029 | | | | ug/L |
| | Li | 7 | 14299.280 | 0.034 | **12.941869** | 0.55 | 4.3 | ug/L |
| | Be | 9 | 18.667 | 0.000 | **1.483930** | 0.03 | 2.2 | ug/L |
| | B | 11 | 24268.905 | 0.071 | **83.840611** | 2.16 | 2.6 | ug/L |
| | Na | 23 | 38353796.179 | 115.278 | **62592.364466** | 3456.85 | 5.5 | ug/L |
| | Mg | 24 | 108157.621 | 0.325 | **248.908766** | 23.20 | 9.3 | ug/L |
| | Al | 27 | 63232.858 | 0.188 | **58.638810** | 3.47 | 5.9 | ug/L |
| | K | 39 | 1033019.997 | 2.941 | **700.343395** | 35.97 | 5.1 | ug/L |
| | Ca | 43 | 6074.398 | 0.018 | **1201.204382** | 49.94 | 4.2 | ug/L |
| > | Sc | 45 | 332926.009 | 332926.009 | | | | ug/L |
| | Ti | 49 | 2046.273 | 0.005 | **13.474737** | 1.71 | 12.7 | ug/L |
| | Co | 59 | 613.358 | 0.002 | **0.261725** | 0.03 | 11.0 | ug/L |
| | Ni | 60 | 201.336 | 0.001 | **0.175010** | 0.06 | 34.7 | ug/L |
| | Ni | 62 | 61.334 | 0.000 | **1.306539** | 0.09 | 6.8 | ug/L |
| | Cu | 63 | 4207.818 | 0.012 | **4.506926** | 0.11 | 2.5 | ug/L |
| | Cu | 65 | 1916.239 | 0.006 | **4.549110** | 0.20 | 4.5 | ug/L |
| | Zn | 66 | 1648.177 | 0.005 | **5.940703** | 0.24 | 4.0 | ug/L |
| | Zn | 67 | 2189.646 | 0.003 | **15.833003** | 4.13 | 26.1 | ug/L |
| | Zn | 68 | 1316.113 | 0.003 | **6.260819** | 0.41 | 6.6 | ug/L |
| | V | 51 | 3176.659 | 0.010 | **1.978145** | 0.32 | 16.3 | ug/L |
| | Cr | 52 | 4661.413 | 0.004 | **0.834014** | 0.04 | 5.0 | ug/L |
| | Cr | 53 | 21026.701 | 0.019 | **27.866107** | 4.11 | 14.7 | ug/L |
| | Mn | 55 | 53300.703 | 0.160 | **20.254548** | 0.71 | 3.5 | ug/L |
| | Fe | 54 | 21970.145 | 0.031 | **80.555906** | 8.24 | 10.2 | ug/L |
| | Fe | 57 | 3534.812 | 0.009 | **54.492460** | 2.33 | 4.3 | ug/L |
| | As | 75 | -225.543 | -0.000 | **0.169489** | 0.26 | 155.9 | ug/L |
| | Se | 77 | 2389.705 | 0.002 | **40.825760** | 4.29 | 10.5 | ug/L |
| | Se | 82 | 8.869 | 0.000 | **1.892616** | 0.08 | 4.4 | ug/L |
| | Sr | 88 | 47025.333 | 0.116 | **13.846933** | 0.31 | 2.3 | ug/L |
| > | Y | 89 | 404461.379 | 404461.379 | | | | ug/L |
| | Mo | 95 | 620.025 | 0.002 | **1.948759** | 0.01 | 0.4 | ug/L |
| | Mo | 97 | 364.009 | 0.001 | **2.105391** | 0.06 | 2.6 | ug/L |
| | Mo | 98 | 973.842 | 0.002 | **2.188487** | 0.04 | 1.7 | ug/L |
| | Ag | 107 | 13.333 | 0.000 | **0.207027** | 0.00 | 1.4 | ug/L |
| | Ag | 109 | 14.000 | 0.000 | **0.258595** | 0.01 | 2.4 | ug/L |
| | Cd | 111 | 11.000 | 0.000 | **0.303869** | 0.02 | 5.2 | ug/L |
| | Cd | 114 | 23.734 | 0.000 | **0.569899** | 0.00 | 0.7 | ug/L |

**00419**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 152165.774 | 152165.774 | | | | ug/L |
| \| | Sn | 120 | 391.309 | -0.001 | **0.587796** | 0.01 | 1.8 | ug/L |
| \| | Sb | 121 | 250.671 | -0.001 | **0.192524** | 0.03 | 15.7 | ug/L |
| \| | Sb | 123 | 183.000 | -0.001 | **0.482291** | 0.02 | 3.7 | ug/L |
| \| | Ba | 135 | 3026.595 | 0.019 | **16.636531** | 0.27 | 1.6 | ug/L |
| \| | Ba | 137 | 5076.342 | 0.032 | **15.868616** | 0.72 | 4.5 | ug/L |
| \| | Tb | 159 | 149221.424 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 160025.165 | 160025.165 | | | | ug/L |
| \| | Tl | 203 | 3.333 | -0.000 | **0.006688** | 0.00 | 53.4 | ug/L |
| \| | Tl | 205 | 8.000 | 0.000 | **-0.032119** | 0.00 | 4.4 | ug/L |
| \| | Pb | 208 | 6150.944 | 0.038 | **2.921511** | 0.07 | 2.5 | ug/L |
| | Kr | 83 | 16.733 | -3.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.125 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.938 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.169 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 84.687 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-07A**
Sample Date/Time: Monday, February 15, 2010 18:03:58
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-07A.122
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28208.838 | 0.010 | | | | ug/L |
| | Li | 7 | 73591.027 | 0.211 | **73.123798** | 2.00 | 2.7 | ug/L |
| | Be | 9 | 10.667 | 0.000 | **1.449567** | 0.01 | 0.7 | ug/L |
| | B | 11 | 27830.932 | 0.082 | **95.677809** | 3.27 | 3.4 | ug/L |
| | Na | 23 | 318696221.113 | 952.346 | **517051.420596** | 7011.61 | 1.4 | ug/L |
| | Mg | 24 | 22973862.345 | 68.660 | **51631.494202** | 1803.96 | 3.5 | ug/L |
| | Al | 27 | 17336.191 | 0.050 | **26.664515** | 0.57 | 2.1 | ug/L |
| | K | 39 | 3591121.090 | 10.571 | **2530.816287** | 110.23 | 4.4 | ug/L |
| | Ca | 43 | 370396.511 | 1.107 | **75167.212354** | 3534.63 | 4.7 | ug/L |
| > | Sc | 45 | 334646.859 | 334646.859 | | | | ug/L |
| | Ti | 49 | 505.350 | 0.000 | **0.410097** | 0.44 | 106.9 | ug/L |
| | Co | 59 | 228.003 | 0.001 | **0.041155** | 0.02 | 51.1 | ug/L |
| | Ni | 60 | 641.360 | 0.002 | **1.464807** | 0.01 | 0.8 | ug/L |
| | Ni | 62 | 72.000 | 0.000 | **1.510429** | 0.38 | 25.3 | ug/L |
| | Cu | 63 | 2789.173 | 0.008 | **2.742466** | 0.23 | 8.4 | ug/L |
| | Cu | 65 | 250.671 | 0.001 | **0.203905** | 0.10 | 50.8 | ug/L |
| | Zn | 66 | 2082.949 | 0.006 | **7.666842** | 0.57 | 7.4 | ug/L |
| | Zn | 67 | 2423.049 | 0.003 | **21.524760** | 3.87 | 18.0 | ug/L |
| | Zn | 68 | 2253.664 | 0.006 | **11.532120** | 0.85 | 7.4 | ug/L |
| | V | 51 | 4930.270 | 0.015 | **2.923157** | 0.29 | 9.9 | ug/L |
| | Cr | 52 | 4656.744 | 0.004 | **0.817458** | 0.18 | 22.6 | ug/L |
| | Cr | 53 | 18150.067 | 0.010 | **10.714873** | 5.13 | 47.9 | ug/L |
| | Mn | 55 | 3340.060 | 0.009 | **1.379060** | 0.09 | 6.3 | ug/L |
| | Fe | 54 | 18150.271 | 0.020 | **50.769363** | 6.86 | 13.5 | ug/L |
| | Fe | 57 | 5880.253 | 0.016 | **97.726522** | 9.46 | 9.7 | ug/L |
| | As | 75 | -574.631 | -0.001 | **-1.156168** | 0.75 | 65.1 | ug/L |
| | Se | 77 | 3101.292 | 0.004 | **77.766587** | 3.04 | 3.9 | ug/L |
| | Se | 82 | 57.329 | 0.000 | **3.739981** | 0.23 | 6.2 | ug/L |
| | Sr | 88 | 2364324.461 | 5.871 | **669.566898** | 30.55 | 4.6 | ug/L |
| > | Y | 89 | 402872.018 | 402872.018 | | | | ug/L |
| | Mo | 95 | 3223.342 | 0.008 | **7.963652** | 0.32 | 4.1 | ug/L |
| | Mo | 97 | 2084.949 | 0.005 | **8.568547** | 0.41 | 4.8 | ug/L |
| | Mo | 98 | 5174.857 | 0.013 | **8.373198** | 0.45 | 5.3 | ug/L |
| | Ag | 107 | 14.667 | 0.000 | **0.207547** | 0.00 | 2.0 | ug/L |
| | Ag | 109 | 6.667 | 0.000 | **0.250819** | 0.00 | 1.8 | ug/L |
| | Cd | 111 | 18.333 | 0.000 | **0.329121** | 0.01 | 3.7 | ug/L |
| | Cd | 114 | 27.807 | 0.000 | **0.574311** | 0.03 | 5.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 160929.179 | 160929.179 | | | | ug/L |
| \| | Sn | 120 | 421.927 | -0.001 | **0.595463** | 0.03 | 4.6 | ug/L |
| \| | Sb | 121 | 322.673 | -0.001 | **0.269549** | 0.01 | 3.6 | ug/L |
| \| | Sb | 123 | 243.165 | -0.001 | **0.568811** | 0.03 | 5.1 | ug/L |
| \| | Ba | 135 | 62083.142 | 0.370 | **309.492253** | 12.37 | 4.0 | ug/L |
| \| | Ba | 137 | 106568.774 | 0.635 | **309.085609** | 7.29 | 2.4 | ug/L |
| \| | Tb | 159 | 159763.507 | 0.003 | | | | ug/L |
| \|> | Ho | 165 | 167698.322 | 167698.322 | | | | ug/L |
| \| | Tl | 203 | 10.667 | 0.000 | **0.017763** | 0.00 | 10.1 | ug/L |
| \| | Tl | 205 | 18.667 | 0.000 | **-0.025630** | 0.00 | 14.8 | ug/L |
| \| | Pb | 208 | 664.011 | 0.004 | **0.221315** | 0.01 | 4.3 | ug/L |
| | Kr | 83 | 26.200 | 5.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.606 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.580 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 84.786 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.748 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-09A**
Sample Date/Time: Monday, February 15, 2010 18:06:38
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-09A.123
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31578.326 | 0.024 | | | | ug/L |
| | Li | 7 | 53430.326 | 0.158 | **54.981961** | 2.44 | 4.4 | ug/L |
| | Be | 9 | 10.667 | 0.000 | **1.451208** | 0.02 | 1.4 | ug/L |
| | B | 11 | 28895.536 | 0.089 | **103.633229** | 4.91 | 4.7 | ug/L |
| | Na | 23 | 214694834.093 | 669.473 | **363474.439457** | 15138.75 | 4.2 | ug/L |
| | Mg | 24 | 9966428.778 | 31.076 | **23371.669183** | 809.45 | 3.5 | ug/L |
| | Al | 27 | 19294.186 | 0.058 | **28.590176** | 0.64 | 2.2 | ug/L |
| | K | 39 | 3336776.025 | 10.239 | **2451.203996** | 68.16 | 2.8 | ug/L |
| | Ca | 43 | 165128.635 | 0.514 | **34927.191908** | 1265.67 | 3.6 | ug/L |
| > | Sc | 45 | 320845.054 | 320845.054 | | | | ug/L |
| | Ti | 49 | 639.360 | 0.001 | **1.768421** | 0.56 | 31.4 | ug/L |
| | Co | 59 | 146.668 | 0.000 | **-0.001744** | 0.01 | 769.1 | ug/L |
| | Ni | 60 | 313.340 | 0.001 | **0.541404** | 0.07 | 13.6 | ug/L |
| | Ni | 62 | 40.000 | 0.000 | **0.921876** | 0.13 | 14.6 | ug/L |
| | Cu | 63 | 2074.280 | 0.006 | **1.973123** | 0.07 | 3.4 | ug/L |
| | Cu | 65 | 286.672 | 0.001 | **0.328346** | 0.05 | 14.9 | ug/L |
| | Zn | 66 | 761.371 | 0.002 | **2.461097** | 0.11 | 4.5 | ug/L |
| | Zn | 67 | 2301.678 | 0.003 | **20.925727** | 1.56 | 7.5 | ug/L |
| | Zn | 68 | 1410.797 | 0.004 | **7.114172** | 0.89 | 12.5 | ug/L |
| | V | 51 | 10034.361 | 0.032 | **5.943338** | 0.67 | 11.2 | ug/L |
| | Cr | 52 | 4283.193 | 0.004 | **0.694273** | 0.15 | 21.5 | ug/L |
| | Cr | 53 | 20895.682 | 0.021 | **31.597721** | 2.07 | 6.5 | ug/L |
| | Mn | 55 | 1551.490 | 0.004 | **0.731810** | 0.03 | 4.2 | ug/L |
| | Fe | 54 | 17546.043 | 0.020 | **51.900764** | 6.13 | 11.8 | ug/L |
| | Fe | 57 | 3119.300 | 0.008 | **48.950590** | 4.04 | 8.3 | ug/L |
| | As | 75 | -476.589 | -0.001 | **-0.898573** | 0.28 | 31.4 | ug/L |
| | Se | 77 | 2979.910 | 0.004 | **82.336660** | 6.19 | 7.5 | ug/L |
| | Se | 82 | 20.970 | 0.000 | **2.407527** | 0.14 | 6.0 | ug/L |
| | Sr | 88 | 976168.796 | 2.594 | **296.231158** | 15.53 | 5.2 | ug/L |
| > | Y | 89 | 376636.491 | 376636.491 | | | | ug/L |
| | Mo | 95 | 2102.287 | 0.006 | **5.717926** | 0.29 | 5.0 | ug/L |
| | Mo | 97 | 1280.773 | 0.003 | **5.888065** | 0.32 | 5.4 | ug/L |
| | Mo | 98 | 3159.170 | 0.008 | **5.737554** | 0.37 | 6.4 | ug/L |
| | Ag | 107 | 4.000 | 0.000 | **0.198338** | 0.00 | 1.0 | ug/L |
| | Ag | 109 | 4.000 | 0.000 | **0.248607** | 0.00 | 1.4 | ug/L |
| | Cd | 111 | 30.000 | 0.000 | **0.383082** | 0.01 | 2.9 | ug/L |
| | Cd | 114 | 51.807 | 0.000 | **0.622136** | 0.00 | 0.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 148071.516 | 148071.516 | | | | ug/L |
| \| | Sn | 120 | 393.309 | -0.001 | **0.600600** | 0.03 | 5.2 | ug/L |
| \| | Sb | 121 | 297.339 | -0.001 | **0.269806** | 0.02 | 7.1 | ug/L |
| \| | Sb | 123 | 233.001 | -0.001 | **0.586701** | 0.02 | 2.6 | ug/L |
| ⌈ | Ba | 135 | 55217.545 | 0.356 | **297.721942** | 14.50 | 4.9 | ug/L |
| \| | Ba | 137 | 95280.893 | 0.614 | **298.933344** | 17.78 | 5.9 | ug/L |
| \| | Tb | 159 | 145416.204 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 155202.116 | 155202.116 | | | | ug/L |
| \| | Tl | 203 | 6.000 | 0.000 | **0.011431** | 0.01 | 53.2 | ug/L |
| \| | Tl | 205 | 9.333 | 0.000 | **-0.031092** | 0.00 | 6.2 | ug/L |
| ⌊ | Pb | 208 | 1234.039 | 0.008 | **0.534118** | 0.03 | 5.1 | ug/L |
| | Kr | 83 | 20.867 | 0.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.745 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 84.682 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 78.012 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 82.135 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-10A**
Sample Date/Time: Monday, February 15, 2010 18:09:19
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-10A.124
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30821.388 | 0.021 | | | | ug/L |
| | Li | 7 | 56629.092 | 0.167 | **57.986163** | 1.15 | 2.0 | ug/L |
| | Be | 9 | 11.333 | 0.000 | **1.454203** | 0.05 | 3.2 | ug/L |
| | B | 11 | 15315.238 | 0.046 | **54.541582** | 1.37 | 2.5 | ug/L |
| | Na | 23 | 245293782.323 | 759.953 | **412597.759574** | 6479.31 | 1.6 | ug/L |
| | Mg | 24 | 25763904.708 | 79.827 | **60028.841454** | 2628.71 | 4.4 | ug/L |
| | Al | 27 | 24203.019 | 0.073 | **32.019844** | 0.09 | 0.3 | ug/L |
| | K | 39 | 2874792.899 | 8.745 | **2092.727968** | 181.56 | 8.7 | ug/L |
| | Ca | 43 | 343885.928 | 1.065 | **72322.889267** | 997.08 | 1.4 | ug/L |
| > | Sc | 45 | 322736.817 | 322736.817 | | | | ug/L |
| | Ti | 49 | 442.013 | 0.000 | **0.010335** | 0.34 | 3297.5 | ug/L |
| | Co | 59 | 264.005 | 0.001 | **0.067053** | 0.01 | 8.8 | ug/L |
| | Ni | 60 | 480.015 | 0.001 | **1.043006** | 0.09 | 8.6 | ug/L |
| | Ni | 62 | 46.667 | 0.000 | **1.051661** | 0.17 | 16.5 | ug/L |
| | Cu | 63 | 2152.301 | 0.006 | **2.055931** | 0.07 | 3.3 | ug/L |
| | Cu | 65 | 222.670 | 0.001 | **0.150995** | 0.14 | 94.3 | ug/L |
| | Zn | 66 | 924.056 | 0.003 | **3.121801** | 0.30 | 9.6 | ug/L |
| | Zn | 67 | 2592.437 | 0.004 | **28.271555** | 2.42 | 8.6 | ug/L |
| | Zn | 68 | 2987.248 | 0.009 | **16.291537** | 1.09 | 6.7 | ug/L |
| | V | 51 | 4855.727 | 0.015 | **2.980518** | 0.29 | 9.9 | ug/L |
| | Cr | 52 | 3708.895 | 0.002 | **0.289848** | 0.09 | 31.0 | ug/L |
| | Cr | 53 | 17385.625 | 0.010 | **9.948618** | 0.58 | 5.8 | ug/L |
| | Mn | 55 | 2739.821 | 0.008 | **1.190535** | 0.01 | 1.0 | ug/L |
| | Fe | 54 | 15410.953 | 0.013 | **34.300137** | 4.35 | 12.7 | ug/L |
| | Fe | 57 | 5201.759 | 0.014 | **88.582887** | 1.42 | 1.6 | ug/L |
| | As | 75 | -596.916 | -0.001 | **-1.343869** | 0.28 | 21.1 | ug/L |
| | Se | 77 | 2673.131 | 0.003 | **62.512106** | 1.58 | 2.5 | ug/L |
| | Se | 82 | 65.775 | 0.000 | **4.185727** | 0.35 | 8.3 | ug/L |
| | Sr | 88 | 2357513.470 | 6.138 | **699.941953** | 10.01 | 1.4 | ug/L |
| > | Y | 89 | 384121.337 | 384121.337 | | | | ug/L |
| | Mo | 95 | 590.689 | 0.002 | **1.953193** | 0.11 | 5.9 | ug/L |
| | Mo | 97 | 358.675 | 0.001 | **2.156934** | 0.10 | 4.5 | ug/L |
| | Mo | 98 | 879.238 | 0.002 | **2.118306** | 0.13 | 6.1 | ug/L |
| | Ag | 107 | 10.000 | 0.000 | **0.203876** | 0.00 | 1.6 | ug/L |
| | Ag | 109 | 8.000 | 0.000 | **0.252508** | 0.00 | 0.8 | ug/L |
| | Cd | 111 | 10.500 | 0.000 | **0.301684** | 0.01 | 4.4 | ug/L |
| | Cd | 114 | 26.492 | 0.000 | **0.574746** | 0.01 | 0.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| > | In | 115 | 152228.742 | 152228.742 | | | | ug/L |
| | Sn | 120 | 404.609 | -0.001 | **0.601034** | 0.04 | 6.7 | ug/L |
| | Sb | 121 | 234.004 | -0.001 | **0.168838** | 0.01 | 8.1 | ug/L |
| | Sb | 123 | 207.331 | -0.001 | **0.526979** | 0.04 | 7.2 | ug/L |
| | Ba | 135 | 190576.679 | 1.198 | **999.547523** | 26.12 | 2.6 | ug/L |
| | Ba | 137 | 329318.801 | 2.070 | **1005.790210** | 14.01 | 1.4 | ug/L |
| | Tb | 159 | 150966.345 | -0.001 | | | | ug/L |
| > | Ho | 165 | 159098.475 | 159098.475 | | | | ug/L |
| | Tl | 203 | 8.667 | 0.000 | **0.015419** | 0.01 | 44.0 | ug/L |
| | Tl | 205 | 15.333 | 0.000 | **-0.027202** | 0.00 | 2.9 | ug/L |
| | Pb | 208 | 556.008 | 0.003 | **0.184964** | 0.02 | 12.6 | ug/L |
| | Kr | 83 | 20.333 | -0.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.275 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.365 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.202 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 84.197 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-11A**
Sample Date/Time: Monday, February 15, 2010 18:12:00
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-11A.125
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 33244.505 | 0.029 | | | | ug/L |
| \| | Li | 7 | 41695.366 | 0.121 | **42.401960** | 0.19 | 0.4 | ug/L |
| \| | Be | 9 | 8.000 | 0.000 | **1.439299** | 0.02 | 1.6 | ug/L |
| \| | B | 11 | 25640.012 | 0.078 | **91.669523** | 2.72 | 3.0 | ug/L |
| \| | Na | 23 | 73636018.547 | 228.907 | **124283.295241** | 3088.06 | 2.5 | ug/L |
| \| | Mg | 24 | 8340867.778 | 25.931 | **19502.703014** | 263.27 | 1.3 | ug/L |
| \| | Al | 27 | 19187.241 | 0.058 | **28.472882** | 0.37 | 1.3 | ug/L |
| \| | K | 39 | 3162434.045 | 9.667 | **2313.896265** | 71.53 | 3.1 | ug/L |
| \| | Ca | 43 | 161226.908 | 0.501 | **34000.985450** | 627.64 | 1.8 | ug/L |
| \|> | Sc | 45 | 321674.018 | 321674.018 | | | | ug/L |
| \| | Ti | 49 | 520.684 | 0.000 | **0.710272** | 0.15 | 21.7 | ug/L |
| \| | Co | 59 | 189.336 | 0.001 | **0.023319** | 0.02 | 72.8 | ug/L |
| \| | Ni | 60 | 192.669 | 0.001 | **0.170070** | 0.08 | 47.9 | ug/L |
| \| | Ni | 62 | 48.000 | 0.000 | **1.081119** | 0.21 | 19.9 | ug/L |
| \| | Cu | 63 | 818.710 | 0.002 | **0.363226** | 0.04 | 11.9 | ug/L |
| \| | Cu | 65 | 176.002 | 0.000 | **0.027476** | 0.07 | 244.3 | ug/L |
| \| | Zn | 66 | 766.705 | 0.002 | **2.475524** | 0.25 | 10.0 | ug/L |
| \| | Zn | 67 | 2114.958 | 0.003 | **15.761663** | 2.65 | 16.8 | ug/L |
| \| | Zn | 68 | 1541.488 | 0.004 | **7.849614** | 0.45 | 5.8 | ug/L |
| \| | V | 51 | 8570.712 | 0.027 | **5.097136** | 0.68 | 13.3 | ug/L |
| \| | Cr | 52 | 4090.421 | 0.003 | **0.555496** | 0.09 | 16.2 | ug/L |
| \| | Cr | 53 | 21361.621 | 0.022 | **34.057330** | 2.21 | 6.5 | ug/L |
| \| | Mn | 55 | 16090.151 | 0.049 | **6.409547** | 0.15 | 2.4 | ug/L |
| \| | Fe | 54 | 17284.872 | 0.019 | **49.424477** | 3.02 | 6.1 | ug/L |
| ⌊ | Fe | 57 | 3476.786 | 0.009 | **55.645568** | 0.87 | 1.6 | ug/L |
| ⌈ | As | 75 | -472.497 | -0.001 | **-0.907591** | 0.77 | 84.9 | ug/L |
| \| | Se | 77 | 2653.125 | 0.003 | **66.010309** | 7.28 | 11.0 | ug/L |
| \| | Se | 82 | 25.992 | 0.000 | **2.628528** | 0.18 | 6.9 | ug/L |
| \| | Sr | 88 | 887774.568 | 2.385 | **272.352363** | 4.02 | 1.5 | ug/L |
| \|> | Y | 89 | 372247.047 | 372247.047 | | | | ug/L |
| \| | Mo | 95 | 1439.468 | 0.004 | **4.118559** | 0.14 | 3.4 | ug/L |
| \| | Mo | 97 | 898.052 | 0.002 | **4.391289** | 0.12 | 2.8 | ug/L |
| ⌊ | Mo | 98 | 2307.460 | 0.006 | **4.433398** | 0.09 | 2.1 | ug/L |
| ⌈ | Ag | 107 | 3.333 | -0.000 | **0.197772** | 0.00 | 0.6 | ug/L |
| \| | Ag | 109 | 0.667 | -0.000 | **0.245196** | 0.00 | 0.5 | ug/L |
| \| | Cd | 111 | 7.333 | 0.000 | **0.290632** | 0.01 | 3.0 | ug/L |
| \| | Cd | 114 | 10.855 | 0.000 | **0.548245** | 0.01 | 1.6 | ug/L |

**00431**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 143819.523 | 143819.523 | | | | ug/L |
| \| | Sn | 120 | 368.633 | -0.001 | **0.586210** | 0.02 | 3.8 | ug/L |
| \| | Sb | 121 | 301.339 | -0.001 | **0.289113** | 0.03 | 10.2 | ug/L |
| \| | Sb | 123 | 187.583 | -0.001 | **0.511005** | 0.03 | 6.2 | ug/L |
| \| | Ba | 135 | 56628.379 | 0.373 | **311.718221** | 4.69 | 1.5 | ug/L |
| \| | Ba | 137 | 96603.568 | 0.636 | **309.390047** | 4.77 | 1.5 | ug/L |
| \| | Tb | 159 | 142453.783 | -0.012 | | | | ug/L |
| \|> | Ho | 165 | 151881.632 | 151881.632 | | | | ug/L |
| \| | Tl | 203 | 6.667 | 0.000 | **0.012722** | 0.01 | 42.1 | ug/L |
| \| | Tl | 205 | 12.000 | 0.000 | **-0.029066** | 0.01 | 19.0 | ug/L |
| \| | Pb | 208 | 468.006 | 0.003 | **0.152785** | 0.03 | 18.9 | ug/L |
| | Kr | 83 | 18.000 | -2.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.977 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 83.695 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 75.772 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 80.377 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 18:14:42
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.126
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29132.869 | 0.015 | | | | ug/L |
| | Li | 7 | 120768.337 | 0.364 | **125.103977** | 8.66 | 6.9 | ug/L |
| | Be | 9 | 26597.955 | 0.082 | **120.133769** | 7.24 | 6.0 | ug/L |
| | B | 11 | 33158.218 | 0.101 | **117.772550** | 10.98 | 9.3 | ug/L |
| | Na | 23 | 3428330.394 | 10.543 | **5729.851124** | 256.05 | 4.5 | ug/L |
| | Mg | 24 | 2479775.828 | 7.650 | **5757.153114** | 199.03 | 3.5 | ug/L |
| | Al | 27 | 7871205.635 | 24.284 | **5630.851178** | 197.79 | 3.5 | ug/L |
| | K | 39 | 8556630.420 | 26.238 | **6289.440004** | 382.67 | 6.1 | ug/L |
| | Ca | 43 | 24845.427 | 0.076 | **5169.134646** | 306.46 | 5.9 | ug/L |
| > | Sc | 45 | 324321.018 | 324321.018 | | | | ug/L |
| | Ti | 49 | 11712.252 | 0.035 | **97.890464** | 6.88 | 7.0 | ug/L |
| | Co | 59 | 161039.457 | 0.497 | **94.468524** | 4.51 | 4.8 | ug/L |
| | Ni | 60 | 30993.001 | 0.096 | **93.558624** | 4.67 | 5.0 | ug/L |
| | Ni | 62 | 4729.456 | 0.015 | **94.261066** | 7.01 | 7.4 | ug/L |
| | Cu | 63 | 74108.667 | 0.228 | **93.182088** | 4.00 | 4.3 | ug/L |
| | Cu | 65 | 34523.969 | 0.106 | **91.937578** | 2.08 | 2.3 | ug/L |
| | Zn | 66 | 21860.356 | 0.067 | **90.343855** | 3.85 | 4.3 | ug/L |
| | Zn | 67 | 5175.077 | 0.012 | **96.273789** | 8.78 | 9.1 | ug/L |
| | Zn | 68 | 16072.794 | 0.049 | **92.529618** | 5.16 | 5.6 | ug/L |
| | V | 51 | 175694.864 | 0.542 | **98.940251** | 3.86 | 3.9 | ug/L |
| | Cr | 52 | 148191.911 | 0.448 | **96.975471** | 3.60 | 3.7 | ug/L |
| | Cr | 53 | 33200.859 | 0.058 | **103.365531** | 10.48 | 10.1 | ug/L |
| | Mn | 55 | 241077.681 | 0.743 | **93.618603** | 4.45 | 4.8 | ug/L |
| | Fe | 54 | 618857.105 | 1.875 | **4743.581928** | 197.72 | 4.2 | ug/L |
| | Fe | 57 | 245755.475 | 0.757 | **4695.384460** | 240.43 | 5.1 | ug/L |
| | As | 75 | 26353.682 | 0.069 | **105.194561** | 1.32 | 1.3 | ug/L |
| | Se | 77 | 10965.812 | 0.025 | **508.803240** | 14.81 | 2.9 | ug/L |
| | Se | 82 | 13018.820 | 0.034 | **522.350608** | 5.33 | 1.0 | ug/L |
| | Sr | 88 | 343874.154 | 0.895 | **102.626326** | 1.70 | 1.7 | ug/L |
| > | Y | 89 | 384067.011 | 384067.011 | | | | ug/L |
| | Mo | 95 | 41627.670 | 0.108 | **101.278563** | 1.44 | 1.4 | ug/L |
| | Mo | 97 | 25371.116 | 0.066 | **100.562114** | 2.41 | 2.4 | ug/L |
| | Mo | 98 | 64365.019 | 0.168 | **100.030053** | 2.66 | 2.7 | ug/L |
| | Ag | 107 | 109389.846 | 0.712 | **102.603876** | 4.44 | 4.3 | ug/L |
| | Ag | 109 | 102174.182 | 0.665 | **101.548317** | 3.82 | 3.8 | ug/L |
| | Cd | 111 | 26091.874 | 0.170 | **103.958757** | 5.80 | 5.6 | ug/L |
| | Cd | 114 | 58380.771 | 0.380 | **102.806871** | 5.07 | 4.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 153791.934 | 153791.934 | | | | ug/L |
| \| | Sn | 120 | 101128.673 | 0.655 | **101.239365** | 4.83 | 4.8 | ug/L |
| \| | Sb | 121 | 72339.337 | 0.468 | **101.190422** | 4.44 | 4.4 | ug/L |
| L | Sb | 123 | 54589.220 | 0.353 | **100.052150** | 3.88 | 3.9 | ug/L |
| ⌈ | Ba | 135 | 18679.321 | 0.117 | **98.204018** | 3.35 | 3.4 | ug/L |
| \| | Ba | 137 | 32227.388 | 0.201 | **98.290444** | 3.83 | 3.9 | ug/L |
| \| | Tb | 159 | 149222.323 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 160066.763 | 160066.763 | | | | ug/L |
| \| | Tl | 203 | 67509.666 | 0.422 | **108.723615** | 1.55 | 1.4 | ug/L |
| \| | Tl | 205 | 162140.500 | 1.013 | **107.714698** | 1.06 | 1.0 | ug/L |
| L | Pb | 208 | 222587.659 | 1.391 | **108.799255** | 1.31 | 1.2 | ug/L |
| | Kr | 83 | 19.800 | -0.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 125.104 | | |
| Be | 9 | 120.134 | | |
| B | 11 | 117.773 | | |
| Na | 23 | 114.597 | | |
| Mg | 24 | 115.143 | | |
| Al | 27 | 110.409 | | |
| K | 39 | 125.789 | | |
| Ca | 43 | 103.383 | | |
| Sc | 45 | | 90.718 | |
| Ti | 49 | 97.890 | | |
| Co | 59 | 94.469 | | |
| Ni | 60 | 93.559 | | |
| Ni | 62 | 94.261 | | |
| Cu | 63 | 93.182 | | |
| Cu | 65 | 91.938 | | |
| Zn | 66 | 90.344 | | |
| Zn | 67 | 96.274 | | |
| Zn | 68 | 92.530 | | |
| V | 51 | 98.940 | | |
| Cr | 52 | 96.975 | | |
| Cr | 53 | 103.366 | | |
| Mn | 55 | 93.619 | | |
| Fe | 54 | 94.872 | | |
| Fe | 57 | 93.908 | | |
| As | 75 | 105.195 | | |
| Se | 77 | 101.761 | | |
| Se | 82 | 104.470 | | |
| Sr | 88 | 102.626 | | |
| Y | 89 | | 86.352 | |
| Mo | 95 | 101.279 | | |
| Mo | 97 | 100.562 | | |
| Mo | 98 | 100.030 | | |
| Ag | 107 | 102.604 | | |
| Ag | 109 | 101.548 | | |
| Cd | 111 | 103.959 | | |
| Cd | 114 | 102.807 | | |
| In | 115 | | 81.026 | |
| Sn | 120 | 101.239 | | |
| Sb | 121 | 101.190 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 100.052 | |
| Ba | 135 | 98.204 | |
| Ba | 137 | 98.290 | |
| Tb | 159 | | |
| Ho | 165 | | 84.709 |
| Tl | 203 | 108.724 | |
| Tl | 205 | 107.715 | |
| Pb | 208 | 108.799 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 18:17:23
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.127
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34374.156 | 0.028 | | | | ug/L |
| | Li | 7 | 3790.267 | 0.003 | **2.181995** | 0.05 | 2.1 | ug/L |
| | Be | 9 | 14.000 | 0.000 | **1.463936** | 0.02 | 1.2 | ug/L |
| | B | 11 | 1254.103 | 0.002 | **4.245061** | 0.54 | 12.6 | ug/L |
| | Na | 23 | 27114.398 | 0.047 | **31.441469** | 1.34 | 4.3 | ug/L |
| | Mg | 24 | 1400.143 | 0.004 | **7.394941** | 1.35 | 18.3 | ug/L |
| | Al | 27 | 4394.603 | 0.011 | **17.716798** | 0.41 | 2.3 | ug/L |
| | K | 39 | 60974.209 | 0.018 | **-0.923141** | 1.47 | 159.0 | ug/L |
| | Ca | 43 | 166.668 | -0.000 | **-4.671594** | 2.79 | 59.6 | ug/L |
| > | Sc | 45 | 334452.453 | 334452.453 | | | | ug/L |
| | Ti | 49 | 414.011 | -0.000 | **-0.360971** | 0.26 | 72.9 | ug/L |
| | Co | 59 | 37.333 | 0.000 | **-0.067380** | 0.00 | 3.9 | ug/L |
| | Ni | 60 | 18.667 | 0.000 | **-0.363468** | 0.01 | 2.4 | ug/L |
| | Ni | 62 | 24.000 | -0.000 | **0.581193** | 0.15 | 26.5 | ug/L |
| | Cu | 63 | 380.676 | 0.001 | **-0.214100** | 0.02 | 11.1 | ug/L |
| | Cu | 65 | 173.335 | 0.000 | **0.002903** | 0.10 | 3350.4 | ug/L |
| | Zn | 66 | 121.334 | 0.000 | **-0.253563** | 0.05 | 19.8 | ug/L |
| | Zn | 67 | 1620.171 | 0.001 | **0.944952** | 0.97 | 103.0 | ug/L |
| | Zn | 68 | 173.335 | 0.000 | **-0.225743** | 0.06 | 25.5 | ug/L |
| | V | 51 | 1183.306 | 0.004 | **0.886951** | 0.28 | 31.1 | ug/L |
| | Cr | 52 | 3386.079 | 0.001 | **-0.007000** | 0.07 | 1011.4 | ug/L |
| | Cr | 53 | 17121.038 | 0.007 | **4.801057** | 2.25 | 46.8 | ug/L |
| | Mn | 55 | 267.338 | 0.000 | **0.224227** | 0.02 | 7.6 | ug/L |
| | Fe | 54 | 10851.543 | -0.002 | **-4.432273** | 1.24 | 27.9 | ug/L |
| | Fe | 57 | 669.362 | 0.000 | **0.988571** | 0.54 | 55.0 | ug/L |
| | As | 75 | -416.532 | -0.001 | **-0.598280** | 0.05 | 8.9 | ug/L |
| | Se | 77 | 1748.199 | 0.001 | **10.930830** | 1.34 | 12.3 | ug/L |
| | Se | 82 | 6.146 | 0.000 | **1.795322** | 0.16 | 8.9 | ug/L |
| | Sr | 88 | 196.669 | 0.000 | **0.655267** | 0.01 | 1.1 | ug/L |
| > | Y | 89 | 391689.046 | 391689.046 | | | | ug/L |
| | Mo | 95 | 82.667 | 0.000 | **0.720040** | 0.03 | 4.2 | ug/L |
| | Mo | 97 | 48.000 | 0.000 | **0.931741** | 0.08 | 8.3 | ug/L |
| | Mo | 98 | 119.261 | 0.000 | **0.943074** | 0.02 | 2.2 | ug/L |
| | Ag | 107 | 20.667 | 0.000 | **0.213158** | 0.00 | 1.0 | ug/L |
| | Ag | 109 | 17.333 | 0.000 | **0.261128** | 0.00 | 1.7 | ug/L |
| | Cd | 111 | 6.000 | 0.000 | **0.282611** | 0.00 | 0.7 | ug/L |
| | Cd | 114 | 5.536 | 0.000 | **0.537238** | 0.01 | 2.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 158788.209 | 158788.209 | | | | ug/L |
| \| | Sn | 120 | 503.991 | -0.000 | **0.680119** | 0.03 | 5.0 | ug/L |
| \| | Sb | 121 | 1358.120 | 0.006 | **1.679522** | 0.11 | 6.4 | ug/L |
| \| | Sb | 123 | 1059.822 | 0.004 | **2.021188** | 0.13 | 6.5 | ug/L |
| \| | Ba | 135 | 18.000 | 0.000 | **0.960362** | 0.02 | 1.8 | ug/L |
| \| | Ba | 137 | 28.667 | 0.000 | **0.539966** | 0.02 | 3.5 | ug/L |
| \| | Tb | 159 | 151134.962 | -0.011 | | | | ug/L |
| \|> | Ho | 165 | 160901.443 | 160901.443 | | | | ug/L |
| \| | Tl | 203 | 40.667 | 0.000 | **0.066422** | 0.02 | 28.7 | ug/L |
| \| | Tl | 205 | 105.334 | 0.001 | **0.032166** | 0.01 | 35.8 | ug/L |
| \| | Pb | 208 | 98.667 | 0.000 | **-0.040680** | 0.00 | 6.2 | ug/L |
| | Kr | 83 | 15.467 | -5.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.552 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 88.066 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 83.658 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.151 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-12A**
Sample Date/Time: Monday, February 15, 2010 18:20:06
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-12A.128
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30889.319 | 0.023 | | | | ug/L |
| | Li | 7 | 58049.983 | 0.176 | **60.955891** | 5.44 | 8.9 | ug/L |
| | Be | 9 | 6.000 | -0.000 | **1.431045** | 0.01 | 0.7 | ug/L |
| | B | 11 | 22194.004 | 0.069 | **80.959110** | 6.13 | 7.6 | ug/L |
| | Na | 23 | 127814843.296 | 405.435 | **220123.745316** | 15920.39 | 7.2 | ug/L |
| | Mg | 24 | 19945032.572 | 63.280 | **47586.495670** | 3685.61 | 7.7 | ug/L |
| | Al | 27 | 78800.518 | 0.248 | **72.506207** | 4.97 | 6.9 | ug/L |
| | K | 39 | 4593934.313 | 14.412 | **3452.304648** | 281.19 | 8.1 | ug/L |
| | Ca | 43 | 369465.087 | 1.172 | **79584.322627** | 6922.77 | 8.7 | ug/L |
| > | Sc | 45 | 315817.895 | 315817.895 | | | | ug/L |
| | Ti | 49 | 645.361 | 0.001 | **1.924756** | 0.77 | 39.8 | ug/L |
| | Co | 59 | 1380.125 | 0.004 | **0.746348** | 0.14 | 18.2 | ug/L |
| | Ni | 60 | 585.356 | 0.002 | **1.405850** | 0.18 | 13.1 | ug/L |
| | Ni | 62 | 78.667 | 0.000 | **1.721065** | 0.46 | 26.6 | ug/L |
| | Cu | 63 | 2777.171 | 0.009 | **2.940137** | 0.49 | 16.8 | ug/L |
| | Cu | 65 | 836.046 | 0.003 | **1.859120** | 0.37 | 19.7 | ug/L |
| | Zn | 66 | 801.375 | 0.002 | **2.678505** | 0.32 | 12.0 | ug/L |
| | Zn | 67 | 2190.979 | 0.003 | **18.932968** | 1.99 | 10.5 | ug/L |
| | Zn | 68 | 1840.221 | 0.005 | **9.843693** | 1.40 | 14.2 | ug/L |
| | V | 51 | 3315.026 | 0.011 | **2.155517** | 0.07 | 3.4 | ug/L |
| | Cr | 52 | 3348.062 | 0.001 | **0.098450** | 0.10 | 102.7 | ug/L |
| | Cr | 53 | 16926.606 | 0.010 | **9.552989** | 5.22 | 54.7 | ug/L |
| | Mn | 55 | 1158161.773 | 3.675 | **461.996154** | 40.12 | 8.7 | ug/L |
| | Fe | 54 | 22000.561 | 0.035 | **90.079186** | 14.66 | 16.3 | ug/L |
| | Fe | 57 | 7861.352 | 0.023 | **143.316291** | 11.34 | 7.9 | ug/L |
| | As | 75 | -614.506 | -0.001 | **-1.522822** | 0.44 | 29.2 | ug/L |
| | Se | 77 | 2641.789 | 0.003 | **67.067361** | 20.08 | 29.9 | ug/L |
| | Se | 82 | 34.694 | 0.000 | **3.005596** | 0.24 | 7.8 | ug/L |
| | Sr | 88 | 2137228.528 | 5.806 | **662.210594** | 85.53 | 12.9 | ug/L |
| > | Y | 89 | 369794.000 | 369794.000 | | | | ug/L |
| | Mo | 95 | 715.367 | 0.002 | **2.332608** | 0.29 | 12.2 | ug/L |
| | Mo | 97 | 445.346 | 0.001 | **2.578426** | 0.34 | 13.3 | ug/L |
| | Mo | 98 | 1094.599 | 0.003 | **2.523447** | 0.21 | 8.4 | ug/L |
| | Ag | 107 | 8.000 | 0.000 | **0.202241** | 0.00 | 2.4 | ug/L |
| | Ag | 109 | 4.000 | 0.000 | **0.248723** | 0.00 | 0.9 | ug/L |
| | Cd | 111 | 8.167 | 0.000 | **0.294125** | 0.01 | 2.0 | ug/L |
| | Cd | 114 | 23.614 | 0.000 | **0.571827** | 0.02 | 4.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 144889.310 | 144889.310 | | | | ug/L |
| \| | Sn | 120 | 470.605 | -0.000 | **0.691922** | 0.02 | 2.8 | ug/L |
| \| | Sb | 121 | 508.017 | 0.001 | **0.595020** | 0.09 | 14.9 | ug/L |
| L | Sb | 123 | 374.587 | 0.000 | **0.874110** | 0.11 | 12.5 | ug/L |
| ⌈ | Ba | 135 | 90124.071 | 0.584 | **487.543601** | 49.69 | 10.2 | ug/L |
| \| | Ba | 137 | 155202.553 | 1.005 | **488.699957** | 50.61 | 10.4 | ug/L |
| \| | Tb | 159 | 145765.775 | -0.008 | | | | ug/L |
| \|> | Ho | 165 | 154707.949 | 154707.949 | | | | ug/L |
| \| | Tl | 203 | 11.333 | 0.000 | **0.020242** | 0.00 | 8.6 | ug/L |
| \| | Tl | 205 | 35.333 | 0.000 | **-0.013004** | 0.01 | 62.9 | ug/L |
| L | Pb | 208 | 10200.644 | 0.066 | **5.081953** | 0.45 | 8.9 | ug/L |
| | Kr | 83 | 22.067 | 1.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 88.339 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 83.143 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.335 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.873 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-13A**
Sample Date/Time: Monday, February 15, 2010 18:22:47
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-13A.129
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34940.590 | 0.038 | | | | ug/L |
| | Li | 7 | 19949.846 | 0.056 | **20.282476** | 0.33 | 1.6 | ug/L |
| | Be | 9 | 1130.083 | 0.004 | **6.694183** | 0.09 | 1.3 | ug/L |
| | B | 11 | 5584.028 | 0.017 | **20.730294** | 0.81 | 3.9 | ug/L |
| | Na | 23 | 14762240.673 | 47.749 | **25929.403936** | 100.48 | 0.4 | ug/L |
| | Mg | 24 | 4891410.841 | 15.831 | **11908.644117** | 37.55 | 0.3 | ug/L |
| | Al | 27 | 20477226.726 | 66.282 | **15342.851694** | 277.03 | 1.8 | ug/L |
| | K | 39 | 845269.441 | 2.571 | **611.660485** | 10.13 | 1.7 | ug/L |
| | Ca | 43 | 105740.569 | 0.342 | **23204.259090** | 331.34 | 1.4 | ug/L |
| > | Sc | 45 | 308953.343 | 308953.343 | | | | ug/L |
| | Ti | 49 | 766.038 | 0.001 | **3.130804** | 0.21 | 6.7 | ug/L |
| | Co | 59 | 101214.926 | 0.328 | **62.252563** | 1.35 | 2.2 | ug/L |
| | Ni | 60 | 6128.441 | 0.020 | **19.074024** | 0.49 | 2.6 | ug/L |
| | Ni | 62 | 922.722 | 0.003 | **19.383228** | 1.65 | 8.5 | ug/L |
| | Cu | 63 | 7805.959 | 0.025 | **9.690029** | 0.17 | 1.7 | ug/L |
| | Cu | 65 | 3806.277 | 0.012 | **10.242612** | 0.61 | 5.9 | ug/L |
| | Zn | 66 | 13203.323 | 0.042 | **56.969543** | 1.27 | 2.2 | ug/L |
| | Zn | 67 | 3842.294 | 0.009 | **66.022062** | 5.68 | 8.6 | ug/L |
| | Zn | 68 | 9293.612 | 0.030 | **55.658498** | 1.42 | 2.5 | ug/L |
| | V | 51 | 3258.639 | 0.011 | **2.159657** | 0.51 | 23.4 | ug/L |
| | Cr | 52 | 4301.869 | 0.004 | **0.817307** | 0.03 | 3.9 | ug/L |
| | Cr | 53 | 17090.299 | 0.011 | **12.742299** | 2.10 | 16.5 | ug/L |
| | Mn | 55 | 5540814.815 | 17.937 | **2254.184062** | 59.32 | 2.6 | ug/L |
| | Fe | 54 | 21250.224 | 0.034 | **87.493683** | 3.29 | 3.8 | ug/L |
| | Fe | 57 | 4576.696 | 0.013 | **80.501624** | 3.43 | 4.3 | ug/L |
| | As | 75 | -446.602 | -0.000 | **-0.239112** | 0.56 | 234.5 | ug/L |
| | Se | 77 | 2171.640 | 0.000 | **1.675430** | 2.42 | 144.6 | ug/L |
| | Se | 82 | 23.265 | 0.000 | **2.215951** | 0.03 | 1.4 | ug/L |
| | Sr | 88 | 499657.859 | 0.923 | **105.833017** | 1.75 | 1.7 | ug/L |
| > | Y | 89 | 540980.705 | 540980.705 | | | | ug/L |
| | Mo | 95 | 19.333 | 0.000 | **0.557134** | 0.00 | 0.4 | ug/L |
| | Mo | 97 | 9.333 | -0.000 | **0.771979** | 0.01 | 1.8 | ug/L |
| | Mo | 98 | 24.594 | -0.000 | **0.789635** | 0.00 | 0.4 | ug/L |
| | Ag | 107 | 8.000 | 0.000 | **0.202749** | 0.00 | 1.1 | ug/L |
| | Ag | 109 | 3.333 | 0.000 | **0.248169** | 0.00 | 1.4 | ug/L |
| | Cd | 111 | 7872.862 | 0.057 | **34.979126** | 1.02 | 2.9 | ug/L |
| | Cd | 114 | 17731.949 | 0.128 | **35.004910** | 1.17 | 3.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 138494.721 | 138494.721 | | | | ug/L |
| \| | Sn | 120 | 338.606 | -0.001 | **0.568179** | 0.01 | 2.1 | ug/L |
| \| | Sb | 121 | 304.673 | -0.001 | **0.311504** | 0.04 | 11.4 | ug/L |
| \| | Sb | 123 | 241.332 | -0.001 | **0.633812** | 0.04 | 6.6 | ug/L |
| \| | Ba | 135 | 3256.022 | 0.021 | **18.464242** | 0.37 | 2.0 | ug/L |
| \| | Ba | 137 | 5705.449 | 0.037 | **18.417959** | 0.53 | 2.9 | ug/L |
| \| | Tb | 159 | 143572.192 | -0.019 | | | | ug/L |
| \|> | Ho | 165 | 154271.006 | 154271.006 | | | | ug/L |
| \| | Tl | 203 | 46.667 | 0.000 | **0.079374** | 0.01 | 10.4 | ug/L |
| \| | Tl | 205 | 122.668 | 0.001 | **0.047109** | 0.01 | 24.7 | ug/L |
| \| | Pb | 208 | 1146.701 | 0.007 | **0.493285** | 0.06 | 13.1 | ug/L |
| | Kr | 83 | 25.733 | 5.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 86.419 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 121.632 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 72.966 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.642 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-14A**
Sample Date/Time: Monday, February 15, 2010 18:25:28
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-14A.130
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 36176.377 | 0.041 | | | | ug/L |
| | Li | 7 | 5900.930 | 0.010 | **4.770888** | 0.09 | 1.9 | ug/L |
| | Be | 9 | 12.667 | 0.000 | **1.462233** | 0.02 | 1.6 | ug/L |
| | B | 11 | 30069.374 | 0.095 | **111.036188** | 3.78 | 3.4 | ug/L |
| | Na | 23 | 35527481.114 | 114.039 | **61919.600269** | 1184.31 | 1.9 | ug/L |
| | Mg | 24 | 50263.921 | 0.161 | **125.599895** | 5.66 | 4.5 | ug/L |
| | Al | 27 | 883920.808 | 2.836 | **671.008616** | 19.39 | 2.9 | ug/L |
| | K | 39 | 860668.686 | 2.599 | **618.268185** | 32.24 | 5.2 | ug/L |
| | Ca | 43 | 20710.532 | 0.066 | **4477.152183** | 149.77 | 3.3 | ug/L |
| > | Sc | 45 | 311439.922 | 311439.922 | | | | ug/L |
| | Ti | 49 | 3655.536 | 0.010 | **29.179179** | 1.02 | 3.5 | ug/L |
| | Co | 59 | 590.690 | 0.002 | **0.272187** | 0.04 | 15.2 | ug/L |
| | Ni | 60 | 462.681 | 0.001 | **1.041391** | 0.16 | 15.7 | ug/L |
| | Ni | 62 | 98.667 | 0.000 | **2.161189** | 0.10 | 4.5 | ug/L |
| | Cu | 63 | 10096.622 | 0.032 | **12.624958** | 0.13 | 1.0 | ug/L |
| | Cu | 65 | 4672.087 | 0.015 | **12.567506** | 0.64 | 5.1 | ug/L |
| | Zn | 66 | 1216.096 | 0.004 | **4.529144** | 0.17 | 3.7 | ug/L |
| | Zn | 67 | 2008.262 | 0.003 | **14.686638** | 2.26 | 15.4 | ug/L |
| | Zn | 68 | 981.396 | 0.003 | **4.750596** | 0.50 | 10.5 | ug/L |
| | V | 51 | 13346.171 | 0.043 | **8.044594** | 0.15 | 1.8 | ug/L |
| | Cr | 52 | 5155.728 | 0.007 | **1.387645** | 0.07 | 5.0 | ug/L |
| | Cr | 53 | 18229.582 | 0.015 | **18.906699** | 2.22 | 11.7 | ug/L |
| | Mn | 55 | 10126.662 | 0.032 | **4.209787** | 0.04 | 1.0 | ug/L |
| | Fe | 54 | 46608.809 | 0.115 | **292.029951** | 4.39 | 1.5 | ug/L |
| | Fe | 57 | 13909.231 | 0.043 | **265.717243** | 0.81 | 0.3 | ug/L |
| | As | 75 | 535.498 | 0.002 | **3.192483** | 0.43 | 13.5 | ug/L |
| | Se | 77 | 2134.297 | 0.002 | **36.514516** | 7.63 | 20.9 | ug/L |
| | Se | 82 | 13.398 | 0.000 | **2.106001** | 0.17 | 8.2 | ug/L |
| | Sr | 88 | 66865.463 | 0.179 | **20.959822** | 0.69 | 3.3 | ug/L |
| > | Y | 89 | 374259.147 | 374259.147 | | | | ug/L |
| | Mo | 95 | 1038.737 | 0.003 | **3.104354** | 0.13 | 4.2 | ug/L |
| | Mo | 97 | 639.360 | 0.002 | **3.326456** | 0.11 | 3.4 | ug/L |
| | Mo | 98 | 1572.161 | 0.004 | **3.251032** | 0.10 | 3.0 | ug/L |
| | Ag | 107 | 41.333 | 0.000 | **0.237072** | 0.01 | 4.8 | ug/L |
| | Ag | 109 | 27.333 | 0.000 | **0.274261** | 0.00 | 1.2 | ug/L |
| | Cd | 111 | 33.833 | 0.000 | **0.407414** | 0.02 | 5.3 | ug/L |
| | Cd | 114 | 94.675 | 0.001 | **0.710128** | 0.02 | 2.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 139974.745 | 139974.745 | | | | ug/L |
| \| | Sn | 120 | 518.667 | 0.000 | **0.761866** | 0.02 | 2.2 | ug/L |
| \| | Sb | 121 | 630.693 | 0.002 | **0.807631** | 0.11 | 13.4 | ug/L |
| L | Sb | 123 | 501.849 | 0.001 | **1.153206** | 0.13 | 11.5 | ug/L |
| ⌈ | Ba | 135 | 1849.556 | 0.012 | **11.125422** | 0.26 | 2.4 | ug/L |
| \| | Ba | 137 | 3212.004 | 0.021 | **10.832434** | 0.08 | 0.8 | ug/L |
| \| | Tb | 159 | 138452.369 | -0.029 | | | | ug/L |
| \|> | Ho | 165 | 150304.923 | 150304.923 | | | | ug/L |
| \| | Tl | 203 | 4.000 | -0.000 | **0.008221** | 0.00 | 41.6 | ug/L |
| \| | Tl | 205 | 23.333 | 0.000 | **-0.020956** | 0.01 | 37.0 | ug/L |
| L | Pb | 208 | 11515.359 | 0.076 | **5.909237** | 0.04 | 0.7 | ug/L |
| | Kr | 83 | 17.267 | -3.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.115 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 84.147 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 73.746 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 79.543 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-15A**
Sample Date/Time: Monday, February 15, 2010 18:28:08
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-15A.131
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 34232.564 | 0.035 | | | | ug/L |
| \| | Li | 7 | 12290.479 | 0.031 | **11.684497** | 0.47 | 4.0 | ug/L |
| \| | Be | 9 | 7.333 | 0.000 | **1.437995** | 0.04 | 2.7 | ug/L |
| \| | B | 11 | 18308.461 | 0.057 | **67.281195** | 4.04 | 6.0 | ug/L |
| \| | Na | 23 | 36917280.671 | 117.940 | **64037.350068** | 1770.57 | 2.8 | ug/L |
| \| | Mg | 24 | 82978.622 | 0.265 | **203.718008** | 9.61 | 4.7 | ug/L |
| \| | Al | 27 | 20022.713 | 0.062 | **29.484041** | 0.91 | 3.1 | ug/L |
| \| | K | 39 | 359161.572 | 0.983 | **230.643228** | 5.24 | 2.3 | ug/L |
| \| | Ca | 43 | 3260.691 | 0.010 | **669.163121** | 21.31 | 3.2 | ug/L |
| \|> | Sc | 45 | 313076.372 | 313076.372 | | | | ug/L |
| \| | Ti | 49 | 544.019 | 0.000 | **1.050053** | 0.29 | 27.6 | ug/L |
| \| | Co | 59 | 60.000 | 0.000 | **-0.052110** | 0.01 | 24.5 | ug/L |
| \| | Ni | 60 | 54.000 | 0.000 | **-0.248654** | 0.02 | 9.6 | ug/L |
| \| | Ni | 62 | 37.333 | 0.000 | **0.884831** | 0.17 | 19.2 | ug/L |
| \| | Cu | 63 | 480.015 | 0.001 | **-0.052450** | 0.06 | 121.4 | ug/L |
| \| | Cu | 65 | 110.667 | 0.000 | **-0.141012** | 0.05 | 33.4 | ug/L |
| \| | Zn | 66 | 504.017 | 0.001 | **1.436377** | 0.33 | 23.0 | ug/L |
| \| | Zn | 67 | 1748.199 | 0.002 | **7.294698** | 0.97 | 13.3 | ug/L |
| \| | Zn | 68 | 472.015 | 0.001 | **1.648199** | 0.42 | 25.3 | ug/L |
| \| | V | 51 | 2427.157 | 0.008 | **1.663996** | 0.72 | 43.0 | ug/L |
| \| | Cr | 52 | 3760.919 | 0.002 | **0.403697** | 0.06 | 15.1 | ug/L |
| \| | Cr | 53 | 18128.023 | 0.014 | **17.705167** | 3.25 | 18.4 | ug/L |
| \| | Mn | 55 | 8751.644 | 0.027 | **3.640231** | 0.19 | 5.3 | ug/L |
| \| | Fe | 54 | 14651.989 | 0.012 | **31.919766** | 2.36 | 7.4 | ug/L |
| ⌊ | Fe | 57 | 822.044 | 0.001 | **4.877953** | 1.52 | 31.1 | ug/L |
| ⌈ | As | 75 | -469.104 | -0.001 | **-0.944759** | 0.56 | 59.8 | ug/L |
| \| | Se | 77 | 2032.269 | 0.002 | **34.601342** | 3.27 | 9.5 | ug/L |
| \| | Se | 82 | 10.291 | 0.000 | **1.991974** | 0.03 | 1.7 | ug/L |
| \| | Sr | 88 | 58369.985 | 0.161 | **18.959778** | 0.49 | 2.6 | ug/L |
| \|> | Y | 89 | 362288.747 | 362288.747 | | | | ug/L |
| \| | Mo | 95 | 560.687 | 0.002 | **1.961576** | 0.10 | 5.3 | ug/L |
| \| | Mo | 97 | 324.007 | 0.001 | **2.097985** | 0.09 | 4.5 | ug/L |
| ⌊ | Mo | 98 | 802.636 | 0.002 | **2.074957** | 0.05 | 2.6 | ug/L |
| ⌈ | Ag | 107 | 10.667 | 0.000 | **0.205229** | 0.00 | 2.4 | ug/L |
| \| | Ag | 109 | 3.333 | 0.000 | **0.248087** | 0.00 | 1.0 | ug/L |
| \| | Cd | 111 | 1.833 | 0.000 | **0.267432** | 0.00 | 1.7 | ug/L |
| \| | Cd | 114 | 4.933 | 0.000 | **0.537064** | 0.01 | 1.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 142995.094 | 142995.094 | | | | ug/L |
| \| | Sn | 120 | 375.334 | -0.001 | **0.595862** | 0.04 | 6.0 | ug/L |
| \| | Sb | 121 | 248.004 | -0.001 | **0.210945** | 0.03 | 14.8 | ug/L |
| \| | Sb | 123 | 174.585 | -0.001 | **0.486739** | 0.04 | 7.6 | ug/L |
| \| | Ba | 135 | 2507.075 | 0.016 | **14.659081** | 0.14 | 0.9 | ug/L |
| \| | Ba | 137 | 4252.509 | 0.028 | **14.091746** | 0.65 | 4.6 | ug/L |
| \| | Tb | 159 | 140279.525 | -0.024 | | | | ug/L |
| \|> | Ho | 165 | 151555.015 | 151555.015 | | | | ug/L |
| \| | Tl | 203 | 2.667 | -0.000 | **0.005867** | 0.01 | 86.5 | ug/L |
| \| | Tl | 205 | 9.333 | 0.000 | **-0.030942** | 0.00 | 13.6 | ug/L |
| \| | Pb | 208 | 584.675 | 0.004 | **0.213451** | 0.01 | 5.2 | ug/L |
| | Kr | 83 | 13.867 | -6.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.572 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 81.456 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 75.337 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 80.205 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-16A**
Sample Date/Time: Monday, February 15, 2010 18:30:49
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-16A.132
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 33250.213 | 0.032 | | | | ug/L |
| | Li | 7 | 33184.786 | 0.098 | **34.684811** | 0.77 | 2.2 | ug/L |
| | Be | 9 | 9.333 | 0.000 | **1.446768** | 0.03 | 1.9 | ug/L |
| | B | 11 | 12953.581 | 0.040 | **47.986555** | 2.91 | 6.1 | ug/L |
| | Na | 23 | 110821915.939 | 357.140 | **193903.371661** | 7392.66 | 3.8 | ug/L |
| | Mg | 24 | 33681592.496 | 108.553 | **81628.271744** | 2613.30 | 3.2 | ug/L |
| | Al | 27 | 30192.509 | 0.095 | **37.182684** | 0.99 | 2.7 | ug/L |
| | K | 39 | 1815368.140 | 5.684 | **1358.417308** | 28.94 | 2.1 | ug/L |
| | Ca | 43 | 485928.418 | 1.566 | **106313.135175** | 3365.89 | 3.2 | ug/L |
| > | Sc | 45 | 310358.777 | 310358.777 | | | | ug/L |
| | Ti | 49 | 596.690 | 0.001 | **1.565259** | 0.31 | 19.9 | ug/L |
| | Co | 59 | 1146.752 | 0.004 | **0.614777** | 0.05 | 8.9 | ug/L |
| | Ni | 60 | 566.688 | 0.002 | **1.375105** | 0.08 | 5.6 | ug/L |
| | Ni | 62 | 50.667 | 0.000 | **1.171565** | 0.49 | 41.5 | ug/L |
| | Cu | 63 | 1010.733 | 0.003 | **0.655729** | 0.04 | 5.9 | ug/L |
| | Cu | 65 | 157.335 | 0.000 | **-0.007088** | 0.01 | 208.3 | ug/L |
| | Zn | 66 | 1108.080 | 0.003 | **4.080784** | 0.39 | 9.6 | ug/L |
| | Zn | 67 | 2379.035 | 0.004 | **25.148447** | 3.65 | 14.5 | ug/L |
| | Zn | 68 | 2164.305 | 0.007 | **11.981714** | 0.93 | 7.8 | ug/L |
| | V | 51 | 1872.107 | 0.006 | **1.340356** | 0.15 | 10.9 | ug/L |
| | Cr | 52 | 3362.735 | 0.001 | **0.147623** | 0.10 | 67.4 | ug/L |
| | Cr | 53 | 16876.507 | 0.010 | **10.939242** | 4.00 | 36.6 | ug/L |
| | Mn | 55 | 174871.058 | 0.563 | **70.944366** | 2.00 | 2.8 | ug/L |
| | Fe | 54 | 16790.930 | 0.019 | **50.356465** | 1.68 | 3.3 | ug/L |
| | Fe | 57 | 7344.838 | 0.022 | **135.453026** | 3.21 | 2.4 | ug/L |
| | As | 75 | -55.930 | 0.000 | **0.791843** | 0.25 | 31.1 | ug/L |
| | Se | 77 | 2618.446 | 0.003 | **62.900709** | 6.36 | 10.1 | ug/L |
| | Se | 82 | 150.098 | 0.000 | **7.702611** | 0.47 | 6.1 | ug/L |
| | Sr | 88 | 3352067.129 | 8.929 | **1017.981424** | 15.61 | 1.5 | ug/L |
| > | Y | 89 | 375447.968 | 375447.968 | | | | ug/L |
| | Mo | 95 | 484.682 | 0.001 | **1.723501** | 0.03 | 1.6 | ug/L |
| | Mo | 97 | 302.673 | 0.001 | **1.964903** | 0.09 | 4.7 | ug/L |
| | Mo | 98 | 767.673 | 0.002 | **1.972729** | 0.07 | 3.4 | ug/L |
| | Ag | 107 | 5.333 | 0.000 | **0.199683** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 2.667 | 0.000 | **0.247261** | 0.00 | 1.0 | ug/L |
| | Cd | 111 | 152.168 | 0.001 | **0.896800** | 0.02 | 2.6 | ug/L |
| | Cd | 114 | 349.117 | 0.002 | **1.172608** | 0.04 | 3.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 145856.069 | 145856.069 | | | | ug/L |
| \| | Sn | 120 | 396.567 | -0.001 | **0.610197** | 0.04 | 7.2 | ug/L |
| \| | Sb | 121 | 1100.746 | 0.005 | **1.460547** | 0.16 | 11.2 | ug/L |
| \| | Sb | 123 | 812.286 | 0.003 | **1.709340** | 0.09 | 5.1 | ug/L |
| \| | Ba | 135 | 110075.150 | 0.712 | **594.144844** | 10.63 | 1.8 | ug/L |
| \| | Ba | 137 | 190846.435 | 1.234 | **599.716058** | 10.45 | 1.7 | ug/L |
| \| | Tb | 159 | 146315.910 | -0.004 | | | | ug/L |
| \|> | Ho | 165 | 154684.593 | 154684.593 | | | | ug/L |
| \| | Tl | 203 | 21.333 | 0.000 | **0.037061** | 0.01 | 29.2 | ug/L |
| \| | Tl | 205 | 44.000 | 0.000 | **-0.007129** | 0.01 | 91.4 | ug/L |
| \| | Pb | 208 | 41522.095 | 0.268 | **20.933736** | 0.38 | 1.8 | ug/L |
| | Kr | 83 | 21.733 | 1.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 86.812 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 84.415 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.845 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.861 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-17A**
Sample Date/Time: Monday, February 15, 2010 18:33:30
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-17A.133
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35084.460 | 0.041 | | | | ug/L |
| | Li | 7 | 13412.350 | 0.036 | **13.370673** | 0.25 | 1.9 | ug/L |
| | Be | 9 | 8.000 | 0.000 | **1.441489** | 0.03 | 1.8 | ug/L |
| | B | 11 | 19292.843 | 0.062 | **73.154756** | 1.83 | 2.5 | ug/L |
| | Na | 23 | 39463300.027 | 130.113 | **70646.460856** | 2419.33 | 3.4 | ug/L |
| | Mg | 24 | 74324.600 | 0.245 | **188.599484** | 10.05 | 5.3 | ug/L |
| | Al | 27 | 32592.338 | 0.105 | **39.544275** | 1.40 | 3.6 | ug/L |
| | K | 39 | 371566.651 | 1.061 | **249.382276** | 9.99 | 4.0 | ug/L |
| | Ca | 43 | 2704.476 | 0.008 | **567.237336** | 23.74 | 4.2 | ug/L |
| > | Sc | 45 | 303201.684 | 303201.684 | | | | ug/L |
| | Ti | 49 | 574.022 | 0.001 | **1.481664** | 0.40 | 27.0 | ug/L |
| | Co | 59 | 37.333 | 0.000 | **-0.065158** | 0.01 | 9.9 | ug/L |
| | Ni | 60 | 53.334 | 0.000 | **-0.245405** | 0.02 | 8.0 | ug/L |
| | Ni | 62 | 24.000 | -0.000 | **0.628944** | 0.26 | 40.8 | ug/L |
| | Cu | 63 | 450.013 | 0.001 | **-0.072014** | 0.01 | 18.1 | ug/L |
| | Cu | 65 | 122.668 | 0.000 | **-0.095682** | 0.03 | 33.1 | ug/L |
| | Zn | 66 | 449.347 | 0.001 | **1.257985** | 0.18 | 14.2 | ug/L |
| | Zn | 67 | 1772.205 | 0.002 | **9.523459** | 3.70 | 38.8 | ug/L |
| | Zn | 68 | 468.014 | 0.001 | **1.710696** | 0.28 | 16.1 | ug/L |
| | V | 51 | 1705.215 | 0.006 | **1.262796** | 0.68 | 53.7 | ug/L |
| | Cr | 52 | 3792.935 | 0.003 | **0.510348** | 0.02 | 3.2 | ug/L |
| | Cr | 53 | 20338.855 | 0.023 | **35.348338** | 2.13 | 6.0 | ug/L |
| | Mn | 55 | 7527.682 | 0.024 | **3.243784** | 0.05 | 1.5 | ug/L |
| | Fe | 54 | 15139.369 | 0.015 | **39.799293** | 0.67 | 1.7 | ug/L |
| | Fe | 57 | 1280.773 | 0.002 | **14.780919** | 0.63 | 4.3 | ug/L |
| | As | 75 | -539.500 | -0.001 | **-1.331723** | 0.35 | 26.5 | ug/L |
| | Se | 77 | 2305.679 | 0.003 | **55.238098** | 2.79 | 5.0 | ug/L |
| | Se | 82 | 14.161 | 0.000 | **2.178376** | 0.11 | 5.0 | ug/L |
| | Sr | 88 | 46368.669 | 0.133 | **15.740989** | 0.22 | 1.4 | ug/L |
| > | Y | 89 | 348928.158 | 348928.158 | | | | ug/L |
| | Mo | 95 | 480.682 | 0.001 | **1.804438** | 0.02 | 1.0 | ug/L |
| | Mo | 97 | 313.340 | 0.001 | **2.103199** | 0.07 | 3.3 | ug/L |
| | Mo | 98 | 805.376 | 0.002 | **2.129928** | 0.07 | 3.5 | ug/L |
| | Ag | 107 | 8.000 | 0.000 | **0.202999** | 0.01 | 3.8 | ug/L |
| | Ag | 109 | 3.333 | 0.000 | **0.248276** | 0.00 | 1.9 | ug/L |
| | Cd | 111 | 2.167 | 0.000 | **0.269425** | 0.00 | 0.5 | ug/L |
| | Cd | 114 | 6.606 | 0.000 | **0.541216** | 0.01 | 1.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 133687.372 | 133687.372 | | | | ug/L |
| \| | Sn | 120 | 354.641 | -0.001 | **0.600193** | 0.01 | 1.8 | ug/L |
| \| | Sb | 121 | 222.670 | -0.001 | **0.196332** | 0.06 | 30.3 | ug/L |
| \| | Sb | 123 | 164.999 | -0.001 | **0.490888** | 0.02 | 4.9 | ug/L |
| \| | Ba | 135 | 2166.305 | 0.015 | **13.286439** | 0.13 | 1.0 | ug/L |
| \| | Ba | 137 | 3728.904 | 0.026 | **12.907211** | 0.18 | 1.4 | ug/L |
| \| | Tb | 159 | 134172.738 | -0.027 | | | | ug/L |
| \|> | Ho | 165 | 145423.776 | 145423.776 | | | | ug/L |
| \| | Tl | 203 | 1.333 | -0.000 | **0.003733** | 0.00 | 54.9 | ug/L |
| \| | Tl | 205 | 8.000 | 0.000 | **-0.031606** | 0.00 | 4.6 | ug/L |
| \| | Pb | 208 | 1524.727 | 0.010 | **0.732095** | 0.02 | 2.7 | ug/L |
| | Kr | 83 | 13.467 | -7.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 84.810 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 78.452 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 70.433 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 76.960 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-18A**
Sample Date/Time: Monday, February 15, 2010 18:36:10
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-18A.134
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31971.990 | 0.032 | | | | ug/L |
| | Li | 7 | 47922.819 | 0.152 | **52.777231** | 1.52 | 2.9 | ug/L |
| | Be | 9 | 5.333 | -0.000 | **1.429042** | 0.01 | 0.7 | ug/L |
| | B | 11 | 9666.737 | 0.031 | **37.099577** | 0.72 | 1.9 | ug/L |
| | Na | 23 | 59083999.656 | 197.360 | **107155.914890** | 3943.42 | 3.7 | ug/L |
| | Mg | 24 | 19153263.793 | 64.023 | **48144.989012** | 2696.04 | 5.6 | ug/L |
| | Al | 27 | 12872.434 | 0.041 | **24.628531** | 0.52 | 2.1 | ug/L |
| | K | 39 | 1407830.301 | 4.542 | **1084.369122** | 71.21 | 6.6 | ug/L |
| | Ca | 43 | 389055.779 | 1.300 | **88267.293274** | 3839.49 | 4.3 | ug/L |
| > | Sc | 45 | 299388.955 | 299388.955 | | | | ug/L |
| | Ti | 49 | 521.351 | 0.000 | **1.057008** | 0.25 | 23.5 | ug/L |
| | Co | 59 | 210.670 | 0.001 | **0.045003** | 0.02 | 45.9 | ug/L |
| | Ni | 60 | 425.345 | 0.001 | **0.979121** | 0.12 | 12.0 | ug/L |
| | Ni | 62 | 48.000 | 0.000 | **1.152253** | 0.17 | 14.6 | ug/L |
| | Cu | 63 | 912.054 | 0.003 | **0.568262** | 0.07 | 11.8 | ug/L |
| | Cu | 65 | 322.673 | 0.001 | **0.488386** | 0.06 | 13.3 | ug/L |
| | Zn | 66 | 733.368 | 0.002 | **2.563618** | 0.07 | 2.8 | ug/L |
| | Zn | 67 | 2677.800 | 0.005 | **36.150205** | 4.60 | 12.7 | ug/L |
| | Zn | 68 | 3463.449 | 0.011 | **20.692969** | 2.18 | 10.5 | ug/L |
| | V | 51 | 7463.841 | 0.025 | **4.794263** | 0.83 | 17.4 | ug/L |
| | Cr | 52 | 3860.969 | 0.003 | **0.594020** | 0.06 | 9.4 | ug/L |
| | Cr | 53 | 17801.915 | 0.015 | **20.702711** | 1.54 | 7.5 | ug/L |
| | Mn | 55 | 14999.279 | 0.050 | **6.423074** | 0.25 | 3.8 | ug/L |
| | Fe | 54 | 18733.428 | 0.028 | **71.914967** | 10.05 | 14.0 | ug/L |
| | Fe | 57 | 6975.829 | 0.022 | **133.253428** | 6.06 | 4.5 | ug/L |
| | As | 75 | -595.031 | -0.001 | **-1.527060** | 0.37 | 24.3 | ug/L |
| | Se | 77 | 2623.781 | 0.004 | **71.600025** | 5.52 | 7.7 | ug/L |
| | Se | 82 | 33.708 | 0.000 | **3.016486** | 0.19 | 6.2 | ug/L |
| | Sr | 88 | 2157124.632 | 6.084 | **693.851398** | 37.68 | 5.4 | ug/L |
| > | Y | 89 | 354745.035 | 354745.035 | | | | ug/L |
| | Mo | 95 | 405.344 | 0.001 | **1.586992** | 0.10 | 6.1 | ug/L |
| | Mo | 97 | 254.004 | 0.001 | **1.829209** | 0.19 | 10.6 | ug/L |
| | Mo | 98 | 597.804 | 0.002 | **1.760812** | 0.02 | 1.0 | ug/L |
| | Ag | 107 | 10.000 | 0.000 | **0.204945** | 0.00 | 1.0 | ug/L |
| | Ag | 109 | 4.667 | 0.000 | **0.249725** | 0.00 | 1.1 | ug/L |
| | Cd | 111 | 21.000 | 0.000 | **0.352927** | 0.02 | 4.7 | ug/L |
| | Cd | 114 | 35.830 | 0.000 | **0.598319** | 0.02 | 3.2 | ug/L |

00458

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 136853.834 | 136853.834 | | | | ug/L |
| \| | Sn | 120 | 374.625 | -0.001 | **0.613082** | 0.01 | 1.2 | ug/L |
| \| | Sb | 121 | 253.338 | -0.001 | **0.236923** | 0.03 | 11.5 | ug/L |
| \| | Sb | 123 | 199.499 | -0.001 | **0.554525** | 0.04 | 7.7 | ug/L |
| \| | Ba | 135 | 212533.317 | 1.453 | **1212.144459** | 85.76 | 7.1 | ug/L |
| \| | Ba | 137 | 367079.673 | 2.509 | **1219.227002** | 85.48 | 7.0 | ug/L |
| \| | Tb | 159 | 137774.501 | -0.010 | | | | ug/L |
| \|> | Ho | 165 | 146548.890 | 146548.890 | | | | ug/L |
| \| | Tl | 203 | 9.333 | 0.000 | **0.017962** | 0.01 | 63.8 | ug/L |
| \| | Tl | 205 | 21.333 | 0.000 | **-0.021962** | 0.00 | 16.3 | ug/L |
| \| | Pb | 208 | 468.006 | 0.003 | **0.161629** | 0.02 | 10.4 | ug/L |
| | Kr | 83 | 20.267 | -0.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 83.744 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 79.760 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 72.102 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 77.555 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20A**
Sample Date/Time: Monday, February 15, 2010 18:38:51
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-20A.135
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 28592.548 | 0.017 | | | | ug/L |
| \| | Li | 7 | 90728.726 | 0.285 | **98.054655** | 4.11 | 4.2 | ug/L |
| \| | Be | 9 | 2171.640 | 0.007 | **11.556315** | 0.35 | 3.1 | ug/L |
| \| | B | 11 | 18764.880 | 0.059 | **69.709944** | 2.50 | 3.6 | ug/L |
| \| | Na | 23 | 139447115.219 | 450.500 | **244590.078221** | 5833.64 | 2.4 | ug/L |
| \| | Mg | 24 | 41109137.707 | 132.861 | **99906.233385** | 3582.99 | 3.6 | ug/L |
| \| | Al | 27 | 1482945.373 | 4.791 | **1122.985940** | 32.67 | 2.9 | ug/L |
| \| | K | 39 | 4845504.704 | 15.503 | **3714.089591** | 177.57 | 4.8 | ug/L |
| \| | Ca | 43 | 577193.284 | 1.865 | **126667.901390** | 6114.51 | 4.8 | ug/L |
| \| > | Sc | 45 | 309599.892 | 309599.892 | | | | ug/L |
| \| | Ti | 49 | 1032.736 | 0.002 | **5.548667** | 0.41 | 7.4 | ug/L |
| \| | Co | 59 | 69137.509 | 0.223 | **42.432487** | 1.91 | 4.5 | ug/L |
| \| | Ni | 60 | 14780.875 | 0.048 | **46.513745** | 2.42 | 5.2 | ug/L |
| \| | Ni | 62 | 2241.660 | 0.007 | **46.836552** | 2.51 | 5.3 | ug/L |
| \| | Cu | 63 | 1655.512 | 0.005 | **1.514543** | 0.06 | 3.7 | ug/L |
| \| | Cu | 65 | 664.029 | 0.002 | **1.411437** | 0.10 | 7.2 | ug/L |
| \| | Zn | 66 | 12980.298 | 0.042 | **55.897254** | 3.23 | 5.8 | ug/L |
| \| | Zn | 67 | 3634.192 | 0.008 | **60.069025** | 3.72 | 6.2 | ug/L |
| \| | Zn | 68 | 9014.621 | 0.029 | **53.837839** | 2.29 | 4.3 | ug/L |
| \| | V | 51 | 3368.437 | 0.011 | **2.217083** | 0.33 | 15.0 | ug/L |
| \| | Cr | 52 | 3698.223 | 0.002 | **0.389781** | 0.12 | 30.9 | ug/L |
| \| | Cr | 53 | 12733.201 | -0.003 | **-14.448767** | 4.34 | 30.1 | ug/L |
| \| | Mn | 55 | 3288803.438 | 10.631 | **1336.079182** | 65.27 | 4.9 | ug/L |
| \| | Fe | 54 | 3612156.612 | 11.642 | **29448.370402** | 1604.01 | 5.4 | ug/L |
| ⌊ | Fe | 57 | 1455911.909 | 4.704 | **29193.684767** | 1489.87 | 5.1 | ug/L |
| ⌈ | As | 75 | 35.173 | 0.000 | **1.071214** | 0.29 | 27.0 | ug/L |
| \| | Se | 77 | 2341.023 | -0.001 | **-32.644981** | 1.40 | 4.3 | ug/L |
| \| | Se | 82 | 57.730 | 0.000 | **2.444839** | 0.12 | 4.7 | ug/L |
| \| | Sr | 88 | 4079452.229 | 4.100 | **467.801601** | 17.52 | 3.7 | ug/L |
| \| > | Y | 89 | 995004.819 | 995004.819 | | | | ug/L |
| \| | Mo | 95 | 618.692 | 0.001 | **1.102248** | 0.03 | 2.9 | ug/L |
| \| | Mo | 97 | 333.341 | 0.000 | **1.251966** | 0.02 | 1.8 | ug/L |
| ⌊ | Mo | 98 | 919.096 | 0.001 | **1.309671** | 0.02 | 1.3 | ug/L |
| ⌈ | Ag | 107 | 16.667 | 0.000 | **0.210057** | 0.00 | 1.3 | ug/L |
| \| | Ag | 109 | 7.333 | 0.000 | **0.251872** | 0.00 | 1.9 | ug/L |
| \| | Cd | 111 | 23.833 | 0.000 | **0.354219** | 0.01 | 3.7 | ug/L |
| \| | Cd | 114 | 50.661 | 0.000 | **0.617128** | 0.03 | 5.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 154305.062 | 154305.062 | | | | ug/L |
| \| | Sn | 120 | 372.540 | -0.001 | **0.563462** | 0.01 | 2.4 | ug/L |
| \| | Sb | 121 | 218.003 | -0.002 | **0.142983** | 0.03 | 18.0 | ug/L |
| \| | Sb | 123 | 211.327 | -0.001 | **0.528471** | 0.03 | 4.9 | ug/L |
| \| | Ba | 135 | 6995.851 | 0.038 | **33.005751** | 1.74 | 5.3 | ug/L |
| \| | Ba | 137 | 12013.381 | 0.066 | **32.614876** | 1.67 | 5.1 | ug/L |
| \| | Tb | 159 | 175307.629 | 0.015 | | | | ug/L |
| \|> | Ho | 165 | 181593.618 | 181593.618 | | | | ug/L |
| \| | Tl | 203 | 18.000 | 0.000 | **0.027069** | 0.01 | 30.3 | ug/L |
| \| | Tl | 205 | 28.000 | 0.000 | **-0.020885** | 0.01 | 34.5 | ug/L |
| \| | Pb | 208 | 2076.109 | 0.011 | **0.806478** | 0.03 | 4.3 | ug/L |
| | Kr | 83 | 51.600 | 31.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 86.600 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 223.714 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 81.296 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 96.101 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 18:41:33
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.136
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29778.141 | 0.021 | | | | ug/L |
| | Li | 7 | 123406.932 | 0.386 | **132.642919** | 4.71 | 3.6 | ug/L |
| | Be | 9 | 26859.507 | 0.086 | **125.770474** | 5.84 | 4.6 | ug/L |
| | B | 11 | 33435.186 | 0.106 | **123.097433** | 4.06 | 3.3 | ug/L |
| | Na | 23 | 3367380.676 | 10.747 | **5840.489667** | 287.60 | 4.9 | ug/L |
| | Mg | 24 | 2385124.898 | 7.635 | **5745.648765** | 250.85 | 4.4 | ug/L |
| | Al | 27 | 7726866.371 | 24.735 | **5735.178319** | 286.39 | 5.0 | ug/L |
| | K | 39 | 8009326.086 | 25.481 | **6107.905637** | 382.55 | 6.3 | ug/L |
| | Ca | 43 | 23206.985 | 0.074 | **5006.510118** | 245.68 | 4.9 | ug/L |
| > | Sc | 45 | 312516.683 | 312516.683 | | | | ug/L |
| | Ti | 49 | 11079.974 | 0.034 | **95.925405** | 1.93 | 2.0 | ug/L |
| | Co | 59 | 150354.443 | 0.481 | **91.490331** | 3.77 | 4.1 | ug/L |
| | Ni | 60 | 28897.524 | 0.092 | **90.452882** | 2.63 | 2.9 | ug/L |
| | Ni | 62 | 4321.214 | 0.014 | **89.296975** | 2.86 | 3.2 | ug/L |
| | Cu | 63 | 69715.953 | 0.223 | **90.917304** | 3.63 | 4.0 | ug/L |
| | Cu | 65 | 32833.938 | 0.105 | **90.724308** | 2.88 | 3.2 | ug/L |
| | Zn | 66 | 20730.571 | 0.066 | **88.862953** | 3.28 | 3.7 | ug/L |
| | Zn | 67 | 4988.285 | 0.012 | **96.227490** | 5.67 | 5.9 | ug/L |
| | Zn | 68 | 14993.267 | 0.048 | **89.496704** | 2.62 | 2.9 | ug/L |
| | V | 51 | 165813.598 | 0.531 | **96.871939** | 3.16 | 3.3 | ug/L |
| | Cr | 52 | 139438.943 | 0.437 | **94.609442** | 3.61 | 3.8 | ug/L |
| | Cr | 53 | 28697.444 | 0.048 | **82.943322** | 4.99 | 6.0 | ug/L |
| | Mn | 55 | 227698.226 | 0.728 | **91.722381** | 4.12 | 4.5 | ug/L |
| | Fe | 54 | 586218.799 | 1.842 | **4659.776070** | 180.17 | 3.9 | ug/L |
| | Fe | 57 | 234159.718 | 0.748 | **4639.931167** | 170.92 | 3.7 | ug/L |
| | As | 75 | 26051.045 | 0.071 | **108.226581** | 2.26 | 2.1 | ug/L |
| | Se | 77 | 10209.438 | 0.024 | **490.419890** | 6.84 | 1.4 | ug/L |
| | Se | 82 | 12663.970 | 0.034 | **528.824834** | 7.37 | 1.4 | ug/L |
| | Sr | 88 | 329706.627 | 0.893 | **102.415607** | 2.44 | 2.4 | ug/L |
| > | Y | 89 | 369027.347 | 369027.347 | | | | ug/L |
| | Mo | 95 | 40106.287 | 0.109 | **101.557486** | 2.05 | 2.0 | ug/L |
| | Mo | 97 | 24207.393 | 0.066 | **99.876363** | 4.09 | 4.1 | ug/L |
| | Mo | 98 | 61970.367 | 0.168 | **100.224297** | 2.23 | 2.2 | ug/L |
| | Ag | 107 | 103269.983 | 0.715 | **103.077395** | 1.75 | 1.7 | ug/L |
| | Ag | 109 | 97127.390 | 0.673 | **102.734897** | 1.85 | 1.8 | ug/L |
| | Cd | 111 | 24646.589 | 0.171 | **104.479896** | 1.44 | 1.4 | ug/L |
| | Cd | 114 | 54979.074 | 0.381 | **103.018523** | 1.43 | 1.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 144441.452 | 144441.452 | | | | ug/L |
| \| | Sn | 120 | 95110.333 | 0.655 | **101.332345** | 2.34 | 2.3 | ug/L |
| \| | Sb | 121 | 67141.117 | 0.462 | **99.950712** | 2.17 | 2.2 | ug/L |
| \| | Sb | 123 | 51143.465 | 0.352 | **99.761042** | 1.49 | 1.5 | ug/L |
| \| | Ba | 135 | 17427.720 | 0.113 | **94.904868** | 1.70 | 1.8 | ug/L |
| \| | Ba | 137 | 30125.549 | 0.195 | **95.143290** | 1.29 | 1.4 | ug/L |
| \| | Tb | 159 | 143852.094 | -0.019 | | | | ug/L |
| \|> | Ho | 165 | 154544.874 | 154544.874 | | | | ug/L |
| \| | Tl | 203 | 65642.277 | 0.425 | **109.496399** | 1.86 | 1.7 | ug/L |
| \| | Tl | 205 | 158726.090 | 1.027 | **109.204919** | 1.41 | 1.3 | ug/L |
| \| | Pb | 208 | 215990.762 | 1.398 | **109.367346** | 2.94 | 2.7 | ug/L |
| | Kr | 83 | 18.333 | -2.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 132.643 | | |
| Be | 9 | 125.770 | | |
| B | 11 | 123.097 | | |
| Na | 23 | 116.810 | | |
| Mg | 24 | 114.913 | | |
| Al | 27 | 112.454 | | |
| K | 39 | 122.158 | | |
| Ca | 43 | 100.130 | | |
| Sc | 45 | | 87.416 | |
| Ti | 49 | 95.925 | | |
| Co | 59 | 91.490 | | |
| Ni | 60 | 90.453 | | |
| Ni | 62 | 89.297 | | |
| Cu | 63 | 90.917 | | |
| Cu | 65 | 90.724 | | |
| Zn | 66 | 88.863 | | |
| Zn | 67 | 96.227 | | |
| Zn | 68 | 89.497 | | |
| V | 51 | 96.872 | | |
| Cr | 52 | 94.609 | | |
| Cr | 53 | 82.943 | | |
| Mn | 55 | 91.722 | | |
| Fe | 54 | 93.196 | | |
| Fe | 57 | 92.799 | | |
| As | 75 | 108.227 | | |
| Se | 77 | 98.084 | | |
| Se | 82 | 105.765 | | |
| Sr | 88 | 102.416 | | |
| Y | 89 | | 82.971 | |
| Mo | 95 | 101.557 | | |
| Mo | 97 | 99.876 | | |
| Mo | 98 | 100.224 | | |
| Ag | 107 | 103.077 | | |
| Ag | 109 | 102.735 | | |
| Cd | 111 | 104.480 | | |
| Cd | 114 | 103.019 | | |
| In | 115 | | 76.099 | |
| Sn | 120 | 101.332 | | |
| Sb | 121 | 99.951 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 99.761 | |
| Ba | 135 | 94.905 | |
| Ba | 137 | 95.143 | |
| Tb | 159 | | |
| Ho | 165 | | 81.787 |
| Tl | 203 | 109.496 | |
| Tl | 205 | 109.205 | |
| Pb | 208 | 109.367 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Monday, February 15, 2010 18:44:14
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 5.137
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 35032.496 | 0.037 | | | | ug/L |
| \| | Li | 7 | 6193.160 | 0.011 | **5.037037** | 0.11 | 2.3 | ug/L |
| \| | Be | 9 | 572.021 | 0.002 | **4.040763** | 0.17 | 4.2 | ug/L |
| \| | B | 11 | 7750.570 | 0.023 | **28.360826** | 1.01 | 3.6 | ug/L |
| \| | Na | 23 | 95185.631 | 0.269 | **152.112486** | 5.79 | 3.8 | ug/L |
| \| | Mg | 24 | 26445.381 | 0.084 | **67.634706** | 2.36 | 3.5 | ug/L |
| \| | Al | 27 | 79134.975 | 0.250 | **73.006328** | 1.81 | 2.5 | ug/L |
| \| | K | 39 | 182028.821 | 0.416 | **94.568166** | 6.22 | 6.6 | ug/L |
| \| | Ca | 43 | 1168.089 | 0.003 | **214.129630** | 15.97 | 7.5 | ug/L |
| \|> | Sc | 45 | 313961.082 | 313961.082 | | | | ug/L |
| \| | Ti | 49 | 970.728 | 0.002 | **4.861497** | 0.41 | 8.4 | ug/L |
| \| | Co | 59 | 3278.033 | 0.010 | **1.901694** | 0.17 | 9.1 | ug/L |
| \| | Ni | 60 | 650.028 | 0.002 | **1.619010** | 0.17 | 10.3 | ug/L |
| \| | Ni | 62 | 149.335 | 0.000 | **3.179082** | 0.57 | 17.9 | ug/L |
| \| | Cu | 63 | 1612.836 | 0.005 | **1.429507** | 0.10 | 7.1 | ug/L |
| \| | Cu | 65 | 766.705 | 0.002 | **1.676449** | 0.28 | 16.7 | ug/L |
| \| | Zn | 66 | 1518.817 | 0.005 | **5.793246** | 0.20 | 3.5 | ug/L |
| \| | Zn | 67 | 1880.231 | 0.002 | **10.694693** | 2.87 | 26.8 | ug/L |
| \| | Zn | 68 | 1128.083 | 0.003 | **5.589095** | 0.32 | 5.8 | ug/L |
| \| | V | 51 | 19563.507 | 0.063 | **11.583103** | 0.46 | 4.0 | ug/L |
| \| | Cr | 52 | 8550.083 | 0.018 | **3.706637** | 0.13 | 3.6 | ug/L |
| \| | Cr | 53 | 14078.206 | 0.001 | **-7.345200** | 2.94 | 40.0 | ug/L |
| \| | Mn | 55 | 5379.881 | 0.017 | **2.278675** | 0.08 | 3.3 | ug/L |
| \| | Fe | 54 | 21853.688 | 0.035 | **89.706658** | 6.76 | 7.5 | ug/L |
| ⌊ | Fe | 57 | 5437.255 | 0.016 | **96.091420** | 2.39 | 2.5 | ug/L |
| ⌈ | As | 75 | 503.352 | 0.002 | **3.061438** | 0.22 | 7.3 | ug/L |
| \| | Se | 77 | 1510.815 | 0.000 | **2.200842** | 3.30 | 150.1 | ug/L |
| \| | Se | 82 | 131.478 | 0.000 | **6.951732** | 0.47 | 6.8 | ug/L |
| \| | Sr | 88 | 3783.598 | 0.010 | **1.750434** | 0.02 | 1.3 | ug/L |
| \|> | Y | 89 | 374081.217 | 374081.217 | | | | ug/L |
| \| | Mo | 95 | 886.051 | 0.002 | **2.726114** | 0.21 | 7.7 | ug/L |
| \| | Mo | 97 | 555.354 | 0.001 | **2.989691** | 0.29 | 9.6 | ug/L |
| ⌊ | Mo | 98 | 1400.429 | 0.004 | **2.981035** | 0.13 | 4.2 | ug/L |
| ⌈ | Ag | 107 | 1129.417 | 0.008 | **1.288335** | 0.07 | 5.1 | ug/L |
| \| | Ag | 109 | 1008.066 | 0.007 | **1.279157** | 0.05 | 4.0 | ug/L |
| \| | Cd | 111 | 533.352 | 0.004 | **2.453534** | 0.08 | 3.1 | ug/L |
| \| | Cd | 114 | 1217.100 | 0.008 | **2.734915** | 0.03 | 1.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 148473.119 | 148473.119 | | | | ug/L |
| \| | Sn | 120 | 5021.537 | 0.031 | **5.387396** | 0.09 | 1.7 | ug/L |
| \| | Sb | 121 | 5037.650 | 0.031 | **7.147531** | 0.35 | 4.9 | ug/L |
| \| | Sb | 123 | 3745.905 | 0.023 | **7.241796** | 0.08 | 1.0 | ug/L |
| \| | Ba | 135 | 898.719 | 0.006 | **5.728360** | 0.39 | 6.8 | ug/L |
| \| | Ba | 137 | 1594.165 | 0.010 | **5.478882** | 0.22 | 4.1 | ug/L |
| \| | Tb | 159 | 144456.099 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 154186.014 | 154186.014 | | | | ug/L |
| \| | Tl | 203 | 1395.460 | 0.009 | **2.335707** | 0.11 | 4.6 | ug/L |
| \| | Tl | 205 | 3360.734 | 0.022 | **2.281458** | 0.04 | 1.6 | ug/L |
| \| | Pb | 208 | 2303.469 | 0.015 | **1.080912** | 0.04 | 3.5 | ug/L |
| | Kr | 83 | 15.733 | -4.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 251.852 | | |
| Be | 9 | 202.038 | | |
| B | 11 | 141.804 | | |
| Na | 23 | 152.112 | | |
| Mg | 24 | 135.269 | | |
| Al | 27 | 146.013 | | |
| K | 39 | 126.091 | | |
| Ca | 43 | 107.065 | | |
| Sc | 45 | | 87.820 | |
| Ti | 49 | 97.230 | | |
| Co | 59 | 95.085 | | |
| Ni | 60 | 80.950 | | |
| Ni | 62 | 158.954 | | |
| Cu | 63 | 71.475 | | |
| Cu | 65 | 83.822 | | |
| Zn | 66 | 96.554 | | |
| Zn | 67 | 178.245 | | |
| Zn | 68 | 93.152 | | |
| V | 51 | 115.831 | | |
| Cr | 52 | 92.666 | | |
| Cr | 53 | -183.630 | | |
| Mn | 55 | 113.934 | | |
| Fe | 54 | 89.707 | | |
| Fe | 57 | 96.091 | | |
| As | 75 | 76.536 | | |
| Se | 77 | 44.017 | | |
| Se | 82 | 139.035 | | |
| Sr | 88 | 175.043 | | |
| Y | 89 | | 84.107 | |
| Mo | 95 | 136.306 | | |
| Mo | 97 | 149.485 | | |
| Mo | 98 | 149.052 | | |
| Ag | 107 | 128.833 | | |
| Ag | 109 | 127.916 | | |
| Cd | 111 | 122.677 | | |
| Cd | 114 | 136.746 | | |
| In | 115 | | 78.223 | |
| Sn | 120 | 134.685 | | |
| Sb | 121 | 142.951 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 144.836 | |
| Ba | 135 | 114.567 | |
| Ba | 137 | 109.578 | |
| Tb | 159 | | |
| Ho | 165 | | 81.597 |
| Tl | 203 | 116.785 | |
| Tl | 205 | 114.073 | |
| Pb | 208 | 108.091 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 18:46:56
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.138
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 33755.685 | 0.033 | | | | ug/L |
| | Li | 7 | 3644.864 | 0.003 | **2.286281** | 0.17 | 7.6 | ug/L |
| | Be | 9 | 3.333 | -0.000 | **1.418892** | 0.02 | 1.4 | ug/L |
| | B | 11 | 977.396 | 0.002 | **3.519118** | 0.29 | 8.3 | ug/L |
| | Na | 23 | 21162.522 | 0.034 | **24.117795** | 2.99 | 12.4 | ug/L |
| | Mg | 24 | 1400.129 | 0.004 | **7.608950** | 0.44 | 5.8 | ug/L |
| | Al | 27 | 2105.289 | 0.005 | **16.232430** | 0.09 | 0.6 | ug/L |
| | K | 39 | 60235.496 | 0.028 | **1.468911** | 2.51 | 170.9 | ug/L |
| | Ca | 43 | 148.001 | -0.000 | **-6.379942** | 5.17 | 81.1 | ug/L |
| > | Sc | 45 | 313201.865 | 313201.865 | | | | ug/L |
| | Ti | 49 | 388.677 | -0.000 | **-0.349397** | 0.34 | 96.0 | ug/L |
| | Co | 59 | 14.667 | -0.000 | **-0.079755** | 0.00 | 6.1 | ug/L |
| | Ni | 60 | 13.333 | -0.000 | **-0.376519** | 0.02 | 5.3 | ug/L |
| | Ni | 62 | 28.000 | -0.000 | **0.694268** | 0.14 | 20.0 | ug/L |
| | Cu | 63 | 350.008 | 0.001 | **-0.222556** | 0.03 | 13.6 | ug/L |
| | Cu | 65 | 168.002 | 0.000 | **0.018206** | 0.04 | 212.3 | ug/L |
| | Zn | 66 | 113.334 | 0.000 | **-0.254200** | 0.18 | 72.2 | ug/L |
| | Zn | 67 | 1493.478 | 0.001 | **0.299631** | 0.85 | 282.7 | ug/L |
| | Zn | 68 | 208.003 | 0.000 | **0.050663** | 0.35 | 699.2 | ug/L |
| | V | 51 | 1497.778 | 0.005 | **1.114899** | 0.21 | 19.2 | ug/L |
| | Cr | 52 | 2943.230 | -0.000 | **-0.164573** | 0.07 | 42.7 | ug/L |
| | Cr | 53 | 14356.056 | 0.002 | **-5.471431** | 2.96 | 54.2 | ug/L |
| | Mn | 55 | 274.672 | 0.000 | **0.233994** | 0.00 | 1.4 | ug/L |
| | Fe | 54 | 10414.097 | -0.001 | **-2.349294** | 5.72 | 243.5 | ug/L |
| | Fe | 57 | 555.354 | -0.000 | **-0.426098** | 1.09 | 254.9 | ug/L |
| | As | 75 | -378.373 | -0.001 | **-0.504828** | 0.75 | 148.8 | ug/L |
| | Se | 77 | 1386.125 | 0.000 | **-4.956840** | 6.10 | 123.0 | ug/L |
| | Se | 82 | 4.349 | 0.000 | **1.736753** | 0.16 | 9.1 | ug/L |
| | Sr | 88 | 226.003 | 0.000 | **0.666471** | 0.01 | 1.1 | ug/L |
| > | Y | 89 | 375896.494 | 375896.494 | | | | ug/L |
| | Mo | 95 | 19.333 | 0.000 | **0.571652** | 0.02 | 3.2 | ug/L |
| | Mo | 97 | 8.000 | 0.000 | **0.778281** | 0.03 | 4.1 | ug/L |
| | Mo | 98 | 22.447 | 0.000 | **0.798148** | 0.02 | 2.3 | ug/L |
| | Ag | 107 | 4.667 | 0.000 | **0.198897** | 0.01 | 3.1 | ug/L |
| | Ag | 109 | 8.667 | 0.000 | **0.253355** | 0.00 | 1.0 | ug/L |
| | Cd | 111 | 2.000 | 0.000 | **0.267682** | 0.00 | 0.1 | ug/L |
| | Cd | 114 | -0.224 | 0.000 | **0.527592** | 0.00 | 0.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 149996.447 | 149996.447 | | | | ug/L |
| \| | Sn | 120 | 393.968 | -0.001 | **0.596080** | 0.01 | 1.2 | ug/L |
| \| | Sb | 121 | 403.344 | -0.000 | **0.417799** | 0.04 | 10.4 | ug/L |
| \| | Sb | 123 | 342.922 | -0.000 | **0.790235** | 0.14 | 17.4 | ug/L |
| \| | Ba | 135 | 11.333 | 0.000 | **0.927658** | 0.03 | 3.7 | ug/L |
| \| | Ba | 137 | 24.667 | 0.000 | **0.529860** | 0.02 | 2.9 | ug/L |
| \| | Tb | 159 | 145134.468 | -0.024 | | | | ug/L |
| \|> | Ho | 165 | 156824.001 | 156824.001 | | | | ug/L |
| \| | Tl | 203 | 8.000 | 0.000 | **0.014616** | 0.01 | 99.7 | ug/L |
| \| | Tl | 205 | 38.000 | 0.000 | **-0.011652** | 0.01 | 73.6 | ug/L |
| \| | Pb | 208 | 88.667 | 0.000 | **-0.044376** | 0.01 | 15.9 | ug/L |
| | Kr | 83 | 15.000 | -5.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.608 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 84.515 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 79.026 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 82.993 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Monday, February 15, 2010 18:49:37
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSA.139
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31953.429 | 0.026 | | | | ug/L |
| | Li | 7 | 3541.482 | 0.003 | **2.118719** | 0.15 | 7.3 | ug/L |
| | Be | 9 | 4.667 | -0.000 | **1.424462** | 0.01 | 1.0 | ug/L |
| | B | 11 | 1150.753 | 0.002 | **4.099261** | 0.33 | 8.1 | ug/L |
| | Na | 23 | 62576017.030 | 196.840 | **106874.026708** | 3476.32 | 3.3 | ug/L |
| | Mg | 24 | 44929736.259 | 141.346 | **106286.121196** | 1639.15 | 1.5 | ug/L |
| | Al | 27 | 138999587.477 | 437.382 | **101159.633423** | 2377.09 | 2.3 | ug/L |
| | K | 39 | 136158774.680 | 428.139 | **102707.235268** | 2776.13 | 2.7 | ug/L |
| | Ca | 43 | 462850.673 | 1.456 | **98860.248864** | 1607.01 | 1.6 | ug/L |
| > | Sc | 45 | 317871.108 | 317871.108 | | | | ug/L |
| | Ti | 49 | 222299.196 | 0.698 | **1963.939887** | 20.85 | 1.1 | ug/L |
| | Co | 59 | 2795.175 | 0.009 | **1.585323** | 0.07 | 4.6 | ug/L |
| | Ni | 60 | 869.382 | 0.003 | **2.269022** | 0.03 | 1.4 | ug/L |
| | Ni | 62 | 588.023 | 0.002 | **12.044621** | 0.72 | 6.0 | ug/L |
| | Cu | 63 | 1618.837 | 0.005 | **1.409269** | 0.05 | 3.5 | ug/L |
| | Cu | 65 | 912.054 | 0.003 | **2.042508** | 0.05 | 2.5 | ug/L |
| | Zn | 66 | 790.707 | 0.002 | **2.613457** | 0.18 | 6.7 | ug/L |
| | Zn | 67 | 1453.471 | 0.001 | **-1.366820** | 1.78 | 130.6 | ug/L |
| | Zn | 68 | 298.673 | 0.000 | **0.573290** | 0.23 | 40.8 | ug/L |
| | V | 51 | 1494.949 | 0.005 | **1.102326** | 0.42 | 37.9 | ug/L |
| | Cr | 52 | 5134.381 | 0.007 | **1.300975** | 0.13 | 10.1 | ug/L |
| | Cr | 53 | 11536.648 | -0.008 | **-23.834402** | 1.16 | 4.9 | ug/L |
| | Mn | 55 | 17447.099 | 0.054 | **7.023645** | 0.21 | 3.0 | ug/L |
| | Fe | 54 | 11421201.530 | 35.903 | **90809.310098** | 1513.71 | 1.7 | ug/L |
| | Fe | 57 | 4682989.177 | 14.733 | **91425.977652** | 1256.52 | 1.4 | ug/L |
| | As | 75 | -418.466 | -0.001 | **-0.606132** | 0.59 | 97.7 | ug/L |
| | Se | 77 | 1758.868 | 0.001 | **11.738558** | 0.80 | 6.8 | ug/L |
| | Se | 82 | -17.650 | -0.000 | **0.861393** | 0.20 | 23.7 | ug/L |
| | Sr | 88 | 8547.413 | 0.022 | **3.090906** | 0.03 | 0.8 | ug/L |
| > | Y | 89 | 390684.723 | 390684.723 | | | | ug/L |
| | Mo | 95 | 874369.897 | 2.238 | **2080.945902** | 45.07 | 2.2 | ug/L |
| | Mo | 97 | 527005.154 | 1.349 | **2038.866797** | 27.15 | 1.3 | ug/L |
| | Mo | 98 | 1359561.718 | 3.480 | **2061.482590** | 6.73 | 0.3 | ug/L |
| | Ag | 107 | 132.001 | 0.001 | **0.309818** | 0.02 | 6.4 | ug/L |
| | Ag | 109 | 98.667 | 0.001 | **0.335828** | 0.00 | 1.1 | ug/L |
| | Cd | 111 | 621.859 | 0.004 | **2.567685** | 0.18 | 7.1 | ug/L |
| | Cd | 114 | 1052.143 | 0.006 | **2.249621** | 0.09 | 3.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| > | In | 115 | 164600.296 | 164600.296 | | | | ug/L |
| | Sn | 120 | 540.669 | 0.000 | **0.697616** | 0.08 | 10.9 | ug/L |
| | Sb | 121 | 390.010 | -0.001 | **0.348377** | 0.04 | 11.1 | ug/L |
| | Sb | 123 | 301.838 | -0.001 | **0.659695** | 0.02 | 2.6 | ug/L |
| | Ba | 135 | 370.009 | 0.002 | **2.592262** | 0.03 | 1.1 | ug/L |
| | Ba | 137 | 616.691 | 0.003 | **2.129323** | 0.15 | 7.1 | ug/L |
| | Tb | 159 | 170516.729 | 0.004 | | | | ug/L |
| > | Ho | 165 | 178827.780 | 178827.780 | | | | ug/L |
| | Tl | 203 | 102.667 | 0.001 | **0.149714** | 0.05 | 30.8 | ug/L |
| | Tl | 205 | 247.337 | 0.001 | **0.109602** | 0.02 | 15.3 | ug/L |
| | Pb | 208 | 600.676 | 0.003 | **0.174468** | 0.03 | 17.3 | ug/L |
| | Kr | 83 | 40.400 | 19.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 88.914 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 87.840 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 86.720 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 94.638 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Monday, February 15, 2010 18:52:18
Sample Type: Spike - 2 of 94
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSAB.140
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31539.928 | 0.023 | | | | ug/L |
| | Li | 7 | 3589.504 | 0.003 | **2.104227** | 0.02 | 1.0 | ug/L |
| | Be | 9 | 8.000 | 0.000 | **1.439270** | 0.02 | 1.1 | ug/L |
| | B | 11 | 1157.421 | 0.002 | **4.050198** | 0.16 | 4.1 | ug/L |
| | Na | 23 | 64035890.515 | 198.090 | **107552.565660** | 3138.29 | 2.9 | ug/L |
| | Mg | 24 | 45407311.078 | 140.487 | **105640.268038** | 2890.79 | 2.7 | ug/L |
| | Al | 27 | 141396273.683 | 437.443 | **101173.625671** | 1795.29 | 1.8 | ug/L |
| | K | 39 | 137934565.677 | 426.494 | **102312.629843** | 898.22 | 0.9 | ug/L |
| | Ca | 43 | 476436.564 | 1.473 | **100043.374973** | 2118.16 | 2.1 | ug/L |
| > | Sc | 45 | 323271.794 | 323271.794 | | | | ug/L |
| | Ti | 49 | 228914.138 | 0.707 | **1988.447472** | 30.67 | 1.5 | ug/L |
| | Co | 59 | 131196.101 | 0.406 | **77.136533** | 1.44 | 1.9 | ug/L |
| | Ni | 60 | 24539.748 | 0.076 | **74.169456** | 0.91 | 1.2 | ug/L |
| | Ni | 62 | 4243.838 | 0.013 | **84.745867** | 2.16 | 2.6 | ug/L |
| | Cu | 63 | 56512.200 | 0.175 | **71.072629** | 1.27 | 1.8 | ug/L |
| | Cu | 65 | 26782.548 | 0.083 | **71.431270** | 1.32 | 1.8 | ug/L |
| | Zn | 66 | 8954.543 | 0.027 | **36.661782** | 0.48 | 1.3 | ug/L |
| | Zn | 67 | 2741.822 | 0.005 | **32.114334** | 2.01 | 6.3 | ug/L |
| | Zn | 68 | 6045.042 | 0.018 | **34.137284** | 0.95 | 2.8 | ug/L |
| | V | 51 | 142018.039 | 0.440 | **80.223496** | 1.19 | 1.5 | ug/L |
| | Cr | 52 | 120103.768 | 0.362 | **78.383382** | 0.59 | 0.8 | ug/L |
| | Cr | 53 | 24977.824 | 0.033 | **54.929696** | 2.66 | 4.8 | ug/L |
| | Mn | 55 | 211972.427 | 0.655 | **82.528396** | 1.15 | 1.4 | ug/L |
| | Fe | 54 | 11820158.974 | 36.531 | **92399.083803** | 1470.92 | 1.6 | ug/L |
| | Fe | 57 | 4821126.000 | 14.912 | **92540.010221** | 1114.78 | 1.2 | ug/L |
| | As | 75 | 8574.167 | 0.022 | **33.803131** | 0.28 | 0.8 | ug/L |
| | Se | 77 | 2619.780 | 0.003 | **55.017911** | 3.63 | 6.6 | ug/L |
| | Se | 82 | 999.679 | 0.003 | **40.226313** | 0.57 | 1.4 | ug/L |
| | Sr | 88 | 8693.577 | 0.022 | **3.092753** | 0.03 | 1.0 | ug/L |
| > | Y | 89 | 397136.090 | 397136.090 | | | | ug/L |
| | Mo | 95 | 898333.850 | 2.262 | **2103.248248** | 22.92 | 1.1 | ug/L |
| | Mo | 97 | 546950.399 | 1.378 | **2081.995162** | 36.70 | 1.8 | ug/L |
| | Mo | 98 | 1403075.959 | 3.534 | **2093.425470** | 38.25 | 1.8 | ug/L |
| | Ag | 107 | 22171.243 | 0.131 | **19.098405** | 0.39 | 2.1 | ug/L |
| | Ag | 109 | 20829.497 | 0.123 | **19.054625** | 0.26 | 1.3 | ug/L |
| | Cd | 111 | 11302.465 | 0.067 | **41.164327** | 1.00 | 2.4 | ug/L |
| | Cd | 114 | 25150.159 | 0.149 | **40.656889** | 0.97 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| > | In | 115 | 168765.866 | 168765.866 | | | | ug/L |
| | Sn | 120 | 515.975 | -0.000 | **0.662212** | 0.01 | 2.2 | ug/L |
| | Sb | 121 | 330.007 | -0.001 | **0.258740** | 0.02 | 8.1 | ug/L |
| | Sb | 123 | 254.251 | -0.001 | **0.567507** | 0.04 | 7.7 | ug/L |
| | Ba | 135 | 366.675 | 0.002 | **2.566157** | 0.12 | 4.8 | ug/L |
| | Ba | 137 | 607.357 | 0.003 | **2.091655** | 0.12 | 5.6 | ug/L |
| | Tb | 159 | 173550.875 | 0.014 | | | | ug/L |
| > | Ho | 165 | 180122.541 | 180122.541 | | | | ug/L |
| | Tl | 203 | 108.001 | 0.001 | **0.155855** | 0.00 | 2.7 | ug/L |
| | Tl | 205 | 233.337 | 0.001 | **0.100393** | 0.01 | 8.9 | ug/L |
| | Pb | 208 | 625.343 | 0.003 | **0.183092** | 0.01 | 8.1 | ug/L |
| | Kr | 83 | 41.400 | 20.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.424 | |
| Ti | 49 | | | |
| Co | 59 | | | 94.439 |
| Ni | 60 | | | 89.876 |
| Ni | 62 | | | 90.877 |
| Cu | 63 | | | 87.079 |
| Cu | 65 | | | 86.736 |
| Zn | 66 | | | 85.121 |
| Zn | 67 | | | 83.703 |
| Zn | 68 | | | 83.910 |
| V | 51 | | | 98.901 |
| Cr | 52 | | | 96.353 |
| Cr | 53 | | | 98.455 |
| Mn | 55 | | | 94.381 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 86.023 |
| Se | 77 | | | 108.198 |
| Se | 82 | | | 98.412 |
| Sr | 88 | | | |
| Y | 89 | | 89.291 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 93.943 |
| Ag | 109 | | | 93.594 |
| Cd | 111 | | | 96.492 |
| Cd | 114 | | | 96.018 |
| In | 115 | | 88.915 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.323 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: MBLK-87096**
Sample Date/Time: Monday, February 15, 2010 18:55:00
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\MBLK-87096.141
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35294.091 | 0.039 | | | | ug/L |
| | Li | 7 | 3734.909 | 0.003 | **2.421866** | 0.10 | 4.0 | ug/L |
| | Be | 9 | 2.667 | -0.000 | **1.415529** | 0.01 | 1.0 | ug/L |
| | B | 11 | 1967.585 | 0.005 | **7.236648** | 0.20 | 2.7 | ug/L |
| | Na | 23 | 26980.862 | 0.053 | **34.786113** | 5.86 | 16.9 | ug/L |
| | Mg | 24 | 9573.389 | 0.031 | **27.541419** | 10.58 | 38.4 | ug/L |
| | Al | 27 | 46273.534 | 0.147 | **49.282016** | 8.42 | 17.1 | ug/L |
| | K | 39 | 79678.589 | 0.093 | **17.049930** | 5.21 | 30.6 | ug/L |
| | Ca | 43 | 313.340 | 0.000 | **30.100696** | 1.04 | 3.4 | ug/L |
| > | Sc | 45 | 310084.456 | 310084.456 | | | | ug/L |
| | Ti | 49 | 875.383 | 0.001 | **4.109381** | 0.53 | 12.9 | ug/L |
| | Co | 59 | 29.333 | 0.000 | **-0.070842** | 0.01 | 13.3 | ug/L |
| | Ni | 60 | 22.667 | 0.000 | **-0.346406** | 0.01 | 3.0 | ug/L |
| | Ni | 62 | 21.333 | -0.000 | **0.556247** | 0.25 | 44.4 | ug/L |
| | Cu | 63 | 136.668 | 0.000 | **-0.499998** | 0.02 | 3.4 | ug/L |
| | Cu | 65 | 58.667 | 0.000 | **-0.282495** | 0.04 | 14.5 | ug/L |
| | Zn | 66 | 270.671 | 0.001 | **0.435131** | 0.06 | 12.9 | ug/L |
| | Zn | 67 | 1941.579 | 0.002 | **13.137139** | 3.14 | 23.9 | ug/L |
| | Zn | 68 | 273.338 | 0.000 | **0.459068** | 0.22 | 47.7 | ug/L |
| | V | 51 | 1510.277 | 0.005 | **1.135832** | 0.41 | 36.2 | ug/L |
| | Cr | 52 | 3129.304 | 0.001 | **-0.011603** | 0.14 | 1185.3 | ug/L |
| | Cr | 53 | 15861.673 | 0.007 | **4.790428** | 3.13 | 65.4 | ug/L |
| | Mn | 55 | 380.676 | 0.001 | **0.278512** | 0.02 | 8.0 | ug/L |
| | Fe | 54 | 17789.124 | 0.023 | **58.842956** | 11.30 | 19.2 | ug/L |
| | Fe | 57 | 1729.531 | 0.004 | **23.274014** | 5.92 | 25.4 | ug/L |
| | As | 75 | -350.933 | -0.001 | **-0.420622** | 0.60 | 143.2 | ug/L |
| | Se | 77 | 1790.876 | 0.001 | **18.555605** | 6.57 | 35.4 | ug/L |
| | Se | 82 | 7.214 | 0.000 | **1.853762** | 0.12 | 6.5 | ug/L |
| | Sr | 88 | 522.018 | 0.001 | **0.758584** | 0.01 | 1.8 | ug/L |
| > | Y | 89 | 370759.741 | 370759.741 | | | | ug/L |
| | Mo | 95 | 570.688 | 0.002 | **1.954878** | 0.08 | 4.3 | ug/L |
| | Mo | 97 | 347.341 | 0.001 | **2.162118** | 0.30 | 14.0 | ug/L |
| | Mo | 98 | 866.643 | 0.002 | **2.147633** | 0.24 | 11.2 | ug/L |
| | Ag | 107 | 5.333 | 0.000 | **0.199684** | 0.00 | 0.6 | ug/L |
| | Ag | 109 | 3.333 | 0.000 | **0.247961** | 0.00 | 1.3 | ug/L |
| | Cd | 111 | 3.667 | 0.000 | **0.274886** | 0.00 | 0.5 | ug/L |
| | Cd | 114 | 6.085 | 0.000 | **0.539222** | 0.02 | 3.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 145893.679 | 145893.679 | | | | ug/L |
| \| | Sn | 120 | 356.641 | -0.001 | **0.568152** | 0.01 | 2.0 | ug/L |
| \| | Sb | 121 | 196.669 | -0.002 | **0.128040** | 0.02 | 14.0 | ug/L |
| \| | Sb | 123 | 192.333 | -0.001 | **0.514504** | 0.09 | 17.6 | ug/L |
| \| | Ba | 135 | 44.667 | 0.000 | **1.108629** | 0.03 | 2.8 | ug/L |
| \| | Ba | 137 | 77.334 | 0.000 | **0.697057** | 0.02 | 2.7 | ug/L |
| \| | Tb | 159 | 142445.637 | -0.025 | | | | ug/L |
| \|> | Ho | 165 | 154077.914 | 154077.914 | | | | ug/L |
| \| | Tl | 203 | 2.667 | -0.000 | **0.005827** | 0.01 | 88.1 | ug/L |
| \| | Tl | 205 | 8.667 | 0.000 | **-0.031457** | 0.00 | 6.9 | ug/L |
| \| | Pb | 208 | 58.000 | 0.000 | **-0.059195** | 0.00 | 6.4 | ug/L |
| | Kr | 83 | 15.200 | -5.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 86.736 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 83.360 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.864 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.540 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: LCS-87096**
Sample Date/Time: Monday, February 15, 2010 18:57:41
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\LCS-87096.142
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31015.790 | 0.022 | | | | ug/L |
| | Li | 7 | 128132.872 | 0.392 | **134.579152** | 7.41 | 5.5 | ug/L |
| | Be | 9 | 25631.334 | 0.080 | **117.368867** | 7.54 | 6.4 | ug/L |
| | B | 11 | 33777.364 | 0.104 | **121.508762** | 6.82 | 5.6 | ug/L |
| | Na | 23 | 3404059.997 | 10.616 | **5769.566971** | 408.36 | 7.1 | ug/L |
| | Mg | 24 | 2495681.897 | 7.808 | **5875.597295** | 430.54 | 7.3 | ug/L |
| | Al | 27 | 7901671.078 | 24.709 | **5729.190771** | 313.77 | 5.5 | ug/L |
| | K | 39 | 8648194.644 | 26.880 | **6443.534906** | 324.22 | 5.0 | ug/L |
| | Ca | 43 | 23546.659 | 0.073 | **4961.759294** | 238.95 | 4.8 | ug/L |
| > | Sc | 45 | 320092.784 | 320092.784 | | | | ug/L |
| | Ti | 49 | 11492.579 | 0.035 | **97.243187** | 3.61 | 3.7 | ug/L |
| | Co | 59 | 152937.757 | 0.478 | **90.910250** | 4.49 | 4.9 | ug/L |
| | Ni | 60 | 29155.166 | 0.091 | **89.166172** | 4.66 | 5.2 | ug/L |
| | Ni | 62 | 4534.671 | 0.014 | **91.559587** | 5.51 | 6.0 | ug/L |
| | Cu | 63 | 69512.009 | 0.217 | **88.510556** | 2.94 | 3.3 | ug/L |
| | Cu | 65 | 33298.600 | 0.104 | **89.881435** | 4.26 | 4.7 | ug/L |
| | Zn | 66 | 18677.327 | 0.058 | **78.139611** | 4.61 | 5.9 | ug/L |
| | Zn | 67 | 5046.990 | 0.012 | **94.705039** | 8.45 | 8.9 | ug/L |
| | Zn | 68 | 13637.411 | 0.042 | **79.372351** | 2.62 | 3.3 | ug/L |
| | V | 51 | 167109.039 | 0.523 | **95.357462** | 3.38 | 3.5 | ug/L |
| | Cr | 52 | 142704.387 | 0.437 | **94.585142** | 4.29 | 4.5 | ug/L |
| | Cr | 53 | 31852.485 | 0.056 | **97.792879** | 6.36 | 6.5 | ug/L |
| | Mn | 55 | 229806.927 | 0.718 | **90.430246** | 4.30 | 4.8 | ug/L |
| | Fe | 54 | 591980.683 | 1.816 | **4595.533237** | 218.47 | 4.8 | ug/L |
| | Fe | 57 | 232386.230 | 0.725 | **4497.571870** | 183.37 | 4.1 | ug/L |
| | As | 75 | 23626.660 | 0.063 | **95.376098** | 5.81 | 6.1 | ug/L |
| | Se | 77 | 9523.230 | 0.021 | **436.439004** | 38.06 | 8.7 | ug/L |
| | Se | 82 | 10916.842 | 0.029 | **442.681234** | 26.38 | 6.0 | ug/L |
| | Sr | 88 | 359814.351 | 0.946 | **108.423079** | 6.17 | 5.7 | ug/L |
| > | Y | 89 | 380916.915 | 380916.915 | | | | ug/L |
| | Mo | 95 | 40696.745 | 0.107 | **100.010497** | 6.07 | 6.1 | ug/L |
| | Mo | 97 | 25010.632 | 0.066 | **100.192501** | 7.95 | 7.9 | ug/L |
| | Mo | 98 | 63541.543 | 0.167 | **99.777536** | 7.67 | 7.7 | ug/L |
| | Ag | 107 | 106922.397 | 0.722 | **104.072698** | 6.53 | 6.3 | ug/L |
| | Ag | 109 | 99612.454 | 0.673 | **102.738910** | 6.15 | 6.0 | ug/L |
| | Cd | 111 | 23799.100 | 0.161 | **98.377193** | 5.18 | 5.3 | ug/L |
| | Cd | 114 | 54023.558 | 0.365 | **98.702664** | 4.52 | 4.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 148315.594 | 148315.594 | | | | ug/L |
| \| | Sn | 120 | 96318.133 | 0.647 | **100.040443** | 5.49 | 5.5 | ug/L |
| \| | Sb | 121 | 72988.067 | 0.490 | **105.945414** | 5.82 | 5.5 | ug/L |
| \| | Sb | 123 | 55326.619 | 0.371 | **105.203019** | 5.20 | 4.9 | ug/L |
| \| | Ba | 135 | 18535.646 | 0.115 | **96.592277** | 4.09 | 4.2 | ug/L |
| \| | Ba | 137 | 31933.494 | 0.198 | **96.502761** | 2.73 | 2.8 | ug/L |
| \| | Tb | 159 | 149408.649 | -0.025 | | | | ug/L |
| \|> | Ho | 165 | 161521.307 | 161521.307 | | | | ug/L |
| \| | Tl | 203 | 69766.378 | 0.432 | **111.383896** | 4.26 | 3.8 | ug/L |
| \| | Tl | 205 | 169090.603 | 1.048 | **111.378472** | 5.42 | 4.9 | ug/L |
| \| | Pb | 208 | 229139.548 | 1.419 | **111.029015** | 4.85 | 4.4 | ug/L |
| | Kr | 83 | 15.600 | -4.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.535 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 85.644 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 78.140 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.479 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-19A**
Sample Date/Time: Monday, February 15, 2010 19:00:22
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-19A.143
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34566.849 | 0.036 | | | | ug/L |
| | Li | 7 | 11016.553 | 0.027 | **10.307870** | 0.41 | 4.0 | ug/L |
| | Be | 9 | 14.000 | 0.000 | **1.468135** | 0.01 | 0.6 | ug/L |
| | B | 11 | 29967.003 | 0.094 | **110.232178** | 5.95 | 5.4 | ug/L |
| | Na | 23 | 31474872.321 | 100.621 | **54634.741066** | 1650.66 | 3.0 | ug/L |
| | Mg | 24 | 1182299.352 | 3.781 | **2847.487137** | 125.17 | 4.4 | ug/L |
| | Al | 27 | 24144.602 | 0.075 | **32.538673** | 1.32 | 4.1 | ug/L |
| | K | 39 | 1393184.029 | 4.291 | **1024.234066** | 42.31 | 4.1 | ug/L |
| | Ca | 43 | 21352.262 | 0.068 | **4597.989813** | 65.14 | 1.4 | ug/L |
| > | Sc | 45 | 312758.883 | 312758.883 | | | | ug/L |
| | Ti | 49 | 529.352 | 0.000 | **0.918544** | 0.31 | 33.4 | ug/L |
| | Co | 59 | 132.001 | 0.000 | **-0.008245** | 0.01 | 138.5 | ug/L |
| | Ni | 60 | 131.334 | 0.000 | **-0.005280** | 0.08 | 1501.6 | ug/L |
| | Ni | 62 | 29.333 | 0.000 | **0.722046** | 0.20 | 28.0 | ug/L |
| | Cu | 63 | 910.054 | 0.003 | **0.513450** | 0.06 | 12.4 | ug/L |
| | Cu | 65 | 352.008 | 0.001 | **0.529226** | 0.14 | 26.7 | ug/L |
| | Zn | 66 | 448.013 | 0.001 | **1.190190** | 0.10 | 8.1 | ug/L |
| | Zn | 67 | 1917.573 | 0.002 | **11.987441** | 3.35 | 27.9 | ug/L |
| | Zn | 68 | 497.349 | 0.001 | **1.801958** | 0.28 | 15.7 | ug/L |
| | V | 51 | 1769.856 | 0.006 | **1.274216** | 0.19 | 15.3 | ug/L |
| | Cr | 52 | 3409.422 | 0.001 | **0.161723** | 0.05 | 29.8 | ug/L |
| | Cr | 53 | 15760.802 | 0.006 | **3.280650** | 3.01 | 91.8 | ug/L |
| | Mn | 55 | 16104.174 | 0.051 | **6.594995** | 0.12 | 1.8 | ug/L |
| | Fe | 54 | 17841.324 | 0.022 | **57.796042** | 2.16 | 3.7 | ug/L |
| | Fe | 57 | 2571.097 | 0.006 | **39.583159** | 3.22 | 8.1 | ug/L |
| | As | 75 | 767.452 | 0.002 | **4.168112** | 0.79 | 19.1 | ug/L |
| | Se | 77 | 1812.214 | 0.001 | **20.480527** | 8.26 | 40.3 | ug/L |
| | Se | 82 | 11.089 | 0.000 | **2.016524** | 0.12 | 6.0 | ug/L |
| | Sr | 88 | 122058.954 | 0.331 | **38.370586** | 0.90 | 2.3 | ug/L |
| > | Y | 89 | 368296.577 | 368296.577 | | | | ug/L |
| | Mo | 95 | 1394.127 | 0.004 | **4.046649** | 0.27 | 6.6 | ug/L |
| | Mo | 97 | 859.382 | 0.002 | **4.274686** | 0.36 | 8.5 | ug/L |
| | Mo | 98 | 2250.184 | 0.006 | **4.381837** | 0.21 | 4.9 | ug/L |
| | Ag | 107 | 13.333 | 0.000 | **0.207693** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 15.333 | 0.000 | **0.260702** | 0.00 | 1.1 | ug/L |
| | Cd | 111 | 9.333 | 0.000 | **0.298998** | 0.01 | 1.9 | ug/L |
| | Cd | 114 | 12.255 | 0.000 | **0.550772** | 0.02 | 3.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 144535.559 | 144535.559 | | | | ug/L |
| \| | Sn | 120 | 409.986 | -0.000 | **0.629288** | 0.06 | 9.2 | ug/L |
| \| | Sb | 121 | 442.013 | 0.000 | **0.495872** | 0.06 | 11.3 | ug/L |
| \| | Sb | 123 | 310.421 | -0.000 | **0.748800** | 0.09 | 11.7 | ug/L |
| \| | Ba | 135 | 4994.955 | 0.032 | **27.780733** | 0.93 | 3.3 | ug/L |
| \| | Ba | 137 | 8505.367 | 0.055 | **27.151363** | 0.64 | 2.3 | ug/L |
| \| | Tb | 159 | 142812.484 | -0.027 | | | | ug/L |
| \|> | Ho | 165 | 154761.633 | 154761.633 | | | | ug/L |
| \| | Tl | 203 | 168.002 | 0.001 | **0.281333** | 0.04 | 14.6 | ug/L |
| \| | Tl | 205 | 398.011 | 0.003 | **0.236741** | 0.08 | 33.2 | ug/L |
| \| | Pb | 208 | 844.685 | 0.005 | **0.338775** | 0.02 | 4.9 | ug/L |
| | Kr | 83 | 14.133 | -6.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.484 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 82.807 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.149 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.902 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-19ASD**
Sample Date/Time: Monday, February 15, 2010 19:03:03
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-19ASD.144
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35423.311 | 0.036 | | | | ug/L |
| | Li | 7 | 5360.535 | 0.008 | **20.093768** | 0.58 | 2.9 | ug/L |
| | Be | 9 | 8.667 | 0.000 | **7.213522** | 0.12 | 1.6 | ug/L |
| | B | 11 | 6795.001 | 0.020 | **121.722191** | 2.80 | 2.3 | ug/L |
| | Na | 23 | 6443881.560 | 20.085 | **54550.917769** | 844.84 | 1.5 | ug/L |
| | Mg | 24 | 241155.842 | 0.752 | **2851.839915** | 32.49 | 1.1 | ug/L |
| | Al | 27 | 6706.257 | 0.019 | **97.596116** | 0.53 | 0.5 | ug/L |
| | K | 39 | 331426.389 | 0.870 | **1017.846364** | 31.49 | 3.1 | ug/L |
| | Ca | 43 | 4558.688 | 0.014 | **4637.252283** | 263.65 | 5.7 | ug/L |
| > | Sc | 45 | 320335.161 | 320335.161 | | | | ug/L |
| | Ti | 49 | 354.008 | -0.000 | **-3.659219** | 1.32 | 36.2 | ug/L |
| | Co | 59 | 45.333 | 0.000 | **-0.308613** | 0.02 | 7.6 | ug/L |
| | Ni | 60 | 28.667 | 0.000 | **-1.652090** | 0.03 | 1.8 | ug/L |
| | Ni | 62 | 22.667 | -0.000 | **2.870126** | 0.59 | 20.5 | ug/L |
| | Cu | 63 | 204.003 | 0.000 | **-2.100225** | 0.15 | 7.1 | ug/L |
| | Cu | 65 | 98.667 | 0.000 | **-0.902098** | 0.28 | 30.7 | ug/L |
| | Zn | 66 | 148.001 | 0.000 | **-0.602547** | 0.56 | 92.4 | ug/L |
| | Zn | 67 | 1677.518 | 0.001 | **21.807291** | 26.08 | 119.6 | ug/L |
| | Zn | 68 | 202.669 | 0.000 | **-0.044716** | 0.68 | 1518.0 | ug/L |
| | V | 51 | 1100.868 | 0.004 | **4.331000** | 0.94 | 21.7 | ug/L |
| | Cr | 52 | 3115.965 | 0.000 | **-0.467562** | 0.35 | 74.0 | ug/L |
| | Cr | 53 | 15454.177 | 0.004 | **-4.232700** | 9.14 | 215.9 | ug/L |
| | Mn | 55 | 3460.112 | 0.010 | **7.405014** | 0.11 | 1.5 | ug/L |
| | Fe | 54 | 11753.156 | 0.002 | **31.694446** | 12.31 | 38.9 | ug/L |
| | Fe | 57 | 974.728 | 0.001 | **37.260946** | 1.50 | 4.0 | ug/L |
| | As | 75 | -125.323 | 0.000 | **2.552219** | 1.40 | 54.9 | ug/L |
| | Se | 77 | 1611.502 | 0.001 | **34.329908** | 17.82 | 51.9 | ug/L |
| | Se | 82 | 5.550 | 0.000 | **8.896731** | 1.18 | 13.2 | ug/L |
| | Sr | 88 | 25179.835 | 0.066 | **40.962336** | 0.77 | 1.9 | ug/L |
| > | Y | 89 | 377753.928 | 377753.928 | | | | ug/L |
| | Mo | 95 | 294.672 | 0.001 | **6.248222** | 0.39 | 6.3 | ug/L |
| | Mo | 97 | 169.335 | 0.000 | **7.117592** | 0.23 | 3.3 | ug/L |
| | Mo | 98 | 470.608 | 0.001 | **7.503711** | 0.25 | 3.3 | ug/L |
| | Ag | 107 | 9.333 | 0.000 | **1.016305** | 0.01 | 1.1 | ug/L |
| | Ag | 109 | 10.000 | 0.000 | **1.272690** | 0.01 | 0.8 | ug/L |
| | Cd | 111 | 2.167 | 0.000 | **1.341203** | 0.02 | 1.1 | ug/L |
| | Cd | 114 | 9.431 | 0.000 | **2.723315** | 0.06 | 2.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 151974.029 | 151974.029 | | | | ug/L |
| \| | Sn | 120 | 431.345 | -0.000 | **3.142950** | 0.06 | 1.9 | ug/L |
| \| | Sb | 121 | 255.338 | -0.001 | **0.997047** | 0.12 | 11.8 | ug/L |
| \| | Sb | 123 | 196.669 | -0.001 | **2.540529** | 0.19 | 7.6 | ug/L |
| \| | Ba | 135 | 1072.075 | 0.007 | **32.548892** | 1.30 | 4.0 | ug/L |
| \| | Ba | 137 | 1831.551 | 0.011 | **30.338354** | 0.31 | 1.0 | ug/L |
| \| | Tb | 159 | 148437.982 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 158435.065 | 158435.065 | | | | ug/L |
| \| | Tl | 203 | 19.333 | 0.000 | **0.164360** | 0.06 | 35.5 | ug/L |
| \| | Tl | 205 | 46.667 | 0.000 | **-0.030696** | 0.03 | 110.0 | ug/L |
| \| | Pb | 208 | 200.001 | 0.001 | **0.050638** | 0.02 | 47.9 | ug/L |
| | Kr | 83 | 14.867 | -5.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.603 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 84.933 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.068 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 83.846 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-19AMS**
Sample Date/Time: Monday, February 15, 2010 19:05:44
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-19AMS.145
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30221.964 | 0.019 | | | | ug/L |
| | Li | 7 | 119357.820 | 0.363 | **124.637305** | 3.77 | 3.0 | ug/L |
| | Be | 9 | 22450.723 | 0.070 | **102.471971** | 0.64 | 0.6 | ug/L |
| | B | 11 | 57693.611 | 0.178 | **206.592456** | 1.50 | 0.7 | ug/L |
| | Na | 23 | 35772739.859 | 111.324 | **60445.853761** | 731.19 | 1.2 | ug/L |
| | Mg | 24 | 3444744.027 | 10.722 | **8066.571499** | 83.58 | 1.0 | ug/L |
| | Al | 27 | 6844330.903 | 21.304 | **4941.613184** | 38.57 | 0.8 | ug/L |
| | K | 39 | 9143936.297 | 28.296 | **6783.216425** | 309.77 | 4.6 | ug/L |
| | Ca | 43 | 43206.392 | 0.134 | **9094.167929** | 168.67 | 1.9 | ug/L |
| > | Sc | 45 | 321252.132 | 321252.132 | | | | ug/L |
| | Ti | 49 | 10244.818 | 0.031 | **85.892089** | 1.75 | 2.0 | ug/L |
| | Co | 59 | 132449.230 | 0.412 | **78.365584** | 1.12 | 1.4 | ug/L |
| | Ni | 60 | 25054.742 | 0.078 | **76.225145** | 1.99 | 2.6 | ug/L |
| | Ni | 62 | 3903.658 | 0.012 | **78.475167** | 3.90 | 5.0 | ug/L |
| | Cu | 63 | 60762.413 | 0.189 | **76.965936** | 1.93 | 2.5 | ug/L |
| | Cu | 65 | 28824.589 | 0.090 | **77.404882** | 2.31 | 3.0 | ug/L |
| | Zn | 66 | 17171.150 | 0.053 | **71.431716** | 1.35 | 1.9 | ug/L |
| | Zn | 67 | 4642.734 | 0.011 | **83.299316** | 3.15 | 3.8 | ug/L |
| | Zn | 68 | 12300.498 | 0.038 | **71.187909** | 2.89 | 4.1 | ug/L |
| | V | 51 | 149078.267 | 0.464 | **84.743119** | 3.38 | 4.0 | ug/L |
| | Cr | 52 | 125422.463 | 0.381 | **82.492668** | 2.05 | 2.5 | ug/L |
| | Cr | 53 | 30006.427 | 0.049 | **85.930297** | 1.99 | 2.3 | ug/L |
| | Mn | 55 | 212307.071 | 0.660 | **83.178429** | 1.41 | 1.7 | ug/L |
| | Fe | 54 | 523612.232 | 1.595 | **4036.502946** | 82.18 | 2.0 | ug/L |
| | Fe | 57 | 206058.934 | 0.640 | **3969.651987** | 79.67 | 2.0 | ug/L |
| | As | 75 | 22421.271 | 0.059 | **89.912898** | 4.21 | 4.7 | ug/L |
| | Se | 77 | 8506.702 | 0.019 | **377.580776** | 5.32 | 1.4 | ug/L |
| | Se | 82 | 9863.345 | 0.026 | **397.173643** | 12.36 | 3.1 | ug/L |
| | Sr | 88 | 444357.614 | 1.160 | **132.770748** | 1.92 | 1.4 | ug/L |
| > | Y | 89 | 383060.873 | 383060.873 | | | | ug/L |
| | Mo | 95 | 37459.657 | 0.098 | **91.421760** | 0.55 | 0.6 | ug/L |
| | Mo | 97 | 22690.753 | 0.059 | **90.247107** | 1.18 | 1.3 | ug/L |
| | Mo | 98 | 57607.748 | 0.150 | **89.821598** | 0.60 | 0.7 | ug/L |
| | Ag | 107 | 90620.009 | 0.606 | **87.421392** | 0.38 | 0.4 | ug/L |
| | Ag | 109 | 85646.896 | 0.573 | **87.557978** | 0.60 | 0.7 | ug/L |
| | Cd | 111 | 20931.775 | 0.140 | **85.780146** | 1.01 | 1.2 | ug/L |
| | Cd | 114 | 47233.159 | 0.316 | **85.606611** | 1.01 | 1.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 149478.334 | 149478.334 | | | | ug/L |
| \| | Sn | 120 | 84242.824 | 0.560 | **86.731518** | 0.67 | 0.8 | ug/L |
| \| | Sb | 121 | 65028.404 | 0.432 | **93.519646** | 1.28 | 1.4 | ug/L |
| \| | Sb | 123 | 49291.004 | 0.327 | **92.912535** | 1.21 | 1.3 | ug/L |
| \| | Ba | 135 | 21524.073 | 0.132 | **110.850284** | 0.20 | 0.2 | ug/L |
| \| | Ba | 137 | 37008.152 | 0.227 | **110.621902** | 1.22 | 1.1 | ug/L |
| \| | Tb | 159 | 151442.429 | -0.022 | | | | ug/L |
| \|> | Ho | 165 | 163152.784 | 163152.784 | | | | ug/L |
| \| | Tl | 203 | 59163.998 | 0.363 | **93.471699** | 1.14 | 1.2 | ug/L |
| \| | Tl | 205 | 143560.159 | 0.880 | **93.554218** | 1.92 | 2.1 | ug/L |
| \| | Pb | 208 | 199333.101 | 1.222 | **95.561628** | 1.20 | 1.3 | ug/L |
| | Kr | 83 | 17.000 | -3.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.859 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.126 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 78.753 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 86.342 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-19AMSD**
Sample Date/Time: Monday, February 15, 2010 19:08:24
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-19AMSD.146
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30523.913 | 0.018 | | | | ug/L |
| | Li | 7 | 112282.878 | 0.335 | **115.013551** | 6.73 | 5.9 | ug/L |
| | Be | 9 | 21847.656 | 0.067 | **97.956637** | 4.02 | 4.1 | ug/L |
| | B | 11 | 56502.879 | 0.171 | **198.656390** | 10.45 | 5.3 | ug/L |
| | Na | 23 | 33880743.823 | 103.511 | **56203.849707** | 2816.80 | 5.0 | ug/L |
| | Mg | 24 | 3308266.026 | 10.106 | **7603.501682** | 237.75 | 3.1 | ug/L |
| | Al | 27 | 6582236.123 | 20.119 | **4667.638951** | 296.88 | 6.4 | ug/L |
| | K | 39 | 8771898.834 | 26.631 | **6383.660559** | 280.24 | 4.4 | ug/L |
| | Ca | 43 | 41866.979 | 0.127 | **8649.571251** | 374.05 | 4.3 | ug/L |
| > | Sc | 45 | 327491.023 | 327491.023 | | | | ug/L |
| | Ti | 49 | 9984.477 | 0.029 | **81.981593** | 3.04 | 3.7 | ug/L |
| | Co | 59 | 131127.002 | 0.401 | **76.148600** | 3.15 | 4.1 | ug/L |
| | Ni | 60 | 24622.010 | 0.075 | **73.483892** | 1.95 | 2.7 | ug/L |
| | Ni | 62 | 3740.910 | 0.011 | **73.843134** | 4.55 | 6.2 | ug/L |
| | Cu | 63 | 59710.212 | 0.182 | **74.198846** | 2.73 | 3.7 | ug/L |
| | Cu | 65 | 27887.810 | 0.085 | **73.439868** | 1.36 | 1.9 | ug/L |
| | Zn | 66 | 16774.273 | 0.051 | **68.472991** | 3.05 | 4.5 | ug/L |
| | Zn | 67 | 4402.593 | 0.010 | **74.736577** | 5.77 | 7.7 | ug/L |
| | Zn | 68 | 12451.406 | 0.038 | **70.701749** | 3.05 | 4.3 | ug/L |
| | V | 51 | 145492.836 | 0.445 | **81.168937** | 2.89 | 3.6 | ug/L |
| | Cr | 52 | 123220.546 | 0.367 | **79.463225** | 3.21 | 4.0 | ug/L |
| | Cr | 53 | 29670.446 | 0.047 | **80.644483** | 5.69 | 7.1 | ug/L |
| | Mn | 55 | 211879.397 | 0.647 | **81.472145** | 2.83 | 3.5 | ug/L |
| | Fe | 54 | 523899.607 | 1.566 | **3962.518385** | 160.61 | 4.1 | ug/L |
| | Fe | 57 | 205059.711 | 0.625 | **3877.144533** | 166.50 | 4.3 | ug/L |
| | As | 75 | 21759.641 | 0.057 | **86.517248** | 3.45 | 4.0 | ug/L |
| | Se | 77 | 8488.014 | 0.018 | **372.618481** | 11.91 | 3.2 | ug/L |
| | Se | 82 | 9605.957 | 0.025 | **383.436243** | 8.82 | 2.3 | ug/L |
| | Sr | 88 | 430815.849 | 1.115 | **127.613052** | 1.40 | 1.1 | ug/L |
| > | Y | 89 | 386488.302 | 386488.302 | | | | ug/L |
| | Mo | 95 | 36478.962 | 0.094 | **88.258940** | 0.86 | 1.0 | ug/L |
| | Mo | 97 | 22254.815 | 0.058 | **87.758279** | 1.80 | 2.0 | ug/L |
| | Mo | 98 | 57227.508 | 0.148 | **88.459955** | 1.53 | 1.7 | ug/L |
| | Ag | 107 | 88917.639 | 0.581 | **83.738167** | 3.20 | 3.8 | ug/L |
| | Ag | 109 | 83167.850 | 0.543 | **82.996930** | 2.62 | 3.2 | ug/L |
| | Cd | 111 | 20677.088 | 0.135 | **82.718930** | 3.21 | 3.9 | ug/L |
| | Cd | 114 | 46554.636 | 0.304 | **82.394059** | 4.04 | 4.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 153258.270 | 153258.270 | | | | ug/L |
| \| | Sn | 120 | 82645.610 | 0.537 | **83.081369** | 3.84 | 4.6 | ug/L |
| \| | Sb | 121 | 63825.801 | 0.414 | **89.612816** | 4.80 | 5.4 | ug/L |
| \| | Sb | 123 | 48449.696 | 0.314 | **89.154245** | 3.86 | 4.3 | ug/L |
| \| | Ba | 135 | 21034.731 | 0.125 | **105.528542** | 6.31 | 6.0 | ug/L |
| \| | Ba | 137 | 36384.554 | 0.217 | **105.897519** | 5.91 | 5.6 | ug/L |
| \| | Tb | 159 | 155347.171 | -0.024 | | | | ug/L |
| \|> | Ho | 165 | 167799.420 | 167799.420 | | | | ug/L |
| \| | Tl | 203 | 58115.487 | 0.347 | **89.381671** | 5.08 | 5.7 | ug/L |
| \| | Tl | 205 | 141241.363 | 0.843 | **89.612161** | 5.81 | 6.5 | ug/L |
| \| | Pb | 208 | 193315.748 | 1.153 | **90.218715** | 4.59 | 5.1 | ug/L |
| | Kr | 83 | 15.933 | -4.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 91.604 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 86.897 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.744 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.801 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-19APDS**
Sample Date/Time: Monday, February 15, 2010 19:11:05
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-19APDS.147
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30438.343 | 0.017 | | | | ug/L |
| | Li | 7 | 127559.667 | 0.377 | **646.752895** | 31.67 | 4.9 | ug/L |
| | Be | 9 | 27183.290 | 0.082 | **601.049719** | 35.74 | 5.9 | ug/L |
| | B | 11 | 40748.313 | 0.122 | **707.929940** | 32.88 | 4.6 | ug/L |
| | Na | 23 | 10623864.314 | 32.101 | **87169.611434** | 8306.82 | 9.5 | ug/L |
| | Mg | 24 | 2899224.765 | 8.762 | **32963.880219** | 2179.48 | 6.6 | ug/L |
| | Al | 27 | 8221103.770 | 24.848 | **28806.201930** | 2068.86 | 7.2 | ug/L |
| | K | 39 | 9420016.303 | 28.289 | **33906.714308** | 1463.10 | 4.3 | ug/L |
| | Ca | 43 | 30547.203 | 0.092 | **31128.711971** | 1076.55 | 3.5 | ug/L |
| > | Sc | 45 | 331457.256 | 331457.256 | | | | ug/L |
| | Ti | 49 | 12024.060 | 0.035 | **491.963531** | 32.24 | 6.6 | ug/L |
| | Co | 59 | 163797.061 | 0.495 | **470.560808** | 32.75 | 7.0 | ug/L |
| | Ni | 60 | 31410.683 | 0.095 | **464.216938** | 28.62 | 6.2 | ug/L |
| | Ni | 62 | 4802.834 | 0.014 | **468.600000** | 34.72 | 7.4 | ug/L |
| | Cu | 63 | 75174.984 | 0.227 | **462.827204** | 29.09 | 6.3 | ug/L |
| | Cu | 65 | 35487.026 | 0.107 | **462.940458** | 29.19 | 6.3 | ug/L |
| | Zn | 66 | 22519.585 | 0.068 | **455.604319** | 23.17 | 5.1 | ug/L |
| | Zn | 67 | 5223.107 | 0.012 | **473.532893** | 43.99 | 9.3 | ug/L |
| | Zn | 68 | 16135.577 | 0.048 | **454.706751** | 26.33 | 5.8 | ug/L |
| | V | 51 | 180517.777 | 0.546 | **497.859097** | 32.85 | 6.6 | ug/L |
| | Cr | 52 | 150133.575 | 0.444 | **481.085578** | 32.39 | 6.7 | ug/L |
| | Cr | 53 | 32228.718 | 0.053 | **467.917374** | 53.19 | 11.4 | ug/L |
| | Mn | 55 | 250743.980 | 0.757 | **476.692410** | 27.99 | 5.9 | ug/L |
| | Fe | 54 | 641646.497 | 1.904 | **24091.274178** | 1581.07 | 6.6 | ug/L |
| | Fe | 57 | 254406.704 | 0.767 | **23800.263845** | 1561.24 | 6.6 | ug/L |
| | As | 75 | 26914.799 | 0.068 | **520.178409** | 21.93 | 4.2 | ug/L |
| | Se | 77 | 10745.503 | 0.023 | **2392.063919** | 123.18 | 5.1 | ug/L |
| | Se | 82 | 12659.169 | 0.032 | **2458.708314** | 83.78 | 3.4 | ug/L |
| | Sr | 88 | 380232.857 | 0.958 | **548.989898** | 20.51 | 3.7 | ug/L |
| > | Y | 89 | 396936.406 | 396936.406 | | | | ug/L |
| | Mo | 95 | 43831.191 | 0.110 | **515.984886** | 13.39 | 2.6 | ug/L |
| | Mo | 97 | 26713.640 | 0.067 | **512.322717** | 14.55 | 2.8 | ug/L |
| | Mo | 98 | 67253.402 | 0.169 | **505.615199** | 9.90 | 2.0 | ug/L |
| | Ag | 107 | 110638.656 | 0.694 | **500.272298** | 9.84 | 2.0 | ug/L |
| | Ag | 109 | 104067.229 | 0.653 | **498.687089** | 12.24 | 2.5 | ug/L |
| | Cd | 111 | 26189.009 | 0.164 | **503.027932** | 15.71 | 3.1 | ug/L |
| | Cd | 114 | 59021.544 | 0.370 | **501.147406** | 16.27 | 3.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 159451.367 | 159451.367 | | | | ug/L |
| \| | Sn | 120 | 104774.039 | 0.654 | **505.710182** | 17.20 | 3.4 | ug/L |
| \| | Sb | 121 | 75114.335 | 0.468 | **506.629011** | 17.37 | 3.4 | ug/L |
| \| | Sb | 123 | 57142.487 | 0.356 | **505.020461** | 17.88 | 3.5 | ug/L |
| \| | Ba | 135 | 20410.385 | 0.122 | **511.830781** | 22.89 | 4.5 | ug/L |
| \| | Ba | 137 | 35165.556 | 0.210 | **511.693821** | 24.06 | 4.7 | ug/L |
| \| | Tb | 159 | 155028.898 | -0.026 | | | | ug/L |
| \|> | Ho | 165 | 167765.151 | 167765.151 | | | | ug/L |
| \| | Tl | 203 | 71325.973 | 0.425 | **548.400045** | 28.39 | 5.2 | ug/L |
| \| | Tl | 205 | 173008.737 | 1.032 | **548.598018** | 24.65 | 4.5 | ug/L |
| \| | Pb | 208 | 236705.608 | 1.412 | **552.357578** | 32.53 | 5.9 | ug/L |
| | Kr | 83 | 17.267 | -3.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.714 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 89.246 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 84.007 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.783 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-19APDSD**
Sample Date/Time: Monday, February 15, 2010 19:13:46
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-19APDSD.148
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29682.665 | 0.015 | | | | ug/L |
| | Li | 7 | 128478.505 | 0.381 | **653.731305** | 31.96 | 4.9 | ug/L |
| | Be | 9 | 27373.963 | 0.083 | **607.004878** | 24.35 | 4.0 | ug/L |
| | B | 11 | 40513.746 | 0.121 | **706.037644** | 17.58 | 2.5 | ug/L |
| | Na | 23 | 10091010.492 | 30.555 | **82973.619061** | 3940.68 | 4.7 | ug/L |
| | Mg | 24 | 2766085.074 | 8.387 | **31556.770916** | 2217.40 | 7.0 | ug/L |
| | Al | 27 | 8094622.454 | 24.534 | **28443.838220** | 1324.45 | 4.7 | ug/L |
| | K | 39 | 9229951.173 | 27.816 | **33339.505052** | 1715.98 | 5.1 | ug/L |
| | Ca | 43 | 29713.307 | 0.090 | **30392.666099** | 1612.50 | 5.3 | ug/L |
| > | Sc | 45 | 330147.329 | 330147.329 | | | | ug/L |
| | Ti | 49 | 11973.989 | 0.035 | **491.421642** | 30.53 | 6.2 | ug/L |
| | Co | 59 | 164753.223 | 0.499 | **474.681183** | 24.23 | 5.1 | ug/L |
| | Ni | 60 | 31832.423 | 0.096 | **471.947965** | 23.41 | 5.0 | ug/L |
| | Ni | 62 | 4764.142 | 0.014 | **466.103246** | 21.07 | 4.5 | ug/L |
| | Cu | 63 | 75501.607 | 0.229 | **466.292596** | 24.15 | 5.2 | ug/L |
| | Cu | 65 | 35856.738 | 0.109 | **469.203618** | 21.76 | 4.6 | ug/L |
| | Zn | 66 | 22099.712 | 0.067 | **448.572262** | 21.50 | 4.8 | ug/L |
| | Zn | 67 | 5287.151 | 0.012 | **483.930389** | 35.74 | 7.4 | ug/L |
| | Zn | 68 | 16233.113 | 0.049 | **458.925420** | 18.07 | 3.9 | ug/L |
| | V | 51 | 178973.465 | 0.543 | **495.075761** | 27.33 | 5.5 | ug/L |
| | Cr | 52 | 151176.715 | 0.449 | **486.034105** | 27.28 | 5.6 | ug/L |
| | Cr | 53 | 32396.107 | 0.054 | **475.841712** | 47.88 | 10.1 | ug/L |
| | Mn | 55 | 250807.250 | 0.760 | **478.372054** | 26.60 | 5.6 | ug/L |
| | Fe | 54 | 638097.510 | 1.900 | **24033.197212** | 1416.50 | 5.9 | ug/L |
| | Fe | 57 | 254717.994 | 0.770 | **23904.592082** | 1413.12 | 5.9 | ug/L |
| | As | 75 | 27211.898 | 0.069 | **525.081215** | 18.31 | 3.5 | ug/L |
| | Se | 77 | 10810.925 | 0.024 | **2404.609505** | 39.40 | 1.6 | ug/L |
| | Se | 82 | 12841.730 | 0.032 | **2490.618137** | 78.49 | 3.2 | ug/L |
| | Sr | 88 | 376635.171 | 0.948 | **543.161793** | 22.94 | 4.2 | ug/L |
| > | Y | 89 | 397391.792 | 397391.792 | | | | ug/L |
| | Mo | 95 | 43703.868 | 0.110 | **513.942468** | 22.27 | 4.3 | ug/L |
| | Mo | 97 | 26331.013 | 0.066 | **504.482982** | 21.75 | 4.3 | ug/L |
| | Mo | 98 | 67879.005 | 0.171 | **509.744063** | 17.57 | 3.4 | ug/L |
| | Ag | 107 | 110967.513 | 0.700 | **504.446122** | 15.51 | 3.1 | ug/L |
| | Ag | 109 | 104493.113 | 0.659 | **503.374750** | 16.04 | 3.2 | ug/L |
| | Cd | 111 | 26347.574 | 0.166 | **508.742546** | 21.90 | 4.3 | ug/L |
| | Cd | 114 | 59472.837 | 0.375 | **507.570078** | 14.76 | 2.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 158596.414 | 158596.414 | | | | ug/L |
| \| | Sn | 120 | 104567.330 | 0.656 | **507.312201** | 14.81 | 2.9 | ug/L |
| \| | Sb | 121 | 76118.963 | 0.477 | **516.120097** | 21.43 | 4.2 | ug/L |
| L | Sb | 123 | 58262.562 | 0.365 | **517.580331** | 19.06 | 3.7 | ug/L |
| ⌈ | Ba | 135 | 20519.335 | 0.123 | **517.924032** | 11.48 | 2.2 | ug/L |
| \| | Ba | 137 | 35477.652 | 0.213 | **519.577109** | 13.96 | 2.7 | ug/L |
| \| | Tb | 159 | 156830.615 | -0.008 | | | | ug/L |
| \|> | Ho | 165 | 166560.740 | 166560.740 | | | | ug/L |
| \| | Tl | 203 | 71431.746 | 0.429 | **552.806646** | 23.21 | 4.2 | ug/L |
| \| | Tl | 205 | 172396.545 | 1.035 | **550.344824** | 25.48 | 4.6 | ug/L |
| L | Pb | 208 | 237191.287 | 1.424 | **557.118486** | 18.94 | 3.4 | ug/L |
| | Kr | 83 | 19.133 | -1.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.347 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 89.348 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 83.557 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.146 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 19:16:28
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.149
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30039.829 | 0.013 | | | | ug/L |
| | Li | 7 | 123426.919 | 0.353 | **121.430538** | 4.77 | 3.9 | ug/L |
| | Be | 9 | 26850.833 | 0.079 | **115.314742** | 5.32 | 4.6 | ug/L |
| | B | 11 | 34138.309 | 0.099 | **115.162564** | 4.43 | 3.8 | ug/L |
| | Na | 23 | 3461360.031 | 10.120 | **5500.131652** | 269.47 | 4.9 | ug/L |
| | Mg | 24 | 2465637.100 | 7.232 | **5442.487805** | 203.87 | 3.7 | ug/L |
| | Al | 27 | 7833212.050 | 22.973 | **5327.707129** | 123.79 | 2.3 | ug/L |
| | K | 39 | 8586226.937 | 25.021 | **5997.395579** | 195.09 | 3.3 | ug/L |
| | Ca | 43 | 25219.946 | 0.073 | **4984.716617** | 106.22 | 2.1 | ug/L |
| > | Sc | 45 | 340986.833 | 340986.833 | | | | ug/L |
| | Ti | 49 | 11911.225 | 0.034 | **94.420610** | 3.25 | 3.4 | ug/L |
| | Co | 59 | 166388.366 | 0.488 | **92.761931** | 1.57 | 1.7 | ug/L |
| | Ni | 60 | 32309.044 | 0.095 | **92.676910** | 0.43 | 0.5 | ug/L |
| | Ni | 62 | 4926.913 | 0.014 | **93.295900** | 5.32 | 5.7 | ug/L |
| | Cu | 63 | 76996.100 | 0.226 | **92.004268** | 1.08 | 1.2 | ug/L |
| | Cu | 65 | 35225.806 | 0.103 | **89.173379** | 0.75 | 0.8 | ug/L |
| | Zn | 66 | 23304.582 | 0.068 | **91.545092** | 0.65 | 0.7 | ug/L |
| | Zn | 67 | 5391.222 | 0.012 | **94.935154** | 2.32 | 2.4 | ug/L |
| | Zn | 68 | 16829.058 | 0.049 | **92.072487** | 0.51 | 0.6 | ug/L |
| | V | 51 | 181334.441 | 0.532 | **97.062842** | 0.65 | 0.7 | ug/L |
| | Cr | 52 | 152200.987 | 0.437 | **94.618435** | 0.92 | 1.0 | ug/L |
| | Cr | 53 | 31630.235 | 0.049 | **84.701238** | 1.52 | 1.8 | ug/L |
| | Mn | 55 | 250359.038 | 0.734 | **92.393566** | 1.02 | 1.1 | ug/L |
| | Fe | 54 | 641649.593 | 1.847 | **4673.221147** | 44.01 | 0.9 | ug/L |
| | Fe | 57 | 256692.314 | 0.751 | **4660.268382** | 61.49 | 1.3 | ug/L |
| | As | 75 | 27219.102 | 0.069 | **104.744597** | 1.75 | 1.7 | ug/L |
| | Se | 77 | 11051.936 | 0.024 | **492.002831** | 11.57 | 2.4 | ug/L |
| | Se | 82 | 13391.332 | 0.034 | **517.990068** | 4.29 | 0.8 | ug/L |
| | Sr | 88 | 353331.536 | 0.887 | **101.650680** | 0.74 | 0.7 | ug/L |
| > | Y | 89 | 398376.353 | 398376.353 | | | | ug/L |
| | Mo | 95 | 43507.369 | 0.109 | **102.043899** | 1.34 | 1.3 | ug/L |
| | Mo | 97 | 26060.749 | 0.065 | **99.577225** | 0.35 | 0.3 | ug/L |
| | Mo | 98 | 67704.911 | 0.170 | **101.411938** | 0.97 | 1.0 | ug/L |
| | Ag | 107 | 115277.366 | 0.696 | **100.395027** | 0.65 | 0.6 | ug/L |
| | Ag | 109 | 107749.506 | 0.651 | **99.443252** | 1.59 | 1.6 | ug/L |
| | Cd | 111 | 27345.691 | 0.165 | **101.145080** | 0.90 | 0.9 | ug/L |
| | Cd | 114 | 61467.756 | 0.371 | **100.500470** | 1.74 | 1.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 165529.217 | 165529.217 | | | | ug/L |
| \| | Sn | 120 | 106018.225 | 0.637 | **98.542429** | 0.46 | 0.5 | ug/L |
| \| | Sb | 121 | 75908.068 | 0.456 | **98.584324** | 1.12 | 1.1 | ug/L |
| \| | Sb | 123 | 57408.771 | 0.344 | **97.703778** | 0.36 | 0.4 | ug/L |
| \| | Ba | 135 | 19510.050 | 0.113 | **95.054770** | 2.43 | 2.6 | ug/L |
| \| | Ba | 137 | 33673.545 | 0.195 | **95.151531** | 0.83 | 0.9 | ug/L |
| \| | Tb | 159 | 162685.061 | -0.008 | | | | ug/L |
| \|> | Ho | 165 | 172710.842 | 172710.842 | | | | ug/L |
| \| | Tl | 203 | 69536.942 | 0.403 | **103.771614** | 0.61 | 0.6 | ug/L |
| \| | Tl | 205 | 170880.104 | 0.989 | **105.191479** | 0.70 | 0.7 | ug/L |
| \| | Pb | 208 | 234615.349 | 1.358 | **106.264517** | 1.08 | 1.0 | ug/L |
| | Kr | 83 | 19.133 | -1.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 121.431 | | |
| Be | 9 | 115.315 | | |
| B | 11 | 115.163 | | |
| Na | 23 | 110.003 | | |
| Mg | 24 | 108.850 | | |
| Al | 27 | 104.465 | | |
| K | 39 | 119.948 | | |
| Ca | 43 | 99.694 | | |
| Sc | 45 | | 95.379 | |
| Ti | 49 | 94.421 | | |
| Co | 59 | 92.762 | | |
| Ni | 60 | 92.677 | | |
| Ni | 62 | 93.296 | | |
| Cu | 63 | 92.004 | | |
| Cu | 65 | 89.173 | | |
| Zn | 66 | 91.545 | | |
| Zn | 67 | 94.935 | | |
| Zn | 68 | 92.072 | | |
| V | 51 | 97.063 | | |
| Cr | 52 | 94.618 | | |
| Cr | 53 | 84.701 | | |
| Mn | 55 | 92.394 | | |
| Fe | 54 | 93.464 | | |
| Fe | 57 | 93.205 | | |
| As | 75 | 104.745 | | |
| Se | 77 | 98.401 | | |
| Se | 82 | 103.598 | | |
| Sr | 88 | 101.651 | | |
| Y | 89 | | 89.570 | |
| Mo | 95 | 102.044 | | |
| Mo | 97 | 99.577 | | |
| Mo | 98 | 101.412 | | |
| Ag | 107 | 100.395 | | |
| Ag | 109 | 99.443 | | |
| Cd | 111 | 101.145 | | |
| Cd | 114 | 100.500 | | |
| In | 115 | | 87.209 | |
| Sn | 120 | 98.542 | | |
| Sb | 121 | 98.584 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 97.704 | |
| Ba | 135 | 95.055 | |
| Ba | 137 | 95.152 | |
| Tb | 159 | | |
| Ho | 165 | | 91.400 |
| Tl | 203 | 103.772 | |
| Tl | 205 | 105.191 | |
| Pb | 208 | 106.265 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 19:19:09
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.150
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34102.475 | 0.027 | | | | ug/L |
| | Li | 7 | 3736.908 | 0.003 | **2.115708** | 0.12 | 5.7 | ug/L |
| | Be | 9 | 8.000 | 0.000 | **1.437650** | 0.01 | 1.0 | ug/L |
| | B | 11 | 1681.518 | 0.004 | **5.699807** | 0.65 | 11.5 | ug/L |
| | Na | 23 | 16183.677 | 0.014 | **13.603275** | 0.21 | 1.5 | ug/L |
| | Mg | 24 | 633.360 | 0.001 | **5.662022** | 0.32 | 5.7 | ug/L |
| | Al | 27 | 3173.994 | 0.007 | **16.862179** | 0.23 | 1.3 | ug/L |
| | K | 39 | 62889.460 | 0.023 | **0.295392** | 1.17 | 397.7 | ug/L |
| | Ca | 43 | 144.001 | -0.000 | **-9.316971** | 4.19 | 45.0 | ug/L |
| > | Sc | 45 | 335669.941 | 335669.941 | | | | ug/L |
| | Ti | 49 | 383.343 | -0.000 | **-0.630073** | 0.13 | 20.9 | ug/L |
| | Co | 59 | 46.667 | 0.000 | **-0.062229** | 0.01 | 9.7 | ug/L |
| | Ni | 60 | 12.000 | -0.000 | **-0.383159** | 0.02 | 4.0 | ug/L |
| | Ni | 62 | 32.000 | 0.000 | **0.733776** | 0.08 | 11.1 | ug/L |
| | Cu | 63 | 415.345 | 0.001 | **-0.173098** | 0.05 | 27.4 | ug/L |
| | Cu | 65 | 193.336 | 0.000 | **0.051832** | 0.09 | 167.0 | ug/L |
| | Zn | 66 | 134.668 | 0.000 | **-0.201104** | 0.10 | 49.5 | ug/L |
| | Zn | 67 | 1745.532 | 0.001 | **3.971381** | 1.55 | 39.0 | ug/L |
| | Zn | 68 | 193.336 | 0.000 | **-0.117901** | 0.18 | 155.0 | ug/L |
| | V | 51 | 753.296 | 0.003 | **0.656625** | 0.50 | 75.8 | ug/L |
| | Cr | 52 | 3129.972 | -0.000 | **-0.181908** | 0.10 | 54.6 | ug/L |
| | Cr | 53 | 15245.762 | 0.001 | **-6.286412** | 0.74 | 11.7 | ug/L |
| | Mn | 55 | 231.337 | 0.000 | **0.210259** | 0.01 | 3.5 | ug/L |
| | Fe | 54 | 10768.650 | -0.003 | **-5.301955** | 4.34 | 81.8 | ug/L |
| | Fe | 57 | 627.359 | 0.000 | **0.167359** | 0.12 | 73.2 | ug/L |
| | As | 75 | -288.545 | -0.000 | **-0.071516** | 0.21 | 292.0 | ug/L |
| | Se | 77 | 1486.144 | -0.000 | **-5.084783** | 6.35 | 124.8 | ug/L |
| | Se | 82 | 7.092 | 0.000 | **1.824851** | 0.12 | 6.4 | ug/L |
| | Sr | 88 | 164.668 | 0.000 | **0.644635** | 0.00 | 0.5 | ug/L |
| > | Y | 89 | 403190.167 | 403190.167 | | | | ug/L |
| | Mo | 95 | 82.000 | 0.000 | **0.713205** | 0.04 | 5.5 | ug/L |
| | Mo | 97 | 52.667 | 0.000 | **0.943107** | 0.04 | 3.9 | ug/L |
| | Mo | 98 | 137.188 | 0.000 | **0.964236** | 0.01 | 0.7 | ug/L |
| | Ag | 107 | 14.667 | 0.000 | **0.207355** | 0.01 | 4.0 | ug/L |
| | Ag | 109 | 14.000 | 0.000 | **0.257569** | 0.00 | 1.2 | ug/L |
| | Cd | 111 | 6.167 | 0.000 | **0.282608** | 0.00 | 1.0 | ug/L |
| | Cd | 114 | 12.900 | 0.000 | **0.549142** | 0.02 | 4.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 163184.471 | 163184.471 | | | | ug/L |
| \| | Sn | 120 | 542.626 | 0.000 | **0.703361** | 0.03 | 4.2 | ug/L |
| \| | Sb | 121 | 1744.865 | 0.008 | **2.140583** | 0.19 | 8.7 | ug/L |
| \| | Sb | 123 | 1289.521 | 0.005 | **2.366705** | 0.04 | 1.6 | ug/L |
| \| | Ba | 135 | 17.333 | 0.000 | **0.953375** | 0.02 | 2.5 | ug/L |
| \| | Ba | 137 | 17.333 | 0.000 | **0.503771** | 0.02 | 3.8 | ug/L |
| \| | Tb | 159 | 158196.005 | -0.003 | | | | ug/L |
| \|> | Ho | 165 | 167161.565 | 167161.565 | | | | ug/L |
| \| | Tl | 203 | 44.000 | 0.000 | **0.069295** | 0.00 | 7.0 | ug/L |
| \| | Tl | 205 | 116.001 | 0.001 | **0.036302** | 0.01 | 15.4 | ug/L |
| \| | Pb | 208 | 104.667 | 0.000 | **-0.039759** | 0.01 | 20.5 | ug/L |
| | Kr | 83 | 13.733 | -6.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.892 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.652 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 85.974 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.464 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-21A**
Sample Date/Time: Monday, February 15, 2010 19:21:52
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-21A.151
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34657.765 | 0.030 | | | | ug/L |
| | Li | 7 | 28659.969 | 0.078 | **27.842037** | 0.55 | 2.0 | ug/L |
| | Be | 9 | 488.682 | 0.001 | **3.543834** | 0.04 | 1.0 | ug/L |
| | B | 11 | 13334.889 | 0.039 | **46.408242** | 1.47 | 3.2 | ug/L |
| | Na | 23 | 8623655.156 | 26.086 | **14168.345540** | 502.34 | 3.5 | ug/L |
| | Mg | 24 | 2686554.728 | 8.138 | **6123.709879** | 302.37 | 4.9 | ug/L |
| | Al | 27 | 9432567.653 | 28.568 | **6621.426593** | 165.87 | 2.5 | ug/L |
| | K | 39 | 2729816.212 | 8.104 | **1939.024319** | 56.81 | 2.9 | ug/L |
| | Ca | 43 | 64142.326 | 0.194 | **13153.590059** | 118.97 | 0.9 | ug/L |
| > | Sc | 45 | 330191.814 | 330191.814 | | | | ug/L |
| | Ti | 49 | 914.721 | 0.001 | **3.950473** | 0.06 | 1.6 | ug/L |
| | Co | 59 | 14607.194 | 0.044 | **8.329449** | 0.24 | 2.9 | ug/L |
| | Ni | 60 | 5022.975 | 0.015 | **14.530666** | 0.75 | 5.1 | ug/L |
| | Ni | 62 | 789.374 | 0.002 | **15.528881** | 1.03 | 6.7 | ug/L |
| | Cu | 63 | 26745.081 | 0.081 | **32.565947** | 0.33 | 1.0 | ug/L |
| | Cu | 65 | 12610.329 | 0.038 | **32.683850** | 0.35 | 1.1 | ug/L |
| | Zn | 66 | 12471.436 | 0.037 | **50.260404** | 0.89 | 1.8 | ug/L |
| | Zn | 67 | 3716.900 | 0.007 | **55.909652** | 5.84 | 10.4 | ug/L |
| | Zn | 68 | 9106.728 | 0.027 | **50.937620** | 2.78 | 5.5 | ug/L |
| | V | 51 | 6705.440 | 0.021 | **3.939072** | 0.20 | 5.0 | ug/L |
| | Cr | 52 | 6742.288 | 0.011 | **2.226220** | 0.10 | 4.3 | ug/L |
| | Cr | 53 | 16033.363 | 0.005 | **-0.252831** | 2.41 | 951.4 | ug/L |
| | Mn | 55 | 744563.455 | 2.254 | **283.501516** | 3.50 | 1.2 | ug/L |
| | Fe | 54 | 346619.049 | 1.015 | **2568.758279** | 33.13 | 1.3 | ug/L |
| | Fe | 57 | 135720.879 | 0.409 | **2539.398223** | 26.54 | 1.0 | ug/L |
| | As | 75 | 183.581 | 0.001 | **1.612790** | 0.17 | 10.6 | ug/L |
| | Se | 77 | 1775.539 | 0.000 | **-3.272643** | 4.13 | 126.1 | ug/L |
| | Se | 82 | 13.161 | 0.000 | **1.986990** | 0.09 | 4.6 | ug/L |
| | Sr | 88 | 232422.307 | 0.494 | **56.938740** | 2.66 | 4.7 | ug/L |
| > | Y | 89 | 470513.480 | 470513.480 | | | | ug/L |
| | Mo | 95 | 43.333 | 0.000 | **0.609975** | 0.02 | 3.7 | ug/L |
| | Mo | 97 | 28.667 | 0.000 | **0.838459** | 0.02 | 2.8 | ug/L |
| | Mo | 98 | 59.187 | 0.000 | **0.837671** | 0.03 | 3.2 | ug/L |
| | Ag | 107 | 10.667 | 0.000 | **0.204545** | 0.00 | 2.0 | ug/L |
| | Ag | 109 | 7.333 | 0.000 | **0.251825** | 0.00 | 0.5 | ug/L |
| | Cd | 111 | 2470.730 | 0.016 | **10.151490** | 0.42 | 4.1 | ug/L |
| | Cd | 114 | 5580.912 | 0.037 | **10.381820** | 0.60 | 5.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 152634.065 | 152634.065 | | | | ug/L |
| \| | Sn | 120 | 483.947 | -0.000 | **0.680205** | 0.05 | 6.9 | ug/L |
| \| | Sb | 121 | 25050.069 | 0.161 | **35.204380** | 1.65 | 4.7 | ug/L |
| L | Sb | 123 | 19044.211 | 0.122 | **35.260792** | 1.19 | 3.4 | ug/L |
| ⌈ | Ba | 135 | 12240.406 | 0.074 | **62.359372** | 2.63 | 4.2 | ug/L |
| \| | Ba | 137 | 21023.361 | 0.127 | **61.975395** | 1.34 | 2.2 | ug/L |
| \| | Tb | 159 | 155430.653 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 165983.054 | 165983.054 | | | | ug/L |
| \| | Tl | 203 | 42.000 | 0.000 | **0.066558** | 0.01 | 20.0 | ug/L |
| \| | Tl | 205 | 116.001 | 0.001 | **0.036869** | 0.00 | 5.6 | ug/L |
| L | Pb | 208 | 547043.133 | 3.296 | **257.950997** | 4.99 | 1.9 | ug/L |
| | Kr | 83 | 22.000 | 1.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.360 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 105.789 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.416 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.840 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-22A**
Sample Date/Time: Monday, February 15, 2010 19:24:32
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-22A.152
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31955.619 | 0.025 | | | | ug/L |
| | Li | 7 | 89615.298 | 0.272 | **93.652492** | 5.55 | 5.9 | ug/L |
| | Be | 9 | 2377.034 | 0.007 | **12.166578** | 0.88 | 7.2 | ug/L |
| | B | 11 | 10797.584 | 0.032 | **38.832870** | 3.21 | 8.3 | ug/L |
| | Na | 23 | 47148074.048 | 147.595 | **80137.787557** | 7540.62 | 9.4 | ug/L |
| | Mg | 24 | 13654476.753 | 42.751 | **32149.885735** | 2933.90 | 9.1 | ug/L |
| | Al | 27 | 10473365.167 | 32.771 | **7593.558854** | 531.46 | 7.0 | ug/L |
| | K | 39 | 3386951.370 | 10.437 | **2498.612541** | 190.21 | 7.6 | ug/L |
| | Ca | 43 | 277153.082 | 0.867 | **58891.121771** | 5045.35 | 8.6 | ug/L |
| > | Sc | 45 | 320052.856 | 320052.856 | | | | ug/L |
| | Ti | 49 | 1051.406 | 0.002 | **5.429337** | 1.26 | 23.1 | ug/L |
| | Co | 59 | 60408.395 | 0.189 | **35.881107** | 2.37 | 6.6 | ug/L |
| | Ni | 60 | 11778.350 | 0.037 | **35.792585** | 2.30 | 6.4 | ug/L |
| | Ni | 62 | 1880.230 | 0.006 | **38.029685** | 1.49 | 3.9 | ug/L |
| | Cu | 63 | 714.700 | 0.002 | **0.236439** | 0.05 | 20.1 | ug/L |
| | Cu | 65 | 410.678 | 0.001 | **0.667264** | 0.04 | 6.1 | ug/L |
| | Zn | 66 | 18884.488 | 0.059 | **79.025640** | 3.95 | 5.0 | ug/L |
| | Zn | 67 | 4945.594 | 0.012 | **92.187941** | 13.69 | 14.8 | ug/L |
| | Zn | 68 | 13374.290 | 0.041 | **77.892127** | 5.02 | 6.5 | ug/L |
| | V | 51 | 49349.645 | 0.155 | **28.374817** | 2.48 | 8.7 | ug/L |
| | Cr | 52 | 38450.652 | 0.111 | **23.907885** | 2.13 | 8.9 | ug/L |
| | Cr | 53 | 19752.676 | 0.018 | **25.221461** | 7.85 | 31.1 | ug/L |
| | Mn | 55 | 3823851.052 | 11.968 | **1504.086622** | 105.14 | 7.0 | ug/L |
| | Fe | 54 | 2513676.629 | 7.833 | **19813.054445** | 1409.63 | 7.1 | ug/L |
| | Fe | 57 | 998249.306 | 3.122 | **19376.366344** | 1323.11 | 6.8 | ug/L |
| | As | 75 | -108.188 | 0.000 | **0.727272** | 0.28 | 39.0 | ug/L |
| | Se | 77 | 2281.672 | 0.000 | **2.093697** | 4.88 | 233.1 | ug/L |
| | Se | 82 | 16.288 | 0.000 | **1.996938** | 0.08 | 4.2 | ug/L |
| | Sr | 88 | 1372364.615 | 2.426 | **277.093011** | 12.04 | 4.3 | ug/L |
| > | Y | 89 | 565724.730 | 565724.730 | | | | ug/L |
| | Mo | 95 | 28.667 | 0.000 | **0.570895** | 0.02 | 2.8 | ug/L |
| | Mo | 97 | 12.667 | 0.000 | **0.779880** | 0.02 | 2.6 | ug/L |
| | Mo | 98 | 36.000 | 0.000 | **0.800504** | 0.02 | 1.9 | ug/L |
| | Ag | 107 | 15.333 | 0.000 | **0.209018** | 0.00 | 2.3 | ug/L |
| | Ag | 109 | 6.000 | 0.000 | **0.250542** | 0.00 | 0.8 | ug/L |
| | Cd | 111 | 686.197 | 0.005 | **3.028232** | 0.12 | 4.1 | ug/L |
| | Cd | 114 | 1573.194 | 0.010 | **3.326377** | 0.10 | 3.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 151442.684 | 151442.684 | | | | ug/L |
| \| | Sn | 120 | 424.585 | -0.000 | **0.623197** | 0.01 | 1.7 | ug/L |
| \| | Sb | 121 | 522.685 | 0.001 | **0.582529** | 0.09 | 16.1 | ug/L |
| \| | Sb | 123 | 401.754 | 0.000 | **0.890864** | 0.04 | 5.0 | ug/L |
| \| | Ba | 135 | 2317.682 | 0.014 | **12.194922** | 0.34 | 2.8 | ug/L |
| \| | Ba | 137 | 4153.122 | 0.024 | **12.282772** | 0.65 | 5.3 | ug/L |
| \| | Tb | 159 | 158379.110 | -0.022 | | | | ug/L |
| \|> | Ho | 165 | 170635.643 | 170635.643 | | | | ug/L |
| \| | Tl | 203 | 22.667 | 0.000 | **0.035665** | 0.01 | 14.7 | ug/L |
| \| | Tl | 205 | 57.334 | 0.000 | **-0.001617** | 0.01 | 468.7 | ug/L |
| \| | Pb | 208 | 3404.298 | 0.020 | **1.474515** | 0.10 | 6.5 | ug/L |
| | Kr | 83 | 31.333 | 10.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.524 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 127.196 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 79.788 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 90.302 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-23A**
Sample Date/Time: Monday, February 15, 2010 19:27:13
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-23A.153
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 12482.753 | -0.042 | | | | ug/L |
| | Li | 7 | 411980.452 | 1.072 | **365.837493** | 9.02 | 2.5 | ug/L |
| | Be | 9 | 7400.225 | 0.019 | **29.491116** | 1.12 | 3.8 | ug/L |
| | B | 11 | 274581.803 | 0.719 | **829.157110** | 30.17 | 3.6 | ug/L |
| | Na | 23 | 224657010.750 | 589.672 | **320149.434357** | 17119.47 | 5.3 | ug/L |
| | Mg | 24 | 54946239.699 | 144.194 | **108427.631759** | 4340.59 | 4.0 | ug/L |
| | Al | 27 | 530503275.303 | 1392.243 | **321970.954998** | 13165.88 | 4.1 | ug/L |
| | K | 39 | 4148368.004 | 10.721 | **2566.814192** | 101.50 | 4.0 | ug/L |
| | Ca | 43 | 748581.432 | 1.964 | **133353.703522** | 4327.01 | 3.2 | ug/L |
| > | Sc | 45 | 381335.277 | 381335.277 | | | | ug/L |
| | Ti | 49 | 5496.630 | 0.013 | **36.743859** | 1.74 | 4.7 | ug/L |
| | Co | 59 | 652998.443 | 1.714 | **325.969719** | 13.29 | 4.1 | ug/L |
| | Ni | 60 | 150594.720 | 0.395 | **387.902262** | 16.63 | 4.3 | ug/L |
| | Ni | 62 | 23514.568 | 0.062 | **398.009243** | 18.86 | 4.7 | ug/L |
| | Cu | 63 | 10747.506 | 0.028 | **10.898459** | 0.61 | 5.6 | ug/L |
| | Cu | 65 | 6058.386 | 0.016 | **13.344336** | 0.61 | 4.6 | ug/L |
| | Zn | 66 | 290619.703 | 0.762 | **1029.124321** | 42.52 | 4.1 | ug/L |
| | Zn | 67 | 46875.727 | 0.119 | **1013.427505** | 28.71 | 2.8 | ug/L |
| | Zn | 68 | 206718.377 | 0.542 | **1024.183881** | 42.07 | 4.1 | ug/L |
| | V | 51 | 337016.172 | 0.885 | **161.285081** | 7.56 | 4.7 | ug/L |
| | Cr | 52 | 176302.014 | 0.453 | **98.160559** | 4.51 | 4.6 | ug/L |
| | Cr | 53 | 33028.118 | 0.043 | **72.962871** | 5.92 | 8.1 | ug/L |
| | Mn | 55 | 27758609.563 | 72.847 | **9154.436278** | 374.04 | 4.1 | ug/L |
| | Fe | 54 | 26432044.400 | 69.335 | **175369.477673** | 7806.45 | 4.5 | ug/L |
| | Fe | 57 | 10908202.821 | 28.623 | **177620.585385** | 6628.68 | 3.7 | ug/L |
| | As | 75 | 6778.764 | 0.003 | **5.580867** | 0.24 | 4.3 | ug/L |
| | Se | 77 | 2965.905 | -0.002 | **-54.107985** | 0.25 | 0.5 | ug/L |
| | Se | 82 | 110.710 | 0.000 | **2.309063** | 0.06 | 2.6 | ug/L |
| | Sr | 88 | 3425089.338 | 1.518 | **173.627853** | 2.46 | 1.4 | ug/L |
| > | Y | 89 | 2255225.141 | 2255225.141 | | | | ug/L |
| | Mo | 95 | 86.001 | 0.000 | **0.559310** | 0.01 | 1.7 | ug/L |
| | Mo | 97 | 38.667 | -0.000 | **0.771904** | 0.00 | 0.5 | ug/L |
| | Mo | 98 | 65.416 | -0.000 | **0.779880** | 0.00 | 0.6 | ug/L |
| | Ag | 107 | 265.338 | 0.001 | **0.408925** | 0.01 | 3.2 | ug/L |
| | Ag | 109 | 139.335 | 0.001 | **0.364040** | 0.01 | 2.1 | ug/L |
| | Cd | 111 | 4427.274 | 0.025 | **15.475910** | 0.69 | 4.4 | ug/L |
| | Cd | 114 | 10009.422 | 0.056 | **15.691905** | 0.60 | 3.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 177828.042 | 177828.042 | | | | ug/L |
| \| | Sn | 120 | 904.474 | 0.002 | **0.973941** | 0.03 | 3.4 | ug/L |
| \| | Sb | 121 | 1862.893 | 0.008 | **2.093865** | 0.11 | 5.3 | ug/L |
| \| | Sb | 123 | 1433.034 | 0.006 | **2.412172** | 0.14 | 5.7 | ug/L |
| \| | Ba | 135 | 3179.325 | 0.011 | **9.905326** | 0.60 | 6.0 | ug/L |
| \| | Ba | 137 | 5509.973 | 0.019 | **9.573981** | 0.12 | 1.3 | ug/L |
| \| | Tb | 159 | 284187.531 | 0.019 | | | | ug/L |
| \|> | Ho | 165 | 293431.870 | 293431.870 | | | | ug/L |
| \| | Tl | 203 | 32.667 | 0.000 | **0.030078** | 0.01 | 26.4 | ug/L |
| \| | Tl | 205 | 78.667 | 0.000 | **-0.008940** | 0.01 | 97.4 | ug/L |
| \| | Pb | 208 | 110869.811 | 0.378 | **29.498176** | 0.84 | 2.9 | ug/L |
| | Kr | 83 | 190.736 | 170.202 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 106.665 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 507.058 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 93.689 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 155.287 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-24A**
Sample Date/Time: Monday, February 15, 2010 19:29:53
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-24A.154
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34867.119 | 0.036 | | | | ug/L |
| | Li | 7 | 13851.809 | 0.036 | **13.321208** | 1.09 | 8.2 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **1.449057** | 0.02 | 1.2 | ug/L |
| | B | 11 | 33579.892 | 0.105 | **122.870377** | 7.54 | 6.1 | ug/L |
| | Na | 23 | 35796097.835 | 113.891 | **61839.404254** | 4120.86 | 6.7 | ug/L |
| | Mg | 24 | 978193.932 | 3.111 | **2344.133615** | 110.02 | 4.7 | ug/L |
| | Al | 27 | 116467.187 | 0.369 | **100.577488** | 20.34 | 20.2 | ug/L |
| | K | 39 | 1508163.392 | 4.635 | **1106.638563** | 77.11 | 7.0 | ug/L |
| | Ca | 43 | 18682.664 | 0.059 | **3997.607682** | 182.05 | 4.6 | ug/L |
| > | Sc | 45 | 314641.328 | 314641.328 | | | | ug/L |
| | Ti | 49 | 480.682 | 0.000 | **0.465055** | 0.88 | 188.3 | ug/L |
| | Co | 59 | 194.669 | 0.001 | **0.029188** | 0.01 | 32.8 | ug/L |
| | Ni | 60 | 250.671 | 0.001 | **0.364054** | 0.12 | 33.4 | ug/L |
| | Ni | 62 | 58.667 | 0.000 | **1.321361** | 0.13 | 9.9 | ug/L |
| | Cu | 63 | 2791.841 | 0.009 | **2.967188** | 0.31 | 10.4 | ug/L |
| | Cu | 65 | 1185.425 | 0.004 | **2.827382** | 0.32 | 11.4 | ug/L |
| | Zn | 66 | 1340.117 | 0.004 | **5.009810** | 0.29 | 5.8 | ug/L |
| | Zn | 67 | 2325.685 | 0.004 | **22.819644** | 3.00 | 13.1 | ug/L |
| | Zn | 68 | 1038.737 | 0.003 | **5.047262** | 0.59 | 11.8 | ug/L |
| | V | 51 | 2281.866 | 0.008 | **1.564755** | 0.50 | 32.0 | ug/L |
| | Cr | 52 | 3835.623 | 0.003 | **0.443059** | 0.09 | 20.6 | ug/L |
| | Cr | 53 | 17197.205 | 0.011 | **11.549382** | 4.36 | 37.8 | ug/L |
| | Mn | 55 | 29761.553 | 0.094 | **12.030683** | 0.95 | 7.9 | ug/L |
| | Fe | 54 | 46367.875 | 0.113 | **286.792897** | 26.43 | 9.2 | ug/L |
| | Fe | 57 | 13569.984 | 0.041 | **256.654534** | 22.32 | 8.7 | ug/L |
| | As | 75 | -141.237 | 0.000 | **0.443772** | 0.78 | 176.5 | ug/L |
| | Se | 77 | 1988.258 | 0.002 | **28.285387** | 9.20 | 32.5 | ug/L |
| | Se | 82 | 11.416 | 0.000 | **2.020403** | 0.16 | 7.8 | ug/L |
| | Sr | 88 | 104197.330 | 0.278 | **32.242126** | 1.33 | 4.1 | ug/L |
| > | Y | 89 | 375357.003 | 375357.003 | | | | ug/L |
| | Mo | 95 | 942.058 | 0.002 | **2.857285** | 0.10 | 3.7 | ug/L |
| | Mo | 97 | 602.024 | 0.002 | **3.170035** | 0.18 | 5.7 | ug/L |
| | Mo | 98 | 1413.171 | 0.004 | **2.992102** | 0.04 | 1.3 | ug/L |
| | Ag | 107 | 10.667 | 0.000 | **0.204949** | 0.00 | 1.9 | ug/L |
| | Ag | 109 | 7.333 | 0.000 | **0.252205** | 0.00 | 1.3 | ug/L |
| | Cd | 111 | 6.667 | 0.000 | **0.287617** | 0.00 | 1.7 | ug/L |
| | Cd | 114 | 15.867 | 0.000 | **0.557285** | 0.01 | 1.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 145255.805 | 145255.805 | | | | ug/L |
| \| | Sn | 120 | 365.966 | -0.001 | **0.579483** | 0.02 | 2.8 | ug/L |
| \| | Sb | 121 | 338.008 | -0.001 | **0.339013** | 0.07 | 21.6 | ug/L |
| \| | Sb | 123 | 250.918 | -0.001 | **0.629368** | 0.03 | 5.4 | ug/L |
| \| | Ba | 135 | 4176.467 | 0.027 | **23.471793** | 0.13 | 0.6 | ug/L |
| \| | Ba | 137 | 7069.916 | 0.046 | **22.746541** | 0.47 | 2.1 | ug/L |
| \| | Tb | 159 | 143528.402 | -0.018 | | | | ug/L |
| \|> | Ho | 165 | 154024.968 | 154024.968 | | | | ug/L |
| \| | Tl | 203 | 8.667 | 0.000 | **0.015879** | 0.01 | 32.2 | ug/L |
| \| | Tl | 205 | 9.333 | 0.000 | **-0.031033** | 0.00 | 9.0 | ug/L |
| \| | Pb | 208 | 917.355 | 0.006 | **0.377856** | 0.03 | 8.0 | ug/L |
| | Kr | 83 | 15.000 | -5.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 88.010 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 84.394 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.528 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.512 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-25A**
Sample Date/Time: Monday, February 15, 2010 19:32:34
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-25A.155
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25384.995 | 0.004 | | | | ug/L |
| | Li | 7 | 95463.488 | 0.288 | **99.126801** | 2.29 | 2.3 | ug/L |
| | Be | 9 | 294.006 | 0.001 | **2.724859** | 0.24 | 8.8 | ug/L |
| | B | 11 | 22058.257 | 0.067 | **78.750250** | 1.12 | 1.4 | ug/L |
| | Na | 23 | 440005868.163 | 1366.209 | **741745.050086** | 5821.15 | 0.8 | ug/L |
| | Mg | 24 | 97437830.830 | 302.569 | **227513.823610** | 2741.12 | 1.2 | ug/L |
| | Al | 27 | 64854.002 | 0.199 | **61.248764** | 1.11 | 1.8 | ug/L |
| | K | 39 | 1700146.308 | 5.115 | **1221.814403** | 17.60 | 1.4 | ug/L |
| | Ca | 43 | 1370269.460 | 4.255 | **288926.700938** | 9536.69 | 3.3 | ug/L |
| > | Sc | 45 | 322047.077 | 322047.077 | | | | ug/L |
| | Ti | 49 | 1902.236 | 0.005 | **12.778706** | 1.04 | 8.1 | ug/L |
| | Co | 59 | 175868.776 | 0.546 | **103.825270** | 3.42 | 3.3 | ug/L |
| | Ni | 60 | 19137.788 | 0.059 | **57.970332** | 1.64 | 2.8 | ug/L |
| | Ni | 62 | 2940.564 | 0.009 | **58.973080** | 4.01 | 6.8 | ug/L |
| | Cu | 63 | 4146.452 | 0.013 | **4.604139** | 0.22 | 4.8 | ug/L |
| | Cu | 65 | 1328.115 | 0.004 | **3.131881** | 0.27 | 8.7 | ug/L |
| | Zn | 66 | 2209.651 | 0.007 | **8.522664** | 0.46 | 5.4 | ug/L |
| | Zn | 67 | 2080.281 | 0.003 | **14.787720** | 0.43 | 2.9 | ug/L |
| | Zn | 68 | 1069.408 | 0.003 | **5.070801** | 0.08 | 1.6 | ug/L |
| | V | 51 | 983.953 | 0.003 | **0.799649** | 0.13 | 16.7 | ug/L |
| | Cr | 52 | 2981.245 | -0.000 | **-0.195310** | 0.05 | 23.4 | ug/L |
| | Cr | 53 | 12165.613 | -0.006 | **-20.988238** | 0.42 | 2.0 | ug/L |
| | Mn | 55 | 39524525.839 | 122.742 | **15424.388447** | 560.84 | 3.6 | ug/L |
| | Fe | 54 | 2403854.789 | 7.431 | **18795.360595** | 705.54 | 3.8 | ug/L |
| | Fe | 57 | 967661.418 | 3.003 | **18636.773009** | 680.56 | 3.7 | ug/L |
| | As | 75 | -615.644 | -0.001 | **-0.765474** | 0.39 | 51.2 | ug/L |
| | Se | 77 | 3538.815 | 0.003 | **58.136538** | 5.29 | 9.1 | ug/L |
| | Se | 82 | 74.163 | 0.000 | **3.728175** | 0.11 | 3.0 | ug/L |
| | Sr | 88 | 8581307.305 | 16.361 | **1864.849092** | 47.28 | 2.5 | ug/L |
| > | Y | 89 | 524486.999 | 524486.999 | | | | ug/L |
| | Mo | 95 | 476.681 | 0.001 | **1.368680** | 0.03 | 2.4 | ug/L |
| | Mo | 97 | 258.671 | 0.000 | **1.490915** | 0.12 | 8.3 | ug/L |
| | Mo | 98 | 642.547 | 0.001 | **1.488418** | 0.04 | 2.4 | ug/L |
| | Ag | 107 | 21.333 | 0.000 | **0.212468** | 0.00 | 1.6 | ug/L |
| | Ag | 109 | 6.667 | 0.000 | **0.250496** | 0.01 | 2.2 | ug/L |
| | Cd | 111 | 8.000 | 0.000 | **0.288298** | 0.01 | 3.8 | ug/L |
| | Cd | 114 | 2.540 | 0.000 | **0.531883** | 0.01 | 1.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| > | In | 115 | 170017.380 | 170017.380 | | | | ug/L |
| | Sn | 120 | 437.809 | -0.001 | **0.588393** | 0.02 | 4.2 | ug/L |
| | Sb | 121 | 384.010 | -0.001 | **0.324027** | 0.02 | 6.8 | ug/L |
| | Sb | 123 | 313.992 | -0.001 | **0.663200** | 0.02 | 3.7 | ug/L |
| | Ba | 135 | 5764.159 | 0.030 | **25.587261** | 1.07 | 4.2 | ug/L |
| | Ba | 137 | 9979.137 | 0.051 | **25.372416** | 0.46 | 1.8 | ug/L |
| | Tb | 159 | 186972.793 | 0.011 | | | | ug/L |
| > | Ho | 165 | 194587.494 | 194587.494 | | | | ug/L |
| | Tl | 203 | 14.000 | 0.000 | **0.019693** | 0.01 | 44.2 | ug/L |
| | Tl | 205 | 20.667 | 0.000 | **-0.026165** | 0.00 | 8.5 | ug/L |
| | Pb | 208 | 356.003 | 0.002 | **0.054669** | 0.01 | 21.5 | ug/L |
| | Kr | 83 | 47.333 | 26.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.082 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 117.924 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 89.574 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 102.978 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-26A**
Sample Date/Time: Monday, February 15, 2010 19:35:14
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-26A.156
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34207.884 | 0.035 | | | | ug/L |
| | Li | 7 | 46392.303 | 0.140 | **48.804197** | 1.91 | 3.9 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **1.437231** | 0.03 | 1.9 | ug/L |
| | B | 11 | 21853.699 | 0.069 | **80.418304** | 3.35 | 4.2 | ug/L |
| | Na | 23 | 48199182.957 | 154.204 | **83726.146991** | 1371.59 | 1.6 | ug/L |
| | Mg | 24 | 10270411.434 | 32.875 | **24723.858348** | 728.43 | 2.9 | ug/L |
| | Al | 27 | 118306.385 | 0.376 | **102.223631** | 1.03 | 1.0 | ug/L |
| | K | 39 | 3725461.529 | 11.765 | **2817.237467** | 178.87 | 6.3 | ug/L |
| | Ca | 43 | 201402.785 | 0.644 | **43735.438580** | 952.39 | 2.2 | ug/L |
| > | Sc | 45 | 312505.211 | 312505.211 | | | | ug/L |
| | Ti | 49 | 585.356 | 0.001 | **1.429779** | 0.40 | 27.7 | ug/L |
| | Co | 59 | 221.337 | 0.001 | **0.046136** | 0.00 | 5.9 | ug/L |
| | Ni | 60 | 278.005 | 0.001 | **0.456644** | 0.09 | 19.0 | ug/L |
| | Ni | 62 | 37.333 | 0.000 | **0.889840** | 0.33 | 37.5 | ug/L |
| | Cu | 63 | 723.367 | 0.002 | **0.269043** | 0.02 | 8.0 | ug/L |
| | Cu | 65 | 262.671 | 0.001 | **0.282711** | 0.04 | 12.4 | ug/L |
| | Zn | 66 | 972.061 | 0.003 | **3.457587** | 0.09 | 2.5 | ug/L |
| | Zn | 67 | 2461.728 | 0.004 | **26.935752** | 2.83 | 10.5 | ug/L |
| | Zn | 68 | 1969.586 | 0.006 | **10.714206** | 0.70 | 6.5 | ug/L |
| | V | 51 | 5744.296 | 0.019 | **3.580448** | 0.83 | 23.1 | ug/L |
| | Cr | 52 | 3251.354 | 0.001 | **0.053529** | 0.01 | 18.7 | ug/L |
| | Cr | 53 | 15351.304 | 0.005 | **0.843840** | 2.08 | 246.9 | ug/L |
| | Mn | 55 | 9693.541 | 0.030 | **4.017747** | 0.58 | 14.5 | ug/L |
| | Fe | 54 | 21521.215 | 0.034 | **87.716509** | 2.77 | 3.2 | ug/L |
| | Fe | 57 | 5989.665 | 0.017 | **107.511349** | 2.67 | 2.5 | ug/L |
| | As | 75 | -423.317 | -0.001 | **-0.704827** | 0.37 | 53.1 | ug/L |
| | Se | 77 | 2214.320 | 0.002 | **41.196224** | 10.46 | 25.4 | ug/L |
| | Se | 82 | 15.913 | 0.000 | **2.209504** | 0.16 | 7.1 | ug/L |
| | Sr | 88 | 1073932.429 | 2.874 | **328.131168** | 8.37 | 2.6 | ug/L |
| > | Y | 89 | 373556.915 | 373556.915 | | | | ug/L |
| | Mo | 95 | 1108.747 | 0.003 | **3.282650** | 0.19 | 5.9 | ug/L |
| | Mo | 97 | 660.028 | 0.002 | **3.416098** | 0.17 | 5.0 | ug/L |
| | Mo | 98 | 1708.711 | 0.005 | **3.471074** | 0.11 | 3.1 | ug/L |
| | Ag | 107 | 6.000 | 0.000 | **0.200349** | 0.00 | 1.7 | ug/L |
| | Ag | 109 | 4.000 | 0.000 | **0.248728** | 0.01 | 2.3 | ug/L |
| | Cd | 111 | 13.667 | 0.000 | **0.316966** | 0.00 | 1.5 | ug/L |
| | Cd | 114 | 23.127 | 0.000 | **0.570706** | 0.00 | 0.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 145371.043 | 145371.043 | | | | ug/L |
| \| | Sn | 120 | 389.216 | -0.001 | **0.604148** | 0.04 | 6.8 | ug/L |
| \| | Sb | 121 | 336.674 | -0.001 | **0.336823** | 0.06 | 16.4 | ug/L |
| L | Sb | 123 | 299.414 | -0.000 | **0.723336** | 0.02 | 3.4 | ug/L |
| ⌈ | Ba | 135 | 82268.262 | 0.521 | **435.558618** | 5.00 | 1.1 | ug/L |
| \| | Ba | 137 | 142501.179 | 0.903 | **439.088536** | 2.26 | 0.5 | ug/L |
| \| | Tb | 159 | 147270.666 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 157788.651 | 157788.651 | | | | ug/L |
| \| | Tl | 203 | 4.000 | -0.000 | **0.007882** | 0.00 | 40.8 | ug/L |
| \| | Tl | 205 | 13.333 | 0.000 | **-0.028474** | 0.00 | 14.3 | ug/L |
| L | Pb | 208 | 1138.032 | 0.007 | **0.475982** | 0.02 | 4.3 | ug/L |
| | Kr | 83 | 19.667 | -0.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.413 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 83.989 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.589 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 83.503 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-27A**
Sample Date/Time: Monday, February 15, 2010 19:37:55
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-27A.157
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 36374.521 | 0.043 | | | | ug/L |
| | Li | 7 | 22432.668 | 0.064 | **23.124223** | 0.80 | 3.5 | ug/L |
| | Be | 9 | 780.040 | 0.003 | **5.069082** | 0.14 | 2.7 | ug/L |
| | B | 11 | 12372.611 | 0.039 | **46.208638** | 1.06 | 2.3 | ug/L |
| | Na | 23 | 36088072.532 | 117.295 | **63687.353038** | 2276.65 | 3.6 | ug/L |
| | Mg | 24 | 3192014.261 | 10.379 | **7809.062571** | 410.71 | 5.3 | ug/L |
| | Al | 27 | 10202041.998 | 33.172 | **7686.110551** | 374.61 | 4.9 | ug/L |
| | K | 39 | 1360203.786 | 4.260 | **1016.684943** | 67.84 | 6.7 | ug/L |
| | Ca | 43 | 219133.129 | 0.712 | **48336.875151** | 1734.36 | 3.6 | ug/L |
| > | Sc | 45 | 307739.153 | 307739.153 | | | | ug/L |
| | Ti | 49 | 855.381 | 0.001 | **3.980170** | 0.36 | 9.1 | ug/L |
| | Co | 59 | 105494.516 | 0.343 | **65.165324** | 2.10 | 3.2 | ug/L |
| | Ni | 60 | 5972.318 | 0.019 | **18.660558** | 0.84 | 4.5 | ug/L |
| | Ni | 62 | 925.389 | 0.003 | **19.515762** | 0.74 | 3.8 | ug/L |
| | Cu | 63 | 47097.076 | 0.153 | **62.159888** | 1.80 | 2.9 | ug/L |
| | Cu | 65 | 22639.942 | 0.073 | **63.410382** | 2.57 | 4.1 | ug/L |
| | Zn | 66 | 22769.653 | 0.074 | **99.210473** | 3.22 | 3.2 | ug/L |
| | Zn | 67 | 5163.067 | 0.013 | **103.176603** | 2.42 | 2.3 | ug/L |
| | Zn | 68 | 16289.229 | 0.052 | **98.871207** | 2.39 | 2.4 | ug/L |
| | V | 51 | 3289.082 | 0.011 | **2.196725** | 0.62 | 28.0 | ug/L |
| | Cr | 52 | 5135.715 | 0.007 | **1.419459** | 0.19 | 13.3 | ug/L |
| | Cr | 53 | 14156.348 | 0.002 | **-5.160790** | 1.18 | 22.8 | ug/L |
| | Mn | 55 | 12714291.796 | 41.335 | **5194.531825** | 178.60 | 3.4 | ug/L |
| | Fe | 54 | 96137.423 | 0.278 | **704.174794** | 36.31 | 5.2 | ug/L |
| | Fe | 57 | 36487.682 | 0.117 | **724.753259** | 28.28 | 3.9 | ug/L |
| | As | 75 | 18852.170 | 0.042 | **64.074113** | 1.00 | 1.6 | ug/L |
| | Se | 77 | 1966.252 | 0.001 | **8.226991** | 4.64 | 56.5 | ug/L |
| | Se | 82 | 26.630 | 0.000 | **2.455803** | 0.19 | 7.9 | ug/L |
| | Sr | 88 | 717758.716 | 1.581 | **180.758470** | 3.81 | 2.1 | ug/L |
| > | Y | 89 | 453943.284 | 453943.284 | | | | ug/L |
| | Mo | 95 | 198.003 | 0.000 | **0.929201** | 0.03 | 3.7 | ug/L |
| | Mo | 97 | 95.334 | 0.000 | **1.063346** | 0.06 | 6.0 | ug/L |
| | Mo | 98 | 241.712 | 0.000 | **1.077967** | 0.01 | 1.3 | ug/L |
| | Ag | 107 | 4.667 | 0.000 | **0.199043** | 0.00 | 1.1 | ug/L |
| | Ag | 109 | 4.000 | 0.000 | **0.248705** | 0.00 | 0.8 | ug/L |
| | Cd | 111 | 7100.777 | 0.049 | **30.259007** | 1.25 | 4.1 | ug/L |
| | Cd | 114 | 16335.793 | 0.113 | **30.950668** | 1.01 | 3.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 144629.197 | 144629.197 | | | | ug/L |
| \| | Sn | 120 | 372.591 | -0.001 | **0.587852** | 0.04 | 7.4 | ug/L |
| \| | Sb | 121 | 392.010 | -0.000 | **0.421694** | 0.05 | 12.3 | ug/L |
| \| | Sb | 123 | 309.834 | -0.000 | **0.747834** | 0.10 | 13.8 | ug/L |
| \| | Ba | 135 | 4231.831 | 0.027 | **23.044820** | 0.88 | 3.8 | ug/L |
| \| | Ba | 137 | 7226.727 | 0.045 | **22.517182** | 0.87 | 3.9 | ug/L |
| \| | Tb | 159 | 148795.576 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 159186.304 | 159186.304 | | | | ug/L |
| \| | Tl | 203 | 302.006 | 0.002 | **0.489849** | 0.03 | 6.1 | ug/L |
| \| | Tl | 205 | 669.363 | 0.004 | **0.410419** | 0.04 | 9.8 | ug/L |
| \| | Pb | 208 | 10041.210 | 0.063 | **4.853326** | 0.23 | 4.8 | ug/L |
| | Kr | 83 | 21.733 | 1.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 86.079 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 102.063 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 76.198 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 84.243 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-28A**
Sample Date/Time: Monday, February 15, 2010 19:40:35
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-28A.158
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 35410.634 | 0.043 | | | | ug/L |
| \| | Li | 7 | 11521.290 | 0.030 | **11.355601** | 0.06 | 0.6 | ug/L |
| \| | Be | 9 | 8.667 | 0.000 | **1.444888** | 0.02 | 1.4 | ug/L |
| \| | B | 11 | 21849.661 | 0.071 | **83.562070** | 2.11 | 2.5 | ug/L |
| \| | Na | 23 | 34908494.756 | 116.066 | **63020.335879** | 845.85 | 1.3 | ug/L |
| \| | Mg | 24 | 175173.736 | 0.582 | **442.201543** | 10.98 | 2.5 | ug/L |
| \| | Al | 27 | 111066.344 | 0.367 | **100.101487** | 2.37 | 2.4 | ug/L |
| \| | K | 39 | 789333.269 | 2.460 | **585.037294** | 9.02 | 1.5 | ug/L |
| \| | Ca | 43 | 6277.227 | 0.020 | **1379.251725** | 29.33 | 2.1 | ug/L |
| \| > | Sc | 45 | 300711.427 | 300711.427 | | | | ug/L |
| \| | Ti | 49 | 862.049 | 0.002 | **4.212238** | 1.20 | 28.5 | ug/L |
| \| | Co | 59 | 184.002 | 0.001 | **0.027740** | 0.01 | 27.5 | ug/L |
| \| | Ni | 60 | 138.001 | 0.000 | **0.032647** | 0.08 | 243.7 | ug/L |
| \| | Ni | 62 | 33.333 | 0.000 | **0.834841** | 0.19 | 22.4 | ug/L |
| \| | Cu | 63 | 794.041 | 0.002 | **0.402731** | 0.05 | 13.0 | ug/L |
| \| | Cu | 65 | 272.005 | 0.001 | **0.338713** | 0.11 | 32.6 | ug/L |
| \| | Zn | 66 | 502.683 | 0.001 | **1.512535** | 0.17 | 11.0 | ug/L |
| \| | Zn | 67 | 1616.170 | 0.002 | **5.484240** | 3.22 | 58.7 | ug/L |
| \| | Zn | 68 | 446.680 | 0.001 | **1.602534** | 0.21 | 13.4 | ug/L |
| \| | V | 51 | 3018.832 | 0.010 | **2.072390** | 0.22 | 10.4 | ug/L |
| \| | Cr | 52 | 2991.248 | 0.000 | **-0.045348** | 0.02 | 38.2 | ug/L |
| \| | Cr | 53 | 13191.302 | -0.000 | **-9.270705** | 1.26 | 13.6 | ug/L |
| \| | Mn | 55 | 56579.361 | 0.188 | **23.773703** | 0.71 | 3.0 | ug/L |
| \| | Fe | 54 | 18288.151 | 0.026 | **67.351378** | 2.88 | 4.3 | ug/L |
| ⌊ | Fe | 57 | 3189.328 | 0.009 | **54.406692** | 2.52 | 4.6 | ug/L |
| ⌈ | As | 75 | -350.831 | -0.001 | **-0.472169** | 0.46 | 97.7 | ug/L |
| \| | Se | 77 | 1476.809 | 0.000 | **3.916946** | 4.79 | 122.3 | ug/L |
| \| | Se | 82 | 8.217 | 0.000 | **1.906241** | 0.11 | 5.7 | ug/L |
| \| | Sr | 88 | 34179.861 | 0.095 | **11.464825** | 0.44 | 3.8 | ug/L |
| \| > | Y | 89 | 358417.264 | 358417.264 | | | | ug/L |
| \| | Mo | 95 | 422.678 | 0.001 | **1.621410** | 0.09 | 5.7 | ug/L |
| \| | Mo | 97 | 266.005 | 0.001 | **1.866669** | 0.05 | 2.9 | ug/L |
| ⌊ | Mo | 98 | 673.883 | 0.002 | **1.877313** | 0.10 | 5.1 | ug/L |
| ⌈ | Ag | 107 | 2.000 | -0.000 | **0.196523** | 0.00 | 0.0 | ug/L |
| \| | Ag | 109 | 2.000 | 0.000 | **0.246717** | 0.00 | 0.0 | ug/L |
| \| | Cd | 111 | 6.333 | 0.000 | **0.287650** | 0.01 | 2.6 | ug/L |
| \| | Cd | 114 | 18.007 | 0.000 | **0.563153** | 0.01 | 1.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 137406.391 | 137406.391 | | | | ug/L |
| \| | Sn | 120 | 348.641 | -0.001 | **0.582395** | 0.01 | 1.4 | ug/L |
| \| | Sb | 121 | 247.337 | -0.001 | **0.225245** | 0.03 | 13.5 | ug/L |
| L | Sb | 123 | 215.667 | -0.001 | **0.585515** | 0.02 | 4.2 | ug/L |
| ⌈ | Ba | 135 | 2012.930 | 0.013 | **12.045395** | 0.52 | 4.3 | ug/L |
| \| | Ba | 137 | 3324.052 | 0.022 | **11.209984** | 0.37 | 3.3 | ug/L |
| \| | Tb | 159 | 139579.679 | -0.020 | | | | ug/L |
| \|> | Ho | 165 | 150128.382 | 150128.382 | | | | ug/L |
| \| | Tl | 203 | 4.000 | -0.000 | **0.008291** | 0.01 | 72.3 | ug/L |
| \| | Tl | 205 | 4.667 | 0.000 | **-0.034145** | 0.00 | 2.4 | ug/L |
| L | Pb | 208 | 1978.766 | 0.013 | **0.943861** | 0.07 | 7.2 | ug/L |
| | Kr | 83 | 14.867 | -5.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 84.114 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 80.585 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 72.393 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 79.450 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-29A**
Sample Date/Time: Monday, February 15, 2010 19:43:16
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-29A.159
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 33362.975 | 0.031 | | | | ug/L |
| | Li | 7 | 67153.930 | 0.204 | **70.491321** | 6.48 | 9.2 | ug/L |
| | Be | 9 | 1180.758 | 0.004 | **6.799400** | 0.49 | 7.2 | ug/L |
| | B | 11 | 51957.005 | 0.163 | **188.800195** | 11.47 | 6.1 | ug/L |
| | Na | 23 | 99224680.980 | 313.681 | **170308.831874** | 20033.69 | 11.8 | ug/L |
| | Mg | 24 | 10776852.823 | 34.073 | **25625.133440** | 2900.60 | 11.3 | ug/L |
| | Al | 27 | 45485709.698 | 143.746 | **33256.352124** | 2899.36 | 8.7 | ug/L |
| | K | 39 | 5372692.656 | 16.820 | **4030.011377** | 429.23 | 10.7 | ug/L |
| | Ca | 43 | 237444.649 | 0.750 | **50900.716546** | 3622.87 | 7.1 | ug/L |
| > | Sc | 45 | 316944.250 | 316944.250 | | | | ug/L |
| | Ti | 49 | 1023.402 | 0.002 | **5.252370** | 0.66 | 12.6 | ug/L |
| | Co | 59 | 86924.784 | 0.275 | **52.154191** | 3.29 | 6.3 | ug/L |
| | Ni | 60 | 29062.158 | 0.092 | **89.763345** | 4.95 | 5.5 | ug/L |
| | Ni | 62 | 4498.649 | 0.014 | **91.660866** | 1.79 | 1.9 | ug/L |
| | Cu | 63 | 79320.630 | 0.250 | **102.168103** | 6.93 | 6.8 | ug/L |
| | Cu | 65 | 37823.604 | 0.119 | **103.229400** | 8.36 | 8.1 | ug/L |
| | Zn | 66 | 96986.673 | 0.306 | **412.917034** | 24.78 | 6.0 | ug/L |
| | Zn | 67 | 16457.593 | 0.048 | **404.841115** | 22.58 | 5.6 | ug/L |
| | Zn | 68 | 68794.549 | 0.217 | **409.544356** | 27.13 | 6.6 | ug/L |
| | V | 51 | 3235.920 | 0.011 | **2.101413** | 0.44 | 21.1 | ug/L |
| | Cr | 52 | 21250.003 | 0.058 | **12.357008** | 0.93 | 7.5 | ug/L |
| | Cr | 53 | 15442.825 | 0.005 | **0.147074** | 4.86 | 3307.3 | ug/L |
| | Mn | 55 | 5537452.116 | 17.492 | **2198.318663** | 142.99 | 6.5 | ug/L |
| | Fe | 54 | 74040.262 | 0.199 | **505.095403** | 39.24 | 7.8 | ug/L |
| | Fe | 57 | 27205.425 | 0.084 | **521.963139** | 39.12 | 7.5 | ug/L |
| | As | 75 | -356.357 | -0.000 | **0.199647** | 0.20 | 97.8 | ug/L |
| | Se | 77 | 2092.951 | -0.001 | **-15.957519** | 0.34 | 2.1 | ug/L |
| | Se | 82 | 73.170 | 0.000 | **3.252829** | 0.19 | 5.9 | ug/L |
| | Sr | 88 | 956800.457 | 1.445 | **165.266349** | 3.31 | 2.0 | ug/L |
| > | Y | 89 | 662024.881 | 662024.881 | | | | ug/L |
| | Mo | 95 | 27.333 | 0.000 | **0.562279** | 0.00 | 0.7 | ug/L |
| | Mo | 97 | 20.667 | 0.000 | **0.793116** | 0.02 | 2.0 | ug/L |
| | Mo | 98 | 37.854 | 0.000 | **0.796561** | 0.00 | 0.6 | ug/L |
| | Ag | 107 | 13.333 | 0.000 | **0.208688** | 0.00 | 1.4 | ug/L |
| | Ag | 109 | 4.667 | 0.000 | **0.249737** | 0.00 | 1.4 | ug/L |
| | Cd | 111 | 36529.420 | 0.271 | **165.577049** | 11.70 | 7.1 | ug/L |
| | Cd | 114 | 82170.111 | 0.609 | **164.475387** | 11.66 | 7.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 135194.129 | 135194.129 | | | | ug/L |
| \| | Sn | 120 | 362.616 | -0.001 | **0.606043** | 0.06 | 9.8 | ug/L |
| \| | Sb | 121 | 962.060 | 0.004 | **1.371192** | 0.04 | 3.1 | ug/L |
| L | Sb | 123 | 732.781 | 0.003 | **1.670611** | 0.08 | 5.0 | ug/L |
| ⌈ | Ba | 135 | 3632.192 | 0.023 | **19.980599** | 1.54 | 7.7 | ug/L |
| \| | Ba | 137 | 6221.851 | 0.039 | **19.520382** | 1.21 | 6.2 | ug/L |
| \| | Tb | 159 | 147954.123 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 158660.463 | 158660.463 | | | | ug/L |
| \| | Tl | 203 | 227.337 | 0.001 | **0.371069** | 0.02 | 6.0 | ug/L |
| \| | Tl | 205 | 587.356 | 0.004 | **0.356534** | 0.03 | 7.4 | ug/L |
| L | Pb | 208 | 347419.593 | 2.193 | **171.603805** | 13.45 | 7.8 | ug/L |
| | Kr | 83 | 38.000 | 17.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 88.654 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 148.848 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 71.227 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 83.965 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-30A**
Sample Date/Time: Monday, February 15, 2010 19:45:57
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-30A.160
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 33213.676 | 0.034 | | | | ug/L |
| | Li | 7 | 69146.828 | 0.218 | **75.273079** | 3.10 | 4.1 | ug/L |
| | Be | 9 | 2234.992 | 0.007 | **11.972165** | 0.07 | 0.6 | ug/L |
| | B | 11 | 34404.779 | 0.111 | **129.498840** | 4.27 | 3.3 | ug/L |
| | Na | 23 | 98570657.659 | 322.798 | **175258.590592** | 11896.25 | 6.8 | ug/L |
| | Mg | 24 | 11033117.272 | 36.140 | **27179.273975** | 2018.56 | 7.4 | ug/L |
| | Al | 27 | 21777541.915 | 71.312 | **16506.018875** | 1045.12 | 6.3 | ug/L |
| | K | 39 | 4890361.925 | 15.849 | **3797.096866** | 259.71 | 6.8 | ug/L |
| | Ca | 43 | 56004.505 | 0.183 | **12409.528068** | 514.84 | 4.1 | ug/L |
| > | Sc | 45 | 305801.957 | 305801.957 | | | | ug/L |
| | Ti | 49 | 772.706 | 0.001 | **3.282033** | 0.72 | 21.9 | ug/L |
| | Co | 59 | 95809.480 | 0.314 | **59.577767** | 3.15 | 5.3 | ug/L |
| | Ni | 60 | 24238.813 | 0.079 | **77.528963** | 3.59 | 4.6 | ug/L |
| | Ni | 62 | 3748.920 | 0.012 | **79.186093** | 8.28 | 10.5 | ug/L |
| | Cu | 63 | 7805.962 | 0.025 | **9.806301** | 0.57 | 5.8 | ug/L |
| | Cu | 65 | 3527.476 | 0.011 | **9.578888** | 0.80 | 8.4 | ug/L |
| | Zn | 66 | 52030.107 | 0.170 | **229.250158** | 11.58 | 5.1 | ug/L |
| | Zn | 67 | 9536.578 | 0.027 | **226.750463** | 5.38 | 2.4 | ug/L |
| | Zn | 68 | 37278.222 | 0.122 | **229.507289** | 15.57 | 6.8 | ug/L |
| | V | 51 | 5478.219 | 0.018 | **3.507298** | 0.24 | 7.0 | ug/L |
| | Cr | 52 | 8449.977 | 0.018 | **3.800549** | 0.43 | 11.3 | ug/L |
| | Cr | 53 | 14833.630 | 0.005 | **-0.288371** | 4.00 | 1386.9 | ug/L |
| | Mn | 55 | 1768829.297 | 5.792 | **727.981765** | 47.14 | 6.5 | ug/L |
| | Fe | 54 | 2152010.815 | 7.012 | **17737.362958** | 1142.05 | 6.4 | ug/L |
| | Fe | 57 | 842027.206 | 2.756 | **17099.379420** | 1138.37 | 6.7 | ug/L |
| | As | 75 | -440.280 | -0.000 | **-0.215930** | 0.25 | 115.1 | ug/L |
| | Se | 77 | 1887.566 | -0.000 | **-9.217563** | 3.77 | 40.9 | ug/L |
| | Se | 82 | 32.741 | 0.000 | **2.484843** | 0.13 | 5.2 | ug/L |
| | Sr | 88 | 407801.210 | 0.754 | **86.515177** | 2.74 | 3.2 | ug/L |
| > | Y | 89 | 540847.950 | 540847.950 | | | | ug/L |
| | Mo | 95 | 18.000 | 0.000 | **0.555100** | 0.02 | 4.0 | ug/L |
| | Mo | 97 | 8.667 | -0.000 | **0.770136** | 0.02 | 2.3 | ug/L |
| | Mo | 98 | 25.187 | -0.000 | **0.790117** | 0.01 | 1.9 | ug/L |
| | Ag | 107 | 14.000 | 0.000 | **0.209470** | 0.00 | 2.2 | ug/L |
| | Ag | 109 | 13.333 | 0.000 | **0.259778** | 0.01 | 3.5 | ug/L |
| | Cd | 111 | 18964.858 | 0.141 | **86.512982** | 3.39 | 3.9 | ug/L |
| | Cd | 114 | 42671.575 | 0.318 | **86.107071** | 4.09 | 4.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 134354.089 | 134354.089 | | | | ug/L |
| \| | Sn | 120 | 335.931 | -0.001 | **0.577318** | 0.03 | 5.4 | ug/L |
| \| | Sb | 121 | 282.005 | -0.001 | **0.289999** | 0.02 | 5.6 | ug/L |
| \| | Sb | 123 | 215.914 | -0.001 | **0.596576** | 0.08 | 12.6 | ug/L |
| \| | Ba | 135 | 1734.196 | 0.011 | **10.295767** | 0.52 | 5.1 | ug/L |
| \| | Ba | 137 | 3064.611 | 0.020 | **10.157069** | 0.42 | 4.1 | ug/L |
| \| | Tb | 159 | 143202.488 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 153429.985 | 153429.985 | | | | ug/L |
| \| | Tl | 203 | 236.670 | 0.002 | **0.399413** | 0.05 | 13.6 | ug/L |
| \| | Tl | 205 | 564.688 | 0.004 | **0.354391** | 0.05 | 15.1 | ug/L |
| \| | Pb | 208 | 5187.340 | 0.034 | **2.559267** | 0.15 | 5.8 | ug/L |
| | Kr | 83 | 24.533 | 4.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 85.538 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 121.603 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 70.785 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.197 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 19:48:39
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.161
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 32029.241 | 0.030 | | | | ug/L |
| \| | Li | 7 | 129993.761 | 0.416 | **142.694892** | 3.28 | 2.3 | ug/L |
| \| | Be | 9 | 27402.740 | 0.089 | **130.855841** | 2.39 | 1.8 | ug/L |
| \| | B | 11 | 33564.412 | 0.108 | **126.096326** | 0.17 | 0.1 | ug/L |
| \| | Na | 23 | 3336540.848 | 10.865 | **5904.658705** | 61.58 | 1.0 | ug/L |
| \| | Mg | 24 | 2491754.473 | 8.140 | **6124.889209** | 147.73 | 2.4 | ug/L |
| \| | Al | 27 | 7844055.139 | 25.621 | **5940.124309** | 66.81 | 1.1 | ug/L |
| \| | K | 39 | 8432001.339 | 27.384 | **6564.227379** | 426.83 | 6.5 | ug/L |
| \| | Ca | 43 | 22766.991 | 0.074 | **5012.786842** | 182.73 | 3.6 | ug/L |
| \| > | Sc | 45 | 306156.173 | 306156.173 | | | | ug/L |
| \| | Ti | 49 | 10726.147 | 0.034 | **94.767739** | 5.00 | 5.3 | ug/L |
| \| | Co | 59 | 148150.811 | 0.484 | **91.995570** | 2.44 | 2.7 | ug/L |
| \| | Ni | 60 | 28566.955 | 0.093 | **91.275831** | 2.35 | 2.6 | ug/L |
| \| | Ni | 62 | 4397.257 | 0.014 | **92.721946** | 1.69 | 1.8 | ug/L |
| \| | Cu | 63 | 68529.450 | 0.224 | **91.214389** | 3.67 | 4.0 | ug/L |
| \| | Cu | 65 | 32542.092 | 0.106 | **91.793927** | 4.53 | 4.9 | ug/L |
| \| | Zn | 66 | 20711.883 | 0.067 | **90.621688** | 4.39 | 4.8 | ug/L |
| \| | Zn | 67 | 4864.206 | 0.012 | **95.577955** | 5.97 | 6.2 | ug/L |
| \| | Zn | 68 | 15082.781 | 0.049 | **91.921414** | 3.17 | 3.4 | ug/L |
| \| | V | 51 | 162931.649 | 0.533 | **97.168657** | 4.79 | 4.9 | ug/L |
| \| | Cr | 52 | 136830.169 | 0.437 | **94.762433** | 3.52 | 3.7 | ug/L |
| \| | Cr | 53 | 28325.398 | 0.049 | **84.263561** | 4.08 | 4.8 | ug/L |
| \| | Mn | 55 | 224052.127 | 0.731 | **92.107820** | 3.05 | 3.3 | ug/L |
| \| | Fe | 54 | 569108.059 | 1.824 | **4616.012942** | 167.73 | 3.6 | ug/L |
| ⌊ | Fe | 57 | 227853.654 | 0.743 | **4607.797693** | 149.60 | 3.2 | ug/L |
| ⌈ | As | 75 | 25428.461 | 0.070 | **106.562831** | 6.16 | 5.8 | ug/L |
| \| | Se | 77 | 10195.421 | 0.024 | **494.538841** | 14.64 | 3.0 | ug/L |
| \| | Se | 82 | 12317.022 | 0.034 | **518.792266** | 19.29 | 3.7 | ug/L |
| \| | Sr | 88 | 320679.157 | 0.876 | **100.476462** | 4.17 | 4.1 | ug/L |
| \| > | Y | 89 | 365866.072 | 365866.072 | | | | ug/L |
| \| | Mo | 95 | 39209.721 | 0.107 | **100.143209** | 2.94 | 2.9 | ug/L |
| \| | Mo | 97 | 24034.159 | 0.066 | **99.998261** | 1.66 | 1.7 | ug/L |
| ⌊ | Mo | 98 | 60887.648 | 0.166 | **99.317053** | 2.11 | 2.1 | ug/L |
| ⌈ | Ag | 107 | 102478.188 | 0.712 | **102.701554** | 1.89 | 1.8 | ug/L |
| \| | Ag | 109 | 95874.540 | 0.667 | **101.825239** | 2.40 | 2.4 | ug/L |
| \| | Cd | 111 | 24026.646 | 0.167 | **102.277554** | 3.23 | 3.2 | ug/L |
| \| | Cd | 114 | 53618.251 | 0.373 | **100.896649** | 2.79 | 2.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 143856.904 | 143856.904 | | | | ug/L |
| \| | Sn | 120 | 93363.490 | 0.646 | **99.864419** | 3.40 | 3.4 | ug/L |
| \| | Sb | 121 | 65172.520 | 0.450 | **97.408717** | 4.08 | 4.2 | ug/L |
| \| | Sb | 123 | 49780.619 | 0.344 | **97.502566** | 2.80 | 2.9 | ug/L |
| \| | Ba | 135 | 17092.992 | 0.112 | **93.990994** | 4.65 | 4.9 | ug/L |
| \| | Ba | 137 | 29457.667 | 0.192 | **93.940968** | 3.59 | 3.8 | ug/L |
| \| | Tb | 159 | 143413.181 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 153081.277 | 153081.277 | | | | ug/L |
| \| | Tl | 203 | 64521.146 | 0.422 | **108.690583** | 6.01 | 5.5 | ug/L |
| \| | Tl | 205 | 156029.616 | 1.020 | **108.424527** | 5.77 | 5.3 | ug/L |
| \| | Pb | 208 | 217148.177 | 1.419 | **110.990657** | 3.62 | 3.3 | ug/L |
| | Kr | 83 | 17.000 | -3.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 142.695 | | |
| Be | 9 | 130.856 | | |
| B | 11 | 126.096 | | |
| Na | 23 | 118.093 | | |
| Mg | 24 | 122.498 | | |
| Al | 27 | 116.473 | | |
| K | 39 | 131.285 | | |
| Ca | 43 | 100.256 | | |
| Sc | 45 | | 85.637 | |
| Ti | 49 | 94.768 | | |
| Co | 59 | 91.996 | | |
| Ni | 60 | 91.276 | | |
| Ni | 62 | 92.722 | | |
| Cu | 63 | 91.214 | | |
| Cu | 65 | 91.794 | | |
| Zn | 66 | 90.622 | | |
| Zn | 67 | 95.578 | | |
| Zn | 68 | 91.921 | | |
| V | 51 | 97.169 | | |
| Cr | 52 | 94.762 | | |
| Cr | 53 | 84.264 | | |
| Mn | 55 | 92.108 | | |
| Fe | 54 | 92.320 | | |
| Fe | 57 | 92.156 | | |
| As | 75 | 106.563 | | |
| Se | 77 | 98.908 | | |
| Se | 82 | 103.758 | | |
| Sr | 88 | 100.476 | | |
| Y | 89 | | 82.260 | |
| Mo | 95 | 100.143 | | |
| Mo | 97 | 99.998 | | |
| Mo | 98 | 99.317 | | |
| Ag | 107 | 102.702 | | |
| Ag | 109 | 101.825 | | |
| Cd | 111 | 102.278 | | |
| Cd | 114 | 100.897 | | |
| In | 115 | | 75.791 | |
| Sn | 120 | 99.864 | | |
| Sb | 121 | 97.409 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 97.503 | |
| Ba | 135 | 93.991 | |
| Ba | 137 | 93.941 | |
| Tb | 159 | | |
| Ho | 165 | | 81.012 |
| Tl | 203 | 108.691 | |
| Tl | 205 | 108.425 | |
| Pb | 208 | 110.991 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 19:51:19
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.162
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 36045.098 | 0.043 | | | | ug/L |
| | Li | 7 | 3900.323 | 0.004 | **2.660900** | 0.15 | 5.8 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **1.450645** | 0.01 | 0.7 | ug/L |
| | B | 11 | 1746.199 | 0.004 | **6.498381** | 0.63 | 9.7 | ug/L |
| | Na | 23 | 20394.278 | 0.033 | **23.567308** | 6.40 | 27.2 | ug/L |
| | Mg | 24 | 1300.112 | 0.004 | **7.440830** | 0.51 | 6.8 | ug/L |
| | Al | 27 | 4252.851 | 0.012 | **17.891338** | 0.36 | 2.0 | ug/L |
| | K | 39 | 58925.255 | 0.028 | **1.511738** | 2.10 | 139.1 | ug/L |
| | Ca | 43 | 169.335 | 0.000 | **-0.963486** | 9.82 | 1019.5 | ug/L |
| > | Sc | 45 | 306090.714 | 306090.714 | | | | ug/L |
| | Ti | 49 | 352.675 | -0.000 | **-0.602258** | 0.29 | 48.6 | ug/L |
| | Co | 59 | 42.667 | 0.000 | **-0.062096** | 0.00 | 2.3 | ug/L |
| | Ni | 60 | 14.000 | 0.000 | **-0.373354** | 0.00 | 0.1 | ug/L |
| | Ni | 62 | 12.000 | -0.000 | **0.371783** | 0.09 | 23.2 | ug/L |
| | Cu | 63 | 351.341 | 0.001 | **-0.209966** | 0.04 | 18.5 | ug/L |
| | Cu | 65 | 145.335 | 0.000 | **-0.035228** | 0.10 | 284.1 | ug/L |
| | Zn | 66 | 129.334 | 0.000 | **-0.172797** | 0.09 | 51.1 | ug/L |
| | Zn | 67 | 1561.493 | 0.001 | **3.129837** | 3.40 | 108.6 | ug/L |
| | Zn | 68 | 116.001 | -0.000 | **-0.489553** | 0.11 | 22.1 | ug/L |
| | V | 51 | 1245.100 | 0.004 | **0.983865** | 0.27 | 27.1 | ug/L |
| | Cr | 52 | 2807.846 | -0.000 | **-0.213287** | 0.04 | 20.9 | ug/L |
| | Cr | 53 | 14072.864 | 0.002 | **-5.226315** | 1.51 | 28.8 | ug/L |
| | Mn | 55 | 584.689 | 0.001 | **0.363721** | 0.02 | 4.8 | ug/L |
| | Fe | 54 | 9622.861 | -0.003 | **-6.981008** | 0.28 | 4.0 | ug/L |
| | Fe | 57 | 590.689 | 0.000 | **0.543976** | 0.71 | 131.3 | ug/L |
| | As | 75 | -347.463 | -0.001 | **-0.429396** | 0.30 | 69.4 | ug/L |
| | Se | 77 | 1436.134 | 0.000 | **0.015260** | 3.77 | 24688.9 | ug/L |
| | Se | 82 | 4.020 | 0.000 | **1.725182** | 0.14 | 8.4 | ug/L |
| | Sr | 88 | 136.668 | 0.000 | **0.640770** | 0.00 | 0.3 | ug/L |
| > | Y | 89 | 364920.098 | 364920.098 | | | | ug/L |
| | Mo | 95 | 66.000 | 0.000 | **0.692011** | 0.02 | 2.2 | ug/L |
| | Mo | 97 | 40.667 | 0.000 | **0.914328** | 0.00 | 0.3 | ug/L |
| | Mo | 98 | 95.261 | 0.000 | **0.917207** | 0.02 | 2.0 | ug/L |
| | Ag | 107 | 14.000 | 0.000 | **0.208625** | 0.00 | 0.1 | ug/L |
| | Ag | 109 | 6.000 | 0.000 | **0.250922** | 0.00 | 1.7 | ug/L |
| | Cd | 111 | 4.167 | 0.000 | **0.277375** | 0.01 | 4.2 | ug/L |
| | Cd | 114 | 13.007 | 0.000 | **0.552541** | 0.00 | 0.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 141899.067 | 141899.067 | | | | ug/L |
| \| | Sn | 120 | 475.280 | 0.000 | **0.707141** | 0.04 | 5.0 | ug/L |
| \| | Sb | 121 | 1334.116 | 0.006 | **1.862245** | 0.20 | 10.7 | ug/L |
| L | Sb | 123 | 996.060 | 0.005 | **2.118457** | 0.15 | 7.0 | ug/L |
| ⌈ | Ba | 135 | 9.333 | 0.000 | **0.919042** | 0.03 | 3.0 | ug/L |
| \| | Ba | 137 | 16.000 | 0.000 | **0.504920** | 0.03 | 5.0 | ug/L |
| \| | Tb | 159 | 139321.076 | -0.020 | | | | ug/L |
| \|> | Ho | 165 | 149836.892 | 149836.892 | | | | ug/L |
| \| | Tl | 203 | 36.667 | 0.000 | **0.064741** | 0.02 | 38.3 | ug/L |
| \| | Tl | 205 | 89.334 | 0.001 | **0.026009** | 0.00 | 15.9 | ug/L |
| L | Pb | 208 | 104.667 | 0.001 | **-0.033983** | 0.00 | 12.5 | ug/L |
| | Kr | 83 | 14.533 | -6.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 85.618 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 82.047 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 74.760 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 79.295 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-31A**
Sample Date/Time: Monday, February 15, 2010 19:54:02
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-31A.163
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23669.793 | -0.004 | | | | ug/L |
| | Li | 7 | 220602.814 | 0.653 | **223.283961** | 6.03 | 2.7 | ug/L |
| | Be | 9 | 4790.159 | 0.014 | **22.180287** | 0.65 | 2.9 | ug/L |
| | B | 11 | 82749.518 | 0.247 | **285.570325** | 3.37 | 1.2 | ug/L |
| | Na | 23 | 210910842.022 | 632.609 | **343460.737617** | 5599.44 | 1.6 | ug/L |
| | Mg | 24 | 31633047.878 | 94.895 | **71358.714664** | 992.40 | 1.4 | ug/L |
| | Al | 27 | 165759389.696 | 497.263 | **115007.172051** | 3900.21 | 3.4 | ug/L |
| | K | 39 | 9043123.162 | 26.958 | **6462.013260** | 144.90 | 2.2 | ug/L |
| | Ca | 43 | 352986.314 | 1.058 | **71866.499101** | 2421.99 | 3.4 | ug/L |
| > | Sc | 45 | 333369.320 | 333369.320 | | | | ug/L |
| | Ti | 49 | 4898.897 | 0.013 | **37.510675** | 2.84 | 7.6 | ug/L |
| | Co | 59 | 227217.740 | 0.682 | **129.591460** | 2.91 | 2.2 | ug/L |
| | Ni | 60 | 51112.632 | 0.153 | **150.224022** | 2.87 | 1.9 | ug/L |
| | Ni | 62 | 8183.018 | 0.024 | **158.419908** | 5.04 | 3.2 | ug/L |
| | Cu | 63 | 3099.291 | 0.009 | **3.134387** | 0.05 | 1.6 | ug/L |
| | Cu | 65 | 1752.200 | 0.005 | **4.111105** | 0.21 | 5.2 | ug/L |
| | Zn | 66 | 54093.643 | 0.162 | **218.394519** | 7.55 | 3.5 | ug/L |
| | Zn | 67 | 9941.087 | 0.026 | **215.029735** | 6.67 | 3.1 | ug/L |
| | Zn | 68 | 37567.551 | 0.112 | **211.814381** | 6.43 | 3.0 | ug/L |
| | V | 51 | 149620.857 | 0.449 | **81.953063** | 2.64 | 3.2 | ug/L |
| | Cr | 52 | 64658.727 | 0.184 | **39.870258** | 1.15 | 2.9 | ug/L |
| | Cr | 53 | 18490.206 | 0.011 | **13.011252** | 2.36 | 18.1 | ug/L |
| | Mn | 55 | 9471245.960 | 28.410 | **3570.328713** | 108.35 | 3.0 | ug/L |
| | Fe | 54 | 19811785.832 | 59.394 | **150226.483661** | 3983.89 | 2.7 | ug/L |
| | Fe | 57 | 8145939.043 | 24.433 | **151618.854699** | 3789.91 | 2.5 | ug/L |
| | As | 75 | 7650.883 | 0.005 | **7.587431** | 0.11 | 1.4 | ug/L |
| | Se | 77 | 2238.993 | -0.002 | **-55.092670** | 1.24 | 2.2 | ug/L |
| | Se | 82 | 80.451 | 0.000 | **2.254618** | 0.02 | 1.0 | ug/L |
| | Sr | 88 | 2934891.192 | 1.660 | **189.746089** | 2.47 | 1.3 | ug/L |
| > | Y | 89 | 1767615.389 | 1767615.389 | | | | ug/L |
| | Mo | 95 | 505.350 | 0.000 | **0.789553** | 0.01 | 1.4 | ug/L |
| | Mo | 97 | 325.340 | 0.000 | **1.024460** | 0.03 | 2.9 | ug/L |
| | Mo | 98 | 823.825 | 0.000 | **1.038828** | 0.01 | 0.8 | ug/L |
| | Ag | 107 | 88.667 | 0.001 | **0.272085** | 0.02 | 5.9 | ug/L |
| | Ag | 109 | 24.000 | 0.000 | **0.266628** | 0.00 | 1.2 | ug/L |
| | Cd | 111 | 842.713 | 0.005 | **3.383467** | 0.15 | 4.4 | ug/L |
| | Cd | 114 | 1914.661 | 0.012 | **3.655832** | 0.09 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 164877.236 | 164877.236 | | | | ug/L |
| \| | Sn | 120 | 517.198 | -0.000 | **0.674928** | 0.03 | 4.1 | ug/L |
| \| | Sb | 121 | 658.028 | 0.001 | **0.697815** | 0.04 | 5.1 | ug/L |
| L | Sb | 123 | 547.176 | 0.001 | **1.078349** | 0.06 | 5.3 | ug/L |
| ⌈ | Ba | 135 | 3013.924 | 0.013 | **11.608530** | 0.57 | 4.9 | ug/L |
| \| | Ba | 137 | 5215.104 | 0.022 | **11.278063** | 0.57 | 5.1 | ug/L |
| \| | Tb | 159 | 226963.841 | 0.020 | | | | ug/L |
| \|> | Ho | 165 | 234033.259 | 234033.259 | | | | ug/L |
| \| | Tl | 203 | 84.000 | 0.000 | **0.093826** | 0.01 | 9.7 | ug/L |
| \| | Tl | 205 | 192.002 | 0.001 | **0.049956** | 0.01 | 23.8 | ug/L |
| L | Pb | 208 | 15275.220 | 0.065 | **5.021686** | 0.21 | 4.1 | ug/L |
| | Kr | 83 | 95.867 | 75.334 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.249 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 397.425 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 86.866 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 123.853 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-32A**
Sample Date/Time: Monday, February 15, 2010 19:56:42
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-32A.164
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 33545.624 | 0.035 | | | | ug/L |
| | Li | 7 | 34540.055 | 0.104 | **36.671394** | 1.76 | 4.8 | ug/L |
| | Be | 9 | 11.333 | 0.000 | **1.457625** | 0.05 | 3.4 | ug/L |
| | B | 11 | 14300.635 | 0.045 | **53.683189** | 3.98 | 7.4 | ug/L |
| | Na | 23 | 112795664.890 | 368.122 | **199866.031275** | 6807.68 | 3.4 | ug/L |
| | Mg | 24 | 34636742.134 | 113.064 | **85020.534309** | 3173.97 | 3.7 | ug/L |
| | Al | 27 | 57628.550 | 0.186 | **58.203291** | 5.37 | 9.2 | ug/L |
| | K | 39 | 1870134.566 | 5.942 | **1420.360738** | 80.27 | 5.7 | ug/L |
| | Ca | 43 | 486301.573 | 1.587 | **107763.438926** | 4451.28 | 4.1 | ug/L |
| > | Sc | 45 | 306553.009 | 306553.009 | | | | ug/L |
| | Ti | 49 | 567.354 | 0.000 | **1.365385** | 0.12 | 9.0 | ug/L |
| | Co | 59 | 1177.424 | 0.004 | **0.642717** | 0.04 | 6.8 | ug/L |
| | Ni | 60 | 562.687 | 0.002 | **1.386640** | 0.09 | 6.2 | ug/L |
| | Ni | 62 | 41.333 | 0.000 | **0.987074** | 0.19 | 18.8 | ug/L |
| | Cu | 63 | 1060.074 | 0.003 | **0.741428** | 0.19 | 25.2 | ug/L |
| | Cu | 65 | 222.670 | 0.001 | **0.184518** | 0.11 | 56.9 | ug/L |
| | Zn | 66 | 937.391 | 0.003 | **3.387141** | 0.24 | 7.1 | ug/L |
| | Zn | 67 | 2263.000 | 0.004 | **22.732790** | 3.32 | 14.6 | ug/L |
| | Zn | 68 | 2112.291 | 0.006 | **11.830841** | 1.04 | 8.8 | ug/L |
| | V | 51 | 2491.211 | 0.008 | **1.728487** | 0.48 | 27.8 | ug/L |
| | Cr | 52 | 2939.895 | 0.000 | **-0.122060** | 0.05 | 43.8 | ug/L |
| | Cr | 53 | 13714.884 | 0.001 | **-7.578713** | 1.48 | 19.5 | ug/L |
| | Mn | 55 | 185433.735 | 0.605 | **76.217912** | 4.37 | 5.7 | ug/L |
| | Fe | 54 | 19474.570 | 0.029 | **74.424990** | 13.52 | 18.2 | ug/L |
| | Fe | 57 | 8677.567 | 0.027 | **164.469628** | 13.56 | 8.2 | ug/L |
| | As | 75 | 50.526 | 0.001 | **1.241207** | 0.67 | 53.7 | ug/L |
| | Se | 77 | 2447.056 | 0.003 | **56.500345** | 8.71 | 15.4 | ug/L |
| | Se | 82 | 157.100 | 0.000 | **8.134603** | 0.66 | 8.1 | ug/L |
| | Sr | 88 | 3429306.191 | 9.348 | **1065.743713** | 76.72 | 7.2 | ug/L |
| > | Y | 89 | 367486.155 | 367486.155 | | | | ug/L |
| | Mo | 95 | 538.019 | 0.001 | **1.887192** | 0.10 | 5.4 | ug/L |
| | Mo | 97 | 342.674 | 0.001 | **2.158266** | 0.14 | 6.4 | ug/L |
| | Mo | 98 | 791.082 | 0.002 | **2.039042** | 0.06 | 3.1 | ug/L |
| | Ag | 107 | 10.667 | 0.000 | **0.205373** | 0.01 | 3.7 | ug/L |
| | Ag | 109 | 8.000 | 0.000 | **0.253113** | 0.00 | 1.0 | ug/L |
| | Cd | 111 | 164.668 | 0.001 | **0.965848** | 0.07 | 7.2 | ug/L |
| | Cd | 114 | 345.693 | 0.002 | **1.181369** | 0.06 | 4.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 142791.761 | 142791.761 | | | | ug/L |
| \| | Sn | 120 | 383.925 | -0.001 | **0.605419** | 0.02 | 3.3 | ug/L |
| \| | Sb | 121 | 1260.103 | 0.006 | **1.742922** | 0.16 | 9.2 | ug/L |
| \| | Sb | 123 | 946.553 | 0.004 | **2.012314** | 0.14 | 7.0 | ug/L |
| \| | Ba | 135 | 114768.862 | 0.737 | **615.290498** | 32.44 | 5.3 | ug/L |
| \| | Ba | 137 | 197653.456 | 1.269 | **616.942659** | 35.62 | 5.8 | ug/L |
| \| | Tb | 159 | 147595.303 | -0.003 | | | | ug/L |
| \|> | Ho | 165 | 155877.039 | 155877.039 | | | | ug/L |
| \| | Tl | 203 | 22.667 | 0.000 | **0.038836** | 0.01 | 20.7 | ug/L |
| \| | Tl | 205 | 44.667 | 0.000 | **-0.007090** | 0.01 | 95.5 | ug/L |
| \| | Pb | 208 | 36629.326 | 0.235 | **18.327615** | 0.99 | 5.4 | ug/L |
| | Kr | 83 | 21.533 | 1.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 85.748 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 82.624 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 75.230 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 82.492 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-33A**
Sample Date/Time: Monday, February 15, 2010 19:59:23
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-33A.165
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 32699.157 | 0.035 | | | | ug/L |
| | Li | 7 | 89154.636 | 0.290 | **99.842871** | 3.29 | 3.3 | ug/L |
| | Be | 9 | 2473.064 | 0.008 | **13.381214** | 0.21 | 1.6 | ug/L |
| | B | 11 | 10359.639 | 0.033 | **39.859500** | 1.06 | 2.7 | ug/L |
| | Na | 23 | 44800597.486 | 149.991 | **81438.607525** | 1907.78 | 2.3 | ug/L |
| | Mg | 24 | 13053777.176 | 43.711 | **32871.811122** | 722.60 | 2.2 | ug/L |
| | Al | 27 | 9965098.051 | 33.369 | **7731.779737** | 122.87 | 1.6 | ug/L |
| | K | 39 | 3124975.953 | 10.300 | **2465.754769** | 30.76 | 1.2 | ug/L |
| | Ca | 43 | 244389.262 | 0.818 | **55546.222440** | 1830.36 | 3.3 | ug/L |
| > | Sc | 45 | 298652.133 | 298652.133 | | | | ug/L |
| | Ti | 49 | 907.387 | 0.002 | **4.709439** | 0.69 | 14.7 | ug/L |
| | Co | 59 | 53509.536 | 0.179 | **34.011322** | 1.22 | 3.6 | ug/L |
| | Ni | 60 | 10045.890 | 0.034 | **32.637592** | 0.88 | 2.7 | ug/L |
| | Ni | 62 | 1608.168 | 0.005 | **34.853002** | 2.07 | 5.9 | ug/L |
| | Cu | 63 | 656.695 | 0.002 | **0.221799** | 0.06 | 27.7 | ug/L |
| | Cu | 65 | 342.674 | 0.001 | **0.548338** | 0.13 | 23.7 | ug/L |
| | Zn | 66 | 17127.050 | 0.057 | **76.711972** | 2.28 | 3.0 | ug/L |
| | Zn | 67 | 4326.551 | 0.011 | **83.633122** | 6.47 | 7.7 | ug/L |
| | Zn | 68 | 12024.060 | 0.040 | **74.911845** | 2.64 | 3.5 | ug/L |
| | V | 51 | 43479.897 | 0.146 | **26.762191** | 1.60 | 6.0 | ug/L |
| | Cr | 52 | 33684.303 | 0.103 | **22.270605** | 1.08 | 4.9 | ug/L |
| | Cr | 53 | 17383.624 | 0.014 | **18.306455** | 3.10 | 16.9 | ug/L |
| | Mn | 55 | 3397351.333 | 11.379 | **1430.150191** | 59.79 | 4.2 | ug/L |
| | Fe | 54 | 2237475.891 | 7.460 | **18870.193014** | 856.41 | 4.5 | ug/L |
| | Fe | 57 | 876700.490 | 2.935 | **18211.757070** | 745.88 | 4.1 | ug/L |
| | As | 75 | -216.164 | -0.000 | **0.373720** | 0.69 | 185.8 | ug/L |
| | Se | 77 | 1994.259 | 0.000 | **-0.837173** | 3.71 | 443.2 | ug/L |
| | Se | 82 | 20.041 | 0.000 | **2.155947** | 0.10 | 4.8 | ug/L |
| | Sr | 88 | 1216579.275 | 2.375 | **271.209760** | 3.67 | 1.4 | ug/L |
| > | Y | 89 | 512218.098 | 512218.098 | | | | ug/L |
| | Mo | 95 | 26.000 | 0.000 | **0.571129** | 0.01 | 2.2 | ug/L |
| | Mo | 97 | 11.333 | 0.000 | **0.779419** | 0.01 | 0.9 | ug/L |
| | Mo | 98 | 29.708 | 0.000 | **0.797061** | 0.01 | 1.0 | ug/L |
| | Ag | 107 | 15.333 | 0.000 | **0.210636** | 0.01 | 3.2 | ug/L |
| | Ag | 109 | 4.667 | 0.000 | **0.249736** | 0.01 | 2.3 | ug/L |
| | Cd | 111 | 583.189 | 0.004 | **2.876820** | 0.06 | 2.0 | ug/L |
| | Cd | 114 | 1322.503 | 0.010 | **3.144822** | 0.05 | 1.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 136068.404 | 136068.404 | | | | ug/L |
| \| | Sn | 120 | 345.316 | -0.001 | **0.582653** | 0.04 | 7.2 | ug/L |
| \| | Sb | 121 | 284.005 | -0.001 | **0.287095** | 0.04 | 15.1 | ug/L |
| \| | Sb | 123 | 258.419 | -0.001 | **0.678151** | 0.11 | 15.7 | ug/L |
| \| | Ba | 135 | 2056.942 | 0.013 | **12.003496** | 0.59 | 4.9 | ug/L |
| \| | Ba | 137 | 3444.105 | 0.022 | **11.316257** | 0.52 | 4.6 | ug/L |
| \| | Tb | 159 | 143879.378 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 154062.527 | 154062.527 | | | | ug/L |
| \| | Tl | 203 | 22.667 | 0.000 | **0.039352** | 0.01 | 18.9 | ug/L |
| \| | Tl | 205 | 44.667 | 0.000 | **-0.006610** | 0.00 | 52.8 | ug/L |
| \| | Pb | 208 | 2879.541 | 0.019 | **1.374625** | 0.04 | 2.5 | ug/L |
| | Kr | 83 | 28.800 | 8.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 83.538 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 115.165 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 71.688 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 81.532 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-34A**
Sample Date/Time: Monday, February 15, 2010 20:02:04
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-34A.166
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 34634.971 | 0.046 | | | | ug/L |
| | Li | 7 | 45893.889 | 0.152 | **52.900928** | 2.52 | 4.8 | ug/L |
| | Be | 9 | 12.667 | 0.000 | **1.467441** | 0.01 | 0.4 | ug/L |
| | B | 11 | 19238.029 | 0.066 | **77.341352** | 2.51 | 3.2 | ug/L |
| | Na | 23 | 45653163.601 | 159.608 | **86659.686349** | 3276.95 | 3.8 | ug/L |
| | Mg | 24 | 9811884.624 | 34.305 | **25799.363508** | 906.57 | 3.5 | ug/L |
| | Al | 27 | 88721.104 | 0.308 | **86.449517** | 4.85 | 5.6 | ug/L |
| | K | 39 | 3349955.724 | 11.555 | **2766.779607** | 180.11 | 6.5 | ug/L |
| | Ca | 43 | 175827.370 | 0.614 | **41702.263189** | 1195.08 | 2.9 | ug/L |
| > | Sc | 45 | 286138.853 | 286138.853 | | | | ug/L |
| | Ti | 49 | 580.689 | 0.001 | **1.864076** | 0.23 | 12.5 | ug/L |
| | Co | 59 | 169.335 | 0.001 | **0.024217** | 0.03 | 111.8 | ug/L |
| | Ni | 60 | 180.002 | 0.001 | **0.200700** | 0.11 | 52.8 | ug/L |
| | Ni | 62 | 28.000 | 0.000 | **0.751549** | 0.19 | 25.1 | ug/L |
| | Cu | 63 | 637.360 | 0.002 | **0.233264** | 0.04 | 16.7 | ug/L |
| | Cu | 65 | 170.669 | 0.000 | **0.070915** | 0.08 | 109.1 | ug/L |
| | Zn | 66 | 412.011 | 0.001 | **1.203596** | 0.21 | 17.3 | ug/L |
| | Zn | 67 | 2029.601 | 0.003 | **20.213082** | 1.51 | 7.5 | ug/L |
| | Zn | 68 | 1465.473 | 0.005 | **8.478723** | 0.61 | 7.2 | ug/L |
| | V | 51 | 5324.548 | 0.019 | **3.636227** | 0.54 | 14.7 | ug/L |
| | Cr | 52 | 2995.250 | 0.001 | **0.068045** | 0.08 | 124.0 | ug/L |
| | Cr | 53 | 13763.638 | 0.004 | **-1.095126** | 3.20 | 292.0 | ug/L |
| | Mn | 55 | 3619.521 | 0.012 | **1.714188** | 0.13 | 7.6 | ug/L |
| | Fe | 54 | 17329.822 | 0.026 | **66.806074** | 7.65 | 11.5 | ug/L |
| | Fe | 57 | 4632.728 | 0.014 | **89.061014** | 1.56 | 1.8 | ug/L |
| | As | 75 | -375.605 | -0.001 | **-0.678464** | 0.09 | 12.7 | ug/L |
| | Se | 77 | 1886.899 | 0.002 | **34.954516** | 16.09 | 46.0 | ug/L |
| | Se | 82 | 17.613 | 0.000 | **2.361260** | 0.09 | 4.0 | ug/L |
| | Sr | 88 | 929840.054 | 2.766 | **315.796204** | 23.27 | 7.4 | ug/L |
| > | Y | 89 | 336899.903 | 336899.903 | | | | ug/L |
| | Mo | 95 | 998.065 | 0.003 | **3.284744** | 0.24 | 7.2 | ug/L |
| | Mo | 97 | 618.025 | 0.002 | **3.523977** | 0.20 | 5.8 | ug/L |
| | Mo | 98 | 1461.472 | 0.004 | **3.340138** | 0.27 | 8.2 | ug/L |
| | Ag | 107 | 2.667 | -0.000 | **0.197275** | 0.00 | 1.6 | ug/L |
| | Ag | 109 | 4.667 | 0.000 | **0.249792** | 0.01 | 2.0 | ug/L |
| | Cd | 111 | 7.000 | 0.000 | **0.292138** | 0.01 | 2.8 | ug/L |
| | Cd | 114 | 11.878 | 0.000 | **0.552074** | 0.01 | 1.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 130989.301 | 130989.301 | | | | ug/L |
| \| | Sn | 120 | 344.615 | -0.001 | **0.596417** | 0.02 | 2.9 | ug/L |
| \| | Sb | 121 | 301.339 | -0.001 | **0.334351** | 0.04 | 13.2 | ug/L |
| \| | Sb | 123 | 261.417 | -0.000 | **0.706581** | 0.06 | 8.3 | ug/L |
| \| | Ba | 135 | 70205.891 | 0.483 | **403.532937** | 23.18 | 5.7 | ug/L |
| \| | Ba | 137 | 121856.931 | 0.838 | **407.584262** | 21.01 | 5.2 | ug/L |
| \| | Tb | 159 | 135725.750 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 145464.880 | 145464.880 | | | | ug/L |
| \| | Tl | 203 | 4.000 | -0.000 | **0.008521** | 0.01 | 74.0 | ug/L |
| \| | Tl | 205 | 9.333 | 0.000 | **-0.030706** | 0.01 | 18.7 | ug/L |
| \| | Pb | 208 | 724.014 | 0.005 | **0.301577** | 0.05 | 17.0 | ug/L |
| | Kr | 83 | 15.333 | -5.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 80.038 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 75.747 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 69.012 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 76.982 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-35A**
Sample Date/Time: Monday, February 15, 2010 20:04:44
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\10020428-35A.167
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35429.271 | 0.052 | | | | ug/L |
| | Li | 7 | 12543.553 | 0.036 | **13.576991** | 0.19 | 1.4 | ug/L |
| | Be | 9 | 9.333 | 0.000 | **1.451623** | 0.01 | 0.4 | ug/L |
| | B | 11 | 24047.547 | 0.085 | **98.859345** | 1.59 | 1.6 | ug/L |
| | Na | 23 | 38493944.034 | 137.642 | **74734.171275** | 2918.92 | 3.9 | ug/L |
| | Mg | 24 | 190464.732 | 0.681 | **516.585687** | 29.17 | 5.6 | ug/L |
| | Al | 27 | 111590.931 | 0.397 | **106.952736** | 3.86 | 3.6 | ug/L |
| | K | 39 | 853839.469 | 2.889 | **687.929996** | 26.51 | 3.9 | ug/L |
| | Ca | 43 | 6661.555 | 0.023 | **1578.255654** | 61.72 | 3.9 | ug/L |
| > | Sc | 45 | 279731.905 | 279731.905 | | | | ug/L |
| | Ti | 49 | 748.036 | 0.001 | **3.684327** | 0.40 | 10.8 | ug/L |
| | Co | 59 | 130.668 | 0.000 | **0.000101** | 0.01 | 13212.4 | ug/L |
| | Ni | 60 | 133.335 | 0.000 | **0.049360** | 0.10 | 199.3 | ug/L |
| | Ni | 62 | 34.667 | 0.000 | **0.917352** | 0.30 | 32.4 | ug/L |
| | Cu | 63 | 812.710 | 0.003 | **0.511331** | 0.02 | 3.2 | ug/L |
| | Cu | 65 | 312.006 | 0.001 | **0.520757** | 0.03 | 5.3 | ug/L |
| | Zn | 66 | 273.338 | 0.001 | **0.575127** | 0.07 | 13.0 | ug/L |
| | Zn | 67 | 1661.513 | 0.002 | **10.312699** | 1.46 | 14.2 | ug/L |
| | Zn | 68 | 357.342 | 0.001 | **1.212483** | 0.28 | 23.5 | ug/L |
| | V | 51 | 3250.301 | 0.012 | **2.353751** | 0.61 | 26.1 | ug/L |
| | Cr | 52 | 3050.605 | 0.001 | **0.162743** | 0.03 | 19.9 | ug/L |
| | Cr | 53 | 13735.589 | 0.005 | **0.790192** | 1.47 | 186.3 | ug/L |
| | Mn | 55 | 57441.697 | 0.205 | **25.931195** | 0.32 | 1.2 | ug/L |
| | Fe | 54 | 18212.974 | 0.030 | **78.244763** | 5.91 | 7.6 | ug/L |
| | Fe | 57 | 3189.328 | 0.010 | **59.310300** | 1.20 | 2.0 | ug/L |
| | As | 75 | -247.541 | -0.000 | **-0.100187** | 0.54 | 544.0 | ug/L |
| | Se | 77 | 1660.846 | 0.001 | **20.172648** | 2.32 | 11.5 | ug/L |
| | Se | 82 | 8.829 | 0.000 | **1.956675** | 0.17 | 8.9 | ug/L |
| | Sr | 88 | 35918.384 | 0.106 | **12.695645** | 0.32 | 2.5 | ug/L |
| > | Y | 89 | 338295.306 | 338295.306 | | | | ug/L |
| | Mo | 95 | 453.347 | 0.001 | **1.768612** | 0.08 | 4.8 | ug/L |
| | Mo | 97 | 273.338 | 0.001 | **1.966703** | 0.10 | 5.3 | ug/L |
| | Mo | 98 | 704.480 | 0.002 | **1.996230** | 0.05 | 2.3 | ug/L |
| | Ag | 107 | 4.000 | 0.000 | **0.198943** | 0.00 | 1.1 | ug/L |
| | Ag | 109 | 3.333 | 0.000 | **0.248497** | 0.00 | 1.1 | ug/L |
| | Cd | 111 | 7.333 | 0.000 | **0.294676** | 0.00 | 1.0 | ug/L |
| | Cd | 114 | 12.139 | 0.000 | **0.553420** | 0.01 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 127489.621 | 127489.621 | | | | ug/L |
| \| | Sn | 120 | 336.632 | -0.001 | **0.598394** | 0.02 | 3.0 | ug/L |
| \| | Sb | 121 | 246.004 | -0.001 | **0.253516** | 0.05 | 19.7 | ug/L |
| \| | Sb | 123 | 176.916 | -0.001 | **0.534552** | 0.05 | 10.3 | ug/L |
| \| | Ba | 135 | 2032.936 | 0.014 | **12.857754** | 0.59 | 4.6 | ug/L |
| \| | Ba | 137 | 3581.500 | 0.025 | **12.760382** | 0.38 | 3.0 | ug/L |
| \| | Tb | 159 | 130311.206 | -0.028 | | | | ug/L |
| \|> | Ho | 165 | 141383.679 | 141383.679 | | | | ug/L |
| \| | Tl | 203 | 6.000 | 0.000 | **0.012345** | 0.00 | 30.9 | ug/L |
| \| | Tl | 205 | 9.333 | 0.000 | **-0.030441** | 0.00 | 7.4 | ug/L |
| \| | Pb | 208 | 2086.776 | 0.015 | **1.066696** | 0.03 | 2.5 | ug/L |
| | Kr | 83 | 13.333 | -7.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 78.245 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 76.061 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 67.168 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 74.822 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Monday, February 15, 2010 20:07:26
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 4.168
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30656.437 | 0.031 | | | | ug/L |
| | Li | 7 | 126886.915 | 0.429 | **146.950529** | 5.12 | 3.5 | ug/L |
| | Be | 9 | 26279.504 | 0.091 | **132.370176** | 6.33 | 4.8 | ug/L |
| | B | 11 | 32340.509 | 0.110 | **128.126047** | 2.70 | 2.1 | ug/L |
| | Na | 23 | 3240736.651 | 11.133 | **6049.912142** | 390.75 | 6.5 | ug/L |
| | Mg | 24 | 2367647.859 | 8.157 | **6138.014874** | 329.87 | 5.4 | ug/L |
| | Al | 27 | 7507277.782 | 25.857 | **5994.647325** | 239.99 | 4.0 | ug/L |
| | K | 39 | 7723072.277 | 26.449 | **6340.132135** | 449.99 | 7.1 | ug/L |
| | Ca | 43 | 21582.245 | 0.074 | **5011.636462** | 230.40 | 4.6 | ug/L |
| > | Sc | 45 | 290428.415 | 290428.415 | | | | ug/L |
| | Ti | 49 | 10419.053 | 0.035 | **97.110029** | 2.02 | 2.1 | ug/L |
| | Co | 59 | 139892.585 | 0.482 | **91.599168** | 2.42 | 2.6 | ug/L |
| | Ni | 60 | 27145.819 | 0.093 | **91.454249** | 2.63 | 2.9 | ug/L |
| | Ni | 62 | 4095.757 | 0.014 | **91.127011** | 4.95 | 5.4 | ug/L |
| | Cu | 63 | 64396.429 | 0.222 | **90.362984** | 2.16 | 2.4 | ug/L |
| | Cu | 65 | 30367.830 | 0.105 | **90.312868** | 3.14 | 3.5 | ug/L |
| | Zn | 66 | 19449.897 | 0.067 | **89.704584** | 1.50 | 1.7 | ug/L |
| | Zn | 67 | 4465.297 | 0.012 | **91.184239** | 3.26 | 3.6 | ug/L |
| | Zn | 68 | 14126.294 | 0.048 | **90.785242** | 3.49 | 3.8 | ug/L |
| | V | 51 | 155995.577 | 0.538 | **98.086598** | 3.40 | 3.5 | ug/L |
| | Cr | 52 | 130149.298 | 0.439 | **95.051940** | 3.39 | 3.6 | ug/L |
| | Cr | 53 | 27038.107 | 0.049 | **85.437271** | 5.64 | 6.6 | ug/L |
| | Mn | 55 | 210503.435 | 0.725 | **91.254921** | 2.86 | 3.1 | ug/L |
| | Fe | 54 | 538251.477 | 1.820 | **4604.189912** | 184.71 | 4.0 | ug/L |
| | Fe | 57 | 214108.234 | 0.736 | **4565.779958** | 137.56 | 3.0 | ug/L |
| | As | 75 | 24665.866 | 0.072 | **109.328366** | 0.53 | 0.5 | ug/L |
| | Se | 77 | 9571.290 | 0.024 | **490.576389** | 17.49 | 3.6 | ug/L |
| | Se | 82 | 11896.761 | 0.034 | **530.076132** | 3.56 | 0.7 | ug/L |
| | Sr | 88 | 305672.141 | 0.884 | **101.312287** | 3.36 | 3.3 | ug/L |
| > | Y | 89 | 345800.290 | 345800.290 | | | | ug/L |
| | Mo | 95 | 37323.766 | 0.108 | **100.849481** | 4.13 | 4.1 | ug/L |
| | Mo | 97 | 22662.696 | 0.066 | **99.762229** | 3.41 | 3.4 | ug/L |
| | Mo | 98 | 57644.191 | 0.167 | **99.484739** | 3.71 | 3.7 | ug/L |
| | Ag | 107 | 96722.233 | 0.706 | **101.728175** | 5.10 | 5.0 | ug/L |
| | Ag | 109 | 90183.854 | 0.658 | **100.526232** | 4.64 | 4.6 | ug/L |
| | Cd | 111 | 23038.135 | 0.168 | **102.917401** | 4.77 | 4.6 | ug/L |
| | Cd | 114 | 51496.697 | 0.376 | **101.673219** | 3.06 | 3.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 137131.541 | 137131.541 | | | | ug/L |
| \| | Sn | 120 | 88266.932 | 0.641 | **99.077454** | 3.52 | 3.5 | ug/L |
| \| | Sb | 121 | 63130.126 | 0.458 | **99.023739** | 4.28 | 4.3 | ug/L |
| \| | Sb | 123 | 47459.739 | 0.344 | **97.546907** | 3.39 | 3.5 | ug/L |
| \| | Ba | 135 | 16261.840 | 0.109 | **91.541254** | 3.75 | 4.1 | ug/L |
| \| | Ba | 137 | 27955.389 | 0.187 | **91.268858** | 4.31 | 4.7 | ug/L |
| \| | Tb | 159 | 138552.504 | -0.024 | | | | ug/L |
| \|> | Ho | 165 | 149639.715 | 149639.715 | | | | ug/L |
| \| | Tl | 203 | 64115.448 | 0.429 | **110.504225** | 3.46 | 3.1 | ug/L |
| \| | Tl | 205 | 154364.323 | 1.033 | **109.792226** | 6.04 | 5.5 | ug/L |
| \| | Pb | 208 | 210329.534 | 1.407 | **110.085100** | 7.18 | 6.5 | ug/L |
| | Kr | 83 | 15.933 | -4.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 146.951 | | |
| Be | 9 | 132.370 | | |
| B | 11 | 128.126 | | |
| Na | 23 | 120.998 | | |
| Mg | 24 | 122.760 | | |
| Al | 27 | 117.542 | | |
| K | 39 | 126.803 | | |
| Ca | 43 | 100.233 | | |
| Sc | 45 | | 81.237 | |
| Ti | 49 | 97.110 | | |
| Co | 59 | 91.599 | | |
| Ni | 60 | 91.454 | | |
| Ni | 62 | 91.127 | | |
| Cu | 63 | 90.363 | | |
| Cu | 65 | 90.313 | | |
| Zn | 66 | 89.705 | | |
| Zn | 67 | 91.184 | | |
| Zn | 68 | 90.785 | | |
| V | 51 | 98.087 | | |
| Cr | 52 | 95.052 | | |
| Cr | 53 | 85.437 | | |
| Mn | 55 | 91.255 | | |
| Fe | 54 | 92.084 | | |
| Fe | 57 | 91.316 | | |
| As | 75 | 109.328 | | |
| Se | 77 | 98.115 | | |
| Se | 82 | 106.015 | | |
| Sr | 88 | 101.312 | | |
| Y | 89 | | 77.749 | |
| Mo | 95 | 100.849 | | |
| Mo | 97 | 99.762 | | |
| Mo | 98 | 99.485 | | |
| Ag | 107 | 101.728 | | |
| Ag | 109 | 100.526 | | |
| Cd | 111 | 102.917 | | |
| Cd | 114 | 101.673 | | |
| In | 115 | | 72.248 | |
| Sn | 120 | 99.077 | | |
| Sb | 121 | 99.024 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 97.547 | |
| Ba | 135 | 91.541 | |
| Ba | 137 | 91.269 | |
| Tb | 159 | | |
| Ho | 165 | | 79.191 |
| Tl | 203 | 110.504 | |
| Tl | 205 | 109.792 | |
| Pb | 208 | 110.085 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Monday, February 15, 2010 20:10:08
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 5.169
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35768.799 | 0.047 | | | | ug/L |
| | Li | 7 | 6340.616 | 0.013 | **5.661598** | 0.46 | 8.0 | ug/L |
| | Be | 9 | 539.352 | 0.002 | **4.056165** | 0.17 | 4.2 | ug/L |
| | B | 11 | 7983.477 | 0.026 | **31.176696** | 1.55 | 5.0 | ug/L |
| | Na | 23 | 78094.449 | 0.232 | **131.582587** | 3.39 | 2.6 | ug/L |
| | Mg | 24 | 23603.133 | 0.080 | **64.647917** | 7.65 | 11.8 | ug/L |
| | Al | 27 | 73868.459 | 0.249 | **72.778057** | 3.45 | 4.7 | ug/L |
| | K | 39 | 166723.506 | 0.403 | **91.383184** | 8.48 | 9.3 | ug/L |
| | Ca | 43 | 1102.746 | 0.003 | **216.126278** | 8.21 | 3.8 | ug/L |
| > | Sc | 45 | 294179.055 | 294179.055 | | | | ug/L |
| | Ti | 49 | 847.380 | 0.002 | **4.263214** | 0.31 | 7.2 | ug/L |
| | Co | 59 | 2896.546 | 0.010 | **1.784462** | 0.04 | 2.2 | ug/L |
| | Ni | 60 | 590.023 | 0.002 | **1.552836** | 0.10 | 6.7 | ug/L |
| | Ni | 62 | 97.334 | 0.000 | **2.252192** | 0.14 | 6.3 | ug/L |
| | Cu | 63 | 1436.801 | 0.005 | **1.324281** | 0.09 | 7.1 | ug/L |
| | Cu | 65 | 676.030 | 0.002 | **1.546523** | 0.06 | 3.7 | ug/L |
| | Zn | 66 | 1329.449 | 0.004 | **5.357360** | 0.34 | 6.4 | ug/L |
| | Zn | 67 | 1564.159 | 0.001 | **4.993732** | 0.16 | 3.1 | ug/L |
| | Zn | 68 | 1068.074 | 0.003 | **5.660233** | 0.50 | 8.8 | ug/L |
| | V | 51 | 17524.458 | 0.060 | **11.092672** | 0.68 | 6.1 | ug/L |
| | Cr | 52 | 7820.641 | 0.017 | **3.564718** | 0.16 | 4.4 | ug/L |
| | Cr | 53 | 13337.553 | 0.001 | **-6.435699** | 1.80 | 27.9 | ug/L |
| | Mn | 55 | 4732.122 | 0.016 | **2.145793** | 0.07 | 3.1 | ug/L |
| | Fe | 54 | 19838.043 | 0.033 | **84.097409** | 3.87 | 4.6 | ug/L |
| | Fe | 57 | 4895.557 | 0.015 | **91.845948** | 0.83 | 0.9 | ug/L |
| | As | 75 | 454.536 | 0.002 | **2.993022** | 0.17 | 5.6 | ug/L |
| | Se | 77 | 1392.126 | 0.000 | **1.118582** | 2.74 | 245.4 | ug/L |
| | Se | 82 | 121.423 | 0.000 | **6.899202** | 0.32 | 4.7 | ug/L |
| | Sr | 88 | 3349.397 | 0.009 | **1.691389** | 0.06 | 3.8 | ug/L |
| > | Y | 89 | 349131.329 | 349131.329 | | | | ug/L |
| | Mo | 95 | 837.379 | 0.002 | **2.753553** | 0.10 | 3.6 | ug/L |
| | Mo | 97 | 502.683 | 0.001 | **2.921263** | 0.13 | 4.5 | ug/L |
| | Mo | 98 | 1292.703 | 0.004 | **2.955846** | 0.17 | 5.8 | ug/L |
| | Ag | 107 | 990.064 | 0.007 | **1.230019** | 0.06 | 4.8 | ug/L |
| | Ag | 109 | 963.394 | 0.007 | **1.311808** | 0.02 | 1.6 | ug/L |
| | Cd | 111 | 487.849 | 0.004 | **2.426846** | 0.06 | 2.5 | ug/L |
| | Cd | 114 | 1048.862 | 0.008 | **2.582543** | 0.10 | 3.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 137516.177 | 137516.177 | | | | ug/L |
| \| | Sn | 120 | 4512.614 | 0.030 | **5.232294** | 0.04 | 0.8 | ug/L |
| \| | Sb | 121 | 4618.720 | 0.031 | **7.070554** | 0.09 | 1.2 | ug/L |
| \| | Sb | 123 | 3537.061 | 0.023 | **7.384527** | 0.37 | 5.0 | ug/L |
| \| | Ba | 135 | 844.713 | 0.006 | **5.581003** | 0.15 | 2.7 | ug/L |
| \| | Ba | 137 | 1448.803 | 0.010 | **5.163252** | 0.11 | 2.1 | ug/L |
| \| | Tb | 159 | 138563.885 | -0.023 | | | | ug/L |
| \|> | Ho | 165 | 149439.958 | 149439.958 | | | | ug/L |
| \| | Tl | 203 | 1359.454 | 0.009 | **2.346712** | 0.10 | 4.5 | ug/L |
| \| | Tl | 205 | 3262.025 | 0.022 | **2.284168** | 0.06 | 2.7 | ug/L |
| \| | Pb | 208 | 2239.459 | 0.015 | **1.085291** | 0.08 | 6.9 | ug/L |
| | Kr | 83 | 14.200 | -6.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 283.080 | | |
| Be | 9 | 202.808 | | |
| B | 11 | 155.883 | | |
| Na | 23 | 131.583 | | |
| Mg | 24 | 129.296 | | |
| Al | 27 | 145.556 | | |
| K | 39 | 121.844 | | |
| Ca | 43 | 108.063 | | |
| Sc | 45 | | 82.287 | |
| Ti | 49 | 85.264 | | |
| Co | 59 | 89.223 | | |
| Ni | 60 | 77.642 | | |
| Ni | 62 | 112.610 | | |
| Cu | 63 | 66.214 | | |
| Cu | 65 | 77.326 | | |
| Zn | 66 | 89.289 | | |
| Zn | 67 | 83.229 | | |
| Zn | 68 | 94.337 | | |
| V | 51 | 110.927 | | |
| Cr | 52 | 89.118 | | |
| Cr | 53 | -160.892 | | |
| Mn | 55 | 107.290 | | |
| Fe | 54 | 84.097 | | |
| Fe | 57 | 91.846 | | |
| As | 75 | 74.826 | | |
| Se | 77 | 22.372 | | |
| Se | 82 | 137.984 | | |
| Sr | 88 | 169.139 | | |
| Y | 89 | | 78.498 | |
| Mo | 95 | 137.678 | | |
| Mo | 97 | 146.063 | | |
| Mo | 98 | 147.792 | | |
| Ag | 107 | 123.002 | | |
| Ag | 109 | 131.181 | | |
| Cd | 111 | 121.342 | | |
| Cd | 114 | 129.127 | | |
| In | 115 | | 72.451 | |
| Sn | 120 | 130.807 | | |
| Sb | 121 | 141.411 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 147.691 | |
| Ba | 135 | 111.620 | |
| Ba | 137 | 103.265 | |
| Tb | 159 | | |
| Ho | 165 | | 79.085 |
| Tl | 203 | 117.336 | |
| Tl | 205 | 114.208 | |
| Pb | 208 | 108.529 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Monday, February 15, 2010 20:12:49
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\QC Std 6.170
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 35609.191 | 0.047 | | | | ug/L |
| | Li | 7 | 3872.975 | 0.005 | **2.823453** | 0.08 | 2.7 | ug/L |
| | Be | 9 | 8.667 | 0.000 | **1.446428** | 0.04 | 2.4 | ug/L |
| | B | 11 | 1292.109 | 0.003 | **5.008054** | 0.37 | 7.3 | ug/L |
| | Na | 23 | 16617.942 | 0.023 | **18.220348** | 0.55 | 3.0 | ug/L |
| | Mg | 24 | 700.033 | 0.002 | **6.044436** | 0.46 | 7.6 | ug/L |
| | Al | 27 | 1643.510 | 0.003 | **15.976372** | 0.14 | 0.9 | ug/L |
| | K | 39 | 56540.383 | 0.029 | **1.646204** | 0.50 | 30.3 | ug/L |
| | Ca | 43 | 144.001 | -0.000 | **-5.129359** | 1.45 | 28.3 | ug/L |
| > | Sc | 45 | 292934.443 | 292934.443 | | | | ug/L |
| | Ti | 49 | 332.674 | -0.000 | **-0.648805** | 0.12 | 17.8 | ug/L |
| | Co | 59 | 22.667 | 0.000 | **-0.073901** | 0.00 | 5.4 | ug/L |
| | Ni | 60 | 12.000 | -0.000 | **-0.378145** | 0.01 | 2.9 | ug/L |
| | Ni | 62 | 28.000 | 0.000 | **0.736282** | 0.16 | 21.7 | ug/L |
| | Cu | 63 | 342.008 | 0.001 | **-0.202080** | 0.03 | 14.1 | ug/L |
| | Cu | 65 | 170.669 | 0.000 | **0.059077** | 0.06 | 94.0 | ug/L |
| | Zn | 66 | 113.334 | 0.000 | **-0.221233** | 0.10 | 47.1 | ug/L |
| | Zn | 67 | 1456.138 | 0.001 | **2.031913** | 0.79 | 38.9 | ug/L |
| | Zn | 68 | 149.335 | 0.000 | **-0.242607** | 0.09 | 37.3 | ug/L |
| | V | 51 | 1635.730 | 0.006 | **1.263348** | 0.57 | 44.7 | ug/L |
| | Cr | 52 | 2610.443 | -0.001 | **-0.270133** | 0.07 | 26.4 | ug/L |
| | Cr | 53 | 13163.256 | 0.001 | **-7.229355** | 0.74 | 10.3 | ug/L |
| | Mn | 55 | 318.673 | 0.001 | **0.260462** | 0.00 | 1.7 | ug/L |
| | Fe | 54 | 9249.299 | -0.003 | **-6.622585** | 2.24 | 33.9 | ug/L |
| | Fe | 57 | 491.349 | -0.000 | **-1.021672** | 0.23 | 22.4 | ug/L |
| | As | 75 | -341.610 | -0.001 | **-0.442230** | 0.19 | 43.3 | ug/L |
| | Se | 77 | 1348.785 | 0.000 | **-2.850372** | 4.83 | 169.3 | ug/L |
| | Se | 82 | 2.212 | 0.000 | **1.651599** | 0.25 | 15.3 | ug/L |
| | Sr | 88 | 100.001 | 0.000 | **0.630177** | 0.01 | 1.0 | ug/L |
| > | Y | 89 | 355421.326 | 355421.326 | | | | ug/L |
| | Mo | 95 | 14.667 | 0.000 | **0.562242** | 0.01 | 1.0 | ug/L |
| | Mo | 97 | 11.333 | 0.000 | **0.794332** | 0.03 | 4.1 | ug/L |
| | Mo | 98 | 26.594 | 0.000 | **0.806868** | 0.02 | 2.0 | ug/L |
| | Ag | 107 | 3.333 | -0.000 | **0.197864** | 0.00 | 1.2 | ug/L |
| | Ag | 109 | 4.667 | 0.000 | **0.249572** | 0.00 | 1.3 | ug/L |
| | Cd | 111 | 1.667 | 0.000 | **0.266812** | 0.00 | 1.3 | ug/L |
| | Cd | 114 | 3.067 | 0.000 | **0.533803** | 0.00 | 0.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 140223.193 | 140223.193 | | | | ug/L |
| \| | Sn | 120 | 363.316 | -0.001 | **0.590683** | 0.02 | 3.1 | ug/L |
| \| | Sb | 121 | 425.345 | 0.000 | **0.491273** | 0.07 | 13.2 | ug/L |
| \| | Sb | 123 | 309.088 | -0.000 | **0.763942** | 0.01 | 1.1 | ug/L |
| \| | Ba | 135 | 8.667 | 0.000 | **0.915741** | 0.01 | 0.8 | ug/L |
| \| | Ba | 137 | 18.667 | 0.000 | **0.514306** | 0.00 | 0.9 | ug/L |
| \| | Tb | 159 | 138470.697 | -0.019 | | | | ug/L |
| \|> | Ho | 165 | 148811.070 | 148811.070 | | | | ug/L |
| \| | Tl | 203 | 18.000 | 0.000 | **0.032640** | 0.01 | 39.5 | ug/L |
| \| | Tl | 205 | 25.333 | 0.000 | **-0.019309** | 0.01 | 37.2 | ug/L |
| \| | Pb | 208 | 77.333 | 0.000 | **-0.048018** | 0.00 | 9.8 | ug/L |
| | Kr | 83 | 15.533 | -5.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 81.938 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 79.912 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 73.877 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 78.752 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Monday, February 15, 2010 20:15:30
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSA.171
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 32162.938 | 0.035 | | | | ug/L |
| | Li | 7 | 3466.781 | 0.003 | **2.364777** | 0.05 | 2.1 | ug/L |
| | Be | 9 | 9.333 | 0.000 | **1.449503** | 0.00 | 0.3 | ug/L |
| | B | 11 | 1337.450 | 0.003 | **5.203664** | 0.40 | 7.6 | ug/L |
| | Na | 23 | 61314686.340 | 210.028 | **114033.827259** | 4079.62 | 3.6 | ug/L |
| | Mg | 24 | 44288780.581 | 151.704 | **114074.279429** | 3721.47 | 3.3 | ug/L |
| | Al | 27 | 137672581.607 | 471.499 | **109049.143531** | 2110.92 | 1.9 | ug/L |
| | K | 39 | 132725578.753 | 454.560 | **109045.614838** | 3833.74 | 3.5 | ug/L |
| | Ca | 43 | 442469.229 | 1.515 | **102869.874527** | 2030.48 | 2.0 | ug/L |
| > | Sc | 45 | 292098.652 | 292098.652 | | | | ug/L |
| | Ti | 49 | 215168.547 | 0.736 | **2069.967866** | 61.82 | 3.0 | ug/L |
| | Co | 59 | 2691.137 | 0.009 | **1.665283** | 0.05 | 2.8 | ug/L |
| | Ni | 60 | 790.707 | 0.003 | **2.242632** | 0.06 | 2.7 | ug/L |
| | Ni | 62 | 566.688 | 0.002 | **12.625168** | 0.41 | 3.3 | ug/L |
| | Cu | 63 | 1529.485 | 0.005 | **1.468349** | 0.02 | 1.5 | ug/L |
| | Cu | 65 | 793.374 | 0.003 | **1.912864** | 0.16 | 8.4 | ug/L |
| | Zn | 66 | 726.701 | 0.002 | **2.625528** | 0.46 | 17.4 | ug/L |
| | Zn | 67 | 1456.138 | 0.001 | **2.179915** | 1.87 | 85.7 | ug/L |
| | Zn | 68 | 277.338 | 0.000 | **0.592105** | 0.22 | 37.5 | ug/L |
| | V | 51 | 1049.896 | 0.004 | **0.899661** | 0.29 | 32.5 | ug/L |
| | Cr | 52 | 4903.563 | 0.007 | **1.440574** | 0.13 | 9.0 | ug/L |
| | Cr | 53 | 10740.162 | -0.007 | **-22.905574** | 0.79 | 3.5 | ug/L |
| | Mn | 55 | 16919.923 | 0.057 | **7.409389** | 0.30 | 4.1 | ug/L |
| | Fe | 54 | 11005250.687 | 37.669 | **95278.230714** | 3224.12 | 3.4 | ug/L |
| | Fe | 57 | 4481310.420 | 15.354 | **95282.687860** | 4123.59 | 4.3 | ug/L |
| | As | 75 | -405.875 | -0.001 | **-0.668249** | 1.05 | 156.6 | ug/L |
| | Se | 77 | 1733.529 | 0.001 | **16.067334** | 2.24 | 13.9 | ug/L |
| | Se | 82 | -14.568 | -0.000 | **0.947865** | 0.08 | 7.9 | ug/L |
| | Sr | 88 | 8169.003 | 0.022 | **3.128383** | 0.09 | 2.7 | ug/L |
| > | Y | 89 | 368022.209 | 368022.209 | | | | ug/L |
| | Mo | 95 | 839429.096 | 2.282 | **2121.315647** | 78.07 | 3.7 | ug/L |
| | Mo | 97 | 513194.941 | 1.395 | **2108.377191** | 52.64 | 2.5 | ug/L |
| | Mo | 98 | 1304756.550 | 3.547 | **2101.234992** | 59.69 | 2.8 | ug/L |
| | Ag | 107 | 126.001 | 0.001 | **0.311638** | 0.01 | 2.5 | ug/L |
| | Ag | 109 | 108.001 | 0.001 | **0.351111** | 0.02 | 5.9 | ug/L |
| | Cd | 111 | 561.354 | 0.004 | **2.476293** | 0.13 | 5.2 | ug/L |
| | Cd | 114 | 970.143 | 0.006 | **2.215775** | 0.04 | 1.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 154751.125 | 154751.125 | | | | ug/L |
| \| | Sn | 120 | 496.657 | -0.000 | **0.685548** | 0.01 | 0.9 | ug/L |
| \| | Sb | 121 | 396.010 | -0.000 | **0.389179** | 0.03 | 8.9 | ug/L |
| \| | Sb | 123 | 312.421 | -0.000 | **0.711538** | 0.06 | 8.9 | ug/L |
| \| | Ba | 135 | 329.340 | 0.002 | **2.477178** | 0.21 | 8.6 | ug/L |
| \| | Ba | 137 | 580.022 | 0.003 | **2.101224** | 0.07 | 3.4 | ug/L |
| \| | Tb | 159 | 163483.005 | 0.006 | | | | ug/L |
| \|> | Ho | 165 | 171027.731 | 171027.731 | | | | ug/L |
| \| | Tl | 203 | 109.334 | 0.001 | **0.166249** | 0.03 | 15.1 | ug/L |
| \| | Tl | 205 | 231.337 | 0.001 | **0.106502** | 0.01 | 6.7 | ug/L |
| \| | Pb | 208 | 584.676 | 0.003 | **0.179227** | 0.02 | 10.3 | ug/L |
| | Kr | 83 | 38.400 | 17.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 81.705 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 82.745 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 81.531 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 90.510 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Monday, February 15, 2010 20:18:11
Sample Type: Spike - 2 of 119
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002150930MS\ICSAB.172
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 32086.733 | 0.031 | | | | ug/L |
| | Li | 7 | 3624.187 | 0.003 | **2.403393** | 0.02 | 1.0 | ug/L |
| | Be | 9 | 6.000 | -0.000 | **1.432002** | 0.01 | 0.6 | ug/L |
| | B | 11 | 1258.103 | 0.003 | **4.716594** | 0.31 | 6.5 | ug/L |
| | Na | 23 | 62517622.091 | 206.761 | **112259.851043** | 4970.74 | 4.4 | ug/L |
| | Mg | 24 | 44615542.299 | 147.571 | **110967.151956** | 4322.79 | 3.9 | ug/L |
| | Al | 27 | 137803297.502 | 455.802 | **105419.317796** | 4253.57 | 4.0 | ug/L |
| | K | 39 | 132311227.520 | 437.486 | **104949.545582** | 4710.49 | 4.5 | ug/L |
| | Ca | 43 | 442202.346 | 1.462 | **99264.637871** | 1443.94 | 1.5 | ug/L |
| > | Sc | 45 | 302429.787 | 302429.787 | | | | ug/L |
| | Ti | 49 | 215485.441 | 0.711 | **2001.343421** | 68.52 | 3.4 | ug/L |
| | Co | 59 | 121884.933 | 0.403 | **76.610423** | 2.35 | 3.1 | ug/L |
| | Ni | 60 | 22873.964 | 0.076 | **73.908163** | 2.04 | 2.8 | ug/L |
| | Ni | 62 | 3919.667 | 0.013 | **83.706858** | 4.70 | 5.6 | ug/L |
| | Cu | 63 | 52548.219 | 0.174 | **70.647884** | 1.59 | 2.2 | ug/L |
| | Cu | 65 | 25110.262 | 0.083 | **71.593927** | 2.08 | 2.9 | ug/L |
| | Zn | 66 | 8425.946 | 0.028 | **36.881972** | 0.85 | 2.3 | ug/L |
| | Zn | 67 | 2640.454 | 0.005 | **34.287056** | 4.51 | 13.2 | ug/L |
| | Zn | 68 | 5670.089 | 0.018 | **34.234319** | 0.54 | 1.6 | ug/L |
| | V | 51 | 134473.335 | 0.445 | **81.216763** | 2.94 | 3.6 | ug/L |
| | Cr | 52 | 112868.392 | 0.364 | **78.773246** | 3.16 | 4.0 | ug/L |
| | Cr | 53 | 23357.419 | 0.033 | **54.892510** | 4.99 | 9.1 | ug/L |
| | Mn | 55 | 196544.336 | 0.650 | **81.816697** | 3.14 | 3.8 | ug/L |
| | Fe | 54 | 11095547.896 | 36.665 | **92738.925464** | 3756.86 | 4.1 | ug/L |
| | Fe | 57 | 4500876.870 | 14.884 | **92366.126922** | 2888.72 | 3.1 | ug/L |
| | As | 75 | 8166.815 | 0.022 | **33.697782** | 1.14 | 3.4 | ug/L |
| | Se | 77 | 2451.724 | 0.003 | **52.246217** | 2.11 | 4.0 | ug/L |
| | Se | 82 | 959.889 | 0.003 | **40.424837** | 0.86 | 2.1 | ug/L |
| | Sr | 88 | 8305.815 | 0.022 | **3.093074** | 0.05 | 1.6 | ug/L |
| > | Y | 89 | 379369.146 | 379369.146 | | | | ug/L |
| | Mo | 95 | 842146.358 | 2.220 | **2063.729384** | 14.97 | 0.7 | ug/L |
| | Mo | 97 | 510046.215 | 1.344 | **2031.938860** | 11.27 | 0.6 | ug/L |
| | Mo | 98 | 1315411.434 | 3.467 | **2053.951932** | 15.25 | 0.7 | ug/L |
| | Ag | 107 | 20445.145 | 0.131 | **19.026772** | 0.60 | 3.1 | ug/L |
| | Ag | 109 | 19487.320 | 0.125 | **19.256602** | 0.40 | 2.1 | ug/L |
| | Cd | 111 | 10615.820 | 0.068 | **41.765265** | 0.99 | 2.4 | ug/L |
| | Cd | 114 | 23492.509 | 0.150 | **41.014310** | 0.31 | 0.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 156240.071 | 156240.071 | | | | ug/L |
| \| | Sn | 120 | 514.684 | 0.000 | **0.698721** | 0.02 | 2.6 | ug/L |
| \| | Sb | 121 | 308.006 | -0.001 | **0.262269** | 0.02 | 7.6 | ug/L |
| \| | Sb | 123 | 253.338 | -0.001 | **0.599971** | 0.02 | 3.9 | ug/L |
| \| | Ba | 135 | 326.007 | 0.002 | **2.437280** | 0.12 | 4.8 | ug/L |
| \| | Ba | 137 | 574.021 | 0.003 | **2.064321** | 0.10 | 4.8 | ug/L |
| \| | Tb | 159 | 164901.227 | 0.003 | | | | ug/L |
| \|> | Ho | 165 | 173008.112 | 173008.112 | | | | ug/L |
| \| | Tl | 203 | 119.334 | 0.001 | **0.179288** | 0.02 | 10.3 | ug/L |
| \| | Tl | 205 | 245.337 | 0.001 | **0.113369** | 0.02 | 17.7 | ug/L |
| \| | Pb | 208 | 578.676 | 0.003 | **0.173226** | 0.01 | 4.9 | ug/L |
| | Kr | 83 | 39.467 | 18.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 84.594 | |
| Ti | 49 | | | |
| Co | 59 | | | 93.681 |
| Ni | 60 | | | 89.582 |
| Ni | 62 | | | 88.852 |
| Cu | 63 | | | 86.474 |
| Cu | 65 | | | 87.101 |
| Zn | 66 | | | 85.641 |
| Zn | 67 | | | 80.268 |
| Zn | 68 | | | 84.106 |
| V | 51 | | | 100.396 |
| Cr | 52 | | | 96.666 |
| Cr | 53 | | | 97.248 |
| Mn | 55 | | | 93.009 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 85.915 |
| Se | 77 | | | 90.447 |
| Se | 82 | | | 98.692 |
| Sr | 88 | | | |
| Y | 89 | | 85.296 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 93.576 |
| Ag | 109 | | | 94.527 |
| Cd | 111 | | | 98.222 |
| Cd | 114 | | | 96.996 |
| In | 115 | | 82.315 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 91.558 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

100216090 7.MS
2-16-10
RD

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 1 | Cal Blank | | Blank |
| 2 | Std 1 | | Standard |
| 3 | Std 2 | | Standard |
| 4 | Std 3 | | Standard |
| 5 | Std 4 | | Standard |
| 6 | Std 5 | | Standard |
| 7 | QC Std 1 | | QC Std |
| 1 | QC Std 2 | | QC Std |
| 8 | QC Std 3 | | QC Std |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 2 | Sample |
| 10 | ICSAB | 3 | Spike - 2 of 2 |

00575

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 145 | 10020461-02D As,Se 6020-W-ALL Batch # 87101 (North Carolina) | 4 | Sample |
| 319 | MBLK-87103 6020-D | 5 | Sample |
| 320 | LCS-87103 | 6 | Sample |
| 321 | 10020428-20B Pb,Mn,Ni,TL | 7 | Sample |
| 322 | 10020428-20BSD | 8 | Sample |
| 323 | 10020428-20BMS | 9 | Sample |
| 324 | 10020428-20BMSD | 10 | Sample |
| 325 | 10020428-20BPDS ICPMS_100216A | 11 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 BPL 2-17-10 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 326 | 10020428-20BPDSD | 12 | Sample |
| 327 | 10020428-27B As,Pb,Mn,Ni,TL | 13 | Sample |
| 328 | 10020461-01E Mn | 14 | Sample |
| 329 | 10020461-02E | 15 | Sample |
| 330 | 10020461-03E | 16 | Sample |
| 331 | 10020461-04E | 17 | Sample |
| x5 332 | 10020428-20B As | 18 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 19 | Sample |
| 10 | ICSAB | 20 | Spike - 2 of 19 |

00576

# Run List

## Sample File Name: 11.18.08.sam

| | AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|---|
| x5 | 146 | 10020428-02A Pb, TL 6020-W-ALL Batch # 87095 | 21 | Sample |
| x25 | 147 | 10020428-02A As | 22 | Sample |
| | 148 | 10020428-13A As | 23 | Sample |
| | 149 | 10020428-20A N/R | 24 | Sample |
| | 235 | 10020428-21A As, Pb, TL 6020-W-ALL Batch #87096 | 25 | Sample |
| | 236 | 10020428-22A Pb, TL | 26 | Sample |
| x5 | 150 | 10020428-22A As | 27 | Sample |
| | 237 | 10020428-23A N/R | 28 | Sample |
| | 7 | QC Std 4 | | QC Std |
| | 8 | QC Std 6 | | QC Std |
| x5 | 151 | 10020428-23A Pb, TL | 29 | Sample |
| x25 | 152 | 10020428-23A As | 30 | Sample |
| | 238 | 10020428-24A As, Pb, TL | 31 | Sample |
| | 239 | 10020428-25A | 32 | Sample |
| | 240 | 10020428-26A | 33 | Sample |
| | 241 | 10020428-27A | 34 | Sample |
| | 242 | 10020428-28A | 35 | Sample |
| | 243 | 10020428-29A Pb, TL | 36 | Sample |
| x5 | 153 | 10020428-29A As | 37 | Sample |
| | 244 | 10020428-30A Pb, TL | 38 | Sample |
| | 7 | QC Std 4 | | QC Std |
| | 8 | QC Std 6 | | QC Std |
| x5 | 154 | 10020428-30A As | 39 | Sample |
| | 245 | 10020428-31A N/R | 40 | Sample |
| x5 | 155 | 10020428-31A ~~As~~ Pb, TL | 41 | Sample |
| x25 | 156 | 10020428-31A As | 42 | Sample |
| | 246 | 10020428-32A As, Pb, TL | 43 | Sample |
| | 247 | 10020428-33A Pb, TL ∅As | 44 | Sample |
| | 248 | 10020428-34A As, Pb, TL | 45 | Sample |
| | 249 | 10020428-35A | 46 | Sample |
| | 7 | QC Std 4 | | QC Std |
| | 8 | QC Std 6 | | QC Std |
| | 9 | ICSA | 47 | Sample |
| | 10 | ICSAB | 48 | Spike - 2 of 47 |

00577

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 1 | Cal Blank | | Blank |
| 2 | Std 1 | | Standard |
| 3 | Std 2 | | Standard |
| 4 | Std 3 | | Standard |
| 5 | Std 4 | | Standard |
| 6 | Std 5 | | Standard |
| 7 | QC Std 1 | | QC Std |
| 1 | QC Std 2 | | QC Std |
| 8 | QC Std 3 | | QC Std |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 2 | Sample |
| 10 | ICSAB | 3 | Spike - 2 of 2 |

00578

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 145 | 10020461-02D | 4 | Sample |
| 319 | MBLK-87103 | 5 | Sample |
| 320 | LCS-87103 | 6 | Sample |
| 321 | 10020428-20B | 7 | Sample |
| 322 | 10020428-20BSD | 8 | Sample |
| 323 | 10020428-20BMS | 9 | Sample |
| 324 | 10020428-20BMSD | 10 | Sample |
| 325 | 10020428-20BPDS | 11 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 326 | 10020428-20BPDSD | 12 | Sample |
| 327 | 10020428-27B | 13 | Sample |
| 328 | 10020461-01E | 14 | Sample |
| 329 | 10020461-02E | 15 | Sample |
| 330 | 10020461-03E | 16 | Sample |
| 331 | 10020461-04E | 17 | Sample |
| 332 | 10020428-20B | 18 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 19 | Sample |
| 10 | ICSAB | 20 | Spike - 2 of 19 |

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 146 | 10020428-02A | 21 | Sample |
| 147 | 10020428-02A | 22 | Sample |
| 148 | 10020428-13A | 23 | Sample |
| 149 | 10020428-20A | 24 | Sample |
| 235 | 10020428-21A | 25 | Sample |
| 236 | 10020428-22A | 26 | Sample |
| 150 | 10020428-22A | 27 | Sample |
| 237 | 10020428-23A | 28 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 151 | 10020428-23A | 29 | Sample |
| 152 | 10020428-23A | 30 | Sample |
| 238 | 10020428-24A | 31 | Sample |
| 239 | 10020428-25A | 32 | Sample |
| 240 | 10020428-26A | 33 | Sample |
| 241 | 10020428-27A | 34 | Sample |
| 242 | 10020428-28A | 35 | Sample |
| 243 | 10020428-29A | 36 | Sample |
| 153 | 10020428-29A | 37 | Sample |
| 244 | 10020428-30A | 38 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 154 | 10020428-30A | 39 | Sample |
| 245 | 10020428-31A | 40 | Sample |
| 155 | 10020428-31A | 41 | Sample |
| 156 | 10020428-31A | 42 | Sample |
| 246 | 10020428-32A | 43 | Sample |
| 247 | 10020428-33A | 44 | Sample |
| 248 | 10020428-34A | 45 | Sample |
| 249 | 10020428-35A | 46 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 47 | Sample |
| 10 | ICSAB | 48 | Spike - 2 of 47 |

00580

# Instrument Tuning Report

File Name: default.tun
File Path: C:\elandata\Tuning\default.tun

| Analyte | Exact Mass | Meas. Mass | Mass DAC | Res. DAC | Meas. Pk. Width | Custom Res. |
|---|---|---|---|---|---|---|
| Be | 9.012 | 9.026 | 2037 | 2095 | 0.592 | |
| C | 12.000 | 12.028 | 2762 | 2105 | 0.575 | |
| Mg | 23.985 | 24.029 | 5671 | 2100 | 0.569 | |
| Co | 58.933 | 58.929 | 14155 | 2135 | 0.583 | |
| In | 114.904 | 114.928 | 27763 | 2215 | 0.604 | |
| Ce | 139.905 | 139.879 | 33836 | 2240 | 0.624 | |
| Pb | 207.977 | 207.979 | 50399 | 2340 | 0.621 | |
| U | 238.050 | 238.028 | 57703 | 2380 | 0.619 | |

# Daily Performance Report

**Sample ID: Sample**
Sample Date/Time: Tuesday, February 16, 2010 08:52:25
Sample Description:
Method File: C:\Elandata\Method\Daily.mth
Dataset File: C:\Elandata\DataSet\Daily Performance\Sample.1476
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 65
Current Dead Time (ns): 65

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD |
|---|---|---|---|---|---|---|
| | Be | 9.0 | 3986.7 | 3986.700 | 67.672 | 1.7 |
| | C | 12.0 | 730173.2 | 730173.177 | 4735.881 | 0.6 |
| | Mg | 24.0 | 38587.7 | 38587.747 | 241.467 | 0.6 |
| | Co | 58.9 | 63701.2 | 63701.209 | 244.286 | 0.4 |
| | In | 114.9 | 173358.6 | 173358.608 | 999.826 | 0.6 |
| | Pb | 208.0 | 111890.8 | 111890.767 | 330.891 | 0.3 |
| | U | 238.1 | 235664.4 | 235664.389 | 843.353 | 0.4 |
| ⌈> | Ce | 139.9 | 183870.2 | 183870.219 | 852.859 | 0.5 |
| ⌊ | CeO | 155.9 | 1861.4 | 0.010 | 0.000 | 1.5 |
| ⌈> | Ba | 137.9 | 152062.5 | 152062.471 | 805.633 | 0.5 |
| ⌊ | Ba++ | 69.0 | 1987.2 | 0.013 | 0.000 | 2.1 |
| | 220 | 220.0 | 0.8 | 0.833 | 0.333 | 40.0 |

## Current Optimization File Data

| Current Value | Description |
|---|---|
| 1.00 | Nebulizer Gas Flow [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 16.00 | Plasma Gas Flow |
| 7.60 | Lens Voltage |
| 1450.00 | ICP RF Power |
| -1725.00 | Analog Stage Voltage |
| 900.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset Std [QRO] |
| -17.00 | Cell Rod Offset Std [CRO] |
| 20.00 | Discriminator Threshold |
| -9.00 | Cell Path Voltage Std [CPV] |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.00 | DRC Mode NEB |
| -6.00 | DRC Mode QRO |
| -1.00 | DRC Mode CRO |
| -15.00 | DRC Mode CPV |
| 0.00 | Cell Gas A |
| 0.00 | Cell Gas B |

## Current Autolens Data

| Analyte | Mass | Num of Pts | DAC Value | Maximum Intensity |
|---|---|---|---|---|
| Be | 9 | 36 | 5.6 | 8559.2 |
| Co | 59 | 36 | 6.2 | 76387.4 |

| | | | | |
|---|---|---|---|---|
| In | 115 | 36 | 7.4 | 176065.3 |

# Quantitative Analysis - Summary Report

**Sample ID: Cal Blank**
Sample Date/Time: Tuesday, February 16, 2010 09:18:04
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\Cal Blank.001
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26876.454 | | | | | ug/L |
| | Li | 7 | 2923.889 | | | | | ug/L |
| | Be | 9 | 4.667 | | | | | ug/L |
| | B | 11 | 520.684 | | | | | ug/L |
| | Na | 23 | 21463.720 | | | | | ug/L |
| | Mg | 24 | 4768.290 | | | | | ug/L |
| | Al | 27 | 17687.603 | | | | | ug/L |
| | K | 39 | 67899.777 | | | | | ug/L |
| | Ca | 43 | 190.669 | | | | | ug/L |
| > | Sc | 45 | 366795.410 | | | | | ug/L |
| | Ti | 49 | 456.014 | | | | | ug/L |
| | Co | 59 | 62.667 | | | | | ug/L |
| | Ni | 60 | 14.000 | | | | | ug/L |
| | Ni | 62 | 50.667 | | | | | ug/L |
| | Cu | 63 | 106.001 | | | | | ug/L |
| | Cu | 65 | 52.000 | | | | | ug/L |
| | Zn | 66 | 153.335 | | | | | ug/L |
| | Zn | 67 | 980.063 | | | | | ug/L |
| | Zn | 68 | 161.335 | | | | | ug/L |
| | V | 51 | -290.059 | | | | | ug/L |
| | Cr | 52 | 3096.623 | | | | | ug/L |
| | Cr | 53 | 13283.474 | | | | | ug/L |
| | Mn | 55 | 336.007 | | | | | ug/L |
| | Fe | 54 | 15112.266 | | | | | ug/L |
| | Fe | 57 | 1570.162 | | | | | ug/L |
| | As | 75 | -347.496 | | | | | ug/L |
| | Se | 77 | 2006.929 | | | | | ug/L |
| | Se | 82 | 6.105 | | | | | ug/L |
| | Sr | 88 | 132.668 | | | | | ug/L |
| > | Y | 89 | 538251.806 | | | | | ug/L |
| | Mo | 95 | 225.337 | | | | | ug/L |
| | Mo | 97 | 144.001 | | | | | ug/L |
| | Mo | 98 | 337.861 | | | | | ug/L |
| | Ag | 107 | 7.333 | | | | | ug/L |
| | Ag | 109 | 7.333 | | | | | ug/L |
| | Cd | 111 | 4.833 | | | | | ug/L |
| | Cd | 114 | 2.274 | | | | | ug/L |

| | | | | |
|---|---|---|---|---|
| \|> | In | 115 | 256586.125 | ug/L |
| \| | Sn | 120 | 887.941 | ug/L |
| \| | Sb | 121 | 486.682 | ug/L |
| L | Sb | 123 | 412.253 | ug/L |
| ⌈ | Ba | 135 | 23.333 | ug/L |
| \| | Ba | 137 | 28.667 | ug/L |
| \| | Tb | 159 | 386941.704 | ug/L |
| \|> | Ho | 165 | 419884.314 | ug/L |
| \| | Tl | 203 | 13.333 | ug/L |
| \| | Tl | 205 | 41.333 | ug/L |
| L | Pb | 208 | 87.334 | ug/L |
| | Kr | 83 | 20.667 | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 1**
Sample Date/Time: Tuesday, February 16, 2010 09:20:44
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\Std 1.002
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26951.414 | 0.001 | | | | ug/L |
| | Li | 7 | 4019.718 | 0.003 | | | | ug/L |
| | Be | 9 | 232.004 | 0.001 | | | | ug/L |
| | B | 11 | 848.714 | 0.001 | | | | ug/L |
| | Na | 23 | 21663.864 | 0.002 | | | | ug/L |
| | Mg | 24 | 7036.654 | 0.007 | | | | ug/L |
| | Al | 27 | 22293.978 | 0.014 | | | | ug/L |
| | K | 39 | 67864.985 | 0.003 | | | | ug/L |
| | Ca | 43 | 206.669 | 0.000 | | | | ug/L |
| > | Sc | 45 | 361453.079 | 361453.079 | | | | ug/L |
| | Ti | 49 | 580.022 | 0.000 | | | | ug/L |
| | Co | 59 | 2321.684 | 0.006 | | | | ug/L |
| | Ni | 60 | 455.347 | 0.001 | | | | ug/L |
| | Ni | 62 | 92.001 | 0.000 | | | | ug/L |
| | Cu | 63 | 1242.767 | 0.003 | | | | ug/L |
| | Cu | 65 | 588.023 | 0.001 | | | | ug/L |
| | Zn | 66 | 516.017 | 0.001 | | | | ug/L |
| | Zn | 67 | 1228.098 | 0.001 | | | | ug/L |
| | Zn | 68 | 422.678 | 0.001 | | | | ug/L |
| | V | 51 | 2029.110 | 0.006 | | | | ug/L |
| | Cr | 52 | 4948.925 | 0.005 | | | | ug/L |
| | Cr | 53 | 14727.428 | 0.005 | | | | ug/L |
| | Mn | 55 | 3698.223 | 0.009 | | | | ug/L |
| | Fe | 54 | 15943.803 | 0.003 | | | | ug/L |
| | Fe | 57 | 1730.195 | 0.001 | | | | ug/L |
| | As | 75 | -36.271 | 0.001 | | | | ug/L |
| | Se | 77 | 2244.995 | 0.001 | | | | ug/L |
| | Se | 82 | 190.781 | 0.000 | | | | ug/L |
| | Sr | 88 | 5125.041 | 0.010 | | | | ug/L |
| > | Y | 89 | 522544.693 | 522544.693 | | | | ug/L |
| | Mo | 95 | 709.366 | 0.001 | | | | ug/L |
| | Mo | 97 | 416.678 | 0.001 | | | | ug/L |
| | Mo | 98 | 1130.604 | 0.002 | | | | ug/L |
| | Ag | 107 | 1793.542 | 0.007 | | | | ug/L |
| | Ag | 109 | 1754.867 | 0.007 | | | | ug/L |
| | Cd | 111 | 432.179 | 0.002 | | | | ug/L |
| | Cd | 114 | 1017.157 | 0.004 | | | | ug/L |

| | | | | | |
|---|---|---|---|---|---|
| \|> | In | 115 | 246985.360 | 246985.360 | ug/L |
| \| | Sn | 120 | 3037.882 | 0.009 | ug/L |
| \| | Sb | 121 | 1808.213 | 0.005 | ug/L |
| \| | Sb | 123 | 1431.630 | 0.004 | ug/L |
| \| | Ba | 135 | 411.344 | 0.001 | ug/L |
| \| | Ba | 137 | 754.704 | 0.002 | ug/L |
| \| | Tb | 159 | 380038.709 | 0.004 | ug/L |
| \|> | Ho | 165 | 410904.186 | 410904.186 | ug/L |
| \| | Tl | 203 | 2129.628 | 0.005 | ug/L |
| \| | Tl | 205 | 4976.943 | 0.012 | ug/L |
| \| | Pb | 208 | 6858.530 | 0.017 | ug/L |
| | Kr | 83 | 19.867 | -0.800 | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 2**
Sample Date/Time: Tuesday, February 16, 2010 09:23:25
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\Std 2.003
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26629.654 | 0.001 | | | | ug/L |
| | Li | 7 | 7606.429 | 0.013 | **5.000000** | 0.18 | 3.7 | ug/L |
| | Be | 9 | 1130.083 | 0.003 | **5.000000** | 0.22 | 4.5 | ug/L |
| | B | 11 | 1972.920 | 0.004 | **5.000000** | 0.03 | 0.6 | ug/L |
| | Na | 23 | 42316.208 | 0.059 | **50.000000** | 3.17 | 6.3 | ug/L |
| | Mg | 24 | 21429.894 | 0.047 | **50.000000** | 3.73 | 7.5 | ug/L |
| | Al | 27 | 78547.339 | 0.170 | **55.000000** | 1.40 | 2.5 | ug/L |
| | K | 39 | 108122.308 | 0.116 | **50.000000** | 4.67 | 9.3 | ug/L |
| | Ca | 43 | 501.350 | 0.001 | **50.000000** | 3.16 | 6.3 | ug/L |
| > | Sc | 45 | 359248.056 | 359248.056 | | | | ug/L |
| | Ti | 49 | 1119.415 | 0.002 | **5.000000** | 0.69 | 13.8 | ug/L |
| | Co | 59 | 10572.608 | 0.029 | **5.000000** | 0.20 | 4.0 | ug/L |
| | Ni | 60 | 2172.974 | 0.006 | **5.000000** | 0.09 | 1.9 | ug/L |
| | Ni | 62 | 373.342 | 0.001 | **5.000000** | 0.46 | 9.1 | ug/L |
| | Cu | 63 | 5179.745 | 0.014 | **5.000000** | 0.15 | 2.9 | ug/L |
| | Cu | 65 | 2576.433 | 0.007 | **5.000000** | 0.27 | 5.4 | ug/L |
| | Zn | 66 | 1709.524 | 0.004 | **5.000000** | 0.60 | 11.9 | ug/L |
| | Zn | 67 | 1505.481 | 0.002 | **5.000000** | 0.60 | 11.9 | ug/L |
| | Zn | 68 | 1356.120 | 0.003 | **5.000000** | 0.31 | 6.1 | ug/L |
| | V | 51 | 10419.040 | 0.030 | **5.000000** | 0.21 | 4.2 | ug/L |
| | Cr | 52 | 11901.868 | 0.025 | **5.000000** | 0.21 | 4.2 | ug/L |
| | Cr | 53 | 16043.384 | 0.008 | **5.000000** | 0.97 | 19.4 | ug/L |
| | Mn | 55 | 16055.409 | 0.044 | **5.000000** | 0.18 | 3.7 | ug/L |
| | Fe | 54 | 21348.587 | 0.018 | **50.000000** | 5.35 | 10.7 | ug/L |
| | Fe | 57 | 4134.444 | 0.007 | **50.000000** | 0.73 | 1.5 | ug/L |
| | As | 75 | 1426.423 | 0.003 | **5.000000** | 0.92 | 18.4 | ug/L |
| | Se | 77 | 2835.190 | 0.002 | **25.000000** | 6.19 | 24.8 | ug/L |
| | Se | 82 | 855.544 | 0.002 | **25.000000** | 0.25 | 1.0 | ug/L |
| | Sr | 88 | 23608.856 | 0.044 | **5.000000** | 0.03 | 0.6 | ug/L |
| > | Y | 89 | 530242.420 | 530242.420 | | | | ug/L |
| | Mo | 95 | 2916.553 | 0.005 | **5.000000** | 0.05 | 1.1 | ug/L |
| | Mo | 97 | 1786.874 | 0.003 | **5.000000** | 0.36 | 7.2 | ug/L |
| | Mo | 98 | 4461.148 | 0.008 | **5.000000** | 0.17 | 3.4 | ug/L |
| | Ag | 107 | 8320.498 | 0.033 | **5.000000** | 0.19 | 3.8 | ug/L |
| | Ag | 109 | 8050.878 | 0.032 | **5.000000** | 0.13 | 2.6 | ug/L |
| | Cd | 111 | 1979.255 | 0.008 | **5.000000** | 0.24 | 4.8 | ug/L |
| | Cd | 114 | 4566.468 | 0.018 | **5.000000** | 0.25 | 5.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 250154.416 | 250154.416 | | | | ug/L |
| \| | Sn | 120 | 9441.751 | 0.034 | **5.000000** | 0.04 | 0.9 | ug/L |
| \| | Sb | 121 | 6941.133 | 0.026 | **5.000000** | 0.12 | 2.4 | ug/L |
| \| | Sb | 123 | 5263.382 | 0.019 | **5.000000** | 0.26 | 5.2 | ug/L |
| \| | Ba | 135 | 2145.633 | 0.005 | **5.000000** | 0.26 | 5.2 | ug/L |
| \| | Ba | 137 | 3859.635 | 0.009 | **5.000000** | 0.13 | 2.7 | ug/L |
| \| | Tb | 159 | 382452.047 | -0.011 | | | | ug/L |
| \|> | Ho | 165 | 420240.498 | 420240.498 | | | | ug/L |
| \| | Tl | 203 | 9775.544 | 0.023 | **5.000000** | 0.11 | 2.3 | ug/L |
| \| | Tl | 205 | 23450.375 | 0.056 | **5.000000** | 0.10 | 2.0 | ug/L |
| \| | Pb | 208 | 31888.966 | 0.076 | **5.000000** | 0.14 | 2.7 | ug/L |
| | Kr | 83 | 22.067 | 1.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 3**
Sample Date/Time: Tuesday, February 16, 2010 09:26:06
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\Std 3.004
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23890.475 | -0.006 | | | | ug/L |
| | Li | 7 | 48126.830 | 0.127 | **50.001451** | 2.50 | 5.0 | ug/L |
| | Be | 9 | 10575.940 | 0.030 | **49.990238** | 2.87 | 5.7 | ug/L |
| | B | 11 | 12876.789 | 0.035 | **49.975544** | 3.79 | 7.6 | ug/L |
| | Na | 23 | 67764.001 | 0.132 | **100.014082** | 6.23 | 6.2 | ug/L |
| | Mg | 24 | 39702.540 | 0.098 | **100.189577** | 5.81 | 5.8 | ug/L |
| | Al | 27 | 198882.473 | 0.510 | **150.008338** | 6.62 | 4.4 | ug/L |
| | K | 39 | 157361.370 | 0.256 | **99.959918** | 5.70 | 5.7 | ug/L |
| | Ca | 43 | 740.036 | 0.002 | **97.257993** | 9.86 | 10.1 | ug/L |
| > | Sc | 45 | 356621.173 | 356621.173 | | | | ug/L |
| | Ti | 49 | 6831.032 | 0.018 | **49.990189** | 1.34 | 2.7 | ug/L |
| | Co | 59 | 102686.479 | 0.288 | **49.999969** | 1.35 | 2.7 | ug/L |
| | Ni | 60 | 20358.912 | 0.057 | **49.991098** | 1.60 | 3.2 | ug/L |
| | Ni | 62 | 3109.962 | 0.009 | **49.976121** | 1.46 | 2.9 | ug/L |
| | Cu | 63 | 50012.828 | 0.140 | **50.003149** | 2.27 | 4.5 | ug/L |
| | Cu | 65 | 24429.426 | 0.068 | **49.997345** | 2.21 | 4.4 | ug/L |
| | Zn | 66 | 15679.966 | 0.044 | **50.007070** | 1.45 | 2.9 | ug/L |
| | Zn | 67 | 3735.575 | 0.008 | **49.933626** | 5.38 | 10.8 | ug/L |
| | Zn | 68 | 11290.948 | 0.031 | **49.991841** | 1.58 | 3.2 | ug/L |
| | V | 51 | 100699.607 | 0.283 | **49.994234** | 0.88 | 1.8 | ug/L |
| | Cr | 52 | 89028.966 | 0.241 | **49.998424** | 1.68 | 3.4 | ug/L |
| | Cr | 53 | 25363.083 | 0.035 | **49.895991** | 3.01 | 6.0 | ug/L |
| | Mn | 55 | 155734.234 | 0.436 | **50.001852** | 1.62 | 3.2 | ug/L |
| | Fe | 54 | 29482.152 | 0.041 | **101.272494** | 6.05 | 6.0 | ug/L |
| | Fe | 57 | 7244.747 | 0.016 | **100.318652** | 5.24 | 5.2 | ug/L |
| | As | 75 | 17277.854 | 0.034 | **49.997471** | 1.09 | 2.2 | ug/L |
| | Se | 77 | 8651.531 | 0.013 | **249.956785** | 4.59 | 1.8 | ug/L |
| | Se | 82 | 8592.449 | 0.016 | **250.046089** | 6.58 | 2.6 | ug/L |
| | Sr | 88 | 235272.539 | 0.452 | **50.006690** | 0.88 | 1.8 | ug/L |
| > | Y | 89 | 520885.238 | 520885.238 | | | | ug/L |
| | Mo | 95 | 27952.697 | 0.053 | **50.005348** | 1.48 | 3.0 | ug/L |
| | Mo | 97 | 17336.181 | 0.033 | **50.005139** | 1.43 | 2.9 | ug/L |
| | Mo | 98 | 43826.172 | 0.084 | **50.011734** | 2.52 | 5.0 | ug/L |
| | Ag | 107 | 82509.499 | 0.337 | **50.006238** | 1.77 | 3.5 | ug/L |
| | Ag | 109 | 78823.815 | 0.322 | **50.004523** | 1.81 | 3.6 | ug/L |
| | Cd | 111 | 19319.565 | 0.079 | **50.003962** | 1.39 | 2.8 | ug/L |
| | Cd | 114 | 44733.371 | 0.183 | **50.005526** | 0.56 | 1.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 244664.284 | 244664.284 | | | | ug/L |
| \| | Sn | 120 | 86155.455 | 0.349 | **50.014690** | 0.34 | 0.7 | ug/L |
| \| | Sb | 121 | 62697.832 | 0.255 | **49.999342** | 1.31 | 2.6 | ug/L |
| L | Sb | 123 | 48632.841 | 0.197 | **50.005779** | 1.45 | 2.9 | ug/L |
| Γ | Ba | 135 | 19024.165 | 0.046 | **49.978657** | 2.19 | 4.4 | ug/L |
| \| | Ba | 137 | 33638.058 | 0.081 | **49.976081** | 2.11 | 4.2 | ug/L |
| \| | Tb | 159 | 377419.063 | -0.012 | | | | ug/L |
| \|> | Ho | 165 | 415301.038 | 415301.038 | | | | ug/L |
| \| | Tl | 203 | 95786.159 | 0.231 | **50.003357** | 1.47 | 2.9 | ug/L |
| \| | Tl | 205 | 230405.289 | 0.555 | **50.002576** | 1.06 | 2.1 | ug/L |
| L | Pb | 208 | 313755.226 | 0.756 | **50.003574** | 1.95 | 3.9 | ug/L |
| | Kr | 83 | 22.067 | 1.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 4**
Sample Date/Time: Tuesday, February 16, 2010 09:28:46
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\Std 4.005
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 22173.336 | -0.011 | | | | ug/L |
| | Li | 7 | 96401.668 | 0.263 | **100.653791** | 2.71 | 2.7 | ug/L |
| | Be | 9 | 21943.925 | 0.062 | **100.708245** | 1.15 | 1.1 | ug/L |
| | B | 11 | 26028.666 | 0.072 | **100.680463** | 3.39 | 3.4 | ug/L |
| | Na | 23 | 575743.730 | 1.563 | **1000.371824** | 43.55 | 4.4 | ug/L |
| | Mg | 24 | 412869.557 | 1.150 | **1000.521600** | 59.53 | 6.0 | ug/L |
| | Al | 27 | 1453824.988 | 4.046 | **1100.368009** | 52.05 | 4.7 | ug/L |
| | K | 39 | 1092588.062 | 2.893 | **1000.161254** | 92.63 | 9.3 | ug/L |
| | Ca | 43 | 5523.318 | 0.015 | **999.550997** | 48.36 | 4.8 | ug/L |
| > | Sc | 45 | 355258.586 | 355258.586 | | | | ug/L |
| | Ti | 49 | 13256.080 | 0.036 | **100.133714** | 2.40 | 2.4 | ug/L |
| | Co | 59 | 208686.710 | 0.587 | **100.357231** | 0.28 | 0.3 | ug/L |
| | Ni | 60 | 41728.882 | 0.117 | **100.513481** | 2.20 | 2.2 | ug/L |
| | Ni | 62 | 6424.015 | 0.018 | **100.734401** | 1.18 | 1.2 | ug/L |
| | Cu | 63 | 101344.155 | 0.285 | **100.317249** | 2.20 | 2.2 | ug/L |
| | Cu | 65 | 47857.831 | 0.135 | **99.735249** | 1.72 | 1.7 | ug/L |
| | Zn | 66 | 31470.936 | 0.088 | **100.220748** | 2.35 | 2.3 | ug/L |
| | Zn | 67 | 6429.354 | 0.015 | **100.557740** | 3.79 | 3.8 | ug/L |
| | Zn | 68 | 23146.776 | 0.065 | **100.647175** | 1.92 | 1.9 | ug/L |
| | V | 51 | 201507.492 | 0.568 | **100.084500** | 3.28 | 3.3 | ug/L |
| | Cr | 52 | 174951.657 | 0.484 | **100.073091** | 2.99 | 3.0 | ug/L |
| | Cr | 53 | 35797.100 | 0.065 | **99.779477** | 3.13 | 3.1 | ug/L |
| | Mn | 55 | 310536.246 | 0.873 | **100.040736** | 3.02 | 3.0 | ug/L |
| | Fe | 54 | 165691.169 | 0.425 | **999.977552** | 36.93 | 3.7 | ug/L |
| | Fe | 57 | 64278.117 | 0.177 | **1000.133735** | 15.95 | 1.6 | ug/L |
| | As | 75 | 34048.731 | 0.067 | **99.816601** | 2.29 | 2.3 | ug/L |
| | Se | 77 | 15562.393 | 0.027 | **503.816377** | 18.23 | 3.6 | ug/L |
| | Se | 82 | 16861.608 | 0.033 | **499.615025** | 20.64 | 4.1 | ug/L |
| | Sr | 88 | 461870.852 | 0.900 | **99.935405** | 4.66 | 4.7 | ug/L |
| > | Y | 89 | 513544.613 | 513544.613 | | | | ug/L |
| | Mo | 95 | 55682.143 | 0.108 | **100.208629** | 2.42 | 2.4 | ug/L |
| | Mo | 97 | 34734.919 | 0.067 | **100.297200** | 2.78 | 2.8 | ug/L |
| | Mo | 98 | 88260.832 | 0.171 | **100.379223** | 1.88 | 1.9 | ug/L |
| | Ag | 107 | 167180.540 | 0.680 | **100.135927** | 4.30 | 4.3 | ug/L |
| | Ag | 109 | 158626.438 | 0.645 | **100.028115** | 4.99 | 5.0 | ug/L |
| | Cd | 111 | 38759.780 | 0.158 | **99.985604** | 6.25 | 6.3 | ug/L |
| | Cd | 114 | 90022.832 | 0.366 | **100.037496** | 3.91 | 3.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 246057.046 | 246057.046 | | | | ug/L |
| \| | Sn | 120 | 173042.404 | 0.701 | **100.105730** | 4.83 | 4.8 | ug/L |
| \| | Sb | 121 | 125160.380 | 0.507 | **99.953581** | 4.34 | 4.3 | ug/L |
| L | Sb | 123 | 96787.008 | 0.392 | **99.895881** | 4.50 | 4.5 | ug/L |
| ⌈ | Ba | 135 | 38703.805 | 0.095 | **100.615894** | 2.26 | 2.2 | ug/L |
| \| | Ba | 137 | 68020.928 | 0.167 | **100.525440** | 3.43 | 3.4 | ug/L |
| \| | Tb | 159 | 372938.735 | -0.008 | | | | ug/L |
| \|> | Ho | 165 | 408309.938 | 408309.938 | | | | ug/L |
| \| | Tl | 203 | 193846.955 | 0.475 | **100.498848** | 2.88 | 2.9 | ug/L |
| \| | Tl | 205 | 453596.908 | 1.111 | **100.028431** | 1.43 | 1.4 | ug/L |
| L | Pb | 208 | 623211.513 | 1.526 | **100.174775** | 2.44 | 2.4 | ug/L |
| | Kr | 83 | 21.533 | 0.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 5**
Sample Date/Time: Tuesday, February 16, 2010 09:31:27
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\Std 5.006
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 17419.210 | -0.023 | | | | ug/L |
| | Li | 7 | 184599.898 | 0.529 | **200.356229** | 5.24 | 2.6 | ug/L |
| | Be | 9 | 42649.280 | 0.124 | **200.371868** | 4.57 | 2.3 | ug/L |
| | B | 11 | 51420.844 | 0.148 | **201.421832** | 8.46 | 4.2 | ug/L |
| | Na | 23 | 5555047.256 | 16.103 | **10001.320172** | 233.59 | 2.3 | ug/L |
| | Mg | 24 | 4000387.464 | 11.626 | **10000.196006** | 323.13 | 3.2 | ug/L |
| | Al | 27 | 13206772.889 | 38.375 | **10201.248920** | 193.36 | 1.9 | ug/L |
| | K | 39 | 10046391.956 | 29.042 | **9999.596422** | 144.48 | 1.4 | ug/L |
| | Ca | 43 | 51619.404 | 0.150 | **9999.764913** | 302.84 | 3.0 | ug/L |
| > | Sc | 45 | 343723.390 | 343723.390 | | | | ug/L |
| | Ti | 49 | 25674.787 | 0.073 | **200.725309** | 4.15 | 2.1 | ug/L |
| | Co | 59 | 407120.042 | 1.184 | **200.415634** | 2.44 | 1.2 | ug/L |
| | Ni | 60 | 79840.911 | 0.232 | **199.726508** | 1.81 | 0.9 | ug/L |
| | Ni | 62 | 12189.655 | 0.035 | **199.566695** | 4.42 | 2.2 | ug/L |
| | Cu | 63 | 194568.469 | 0.566 | **199.812561** | 2.87 | 1.4 | ug/L |
| | Cu | 65 | 92347.145 | 0.269 | **199.871452** | 3.05 | 1.5 | ug/L |
| | Zn | 66 | 61733.400 | 0.179 | **200.668711** | 1.82 | 0.9 | ug/L |
| | Zn | 67 | 10831.628 | 0.029 | **198.362729** | 7.91 | 4.0 | ug/L |
| | Zn | 68 | 44501.708 | 0.129 | **200.084502** | 2.54 | 1.3 | ug/L |
| | V | 51 | 393814.523 | 1.147 | **200.403232** | 4.18 | 2.1 | ug/L |
| | Cr | 52 | 332424.699 | 0.959 | **199.660103** | 2.49 | 1.2 | ug/L |
| | Cr | 53 | 52195.911 | 0.116 | **196.928071** | 8.49 | 4.3 | ug/L |
| | Mn | 55 | 595580.128 | 1.732 | **199.687672** | 1.05 | 0.5 | ug/L |
| | Fe | 54 | 1478995.164 | 4.262 | **9999.850406** | 184.09 | 1.8 | ug/L |
| | Fe | 57 | 616326.950 | 1.789 | **10000.319159** | 109.12 | 1.1 | ug/L |
| | As | 75 | 66146.802 | 0.133 | **199.544112** | 3.40 | 1.7 | ug/L |
| | Se | 77 | 27990.835 | 0.052 | **998.393066** | 35.66 | 3.6 | ug/L |
| | Se | 82 | 32984.010 | 0.066 | **1000.221034** | 26.18 | 2.6 | ug/L |
| | Sr | 88 | 908436.382 | 1.812 | **200.244755** | 3.46 | 1.7 | ug/L |
| > | Y | 89 | 501315.015 | 501315.015 | | | | ug/L |
| | Mo | 95 | 107523.966 | 0.214 | **199.667179** | 5.68 | 2.8 | ug/L |
| | Mo | 97 | 66989.782 | 0.133 | **199.632879** | 4.90 | 2.5 | ug/L |
| | Mo | 98 | 171090.737 | 0.341 | **199.864421** | 7.45 | 3.7 | ug/L |
| | Ag | 107 | 316146.404 | 1.333 | **199.254810** | 8.16 | 4.1 | ug/L |
| | Ag | 109 | 301257.619 | 1.270 | **199.395663** | 8.22 | 4.1 | ug/L |
| | Cd | 111 | 74749.098 | 0.315 | **199.952016** | 4.69 | 2.3 | ug/L |
| | Cd | 114 | 173370.505 | 0.731 | **199.923636** | 1.12 | 0.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 237306.204 | 237306.204 | | | | ug/L |
| \| | Sn | 120 | 333921.067 | 1.404 | **200.117615** | 3.62 | 1.8 | ug/L |
| \| | Sb | 121 | 244472.229 | 1.029 | **200.524653** | 5.49 | 2.7 | ug/L |
| \| | Sb | 123 | 189601.047 | 0.798 | **200.607192** | 5.23 | 2.6 | ug/L |
| \| | Ba | 135 | 76181.570 | 0.191 | **200.421787** | 4.48 | 2.2 | ug/L |
| \| | Ba | 137 | 134731.964 | 0.337 | **200.649909** | 2.77 | 1.4 | ug/L |
| \| | Tb | 159 | 361112.551 | -0.018 | | | | ug/L |
| \|> | Ho | 165 | 399546.687 | 399546.687 | | | | ug/L |
| \| | Tl | 203 | 365568.429 | 0.915 | **198.714489** | 3.48 | 1.7 | ug/L |
| \| | Tl | 205 | 870185.984 | 2.178 | **199.254473** | 2.56 | 1.3 | ug/L |
| \| | Pb | 208 | 1180641.724 | 2.955 | **198.802694** | 3.93 | 2.0 | ug/L |
| | Kr | 83 | 26.600 | 5.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

File Name: 02-16.cal
File Path: C:\Elandata\System\02-16.cal
Calibration Type: External Calibration

| Analyte | Mass | Curve Type | Slope | Intercept | Corr. Coeff. |
|---|---|---|---|---|---|
| Li | 6.015 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Li | 7.016 | Simple Linear | 0.002646982 | -0.001274052 | 0.999943 |
| Be | 9.012 | Simple Linear | 0.000621009 | -0.000364464 | 0.999934 |
| B | 11.009 | Simple Linear | 0.000738911 | -0.000660454 | 0.999755 |
| Na | 22.990 | Simple Linear | 0.001612952 | -0.028394771 | 0.999998 |
| Mg | 23.985 | Simple Linear | 0.001163813 | -0.012104053 | 1.000000 |
| Al | 26.982 | Simple Linear | 0.003766968 | -0.053199638 | 0.999999 |
| K | 38.964 | Simple Linear | 0.002906930 | -0.026208013 | 1.000000 |
| Ca | 42.959 | Simple Linear | 0.000014961 | 0.000039921 | 0.999999 |
| Sc | 44.956 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Ti | 48.948 | Simple Linear | 0.000366854 | -0.000182934 | 0.999947 |
| Co | 58.933 | Simple Linear | 0.005922480 | -0.002717039 | 0.999970 |
| Ni | 59.933 | Simple Linear | 0.001162739 | 0.000011581 | 0.999964 |
| Ni | 61.928 | Simple Linear | 0.000177224 | -0.000044108 | 0.999920 |
| Cu | 62.930 | Simple Linear | 0.002831319 | 0.000020712 | 0.999986 |
| Cu | 64.928 | Simple Linear | 0.001340784 | 0.000530223 | 0.999991 |
| Zn | 65.926 | Simple Linear | 0.000895432 | -0.000498071 | 0.999951 |
| Zn | 66.927 | Simple Linear | 0.000141354 | 0.000800151 | 0.999681 |
| Zn | 67.925 | Simple Linear | 0.000645666 | -0.000160479 | 0.999954 |
| V | 50.944 | Simple Linear | 0.005725418 | -0.000819846 | 0.999983 |
| Cr | 51.941 | Simple Linear | 0.004794394 | 0.001463091 | 0.999988 |
| Cr | 52.941 | Simple Linear | 0.000556949 | 0.005971311 | 0.999014 |
| Mn | 54.938 | Simple Linear | 0.008661756 | 0.002154936 | 0.999990 |
| Fe | 53.940 | Simple Linear | 0.000426348 | -0.001634069 | 1.000000 |
| Fe | 56.935 | Simple Linear | 0.000179050 | -0.001794164 | 1.000000 |
| As | 74.922 | Simple Linear | 0.000663378 | 0.000221646 | 0.999976 |
| Se | 76.920 | Simple Linear | 0.000051962 | 0.000264504 | 0.999926 |
| Se | 81.917 | Simple Linear | 0.000065805 | -0.000003759 | 0.999999 |
| Sr | 87.906 | Simple Linear | 0.009057731 | -0.001357502 | 0.999994 |
| Y | 88.905 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Mo | 94.906 | Simple Linear | 0.001072920 | -0.000092491 | 0.999984 |
| Mo | 96.906 | Simple Linear | 0.000669012 | -0.000133667 | 0.999977 |
| Mo | 97.906 | Simple Linear | 0.001708853 | -0.000646549 | 0.999982 |
| Ag | 106.905 | Simple Linear | 0.006674487 | 0.002993121 | 0.999944 |
| Ag | 108.905 | Simple Linear | 0.006355041 | 0.002976873 | 0.999964 |
| Cd | 110.904 | Simple Linear | 0.001574940 | 0.000155266 | 1.000000 |
| Cd | 113.904 | Simple Linear | 0.003652502 | 0.000350129 | 0.999999 |
| In | 114.904 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Sn | 119.902 | Simple Linear | 0.007017269 | -0.000356306 | 0.999996 |
| Sb | 120.904 | Simple Linear | 0.005136851 | -0.001395245 | 0.999973 |
| Sb | 122.904 | Simple Linear | 0.003983453 | -0.001469988 | 0.999963 |
| Ba | 134.906 | Simple Linear | 0.000953164 | -0.000435849 | 0.999941 |
| Ba | 136.905 | Simple Linear | 0.001684148 | -0.000796338 | 0.999928 |
| Tb | 158.925 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Ho | 164.930 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Tl | 202.972 | Simple Linear | 0.004589316 | 0.003023192 | 0.999811 |
| Tl | 204.975 | Simple Linear | 0.010898698 | 0.006296087 | 0.999946 |
| Pb | 207.977 | Simple Linear | 0.014804124 | 0.011832196 | 0.999857 |

00602

| | | | | | |
|---|---|---|---|---|---|
| Kr | 82.914 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |

00603

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 1**
Sample Date/Time: Tuesday, February 16, 2010 09:34:07
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 1.007
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23526.206 | -0.008 | | | | ug/L |
| | Li | 7 | 97376.213 | 0.263 | **99.945162** | 4.39 | 4.4 | ug/L |
| | Be | 9 | 21974.020 | 0.061 | **99.106517** | 2.32 | 2.3 | ug/L |
| | B | 11 | 27588.057 | 0.075 | **102.958553** | 2.32 | 2.3 | ug/L |
| | Na | 23 | 2856996.151 | 7.900 | **4915.440877** | 195.02 | 4.0 | ug/L |
| | Mg | 24 | 2102014.993 | 5.843 | **5031.378725** | 317.08 | 6.3 | ug/L |
| | Al | 27 | 6999071.547 | 19.446 | **5176.315789** | 121.64 | 2.3 | ug/L |
| | K | 39 | 5587623.403 | 15.385 | **5301.666840** | 456.29 | 8.6 | ug/L |
| | Ca | 43 | 26413.272 | 0.073 | **4879.388644** | 79.82 | 1.6 | ug/L |
| > | Sc | 45 | 359102.299 | 359102.299 | | | | ug/L |
| | Ti | 49 | 13165.260 | 0.035 | **97.038217** | 0.91 | 0.9 | ug/L |
| | Co | 59 | 203728.037 | 0.567 | **96.223599** | 2.61 | 2.7 | ug/L |
| | Ni | 60 | 39895.205 | 0.111 | **95.505769** | 1.02 | 1.1 | ug/L |
| | Ni | 62 | 6106.425 | 0.017 | **95.408079** | 2.72 | 2.8 | ug/L |
| | Cu | 63 | 98435.237 | 0.274 | **96.718066** | 2.05 | 2.1 | ug/L |
| | Cu | 65 | 47678.045 | 0.133 | **98.541569** | 3.42 | 3.5 | ug/L |
| | Zn | 66 | 31112.140 | 0.086 | **96.870807** | 3.10 | 3.2 | ug/L |
| | Zn | 67 | 6206.503 | 0.015 | **97.708355** | 1.43 | 1.5 | ug/L |
| | Zn | 68 | 22622.551 | 0.063 | **97.148273** | 1.46 | 1.5 | ug/L |
| | V | 51 | 199585.641 | 0.557 | **97.355172** | 0.44 | 0.5 | ug/L |
| | Cr | 52 | 171312.732 | 0.469 | **97.441106** | 0.76 | 0.8 | ug/L |
| | Cr | 53 | 33285.198 | 0.056 | **90.689517** | 2.14 | 2.4 | ug/L |
| | Mn | 55 | 302492.662 | 0.842 | **96.910421** | 1.97 | 2.0 | ug/L |
| | Fe | 54 | 752870.625 | 2.056 | **4825.641134** | 132.47 | 2.7 | ug/L |
| | Fe | 57 | 308892.981 | 0.856 | **4790.874021** | 88.82 | 1.9 | ug/L |
| | As | 75 | 34363.917 | 0.067 | **100.745753** | 2.53 | 2.5 | ug/L |
| | Se | 77 | 15273.151 | 0.026 | **491.212001** | 15.68 | 3.2 | ug/L |
| | Se | 82 | 17254.203 | 0.033 | **506.678717** | 15.35 | 3.0 | ug/L |
| | Sr | 88 | 464193.042 | 0.897 | **99.183208** | 3.48 | 3.5 | ug/L |
| > | Y | 89 | 517558.165 | 517558.165 | | | | ug/L |
| | Mo | 95 | 54707.270 | 0.105 | **98.263847** | 4.25 | 4.3 | ug/L |
| | Mo | 97 | 33768.637 | 0.065 | **97.358032** | 2.91 | 3.0 | ug/L |
| | Mo | 98 | 87804.394 | 0.169 | **99.335668** | 3.89 | 3.9 | ug/L |
| | Ag | 107 | 161293.402 | 0.661 | **98.534171** | 2.21 | 2.2 | ug/L |
| | Ag | 109 | 153560.154 | 0.629 | **98.504603** | 2.18 | 2.2 | ug/L |
| | Cd | 111 | 38411.181 | 0.157 | **99.794437** | 1.78 | 1.8 | ug/L |
| | Cd | 114 | 90504.130 | 0.371 | **101.404141** | 2.16 | 2.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 244126.241 | 244126.241 | | | | ug/L |
| \| | Sn | 120 | 170032.659 | 0.693 | **98.810930** | 0.53 | 0.5 | ug/L |
| \| | Sb | 121 | 125589.610 | 0.513 | **100.051727** | 0.74 | 0.7 | ug/L |
| \| | Sb | 123 | 97138.439 | 0.396 | **99.855305** | 0.97 | 1.0 | ug/L |
| \| | Ba | 135 | 38729.264 | 0.094 | **99.102161** | 2.88 | 2.9 | ug/L |
| \| | Ba | 137 | 68156.619 | 0.165 | **98.724957** | 1.48 | 1.5 | ug/L |
| \| | Tb | 159 | 370777.147 | -0.021 | | | | ug/L |
| \|> | Ho | 165 | 411793.692 | 411793.692 | | | | ug/L |
| \| | Tl | 203 | 189791.723 | 0.461 | **99.767011** | 0.51 | 0.5 | ug/L |
| \| | Tl | 205 | 451490.066 | 1.096 | **100.026130** | 1.67 | 1.7 | ug/L |
| \| | Pb | 208 | 613347.439 | 1.489 | **99.813968** | 1.80 | 1.8 | ug/L |
| | Kr | 83 | 23.000 | 2.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 99.945 | | |
| Be | 9 | 99.107 | | |
| B | 11 | 102.959 | | |
| Na | 23 | 98.309 | | |
| Mg | 24 | 100.628 | | |
| Al | 27 | 101.496 | | |
| K | 39 | 106.033 | | |
| Ca | 43 | 97.588 | | |
| Sc | 45 | | 97.903 | |
| Ti | 49 | 97.038 | | |
| Co | 59 | 96.224 | | |
| Ni | 60 | 95.506 | | |
| Ni | 62 | 95.408 | | |
| Cu | 63 | 96.718 | | |
| Cu | 65 | 98.542 | | |
| Zn | 66 | 96.871 | | |
| Zn | 67 | 97.708 | | |
| Zn | 68 | 97.148 | | |
| V | 51 | 97.355 | | |
| Cr | 52 | 97.441 | | |
| Cr | 53 | 90.690 | | |
| Mn | 55 | 96.910 | | |
| Fe | 54 | 96.513 | | |
| Fe | 57 | 95.817 | | |
| As | 75 | 100.746 | | |
| Se | 77 | 98.242 | | |
| Se | 82 | 101.336 | | |
| Sr | 88 | 99.183 | | |
| Y | 89 | | 96.155 | |
| Mo | 95 | 98.264 | | |
| Mo | 97 | 97.358 | | |
| Mo | 98 | 99.336 | | |
| Ag | 107 | 98.534 | | |
| Ag | 109 | 98.505 | | |
| Cd | 111 | 99.794 | | |
| Cd | 114 | 101.404 | | |
| In | 115 | | 95.144 | |
| Sn | 120 | 98.811 | | |
| Sb | 121 | 100.052 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 99.855 | |
| Ba | 135 | 99.102 | |
| Ba | 137 | 98.725 | |
| Tb | 159 | | |
| Ho | 165 | | 98.073 |
| Tl | 203 | 99.767 | |
| Tl | 205 | 100.026 | |
| Pb | 208 | 99.814 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 2**
Sample Date/Time: Tuesday, February 16, 2010 09:42:24
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 2.008
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27218.073 | 0.001 | | | | ug/L |
| | Li | 7 | 4950.927 | 0.006 | **2.583993** | 0.14 | 5.4 | ug/L |
| | Be | 9 | 476.681 | 0.001 | **2.665741** | 0.08 | 2.9 | ug/L |
| | B | 11 | 6263.883 | 0.016 | **22.152554** | 0.14 | 0.6 | ug/L |
| | Na | 23 | 70555.447 | 0.134 | **100.973721** | 3.13 | 3.1 | ug/L |
| | Mg | 24 | 21195.849 | 0.045 | **49.050850** | 2.20 | 4.5 | ug/L |
| | Al | 27 | 71243.841 | 0.147 | **53.064941** | 3.01 | 5.7 | ug/L |
| | K | 39 | 128736.905 | 0.167 | **66.507981** | 8.00 | 12.0 | ug/L |
| | Ca | 43 | 1266.771 | 0.003 | **194.077597** | 15.74 | 8.1 | ug/L |
| > | Sc | 45 | 365708.478 | 365708.478 | | | | ug/L |
| | Ti | 49 | 1129.416 | 0.002 | **5.527196** | 0.09 | 1.7 | ug/L |
| | Co | 59 | 4407.930 | 0.012 | **2.465872** | 0.08 | 3.3 | ug/L |
| | Ni | 60 | 880.050 | 0.002 | **2.028068** | 0.11 | 5.5 | ug/L |
| | Ni | 62 | 165.335 | 0.000 | **2.021474** | 0.46 | 22.7 | ug/L |
| | Cu | 63 | 2208.985 | 0.006 | **2.022952** | 0.12 | 5.8 | ug/L |
| | Cu | 65 | 1048.072 | 0.003 | **1.635426** | 0.07 | 4.3 | ug/L |
| | Zn | 66 | 2153.635 | 0.005 | **6.665061** | 0.17 | 2.5 | ug/L |
| | Zn | 67 | 1274.773 | 0.001 | **0.088879** | 2.73 | 3076.1 | ug/L |
| | Zn | 68 | 1529.486 | 0.004 | **6.043879** | 0.21 | 3.5 | ug/L |
| | V | 51 | 20861.899 | 0.058 | **10.244439** | 0.21 | 2.0 | ug/L |
| | Cr | 52 | 9930.410 | 0.019 | **3.599659** | 0.24 | 6.6 | ug/L |
| | Cr | 53 | 13865.827 | 0.002 | **-7.652597** | 2.53 | 33.0 | ug/L |
| | Mn | 55 | 6689.575 | 0.017 | **1.757997** | 0.08 | 4.3 | ug/L |
| | Fe | 54 | 28052.487 | 0.036 | **87.215646** | 8.82 | 10.1 | ug/L |
| | Fe | 57 | 7362.856 | 0.016 | **98.575545** | 1.85 | 1.9 | ug/L |
| | As | 75 | 850.420 | 0.002 | **3.050380** | 0.16 | 5.1 | ug/L |
| | Se | 77 | 2071.613 | 0.000 | **-1.860730** | 4.01 | 215.3 | ug/L |
| | Se | 82 | 193.512 | 0.000 | **5.419199** | 0.25 | 4.6 | ug/L |
| | Sr | 88 | 4977.611 | 0.009 | **1.156486** | 0.02 | 1.9 | ug/L |
| > | Y | 89 | 531494.079 | 531494.079 | | | | ug/L |
| | Mo | 95 | 1313.446 | 0.002 | **1.998514** | 0.13 | 6.4 | ug/L |
| | Mo | 97 | 816.710 | 0.001 | **2.096580** | 0.08 | 3.9 | ug/L |
| | Mo | 98 | 2053.462 | 0.003 | **2.271468** | 0.12 | 5.1 | ug/L |
| | Ag | 107 | 1752.200 | 0.007 | **0.584303** | 0.03 | 5.1 | ug/L |
| | Ag | 109 | 1742.197 | 0.007 | **0.610104** | 0.04 | 5.7 | ug/L |
| | Cd | 111 | 827.545 | 0.003 | **1.964945** | 0.05 | 2.5 | ug/L |
| | Cd | 114 | 1883.116 | 0.007 | **1.938072** | 0.08 | 4.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 253142.947 | 253142.947 | | | | ug/L |
| \| | Sn | 120 | 8423.203 | 0.030 | **4.299034** | 0.13 | 3.1 | ug/L |
| \| | Sb | 121 | 8515.379 | 0.032 | **6.450696** | 0.14 | 2.2 | ug/L |
| \| | Sb | 123 | 6696.159 | 0.025 | **6.606134** | 0.01 | 0.2 | ug/L |
| \| | Ba | 135 | 1944.913 | 0.005 | **5.267216** | 0.02 | 0.4 | ug/L |
| \| | Ba | 137 | 3420.094 | 0.008 | **5.275861** | 0.13 | 2.5 | ug/L |
| \| | Tb | 159 | 384685.564 | -0.004 | | | | ug/L |
| \|> | Ho | 165 | 419151.947 | 419151.947 | | | | ug/L |
| \| | Tl | 203 | 4222.492 | 0.010 | **1.529310** | 0.04 | 2.5 | ug/L |
| \| | Tl | 205 | 9962.451 | 0.024 | **1.594597** | 0.08 | 4.8 | ug/L |
| \| | Pb | 208 | 6396.381 | 0.015 | **0.217629** | 0.03 | 12.9 | ug/L |
| | Kr | 83 | 20.067 | -0.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 129.200 | | |
| Be | 9 | 133.287 | | |
| B | 11 | 110.763 | | |
| Na | 23 | 100.974 | | |
| Mg | 24 | 98.102 | | |
| Al | 27 | 106.130 | | |
| K | 39 | 88.677 | | |
| Ca | 43 | 97.039 | | |
| Sc | 45 | | 99.704 | |
| Ti | 49 | 110.544 | | |
| Co | 59 | 123.294 | | |
| Ni | 60 | 101.403 | | |
| Ni | 62 | 101.074 | | |
| Cu | 63 | 101.148 | | |
| Cu | 65 | 81.771 | | |
| Zn | 66 | 111.084 | | |
| Zn | 67 | 1.481 | | |
| Zn | 68 | 100.731 | | |
| V | 51 | 102.444 | | |
| Cr | 52 | 89.991 | | |
| Cr | 53 | -191.315 | | |
| Mn | 55 | 87.900 | | |
| Fe | 54 | 87.216 | | |
| Fe | 57 | 98.576 | | |
| As | 75 | 76.260 | | |
| Se | 77 | -37.215 | | |
| Se | 82 | 108.384 | | |
| Sr | 88 | 115.649 | | |
| Y | 89 | | 98.745 | |
| Mo | 95 | 99.926 | | |
| Mo | 97 | 104.829 | | |
| Mo | 98 | 113.573 | | |
| Ag | 107 | 58.430 | | |
| Ag | 109 | 61.010 | | |
| Cd | 111 | 98.247 | | |
| Cd | 114 | 96.904 | | |
| In | 115 | | 98.658 | |
| Sn | 120 | 107.476 | | |
| Sb | 121 | 129.014 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 132.123 | |
| Ba | 135 | 105.344 | |
| Ba | 137 | 105.517 | |
| Tb | 159 | | |
| Ho | 165 | | 99.826 |
| Tl | 203 | 76.465 | |
| Tl | 205 | 79.730 | |
| Pb | 208 | 21.763 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 3**
Sample Date/Time: Tuesday, February 16, 2010 09:45:29
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 3.009
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27148.269 | 0.002 | | | | ug/L |
| | Li | 7 | 3055.942 | 0.000 | **0.667773** | 0.19 | 28.1 | ug/L |
| | Be | 9 | 5.333 | 0.000 | **0.590187** | 0.01 | 2.3 | ug/L |
| | B | 11 | 734.035 | 0.001 | **1.724747** | 0.19 | 10.9 | ug/L |
| | Na | 23 | 11775.740 | -0.026 | **1.552437** | 2.17 | 139.8 | ug/L |
| | Mg | 24 | 333.342 | -0.012 | **0.023061** | 0.49 | 2142.0 | ug/L |
| | Al | 27 | 1316.780 | -0.045 | **2.289887** | 0.07 | 3.1 | ug/L |
| | K | 39 | 47580.881 | -0.053 | **-9.327474** | 4.11 | 44.1 | ug/L |
| | Ca | 43 | 153.335 | -0.000 | **-9.026320** | 3.66 | 40.5 | ug/L |
| > | Sc | 45 | 360971.049 | 360971.049 | | | | ug/L |
| | Ti | 49 | 392.010 | -0.000 | **0.069994** | 0.05 | 74.7 | ug/L |
| | Co | 59 | 69.334 | 0.000 | **0.462360** | 0.01 | 1.7 | ug/L |
| | Ni | 60 | 18.667 | 0.000 | **0.001675** | 0.01 | 586.8 | ug/L |
| | Ni | 62 | 24.000 | -0.000 | **-0.155293** | 0.06 | 40.8 | ug/L |
| | Cu | 63 | 178.002 | 0.000 | **0.064812** | 0.02 | 28.3 | ug/L |
| | Cu | 65 | 80.000 | 0.000 | **-0.335862** | 0.03 | 9.0 | ug/L |
| | Zn | 66 | 74.667 | -0.000 | **0.320373** | 0.03 | 9.7 | ug/L |
| | Zn | 67 | 1185.425 | 0.001 | **-1.330155** | 2.21 | 166.2 | ug/L |
| | Zn | 68 | 117.334 | -0.000 | **0.070678** | 0.15 | 209.2 | ug/L |
| | V | 51 | 1119.294 | 0.004 | **0.823209** | 0.21 | 25.6 | ug/L |
| | Cr | 52 | 3035.933 | -0.000 | **-0.311738** | 0.05 | 17.2 | ug/L |
| | Cr | 53 | 13608.028 | 0.001 | **-8.055772** | 1.29 | 16.0 | ug/L |
| | Mn | 55 | 292.672 | -0.000 | **-0.260929** | 0.01 | 2.7 | ug/L |
| | Fe | 54 | 12601.434 | -0.006 | **-10.918964** | 2.42 | 22.2 | ug/L |
| | Fe | 57 | 822.044 | -0.002 | **-1.170293** | 0.80 | 68.1 | ug/L |
| | As | 75 | -312.890 | 0.000 | **-0.275294** | 0.60 | 216.5 | ug/L |
| | Se | 77 | 1931.576 | -0.000 | **-5.104626** | 2.86 | 56.0 | ug/L |
| | Se | 82 | 4.235 | -0.000 | **0.009457** | 0.07 | 791.2 | ug/L |
| | Sr | 88 | 104.001 | -0.000 | **0.144774** | 0.01 | 4.0 | ug/L |
| > | Y | 89 | 518312.788 | 518312.788 | | | | ug/L |
| | Mo | 95 | 24.000 | -0.000 | **-0.260803** | 0.01 | 5.6 | ug/L |
| | Mo | 97 | 24.000 | -0.000 | **-0.130897** | 0.01 | 8.8 | ug/L |
| | Mo | 98 | 48.082 | -0.001 | **0.065328** | 0.01 | 20.2 | ug/L |
| | Ag | 107 | 18.000 | 0.000 | **-0.441930** | 0.00 | 0.6 | ug/L |
| | Ag | 109 | 18.667 | 0.000 | **-0.461194** | 0.00 | 0.3 | ug/L |
| | Cd | 111 | 4.167 | -0.000 | **-0.100033** | 0.00 | 3.6 | ug/L |
| | Cd | 114 | 6.932 | 0.000 | **-0.090742** | 0.01 | 10.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 250175.671 | 250175.671 | | | | ug/L |
| \| | Sn | 120 | 769.287 | -0.000 | **-0.004032** | 0.02 | 468.6 | ug/L |
| \| | Sb | 121 | 1080.743 | 0.002 | **0.743724** | 0.02 | 2.6 | ug/L |
| \| | Sb | 123 | 837.207 | 0.002 | **0.806457** | 0.05 | 6.7 | ug/L |
| \| | Ba | 135 | 16.667 | -0.000 | **0.440291** | 0.01 | 1.8 | ug/L |
| \| | Ba | 137 | 29.333 | 0.000 | **0.473341** | 0.01 | 2.0 | ug/L |
| \| | Tb | 159 | 383544.715 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 423502.677 | 423502.677 | | | | ug/L |
| \| | Tl | 203 | 52.000 | 0.000 | **-0.638902** | 0.01 | 1.3 | ug/L |
| \| | Tl | 205 | 133.334 | 0.000 | **-0.557822** | 0.00 | 0.3 | ug/L |
| \| | Pb | 208 | 148.001 | 0.000 | **-0.789679** | 0.00 | 0.2 | ug/L |
| | Kr | 83 | 21.067 | 0.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.412 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 96.296 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 97.502 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.862 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Tuesday, February 16, 2010 09:48:48
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 4.010
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 21896.334 | -0.010 | | | | ug/L |
| | Li | 7 | 93931.144 | 0.262 | **99.510186** | 5.04 | 5.1 | ug/L |
| | Be | 9 | 21226.605 | 0.061 | **98.850025** | 4.82 | 4.9 | ug/L |
| | B | 11 | 25413.912 | 0.072 | **97.837088** | 1.21 | 1.2 | ug/L |
| | Na | 23 | 2848419.323 | 8.130 | **5058.151077** | 223.56 | 4.4 | ug/L |
| | Mg | 24 | 2027042.902 | 5.815 | **5007.094387** | 327.55 | 6.5 | ug/L |
| | Al | 27 | 6670502.192 | 19.129 | **5092.247753** | 246.67 | 4.8 | ug/L |
| | K | 39 | 5364025.976 | 15.239 | **5251.261592** | 255.97 | 4.9 | ug/L |
| | Ca | 43 | 25910.231 | 0.074 | **4940.923151** | 92.39 | 1.9 | ug/L |
| > | Sc | 45 | 347928.509 | 347928.509 | | | | ug/L |
| | Ti | 49 | 12908.823 | 0.036 | **98.255782** | 1.32 | 1.3 | ug/L |
| | Co | 59 | 202470.405 | 0.582 | **98.727965** | 4.45 | 4.5 | ug/L |
| | Ni | 60 | 39372.522 | 0.113 | **97.305557** | 2.73 | 2.8 | ug/L |
| | Ni | 62 | 6185.155 | 0.018 | **99.807539** | 5.02 | 5.0 | ug/L |
| | Cu | 63 | 96583.466 | 0.277 | **97.966037** | 3.61 | 3.7 | ug/L |
| | Cu | 65 | 46120.581 | 0.132 | **98.377374** | 2.97 | 3.0 | ug/L |
| | Zn | 66 | 31438.784 | 0.090 | **101.018683** | 1.91 | 1.9 | ug/L |
| | Zn | 67 | 6149.124 | 0.015 | **100.496014** | 3.65 | 3.6 | ug/L |
| | Zn | 68 | 22654.668 | 0.065 | **100.429846** | 3.69 | 3.7 | ug/L |
| | V | 51 | 193076.577 | 0.556 | **97.211973** | 1.04 | 1.1 | ug/L |
| | Cr | 52 | 167341.343 | 0.473 | **98.272341** | 2.14 | 2.2 | ug/L |
| | Cr | 53 | 32501.195 | 0.057 | **92.015143** | 4.50 | 4.9 | ug/L |
| | Mn | 55 | 296702.477 | 0.852 | **98.135676** | 4.07 | 4.1 | ug/L |
| | Fe | 54 | 737867.987 | 2.080 | **4882.904303** | 162.49 | 3.3 | ug/L |
| | Fe | 57 | 304312.791 | 0.871 | **4872.842146** | 199.91 | 4.1 | ug/L |
| | As | 75 | 33709.149 | 0.068 | **102.604640** | 2.04 | 2.0 | ug/L |
| | Se | 77 | 14995.275 | 0.026 | **502.121352** | 9.59 | 1.9 | ug/L |
| | Se | 82 | 16857.993 | 0.034 | **513.944309** | 11.51 | 2.2 | ug/L |
| | Sr | 88 | 452737.489 | 0.908 | **100.418638** | 1.98 | 2.0 | ug/L |
| > | Y | 89 | 498395.975 | 498395.975 | | | | ug/L |
| | Mo | 95 | 54019.023 | 0.108 | **100.717340** | 0.44 | 0.4 | ug/L |
| | Mo | 97 | 33107.778 | 0.066 | **99.090936** | 1.16 | 1.2 | ug/L |
| | Mo | 98 | 83924.511 | 0.168 | **98.550143** | 0.24 | 0.2 | ug/L |
| | Ag | 107 | 157147.982 | 0.655 | **97.623998** | 3.27 | 3.4 | ug/L |
| | Ag | 109 | 147981.927 | 0.616 | **96.522100** | 2.65 | 2.7 | ug/L |
| | Cd | 111 | 37218.031 | 0.155 | **98.347015** | 4.52 | 4.6 | ug/L |
| | Cd | 114 | 87077.494 | 0.363 | **99.218103** | 3.57 | 3.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 240153.381 | 240153.381 | | | | ug/L |
| \| | Sn | 120 | 163056.957 | 0.676 | **96.339140** | 2.55 | 2.7 | ug/L |
| \| | Sb | 121 | 117476.451 | 0.487 | **95.140548** | 1.68 | 1.8 | ug/L |
| \| | Sb | 123 | 90855.926 | 0.377 | **94.964721** | 2.53 | 2.7 | ug/L |
| \| | Ba | 135 | 37114.668 | 0.092 | **96.795612** | 1.87 | 1.9 | ug/L |
| \| | Ba | 137 | 65058.679 | 0.161 | **96.064448** | 1.92 | 2.0 | ug/L |
| \| | Tb | 159 | 368763.295 | -0.009 | | | | ug/L |
| \|> | Ho | 165 | 403993.523 | 403993.523 | | | | ug/L |
| \| | Tl | 203 | 183208.645 | 0.453 | **98.152721** | 1.60 | 1.6 | ug/L |
| \| | Tl | 205 | 433263.783 | 1.072 | **97.828498** | 1.42 | 1.5 | ug/L |
| \| | Pb | 208 | 583536.659 | 1.445 | **96.787552** | 3.10 | 3.2 | ug/L |
| | Kr | 83 | 23.133 | 2.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 99.510 | | |
| Be | 9 | 98.850 | | |
| B | 11 | 97.837 | | |
| Na | 23 | 101.163 | | |
| Mg | 24 | 100.142 | | |
| Al | 27 | 99.848 | | |
| K | 39 | 105.025 | | |
| Ca | 43 | 98.818 | | |
| Sc | 45 | | 94.856 | |
| Ti | 49 | 98.256 | | |
| Co | 59 | 98.728 | | |
| Ni | 60 | 97.306 | | |
| Ni | 62 | 99.808 | | |
| Cu | 63 | 97.966 | | |
| Cu | 65 | 98.377 | | |
| Zn | 66 | 101.019 | | |
| Zn | 67 | 100.496 | | |
| Zn | 68 | 100.430 | | |
| V | 51 | 97.212 | | |
| Cr | 52 | 98.272 | | |
| Cr | 53 | 92.015 | | |
| Mn | 55 | 98.136 | | |
| Fe | 54 | 97.658 | | |
| Fe | 57 | 97.457 | | |
| As | 75 | 102.605 | | |
| Se | 77 | 100.424 | | |
| Se | 82 | 102.789 | | |
| Sr | 88 | 100.419 | | |
| Y | 89 | | 92.595 | |
| Mo | 95 | 100.717 | | |
| Mo | 97 | 99.091 | | |
| Mo | 98 | 98.550 | | |
| Ag | 107 | 97.624 | | |
| Ag | 109 | 96.522 | | |
| Cd | 111 | 98.347 | | |
| Cd | 114 | 99.218 | | |
| In | 115 | | 93.596 | |
| Sn | 120 | 96.339 | | |
| Sb | 121 | 95.141 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 94.965 | |
| Ba | 135 | 96.796 | |
| Ba | 137 | 96.064 | |
| Tb | 159 | | |
| Ho | 165 | | 96.215 |
| Tl | 203 | 98.153 | |
| Tl | 205 | 97.828 | |
| Pb | 208 | 96.788 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Tuesday, February 16, 2010 09:51:49
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 5.011
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27115.155 | 0.003 | | | | ug/L |
| | Li | 7 | 4974.944 | 0.006 | **2.773832** | 0.17 | 6.0 | ug/L |
| | Be | 9 | 474.681 | 0.001 | **2.722718** | 0.08 | 2.8 | ug/L |
| | B | 11 | 6168.472 | 0.016 | **22.539610** | 0.36 | 1.6 | ug/L |
| | Na | 23 | 69177.736 | 0.137 | **102.348611** | 9.05 | 8.8 | ug/L |
| | Mg | 24 | 19224.164 | 0.041 | **45.829245** | 4.36 | 9.5 | ug/L |
| | Al | 27 | 69085.597 | 0.147 | **53.105512** | 1.77 | 3.3 | ug/L |
| | K | 39 | 125516.720 | 0.169 | **67.175518** | 2.22 | 3.3 | ug/L |
| | Ca | 43 | 1238.766 | 0.003 | **196.296784** | 4.36 | 2.2 | ug/L |
| > | Sc | 45 | 354303.836 | 354303.836 | | | | ug/L |
| | Ti | 49 | 1104.080 | 0.002 | **5.599349** | 0.51 | 9.2 | ug/L |
| | Co | 59 | 4338.558 | 0.012 | **2.497027** | 0.03 | 1.4 | ug/L |
| | Ni | 60 | 874.716 | 0.002 | **2.079916** | 0.06 | 3.1 | ug/L |
| | Ni | 62 | 173.335 | 0.000 | **2.228251** | 0.58 | 26.1 | ug/L |
| | Cu | 63 | 2192.979 | 0.006 | **2.077823** | 0.09 | 4.1 | ug/L |
| | Cu | 65 | 1042.737 | 0.003 | **1.693902** | 0.08 | 4.6 | ug/L |
| | Zn | 66 | 1986.924 | 0.005 | **6.357479** | 0.50 | 7.9 | ug/L |
| | Zn | 67 | 1472.142 | 0.001 | **4.840887** | 2.50 | 51.7 | ug/L |
| | Zn | 68 | 1573.495 | 0.004 | **6.457082** | 0.81 | 12.5 | ug/L |
| | V | 51 | 21144.141 | 0.060 | **10.706664** | 0.41 | 3.8 | ug/L |
| | Cr | 52 | 9987.815 | 0.020 | **3.816994** | 0.24 | 6.2 | ug/L |
| | Cr | 53 | 14619.216 | 0.005 | **-1.645813** | 1.71 | 104.1 | ug/L |
| | Mn | 55 | 6554.125 | 0.018 | **1.781164** | 0.02 | 1.0 | ug/L |
| | Fe | 54 | 27445.969 | 0.036 | **88.947423** | 4.16 | 4.7 | ug/L |
| | Fe | 57 | 7002.521 | 0.015 | **96.508797** | 2.84 | 2.9 | ug/L |
| | As | 75 | 881.296 | 0.002 | **3.184876** | 0.49 | 15.3 | ug/L |
| | Se | 77 | 1978.254 | 0.000 | **-3.884372** | 0.73 | 18.7 | ug/L |
| | Se | 82 | 187.842 | 0.000 | **5.357229** | 0.49 | 9.2 | ug/L |
| | Sr | 88 | 4822.846 | 0.009 | **1.143281** | 0.04 | 3.6 | ug/L |
| > | Y | 89 | 521766.576 | 521766.576 | | | | ug/L |
| | Mo | 95 | 1180.091 | 0.002 | **1.804290** | 0.06 | 3.5 | ug/L |
| | Mo | 97 | 766.038 | 0.001 | **1.994565** | 0.18 | 8.8 | ug/L |
| | Mo | 98 | 1932.097 | 0.003 | **2.178101** | 0.05 | 2.2 | ug/L |
| | Ag | 107 | 1663.513 | 0.007 | **0.568683** | 0.01 | 1.5 | ug/L |
| | Ag | 109 | 1602.834 | 0.007 | **0.560665** | 0.05 | 9.3 | ug/L |
| | Cd | 111 | 804.542 | 0.003 | **1.983111** | 0.05 | 2.7 | ug/L |
| | Cd | 114 | 1833.434 | 0.008 | **1.958905** | 0.02 | 0.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 244002.980 | 244002.980 | | | | ug/L |
| \| | Sn | 120 | 8279.719 | 0.030 | **4.393410** | 0.05 | 1.2 | ug/L |
| \| | Sb | 121 | 8351.869 | 0.032 | **6.566828** | 0.29 | 4.5 | ug/L |
| L | Sb | 123 | 6434.024 | 0.025 | **6.586621** | 0.38 | 5.8 | ug/L |
| ⌈ | Ba | 135 | 1978.254 | 0.005 | **5.479035** | 0.05 | 1.0 | ug/L |
| \| | Ba | 137 | 3394.749 | 0.008 | **5.367254** | 0.11 | 2.0 | ug/L |
| \| | Tb | 159 | 372182.620 | -0.010 | | | | ug/L |
| \|> | Ho | 165 | 408510.011 | 408510.011 | | | | ug/L |
| \| | Tl | 203 | 4137.780 | 0.010 | **1.541850** | 0.08 | 5.1 | ug/L |
| \| | Tl | 205 | 9770.203 | 0.024 | **1.608254** | 0.07 | 4.5 | ug/L |
| L | Pb | 208 | 6468.400 | 0.016 | **0.256162** | 0.01 | 4.8 | ug/L |
| | Kr | 83 | 20.533 | -0.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 138.692 | | |
| Be | 9 | 136.136 | | |
| B | 11 | 112.698 | | |
| Na | 23 | 102.349 | | |
| Mg | 24 | 91.658 | | |
| Al | 27 | 106.211 | | |
| K | 39 | 89.567 | | |
| Ca | 43 | 98.148 | | |
| Sc | 45 | | 96.594 | |
| Ti | 49 | 111.987 | | |
| Co | 59 | 124.851 | | |
| Ni | 60 | 103.996 | | |
| Ni | 62 | 111.413 | | |
| Cu | 63 | 103.891 | | |
| Cu | 65 | 84.695 | | |
| Zn | 66 | 105.958 | | |
| Zn | 67 | 80.681 | | |
| Zn | 68 | 107.618 | | |
| V | 51 | 107.067 | | |
| Cr | 52 | 95.425 | | |
| Cr | 53 | -41.145 | | |
| Mn | 55 | 89.058 | | |
| Fe | 54 | 88.947 | | |
| Fe | 57 | 96.509 | | |
| As | 75 | 79.622 | | |
| Se | 77 | -77.687 | | |
| Se | 82 | 107.145 | | |
| Sr | 88 | 114.328 | | |
| Y | 89 | | 96.937 | |
| Mo | 95 | 90.214 | | |
| Mo | 97 | 99.728 | | |
| Mo | 98 | 108.905 | | |
| Ag | 107 | 56.868 | | |
| Ag | 109 | 56.067 | | |
| Cd | 111 | 99.156 | | |
| Cd | 114 | 97.945 | | |
| In | 115 | | 95.096 | |
| Sn | 120 | 109.835 | | |
| Sb | 121 | 131.337 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 131.732 | |
| Ba | 135 | 109.581 | |
| Ba | 137 | 107.345 | |
| Tb | 159 | | |
| Ho | 165 | | 97.291 |
| Tl | 203 | 77.092 | |
| Tl | 205 | 80.413 | |
| Pb | 208 | 25.616 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Tuesday, February 16, 2010 09:55:39
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 6.012
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 28074.566 | 0.002 | | | | ug/L |
| \| | Li | 7 | 3135.306 | 0.000 | **0.661662** | 0.06 | 9.5 | ug/L |
| \| | Be | 9 | 6.000 | 0.000 | **0.592397** | 0.01 | 1.5 | ug/L |
| \| | B | 11 | 712.033 | 0.000 | **1.569626** | 0.08 | 5.4 | ug/L |
| \| | Na | 23 | 11742.303 | -0.027 | **0.948082** | 1.16 | 122.6 | ug/L |
| \| | Mg | 24 | 333.341 | -0.012 | **0.004344** | 0.15 | 3540.6 | ug/L |
| \| | Al | 27 | 743.369 | -0.046 | **1.853211** | 0.01 | 0.7 | ug/L |
| \| | K | 39 | 48150.278 | -0.055 | **-10.038657** | 0.46 | 4.6 | ug/L |
| \| | Ca | 43 | 146.668 | -0.000 | **-11.040891** | 3.98 | 36.0 | ug/L |
| \| > | Sc | 45 | 371249.444 | 371249.444 | | | | ug/L |
| \| | Ti | 49 | 424.012 | -0.000 | **0.222257** | 0.05 | 20.3 | ug/L |
| \| | Co | 59 | 50.667 | -0.000 | **0.453048** | 0.00 | 1.0 | ug/L |
| \| | Ni | 60 | 14.000 | -0.000 | **-0.010453** | 0.01 | 71.2 | ug/L |
| \| | Ni | 62 | 33.333 | -0.000 | **-0.020979** | 0.26 | 1240.2 | ug/L |
| \| | Cu | 63 | 184.669 | 0.000 | **0.066212** | 0.01 | 12.9 | ug/L |
| \| | Cu | 65 | 60.000 | 0.000 | **-0.380948** | 0.02 | 4.8 | ug/L |
| \| | Zn | 66 | 94.667 | -0.000 | **0.373972** | 0.07 | 18.3 | ug/L |
| \| | Zn | 67 | 1238.767 | 0.001 | **-0.932663** | 1.48 | 159.2 | ug/L |
| \| | Zn | 68 | 145.335 | -0.000 | **0.174657** | 0.10 | 58.1 | ug/L |
| \| | V | 51 | -122.998 | 0.000 | **0.227899** | 0.21 | 91.2 | ug/L |
| \| | Cr | 52 | 3020.593 | -0.000 | **-0.368414** | 0.03 | 7.5 | ug/L |
| \| | Cr | 53 | 14470.939 | 0.003 | **-5.719766** | 2.58 | 45.2 | ug/L |
| \| | Mn | 55 | 241.337 | -0.000 | **-0.279321** | 0.01 | 3.0 | ug/L |
| \| | Fe | 54 | 13304.389 | -0.005 | **-8.645735** | 4.79 | 55.5 | ug/L |
| ⌊ | Fe | 57 | 740.703 | -0.002 | **-2.719589** | 1.30 | 48.0 | ug/L |
| ⌈ | As | 75 | -402.684 | -0.000 | **-0.503800** | 0.50 | 98.8 | ug/L |
| \| | Se | 77 | 2058.942 | 0.000 | **-2.189340** | 1.78 | 81.5 | ug/L |
| \| | Se | 82 | 1.693 | -0.000 | **-0.067158** | 0.08 | 116.5 | ug/L |
| \| | Sr | 88 | 83.334 | -0.000 | **0.140009** | 0.00 | 1.9 | ug/L |
| \| > | Y | 89 | 530618.095 | 530618.095 | | | | ug/L |
| \| | Mo | 95 | 27.333 | -0.000 | **-0.256111** | 0.01 | 5.2 | ug/L |
| \| | Mo | 97 | 14.000 | -0.000 | **-0.160675** | 0.01 | 9.3 | ug/L |
| ⌊ | Mo | 98 | 31.114 | -0.001 | **0.045358** | 0.00 | 7.9 | ug/L |
| ⌈ | Ag | 107 | 10.667 | 0.000 | **-0.446371** | 0.00 | 0.1 | ug/L |
| \| | Ag | 109 | 10.000 | 0.000 | **-0.466665** | 0.00 | 1.0 | ug/L |
| \| | Cd | 111 | 3.833 | -0.000 | **-0.100874** | 0.01 | 6.2 | ug/L |
| \| | Cd | 114 | 11.067 | 0.000 | **-0.086232** | 0.00 | 4.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 251501.905 | 251501.905 | | | | ug/L |
| \| | Sn | 120 | 713.307 | -0.001 | **-0.038251** | 0.02 | 58.4 | ug/L |
| \| | Sb | 121 | 902.720 | 0.002 | **0.601148** | 0.05 | 8.7 | ug/L |
| L | Sb | 123 | 712.112 | 0.001 | **0.676513** | 0.05 | 8.1 | ug/L |
| ⌈ | Ba | 135 | 11.333 | -0.000 | **0.427085** | 0.01 | 1.9 | ug/L |
| \| | Ba | 137 | 22.667 | -0.000 | **0.464201** | 0.01 | 2.3 | ug/L |
| \| | Tb | 159 | 387399.832 | -0.007 | | | | ug/L |
| \|> | Ho | 165 | 423735.777 | 423735.777 | | | | ug/L |
| \| | Tl | 203 | 34.667 | 0.000 | **-0.647802** | 0.00 | 0.5 | ug/L |
| \| | Tl | 205 | 73.334 | 0.000 | **-0.570846** | 0.00 | 0.0 | ug/L |
| L | Pb | 208 | 100.667 | 0.000 | **-0.797217** | 0.00 | 0.2 | ug/L |
| | Kr | 83 | 22.133 | 1.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 101.214 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 98.582 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 98.019 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.917 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Tuesday, February 16, 2010 09:59:34
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\ICSA.013
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24666.990 | 0.002 | | | | ug/L |
| | Li | 7 | 2698.474 | 0.000 | **0.557792** | 0.06 | 11.3 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **0.602067** | 0.02 | 3.3 | ug/L |
| | B | 11 | 1046.738 | 0.002 | **3.273140** | 0.33 | 10.1 | ug/L |
| | Na | 23 | 52988008.333 | 160.720 | **99660.810592** | 5870.58 | 5.9 | ug/L |
| | Mg | 24 | 37163876.431 | 112.740 | **96881.855466** | 4654.29 | 4.8 | ug/L |
| | Al | 27 | 122341618.313 | 371.030 | **98509.656702** | 3761.13 | 3.8 | ug/L |
| | K | 39 | 88007207.454 | 266.848 | **91806.229853** | 5920.10 | 6.4 | ug/L |
| | Ca | 43 | 493182.993 | 1.496 | **100006.619533** | 6288.48 | 6.3 | ug/L |
| > | Sc | 45 | 329977.099 | 329977.099 | | | | ug/L |
| | Ti | 49 | 255073.509 | 0.773 | **2107.000111** | 124.82 | 5.9 | ug/L |
| | Co | 59 | 3379.410 | 0.010 | **2.162226** | 0.14 | 6.3 | ug/L |
| | Ni | 60 | 1136.084 | 0.003 | **2.924932** | 0.30 | 10.2 | ug/L |
| | Ni | 62 | 660.028 | 0.002 | **10.767832** | 0.74 | 6.9 | ug/L |
| | Cu | 63 | 2071.614 | 0.006 | **2.114325** | 0.27 | 12.8 | ug/L |
| | Cu | 65 | 1190.759 | 0.003 | **2.190186** | 0.14 | 6.5 | ug/L |
| | Zn | 66 | 1038.737 | 0.003 | **3.611222** | 0.31 | 8.6 | ug/L |
| | Zn | 67 | 1164.088 | 0.001 | **0.397355** | 0.25 | 61.9 | ug/L |
| | Zn | 68 | 322.673 | 0.001 | **1.085592** | 0.16 | 14.8 | ug/L |
| | V | 51 | 257.557 | 0.002 | **0.419641** | 0.09 | 20.6 | ug/L |
| | Cr | 52 | 5833.549 | 0.009 | **1.629411** | 0.35 | 21.4 | ug/L |
| | Cr | 53 | 11550.669 | -0.001 | **-12.873529** | 1.16 | 9.0 | ug/L |
| | Mn | 55 | 21274.056 | 0.064 | **7.099267** | 0.45 | 6.4 | ug/L |
| | Fe | 54 | 14125588.070 | 42.833 | **100468.276205** | 6700.36 | 6.7 | ug/L |
| | Fe | 57 | 5936926.002 | 18.014 | **100620.761490** | 6364.66 | 6.3 | ug/L |
| | As | 75 | -325.295 | -0.000 | **-0.383045** | 0.42 | 109.6 | ug/L |
| | Se | 77 | 2262.333 | 0.001 | **14.182518** | 3.43 | 24.2 | ug/L |
| | Se | 82 | -16.030 | -0.000 | **-0.621513** | 0.16 | 26.1 | ug/L |
| | Sr | 88 | 10461.109 | 0.022 | **2.536446** | 0.04 | 1.5 | ug/L |
| > | Y | 89 | 478597.419 | 478597.419 | | | | ug/L |
| | Mo | 95 | 1067643.748 | 2.231 | **2079.537617** | 47.37 | 2.3 | ug/L |
| | Mo | 97 | 652922.251 | 1.365 | **2039.950447** | 60.14 | 2.9 | ug/L |
| | Mo | 98 | 1684482.422 | 3.522 | **2061.144138** | 88.38 | 4.3 | ug/L |
| | Ag | 107 | 146.001 | 0.001 | **-0.355111** | 0.01 | 1.9 | ug/L |
| | Ag | 109 | 160.002 | 0.001 | **-0.360505** | 0.01 | 3.0 | ug/L |
| | Cd | 111 | 921.222 | 0.004 | **2.497471** | 0.08 | 3.0 | ug/L |
| | Cd | 114 | 1604.316 | 0.007 | **1.860414** | 0.08 | 4.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 224410.768 | 224410.768 | | | | ug/L |
| \| | Sn | 120 | 738.677 | -0.000 | **0.026792** | 0.01 | 45.0 | ug/L |
| \| | Sb | 121 | 704.032 | 0.001 | **0.513201** | 0.03 | 5.9 | ug/L |
| \| | Sb | 123 | 557.102 | 0.001 | **0.590594** | 0.08 | 13.9 | ug/L |
| \| | Ba | 135 | 592.023 | 0.002 | **2.072903** | 0.06 | 2.9 | ug/L |
| \| | Ba | 137 | 969.394 | 0.003 | **1.983216** | 0.04 | 2.2 | ug/L |
| \| | Tb | 159 | 333129.830 | -0.024 | | | | ug/L |
| \|> | Ho | 165 | 371145.030 | 371145.030 | | | | ug/L |
| \| | Tl | 203 | 267.338 | 0.001 | **-0.508401** | 0.02 | 3.7 | ug/L |
| \| | Tl | 205 | 639.360 | 0.002 | **-0.428412** | 0.01 | 2.5 | ug/L |
| \| | Pb | 208 | 1384.048 | 0.004 | **-0.560942** | 0.02 | 3.6 | ug/L |
| | Kr | 83 | 46.333 | 25.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.962 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 88.917 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 87.460 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 88.392 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Tuesday, February 16, 2010 10:02:14
Sample Type: Spike - 2 of 19
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\ICSAB.014
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26205.700 | 0.004 | | | | ug/L |
| | Li | 7 | 2945.897 | 0.001 | **0.747103** | 0.07 | 8.8 | ug/L |
| | Be | 9 | 4.000 | -0.000 | **0.585381** | 0.01 | 1.6 | ug/L |
| | B | 11 | 1036.737 | 0.002 | **3.104466** | 0.07 | 2.1 | ug/L |
| | Na | 23 | 55335504.404 | 162.886 | **101003.636482** | 5608.67 | 5.6 | ug/L |
| | Mg | 24 | 39953994.986 | 117.639 | **101090.701310** | 3494.55 | 3.5 | ug/L |
| | Al | 27 | 127449023.469 | 375.253 | **99630.818210** | 2129.63 | 2.1 | ug/L |
| | K | 39 | 92727957.274 | 272.870 | **93877.757282** | 3612.47 | 3.8 | ug/L |
| | Ca | 43 | 511307.241 | 1.505 | **100603.474914** | 3812.49 | 3.8 | ug/L |
| > | Sc | 45 | 339583.400 | 339583.400 | | | | ug/L |
| | Ti | 49 | 262121.596 | 0.771 | **2101.208162** | 27.16 | 1.3 | ug/L |
| | Co | 59 | 164189.836 | 0.483 | **82.069226** | 0.65 | 0.8 | ug/L |
| | Ni | 60 | 31406.013 | 0.092 | **79.498236** | 2.22 | 2.8 | ug/L |
| | Ni | 62 | 5227.109 | 0.015 | **86.323451** | 1.90 | 2.2 | ug/L |
| | Cu | 63 | 72733.005 | 0.214 | **75.539818** | 1.69 | 2.2 | ug/L |
| | Cu | 65 | 35280.726 | 0.104 | **76.987129** | 0.78 | 1.0 | ug/L |
| | Zn | 66 | 11950.619 | 0.035 | **39.392158** | 1.61 | 4.1 | ug/L |
| | Zn | 67 | 3095.290 | 0.006 | **39.922953** | 2.64 | 6.6 | ug/L |
| | Zn | 68 | 7910.736 | 0.023 | **35.646042** | 1.25 | 3.5 | ug/L |
| | V | 51 | 163935.910 | 0.484 | **84.599646** | 1.03 | 1.2 | ug/L |
| | Cr | 52 | 140494.820 | 0.405 | **84.227332** | 0.73 | 0.9 | ug/L |
| | Cr | 53 | 27762.016 | 0.046 | **71.040185** | 2.11 | 3.0 | ug/L |
| | Mn | 55 | 260144.571 | 0.765 | **88.087812** | 0.57 | 0.6 | ug/L |
| | Fe | 54 | 14277421.373 | 42.002 | **98520.500291** | 833.73 | 0.8 | ug/L |
| | Fe | 57 | 6008161.089 | 17.688 | **98800.673337** | 778.53 | 0.8 | ug/L |
| | As | 75 | 11317.165 | 0.024 | **35.459328** | 1.29 | 3.6 | ug/L |
| | Se | 77 | 3350.730 | 0.003 | **54.727930** | 3.48 | 6.4 | ug/L |
| | Se | 82 | 1244.861 | 0.003 | **38.514588** | 2.04 | 5.3 | ug/L |
| | Sr | 88 | 10684.758 | 0.022 | **2.531119** | 0.15 | 6.0 | ug/L |
| > | Y | 89 | 490486.534 | 490486.534 | | | | ug/L |
| | Mo | 95 | 1078889.463 | 2.201 | **2051.525777** | 58.96 | 2.9 | ug/L |
| | Mo | 97 | 664734.028 | 1.356 | **2027.709318** | 77.19 | 3.8 | ug/L |
| | Mo | 98 | 1706574.953 | 3.483 | **2038.354069** | 84.01 | 4.1 | ug/L |
| | Ag | 107 | 29419.508 | 0.128 | **18.787840** | 1.01 | 5.4 | ug/L |
| | Ag | 109 | 27905.867 | 0.122 | **18.693648** | 0.88 | 4.7 | ug/L |
| | Cd | 111 | 14688.346 | 0.064 | **40.595506** | 1.85 | 4.6 | ug/L |
| | Cd | 114 | 33677.895 | 0.147 | **40.128163** | 1.05 | 2.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 229329.341 | 229329.341 | | | | ug/L |
| \| | Sn | 120 | 811.334 | 0.000 | **0.062166** | 0.05 | 73.6 | ug/L |
| \| | Sb | 121 | 470.014 | 0.000 | **0.302068** | 0.03 | 11.5 | ug/L |
| \| | Sb | 123 | 391.590 | 0.000 | **0.395659** | 0.06 | 16.4 | ug/L |
| \| | Ba | 135 | 596.023 | 0.002 | **2.038942** | 0.18 | 8.9 | ug/L |
| \| | Ba | 137 | 1041.404 | 0.003 | **2.053677** | 0.03 | 1.5 | ug/L |
| \| | Tb | 159 | 338976.683 | -0.033 | | | | ug/L |
| \|> | Ho | 165 | 381369.162 | 381369.162 | | | | ug/L |
| \| | Tl | 203 | 274.005 | 0.001 | **-0.509101** | 0.02 | 3.1 | ug/L |
| \| | Tl | 205 | 640.027 | 0.002 | **-0.432764** | 0.01 | 2.8 | ug/L |
| \| | Pb | 208 | 1483.389 | 0.004 | **-0.550560** | 0.00 | 0.5 | ug/L |
| | Kr | 83 | 48.600 | 27.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 92.581 | |
| Ti | 49 | | | |
| Co | 59 | | | 99.884 |
| Ni | 60 | | | 95.717 |
| Ni | 62 | | | 94.445 |
| Cu | 63 | | | 91.782 |
| Cu | 65 | | | 93.496 |
| Zn | 66 | | | 89.452 |
| Zn | 67 | | | 98.814 |
| Zn | 68 | | | 86.401 |
| V | 51 | | | 105.225 |
| Cr | 52 | | | 103.247 |
| Cr | 53 | | | 104.892 |
| Mn | 55 | | | 101.236 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 89.606 |
| Se | 77 | | | 101.364 |
| Se | 82 | | | 97.840 |
| Sr | 88 | | | |
| Y | 89 | | 91.126 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 95.715 |
| Ag | 109 | | | 95.271 |
| Cd | 111 | | | 95.245 |
| Cd | 114 | | | 95.669 |
| In | 115 | | 89.377 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 90.827 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020461-02D**
Sample Date/Time: Tuesday, February 16, 2010 10:19:37
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020461-02D.016
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29464.377 | 0.004 | | | | ug/L |
| | Li | 7 | 6407.337 | 0.009 | **18.923015** | 1.61 | 8.5 | ug/L |
| | Be | 9 | 82.667 | 0.000 | **4.567475** | 0.06 | 1.2 | ug/L |
| | B | 11 | 816.043 | 0.001 | **9.270503** | 1.00 | 10.8 | ug/L |
| | Na | 23 | 1450481.422 | 3.725 | **11633.675403** | 391.68 | 3.4 | ug/L |
| | Mg | 24 | 758475.460 | 1.965 | **8493.497313** | 357.97 | 4.2 | ug/L |
| | Al | 27 | 11338086.143 | 29.527 | **39262.648533** | 1546.72 | 3.9 | ug/L |
| | K | 39 | 2717159.636 | 6.902 | **11917.331961** | 678.88 | 5.7 | ug/L |
| | Ca | 43 | 2953.902 | 0.007 | **2386.027050** | 122.50 | 5.1 | ug/L |
| > | Sc | 45 | 383555.595 | 383555.595 | | | | ug/L |
| | Ti | 49 | 50758.300 | 0.131 | **1789.306652** | 12.60 | 0.7 | ug/L |
| | Co | 59 | 13180.626 | 0.034 | **31.189387** | 1.77 | 5.7 | ug/L |
| | Ni | 60 | 1245.434 | 0.003 | **13.754662** | 0.64 | 4.6 | ug/L |
| | Ni | 62 | 336.007 | 0.001 | **22.022598** | 2.56 | 11.6 | ug/L |
| | Cu | 63 | 3498.129 | 0.009 | **15.561701** | 0.42 | 2.7 | ug/L |
| | Cu | 65 | 1689.519 | 0.004 | **13.915359** | 0.47 | 3.4 | ug/L |
| | Zn | 66 | 3722.234 | 0.009 | **54.681746** | 2.88 | 5.3 | ug/L |
| | Zn | 67 | 2233.659 | 0.003 | **83.035103** | 8.89 | 10.7 | ug/L |
| | Zn | 68 | 4570.691 | 0.011 | **90.166008** | 3.28 | 3.6 | ug/L |
| | V | 51 | 20343.976 | 0.054 | **47.716587** | 0.92 | 1.9 | ug/L |
| | Cr | 52 | 19144.461 | 0.041 | **41.741761** | 1.19 | 2.9 | ug/L |
| | Cr | 53 | 16938.632 | 0.008 | **17.811163** | 5.90 | 33.1 | ug/L |
| | Mn | 55 | 1784904.382 | 4.655 | **2686.069649** | 99.53 | 3.7 | ug/L |
| | Fe | 54 | 841478.230 | 2.154 | **25279.740702** | 957.66 | 3.8 | ug/L |
| | Fe | 57 | 343661.820 | 0.892 | **24971.466908** | 1364.31 | 5.5 | ug/L |
| | As | 75 | -423.449 | 0.000 | **-1.666199** | 1.10 | 65.7 | ug/L |
| | Se | 77 | 2210.985 | -0.000 | **-61.096940** | 15.14 | 24.8 | ug/L |
| | Se | 82 | 12.098 | 0.000 | **0.830981** | 0.92 | 110.5 | ug/L |
| | Sr | 88 | 41804.054 | 0.063 | **35.674184** | 0.78 | 2.2 | ug/L |
| > | Y | 89 | 658057.019 | 658057.019 | | | | ug/L |
| | Mo | 95 | 114.001 | -0.000 | **-0.713596** | 0.09 | 12.5 | ug/L |
| | Mo | 97 | 82.667 | -0.000 | **-0.061223** | 0.06 | 104.4 | ug/L |
| | Mo | 98 | 202.523 | -0.000 | **0.955741** | 0.10 | 10.3 | ug/L |
| | Ag | 107 | 25.333 | 0.000 | **-2.186477** | 0.02 | 0.7 | ug/L |
| | Ag | 109 | 14.000 | 0.000 | **-2.319930** | 0.01 | 0.3 | ug/L |
| | Cd | 111 | 16.167 | 0.000 | **-0.344611** | 0.03 | 8.1 | ug/L |
| | Cd | 114 | 33.787 | 0.000 | **-0.303233** | 0.07 | 22.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 246388.903 | 246388.903 | | | | ug/L |
| \| | Sn | 120 | 1201.360 | 0.001 | **1.260287** | 0.21 | 16.4 | ug/L |
| \| | Sb | 121 | 363.342 | -0.000 | **0.947173** | 0.07 | 7.5 | ug/L |
| \| | Sb | 123 | 277.334 | -0.000 | **1.242371** | 0.12 | 9.4 | ug/L |
| \| | Ba | 135 | 140022.644 | 0.331 | **1739.160522** | 34.69 | 2.0 | ug/L |
| \| | Ba | 137 | 247588.778 | 0.586 | **1741.164523** | 51.95 | 3.0 | ug/L |
| \| | Tb | 159 | 383400.434 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 422930.099 | 422930.099 | | | | ug/L |
| \| | Tl | 203 | 182.002 | 0.000 | **-2.859786** | 0.07 | 2.4 | ug/L |
| \| | Tl | 205 | 522.018 | 0.001 | **-2.367392** | 0.02 | 1.0 | ug/L |
| \| | Pb | 208 | 14605.488 | 0.034 | **7.601444** | 0.36 | 4.7 | ug/L |
| | Kr | 83 | 30.067 | 9.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 104.569 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 122.258 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 96.026 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.725 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: MBLK-87103**
Sample Date/Time: Tuesday, February 16, 2010 10:33:00
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\MBLK-87103.017
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30988.714 | 0.009 | | | | ug/L |
| | Li | 7 | 3394.083 | 0.001 | **0.865074** | 0.04 | 4.3 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **0.597387** | 0.01 | 2.0 | ug/L |
| | B | 11 | 1593.499 | 0.003 | **4.685334** | 0.14 | 3.0 | ug/L |
| | Na | 23 | 19257.575 | -0.008 | **12.902071** | 2.04 | 15.8 | ug/L |
| | Mg | 24 | 9072.113 | 0.011 | **20.001160** | 4.44 | 22.2 | ug/L |
| | Al | 27 | 50248.951 | 0.085 | **36.754525** | 3.64 | 9.9 | ug/L |
| | K | 39 | 54258.495 | -0.041 | **-5.096086** | 6.19 | 121.5 | ug/L |
| | Ca | 43 | 460.014 | 0.001 | **44.476386** | 15.63 | 35.2 | ug/L |
| > | Sc | 45 | 377592.434 | 377592.434 | | | | ug/L |
| | Ti | 49 | 710.033 | 0.001 | **2.269034** | 1.13 | 49.9 | ug/L |
| | Co | 59 | 70.667 | 0.000 | **0.461546** | 0.00 | 0.5 | ug/L |
| | Ni | 60 | 3861.636 | 0.010 | **8.766805** | 0.47 | 5.4 | ug/L |
| | Ni | 62 | 632.026 | 0.002 | **8.936289** | 0.90 | 10.1 | ug/L |
| | Cu | 63 | 150.668 | 0.000 | **0.031886** | 0.01 | 41.7 | ug/L |
| | Cu | 65 | 78.667 | 0.000 | **-0.345254** | 0.04 | 10.9 | ug/L |
| | Zn | 66 | 8260.433 | 0.021 | **24.559137** | 1.31 | 5.3 | ug/L |
| | Zn | 67 | 2375.038 | 0.004 | **20.171636** | 8.31 | 41.2 | ug/L |
| | Zn | 68 | 6090.412 | 0.016 | **24.607858** | 1.98 | 8.0 | ug/L |
| | V | 51 | -126.294 | 0.000 | **0.224255** | 0.17 | 76.7 | ug/L |
| | Cr | 52 | 8420.613 | 0.014 | **2.587949** | 0.19 | 7.3 | ug/L |
| | Cr | 53 | 15810.241 | 0.006 | **-0.394050** | 5.72 | 1451.0 | ug/L |
| | Mn | 55 | 1871.562 | 0.004 | **0.219709** | 0.07 | 30.8 | ug/L |
| | Fe | 54 | 30094.057 | 0.039 | **94.530310** | 14.32 | 15.1 | ug/L |
| | Fe | 57 | 4709.441 | 0.008 | **55.871981** | 3.52 | 6.3 | ug/L |
| | As | 75 | -330.373 | 0.000 | **-0.286233** | 0.23 | 79.6 | ug/L |
| | Se | 77 | 2260.999 | 0.001 | **4.689095** | 6.06 | 129.2 | ug/L |
| | Se | 82 | 2.183 | -0.000 | **-0.057887** | 0.18 | 304.8 | ug/L |
| | Sr | 88 | 2082.282 | 0.004 | **0.553303** | 0.02 | 4.4 | ug/L |
| > | Y | 89 | 534839.959 | 534839.959 | | | | ug/L |
| | Mo | 95 | 408.011 | 0.000 | **0.407442** | 0.06 | 14.4 | ug/L |
| | Mo | 97 | 283.339 | 0.000 | **0.596310** | 0.14 | 23.9 | ug/L |
| | Mo | 98 | 734.629 | 0.001 | **0.816046** | 0.04 | 4.6 | ug/L |
| | Ag | 107 | 7.333 | 0.000 | **-0.448358** | 0.00 | 0.2 | ug/L |
| | Ag | 109 | 9.333 | 0.000 | **-0.467097** | 0.00 | 0.2 | ug/L |
| | Cd | 111 | 3.333 | -0.000 | **-0.102147** | 0.00 | 1.0 | ug/L |
| | Cd | 114 | 4.720 | 0.000 | **-0.093125** | 0.00 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 252793.926 | 252793.926 | | | | ug/L |
| \| | Sn | 120 | 699.297 | -0.001 | **-0.048448** | 0.01 | 21.8 | ug/L |
| \| | Sb | 121 | 445.346 | -0.000 | **0.246946** | 0.06 | 24.0 | ug/L |
| L | Sb | 123 | 362.004 | -0.000 | **0.325968** | 0.03 | 8.5 | ug/L |
| ⌈ | Ba | 135 | 288.672 | 0.001 | **1.112871** | 0.07 | 5.9 | ug/L |
| \| | Ba | 137 | 533.352 | 0.001 | **1.178539** | 0.07 | 6.0 | ug/L |
| \| | Tb | 159 | 384308.954 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 423885.905 | 423885.905 | | | | ug/L |
| \| | Tl | 203 | 8.667 | -0.000 | **-0.661205** | 0.00 | 0.2 | ug/L |
| \| | Tl | 205 | 18.667 | -0.000 | **-0.582678** | 0.00 | 0.1 | ug/L |
| L | Pb | 208 | 292.002 | 0.000 | **-0.766665** | 0.01 | 1.1 | ug/L |
| | Kr | 83 | 19.133 | -1.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 102.944 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 99.366 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 98.522 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.953 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: LCS-87103**
Sample Date/Time: Tuesday, February 16, 2010 10:35:40
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\LCS-87103.018
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26330.511 | -0.003 | | | | ug/L |
| | Li | 7 | 114682.711 | 0.301 | **114.048685** | 12.81 | 11.2 | ug/L |
| | Be | 9 | 23604.928 | 0.064 | **102.844630** | 10.17 | 9.9 | ug/L |
| | B | 11 | 30004.488 | 0.079 | **108.192346** | 8.92 | 8.2 | ug/L |
| | Na | 23 | 3195872.100 | 8.539 | **5311.863932** | 501.39 | 9.4 | ug/L |
| | Mg | 24 | 2307032.150 | 6.189 | **5328.223474** | 408.66 | 7.7 | ug/L |
| | Al | 27 | 7619767.898 | 20.437 | **5439.502368** | 329.53 | 6.1 | ug/L |
| | K | 39 | 6203614.661 | 16.501 | **5685.548546** | 600.89 | 10.6 | ug/L |
| | Ca | 43 | 27998.883 | 0.075 | **4993.608966** | 296.89 | 5.9 | ug/L |
| > | Sc | 45 | 372473.227 | 372473.227 | | | | ug/L |
| | Ti | 49 | 14331.343 | 0.037 | **102.116063** | 5.73 | 5.6 | ug/L |
| | Co | 59 | 219208.847 | 0.590 | **99.997635** | 9.06 | 9.1 | ug/L |
| | Ni | 60 | 42978.573 | 0.116 | **99.367718** | 7.96 | 8.0 | ug/L |
| | Ni | 62 | 6538.783 | 0.017 | **98.719417** | 8.70 | 8.8 | ug/L |
| | Cu | 63 | 101521.765 | 0.273 | **96.332428** | 7.73 | 8.0 | ug/L |
| | Cu | 65 | 48598.437 | 0.131 | **96.946925** | 5.96 | 6.2 | ug/L |
| | Zn | 66 | 31578.074 | 0.084 | **94.918066** | 6.63 | 7.0 | ug/L |
| | Zn | 67 | 6461.384 | 0.015 | **98.350781** | 9.53 | 9.7 | ug/L |
| | Zn | 68 | 23205.637 | 0.062 | **96.194317** | 6.06 | 6.3 | ug/L |
| | V | 51 | 209314.850 | 0.564 | **98.579766** | 6.87 | 7.0 | ug/L |
| | Cr | 52 | 185402.905 | 0.490 | **101.941215** | 8.33 | 8.2 | ug/L |
| | Cr | 53 | 38296.523 | 0.067 | **109.172168** | 13.64 | 12.5 | ug/L |
| | Mn | 55 | 328240.976 | 0.882 | **101.576930** | 8.46 | 8.3 | ug/L |
| | Fe | 54 | 826870.545 | 2.183 | **5124.204702** | 444.77 | 8.7 | ug/L |
| | Fe | 57 | 338352.364 | 0.906 | **5070.169461** | 474.17 | 9.4 | ug/L |
| | As | 75 | 31640.227 | 0.061 | **91.429558** | 5.40 | 5.9 | ug/L |
| | Se | 77 | 14214.470 | 0.023 | **444.610333** | 46.29 | 10.4 | ug/L |
| | Se | 82 | 15234.891 | 0.029 | **440.774936** | 29.01 | 6.6 | ug/L |
| | Sr | 88 | 509009.437 | 0.969 | **107.115550** | 6.29 | 5.9 | ug/L |
| > | Y | 89 | 526058.930 | 526058.930 | | | | ug/L |
| | Mo | 95 | 56819.901 | 0.108 | **100.590478** | 7.60 | 7.6 | ug/L |
| | Mo | 97 | 35495.107 | 0.067 | **100.909158** | 8.23 | 8.2 | ug/L |
| | Mo | 98 | 91336.853 | 0.173 | **101.889109** | 8.70 | 8.5 | ug/L |
| | Ag | 107 | 168014.247 | 0.686 | **102.404717** | 7.08 | 6.9 | ug/L |
| | Ag | 109 | 159715.003 | 0.652 | **102.185899** | 5.44 | 5.3 | ug/L |
| | Cd | 111 | 37483.129 | 0.153 | **97.084143** | 4.37 | 4.5 | ug/L |
| | Cd | 114 | 86113.396 | 0.352 | **96.178659** | 4.57 | 4.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 245065.645 | 245065.645 | | | | ug/L |
| \| | Sn | 120 | 177545.884 | 0.722 | **102.916664** | 5.90 | 5.7 | ug/L |
| \| | Sb | 121 | 130375.176 | 0.531 | **103.590134** | 6.55 | 6.3 | ug/L |
| \| | Sb | 123 | 101379.837 | 0.413 | **103.960343** | 7.60 | 7.3 | ug/L |
| \| | Ba | 135 | 41147.849 | 0.097 | **102.222345** | 7.59 | 7.4 | ug/L |
| \| | Ba | 137 | 71266.379 | 0.168 | **100.259944** | 8.34 | 8.3 | ug/L |
| \| | Tb | 159 | 385758.993 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 424795.521 | 424795.521 | | | | ug/L |
| \| | Tl | 203 | 194332.216 | 0.458 | **99.116634** | 4.42 | 4.5 | ug/L |
| \| | Tl | 205 | 459845.078 | 1.084 | **98.847546** | 4.52 | 4.6 | ug/L |
| \| | Pb | 208 | 625676.279 | 1.475 | **98.838296** | 6.21 | 6.3 | ug/L |
| | Kr | 83 | 21.267 | 0.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 101.548 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 97.735 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 95.510 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 101.170 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20B**
Sample Date/Time: Tuesday, February 16, 2010 10:39:49
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20B.019
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24115.579 | -0.003 | | | | ug/L |
| | Li | 7 | 85992.743 | 0.241 | **91.548325** | 2.56 | 2.8 | ug/L |
| | Be | 9 | 1357.453 | 0.004 | **6.895661** | 0.07 | 1.0 | ug/L |
| | B | 11 | 17851.367 | 0.050 | **68.928347** | 2.20 | 3.2 | ug/L |
| | Na | 23 | 143372446.615 | 415.086 | **257362.947572** | 3364.95 | 1.3 | ug/L |
| | Mg | 24 | 41072556.028 | 118.917 | **102189.432881** | 1735.04 | 1.7 | ug/L |
| | Al | 27 | 577305.695 | 1.624 | **445.121616** | 10.96 | 2.5 | ug/L |
| | K | 39 | 3707277.716 | 10.549 | **3638.078387** | 53.51 | 1.5 | ug/L |
| | Ca | 43 | 704953.470 | 2.041 | **136389.999664** | 1121.93 | 0.8 | ug/L |
| > | Sc | 45 | 345384.870 | 345384.870 | | | | ug/L |
| | Ti | 49 | 1343.451 | 0.003 | **7.712565** | 0.28 | 3.6 | ug/L |
| | Co | 59 | 101551.353 | 0.294 | **50.080636** | 1.02 | 2.0 | ug/L |
| | Ni | 60 | 21959.969 | 0.064 | **54.642340** | 0.52 | 0.9 | ug/L |
| | Ni | 62 | 3311.379 | 0.009 | **53.579267** | 1.67 | 3.1 | ug/L |
| | Cu | 63 | 2082.282 | 0.006 | **2.020301** | 0.06 | 3.0 | ug/L |
| | Cu | 65 | 832.046 | 0.002 | **1.297819** | 0.32 | 25.0 | ug/L |
| | Zn | 66 | 18212.201 | 0.052 | **58.980423** | 0.43 | 0.7 | ug/L |
| | Zn | 67 | 4085.086 | 0.009 | **59.130997** | 4.30 | 7.3 | ug/L |
| | Zn | 68 | 12642.381 | 0.036 | **56.261837** | 0.45 | 0.8 | ug/L |
| | V | 51 | -1141.984 | -0.003 | **-0.294373** | 0.60 | 204.3 | ug/L |
| | Cr | 52 | 3876.977 | 0.003 | **0.275129** | 0.03 | 9.2 | ug/L |
| | Cr | 53 | 14958.541 | 0.007 | **2.014723** | 2.42 | 120.3 | ug/L |
| | Mn | 55 | 4747415.125 | 13.745 | **1586.580330** | 9.12 | 0.6 | ug/L |
| | Fe | 54 | 1390510.224 | 3.985 | **9349.731182** | 61.31 | 0.7 | ug/L |
| | Fe | 57 | 571424.743 | 1.650 | **9227.137537** | 161.15 | 1.7 | ug/L |
| | As | 75 | -556.060 | -0.000 | **-0.456997** | 0.66 | 144.4 | ug/L |
| | Se | 77 | 3530.144 | 0.001 | **11.747856** | 4.03 | 34.3 | ug/L |
| | Se | 82 | 40.823 | 0.000 | **0.693577** | 0.04 | 5.6 | ug/L |
| | Sr | 88 | 6136639.569 | 8.000 | **883.418856** | 9.21 | 1.0 | ug/L |
| > | Y | 89 | 767000.359 | 767000.359 | | | | ug/L |
| | Mo | 95 | 344.008 | 0.000 | **0.114231** | 0.04 | 31.4 | ug/L |
| | Mo | 97 | 231.337 | 0.000 | **0.250606** | 0.02 | 9.8 | ug/L |
| | Mo | 98 | 517.433 | 0.000 | **0.405774** | 0.02 | 5.7 | ug/L |
| | Ag | 107 | 24.667 | 0.000 | **-0.436023** | 0.00 | 1.1 | ug/L |
| | Ag | 109 | 20.000 | 0.000 | **-0.458649** | 0.01 | 1.9 | ug/L |
| | Cd | 111 | 42.333 | 0.000 | **0.011071** | 0.01 | 97.2 | ug/L |
| | Cd | 114 | 82.344 | 0.000 | **0.003719** | 0.00 | 94.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 221014.387 | 221014.387 | | | | ug/L |
| \| | Sn | 120 | 715.736 | -0.000 | **0.019095** | 0.01 | 36.9 | ug/L |
| \| | Sb | 121 | 569.355 | 0.001 | **0.404127** | 0.07 | 17.2 | ug/L |
| \| | Sb | 123 | 538.415 | 0.001 | **0.577530** | 0.06 | 10.3 | ug/L |
| \| | Ba | 135 | 12753.902 | 0.033 | **35.492906** | 0.62 | 1.7 | ug/L |
| \| | Ba | 137 | 22397.229 | 0.059 | **35.315416** | 0.41 | 1.2 | ug/L |
| \| | Tb | 159 | 341055.046 | -0.027 | | | | ug/L |
| \|> | Ho | 165 | 381245.560 | 381245.560 | | | | ug/L |
| \| | Tl | 203 | 392.010 | 0.001 | **-0.441631** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 990.731 | 0.002 | **-0.348315** | 0.03 | 7.7 | ug/L |
| \| | Pb | 208 | 522.674 | 0.001 | **-0.720658** | 0.01 | 0.9 | ug/L |
| | Kr | 83 | 39.667 | 19.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.163 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 142.498 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 86.137 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 90.798 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20BSD**
Sample Date/Time: Tuesday, February 16, 2010 10:42:29
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20BSD.020
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27603.652 | 0.006 | | | | ug/L |
| | Li | 7 | 21008.680 | 0.052 | **100.724850** | 5.90 | 5.9 | ug/L |
| | Be | 9 | 301.339 | 0.001 | **9.762147** | 0.19 | 1.9 | ug/L |
| | B | 11 | 4540.006 | 0.012 | **82.590825** | 0.63 | 0.8 | ug/L |
| | Na | 23 | 30459053.500 | 86.932 | **269567.920421** | 16455.28 | 6.1 | ug/L |
| | Mg | 24 | 8967733.245 | 25.597 | **110020.580261** | 3656.53 | 3.3 | ug/L |
| | Al | 27 | 126761.322 | 0.314 | **487.239187** | 17.55 | 3.6 | ug/L |
| | K | 39 | 884369.270 | 2.341 | **4071.828622** | 232.69 | 5.7 | ug/L |
| | Ca | 43 | 148346.558 | 0.423 | **141407.068608** | 3760.23 | 2.7 | ug/L |
| > | Sc | 45 | 350171.325 | 350171.325 | | | | ug/L |
| | Ti | 49 | 578.689 | 0.000 | **8.077896** | 1.97 | 24.3 | ug/L |
| | Co | 59 | 22428.661 | 0.064 | **56.238527** | 1.86 | 3.3 | ug/L |
| | Ni | 60 | 5119.704 | 0.015 | **62.673277** | 2.35 | 3.8 | ug/L |
| | Ni | 62 | 770.705 | 0.002 | **59.466134** | 3.51 | 5.9 | ug/L |
| | Cu | 63 | 476.015 | 0.001 | **1.854226** | 0.22 | 11.7 | ug/L |
| | Cu | 65 | 224.003 | 0.000 | **-0.121466** | 0.17 | 141.4 | ug/L |
| | Zn | 66 | 4798.830 | 0.013 | **76.975814** | 2.15 | 2.8 | ug/L |
| | Zn | 67 | 2014.931 | 0.003 | **80.818946** | 13.46 | 16.6 | ug/L |
| | Zn | 68 | 3356.733 | 0.009 | **72.048695** | 2.59 | 3.6 | ug/L |
| | V | 51 | -498.789 | -0.001 | **0.158921** | 1.81 | 1136.7 | ug/L |
| | Cr | 52 | 3044.603 | 0.000 | **-1.264239** | 0.18 | 14.2 | ug/L |
| | Cr | 53 | 14750.797 | 0.006 | **-0.519796** | 4.75 | 914.6 | ug/L |
| | Mn | 55 | 1019075.911 | 2.910 | **1678.491324** | 41.70 | 2.5 | ug/L |
| | Fe | 54 | 310157.062 | 0.845 | **9925.225080** | 226.09 | 2.3 | ug/L |
| | Fe | 57 | 126309.523 | 0.357 | **10005.983620** | 325.10 | 3.2 | ug/L |
| | As | 75 | -469.556 | -0.000 | **-3.178583** | 1.03 | 32.3 | ug/L |
| | Se | 77 | 2427.050 | 0.001 | **36.901301** | 3.83 | 10.4 | ug/L |
| | Se | 82 | 15.428 | 0.000 | **1.531425** | 0.77 | 50.2 | ug/L |
| | Sr | 88 | 1250260.987 | 2.254 | **1244.846980** | 28.31 | 2.3 | ug/L |
| > | Y | 89 | 554583.943 | 554583.943 | | | | ug/L |
| | Mo | 95 | 73.334 | -0.000 | **-0.902960** | 0.09 | 10.4 | ug/L |
| | Mo | 97 | 46.667 | -0.000 | **-0.371565** | 0.18 | 48.2 | ug/L |
| | Mo | 98 | 122.375 | -0.000 | **0.700737** | 0.04 | 5.6 | ug/L |
| | Ag | 107 | 10.000 | 0.000 | **-2.231486** | 0.02 | 0.9 | ug/L |
| | Ag | 109 | 6.667 | -0.000 | **-2.342203** | 0.02 | 0.7 | ug/L |
| | Cd | 111 | 9.167 | 0.000 | **-0.428280** | 0.01 | 2.7 | ug/L |
| | Cd | 114 | 24.700 | 0.000 | **-0.346838** | 0.02 | 5.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 233960.540 | 233960.540 | | | | ug/L |
| \| | Sn | 120 | 656.559 | -0.001 | **-0.211712** | 0.11 | 53.4 | ug/L |
| \| | Sb | 121 | 274.005 | -0.001 | **0.651788** | 0.10 | 15.3 | ug/L |
| L | Sb | 123 | 260.662 | -0.000 | **1.227918** | 0.17 | 13.7 | ug/L |
| ⌈ | Ba | 135 | 2699.141 | 0.007 | **36.910140** | 1.46 | 3.9 | ug/L |
| \| | Ba | 137 | 4798.166 | 0.012 | **37.295352** | 2.27 | 6.1 | ug/L |
| \| | Tb | 159 | 366322.492 | -0.018 | | | | ug/L |
| \|> | Ho | 165 | 405603.343 | 405603.343 | | | | ug/L |
| \| | Tl | 203 | 63.334 | 0.000 | **-3.157928** | 0.05 | 1.5 | ug/L |
| \| | Tl | 205 | 107.334 | 0.000 | **-2.812240** | 0.00 | 0.2 | ug/L |
| L | Pb | 208 | 158.667 | 0.000 | **-3.934327** | 0.01 | 0.3 | ug/L |
| | Kr | 83 | 22.000 | 1.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.468 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 103.034 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.182 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 96.599 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20BMS**
Sample Date/Time: Tuesday, February 16, 2010 10:45:10
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20BMS.021
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 20702.759 | -0.015 | | | | ug/L |
| | Li | 7 | 192974.368 | 0.534 | **202.123114** | 4.77 | 2.4 | ug/L |
| | Be | 9 | 21375.665 | 0.060 | **97.185265** | 1.86 | 1.9 | ug/L |
| | B | 11 | 44827.019 | 0.124 | **169.232011** | 5.01 | 3.0 | ug/L |
| | Na | 23 | 149503966.203 | 419.672 | **260206.491937** | 7388.97 | 2.8 | ug/L |
| | Mg | 24 | 43259405.707 | 121.429 | **104347.253703** | 2047.94 | 2.0 | ug/L |
| | Al | 27 | 7061498.334 | 19.777 | **5264.122673** | 167.66 | 3.2 | ug/L |
| | K | 39 | 8484909.612 | 23.630 | **8137.785216** | 26.42 | 0.3 | ug/L |
| | Ca | 43 | 754021.186 | 2.116 | **141430.780662** | 4404.35 | 3.1 | ug/L |
| > | Sc | 45 | 356282.192 | 356282.192 | | | | ug/L |
| | Ti | 49 | 13457.766 | 0.037 | **100.088750** | 2.79 | 2.8 | ug/L |
| | Co | 59 | 277377.922 | 0.778 | **131.893957** | 2.91 | 2.2 | ug/L |
| | Ni | 60 | 54437.330 | 0.153 | **131.374408** | 2.73 | 2.1 | ug/L |
| | Ni | 62 | 8315.161 | 0.023 | **131.197621** | 5.03 | 3.8 | ug/L |
| | Cu | 63 | 80399.384 | 0.225 | **79.607626** | 1.97 | 2.5 | ug/L |
| | Cu | 65 | 39006.696 | 0.109 | **81.161758** | 2.29 | 2.8 | ug/L |
| | Zn | 66 | 40787.853 | 0.114 | **127.963260** | 2.41 | 1.9 | ug/L |
| | Zn | 67 | 7785.278 | 0.019 | **130.040168** | 7.88 | 6.1 | ug/L |
| | Zn | 68 | 29839.152 | 0.083 | **129.326292** | 6.22 | 4.8 | ug/L |
| | V | 51 | 184947.972 | 0.520 | **90.975852** | 3.31 | 3.6 | ug/L |
| | Cr | 52 | 157188.458 | 0.433 | **89.986414** | 3.46 | 3.9 | ug/L |
| | Cr | 53 | 33744.528 | 0.059 | **94.349882** | 4.31 | 4.6 | ug/L |
| | Mn | 55 | 5041821.708 | 14.154 | **1633.809352** | 52.83 | 3.2 | ug/L |
| | Fe | 54 | 2106252.760 | 5.872 | **13777.225492** | 471.34 | 3.4 | ug/L |
| | Fe | 57 | 854912.764 | 2.396 | **13390.306790** | 376.12 | 2.8 | ug/L |
| | As | 75 | 27740.689 | 0.036 | **53.963380** | 1.47 | 2.7 | ug/L |
| | Se | 77 | 13897.214 | 0.014 | **264.186959** | 5.30 | 2.0 | ug/L |
| | Se | 82 | 13612.016 | 0.017 | **263.666450** | 3.37 | 1.3 | ug/L |
| | Sr | 88 | 6766307.965 | 8.628 | **952.657222** | 21.60 | 2.3 | ug/L |
| > | Y | 89 | 784158.171 | 784158.171 | | | | ug/L |
| | Mo | 95 | 52236.212 | 0.066 | **61.776291** | 1.54 | 2.5 | ug/L |
| | Mo | 97 | 31971.672 | 0.041 | **60.737004** | 1.20 | 2.0 | ug/L |
| | Mo | 98 | 82372.866 | 0.104 | **61.478110** | 0.93 | 1.5 | ug/L |
| | Ag | 107 | 131100.202 | 0.595 | **88.701844** | 2.36 | 2.7 | ug/L |
| | Ag | 109 | 124971.251 | 0.567 | **88.785563** | 1.93 | 2.2 | ug/L |
| | Cd | 111 | 30036.541 | 0.136 | **86.453602** | 1.61 | 1.9 | ug/L |
| | Cd | 114 | 69351.551 | 0.315 | **86.083325** | 1.89 | 2.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 220318.380 | 220318.380 | | | | ug/L |
| \| | Sn | 120 | 147461.212 | 0.666 | **94.937619** | 1.73 | 1.8 | ug/L |
| \| | Sb | 121 | 108579.720 | 0.491 | **95.842824** | 1.38 | 1.4 | ug/L |
| L | Sb | 123 | 83640.660 | 0.378 | **95.270350** | 1.33 | 1.4 | ug/L |
| ⌈ | Ba | 135 | 47996.640 | 0.122 | **128.481338** | 2.06 | 1.6 | ug/L |
| \| | Ba | 137 | 84232.787 | 0.214 | **127.649638** | 2.19 | 1.7 | ug/L |
| \| | Tb | 159 | 351597.771 | -0.027 | | | | ug/L |
| \|> | Ho | 165 | 393137.242 | 393137.242 | | | | ug/L |
| \| | Tl | 203 | 156838.889 | 0.399 | **86.262449** | 3.25 | 3.8 | ug/L |
| \| | Tl | 205 | 371665.645 | 0.945 | **86.155785** | 2.98 | 3.5 | ug/L |
| L | Pb | 208 | 511943.164 | 1.302 | **87.148090** | 2.71 | 3.1 | ug/L |
| | Kr | 83 | 47.333 | 26.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.134 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 145.686 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 85.865 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 93.630 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20BMSD**
Sample Date/Time: Tuesday, February 16, 2010 10:47:51
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20BMSD.022
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 20509.527 | -0.015 | | | | ug/L |
| | Li | 7 | 210889.162 | 0.591 | **223.781877** | 11.54 | 5.2 | ug/L |
| | Be | 9 | 22599.166 | 0.064 | **103.939414** | 4.58 | 4.4 | ug/L |
| | B | 11 | 49223.056 | 0.138 | **188.172523** | 6.95 | 3.7 | ug/L |
| | Na | 23 | 162969951.129 | 462.982 | **287057.930013** | 18177.15 | 6.3 | ug/L |
| | Mg | 24 | 47582832.657 | 135.159 | **116145.042493** | 5590.71 | 4.8 | ug/L |
| | Al | 27 | 7501683.107 | 21.258 | **5657.262063** | 156.10 | 2.8 | ug/L |
| | K | 39 | 9247036.934 | 26.066 | **8975.934174** | 132.38 | 1.5 | ug/L |
| | Ca | 43 | 804633.869 | 2.285 | **152721.521417** | 5487.34 | 3.6 | ug/L |
| > | Sc | 45 | 352205.513 | 352205.513 | | | | ug/L |
| | Ti | 49 | 14159.023 | 0.039 | **106.739466** | 4.09 | 3.8 | ug/L |
| | Co | 59 | 290420.786 | 0.825 | **139.711994** | 4.90 | 3.5 | ug/L |
| | Ni | 60 | 56254.991 | 0.160 | **137.362922** | 4.00 | 2.9 | ug/L |
| | Ni | 62 | 8604.812 | 0.024 | **137.380823** | 5.21 | 3.8 | ug/L |
| | Cu | 63 | 82385.611 | 0.234 | **82.537865** | 2.88 | 3.5 | ug/L |
| | Cu | 65 | 39727.692 | 0.113 | **83.661809** | 3.23 | 3.9 | ug/L |
| | Zn | 66 | 39593.668 | 0.112 | **125.682271** | 4.60 | 3.7 | ug/L |
| | Zn | 67 | 8086.921 | 0.020 | **137.951240** | 9.39 | 6.8 | ug/L |
| | Zn | 68 | 29484.475 | 0.083 | **129.310148** | 7.90 | 6.1 | ug/L |
| | V | 51 | 193511.149 | 0.551 | **96.298811** | 4.82 | 5.0 | ug/L |
| | Cr | 52 | 161110.370 | 0.449 | **93.389320** | 3.98 | 4.3 | ug/L |
| | Cr | 53 | 34668.640 | 0.062 | **101.065981** | 6.75 | 6.7 | ug/L |
| | Mn | 55 | 5316460.700 | 15.100 | **1743.035556** | 63.62 | 3.7 | ug/L |
| | Fe | 54 | 2202593.708 | 6.215 | **14582.074174** | 631.01 | 4.3 | ug/L |
| | Fe | 57 | 900683.011 | 2.554 | **14273.276914** | 450.62 | 3.2 | ug/L |
| | As | 75 | 28624.057 | 0.036 | **54.657593** | 1.01 | 1.9 | ug/L |
| | Se | 77 | 14484.296 | 0.014 | **272.224994** | 14.10 | 5.2 | ug/L |
| | Se | 82 | 14158.892 | 0.018 | **269.279914** | 6.23 | 2.3 | ug/L |
| | Sr | 88 | 7178203.162 | 8.986 | **992.198940** | 28.91 | 2.9 | ug/L |
| > | Y | 89 | 798869.189 | 798869.189 | | | | ug/L |
| | Mo | 95 | 54477.634 | 0.068 | **63.272162** | 2.17 | 3.4 | ug/L |
| | Mo | 97 | 33686.950 | 0.042 | **62.850177** | 2.01 | 3.2 | ug/L |
| | Mo | 98 | 86697.884 | 0.108 | **63.532731** | 1.36 | 2.1 | ug/L |
| | Ag | 107 | 136331.640 | 0.620 | **92.501863** | 3.20 | 3.5 | ug/L |
| | Ag | 109 | 128897.686 | 0.587 | **91.825529** | 2.76 | 3.0 | ug/L |
| | Cd | 111 | 31028.470 | 0.141 | **89.558181** | 3.75 | 4.2 | ug/L |
| | Cd | 114 | 71624.650 | 0.326 | **89.158266** | 4.09 | 4.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 219850.299 | 219850.299 | | | | ug/L |
| \| | Sn | 120 | 155033.886 | 0.702 | **100.102778** | 3.63 | 3.6 | ug/L |
| \| | Sb | 121 | 112738.172 | 0.511 | **99.774967** | 3.06 | 3.1 | ug/L |
| \| | Sb | 123 | 87065.929 | 0.395 | **99.431053** | 3.23 | 3.2 | ug/L |
| \| | Ba | 135 | 50516.029 | 0.128 | **135.075307** | 4.25 | 3.1 | ug/L |
| \| | Ba | 137 | 88478.610 | 0.225 | **133.916981** | 2.32 | 1.7 | ug/L |
| \| | Tb | 159 | 351358.488 | -0.029 | | | | ug/L |
| \|> | Ho | 165 | 393639.927 | 393639.927 | | | | ug/L |
| \| | Tl | 203 | 164387.565 | 0.418 | **90.348143** | 3.17 | 3.5 | ug/L |
| \| | Tl | 205 | 392593.417 | 0.997 | **90.940603** | 3.37 | 3.7 | ug/L |
| \| | Pb | 208 | 537365.204 | 1.365 | **91.418259** | 2.30 | 2.5 | ug/L |
| | Kr | 83 | 43.733 | 23.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.022 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 148.419 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 85.683 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 93.750 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20BPDS**
Sample Date/Time: Tuesday, February 16, 2010 10:50:31
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20BPDS.023
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25137.331 | -0.004 | | | | ug/L |
| | Li | 7 | 130049.638 | 0.353 | **669.283570** | 14.91 | 2.2 | ug/L |
| | Be | 9 | 23256.438 | 0.065 | **522.610255** | 7.63 | 1.5 | ug/L |
| | B | 11 | 35296.842 | 0.097 | **657.898430** | 22.38 | 3.4 | ug/L |
| | Na | 23 | 36088372.437 | 100.110 | **310419.265214** | 2768.12 | 0.9 | ug/L |
| | Mg | 24 | 11776114.822 | 32.677 | **140439.371066** | 4404.81 | 3.1 | ug/L |
| | Al | 27 | 7304372.541 | 20.228 | **26920.196081** | 645.60 | 2.4 | ug/L |
| | K | 39 | 6951868.306 | 19.115 | **32923.294532** | 2234.39 | 6.8 | ug/L |
| | Ca | 43 | 188652.816 | 0.523 | **174827.316300** | 4876.00 | 2.8 | ug/L |
| > | Sc | 45 | 360265.582 | 360265.582 | | | | ug/L |
| | Ti | 49 | 13203.994 | 0.035 | **485.105501** | 13.40 | 2.8 | ug/L |
| | Co | 59 | 221107.677 | 0.614 | **520.282039** | 3.82 | 0.7 | ug/L |
| | Ni | 60 | 42638.544 | 0.118 | **508.750584** | 11.30 | 2.2 | ug/L |
| | Ni | 62 | 6546.785 | 0.018 | **510.067121** | 11.92 | 2.3 | ug/L |
| | Cu | 63 | 90351.585 | 0.251 | **442.352430** | 6.49 | 1.5 | ug/L |
| | Cu | 65 | 43103.104 | 0.120 | **443.681686** | 7.21 | 1.6 | ug/L |
| | Zn | 66 | 32467.053 | 0.090 | **503.655607** | 6.91 | 1.4 | ug/L |
| | Zn | 67 | 6418.677 | 0.015 | **507.424535** | 9.49 | 1.9 | ug/L |
| | Zn | 68 | 23709.835 | 0.065 | **507.510915** | 15.13 | 3.0 | ug/L |
| | V | 51 | 198008.702 | 0.550 | **481.434729** | 12.06 | 2.5 | ug/L |
| | Cr | 52 | 167271.908 | 0.456 | **473.912802** | 7.57 | 1.6 | ug/L |
| | Cr | 53 | 34430.885 | 0.059 | **479.283635** | 6.42 | 1.3 | ug/L |
| | Mn | 55 | 1372972.168 | 3.810 | **2198.129152** | 6.56 | 0.3 | ug/L |
| | Fe | 54 | 1061163.704 | 2.904 | **34079.776587** | 119.40 | 0.4 | ug/L |
| | Fe | 57 | 437651.585 | 1.211 | **33855.000255** | 481.74 | 1.4 | ug/L |
| | As | 75 | 32453.182 | 0.057 | **426.568880** | 5.48 | 1.3 | ug/L |
| | Se | 77 | 14585.149 | 0.022 | **2044.968580** | 33.18 | 1.6 | ug/L |
| | Se | 82 | 16032.076 | 0.028 | **2108.323055** | 53.79 | 2.6 | ug/L |
| | Sr | 88 | 1834569.711 | 3.175 | **1753.557933** | 29.27 | 1.7 | ug/L |
| > | Y | 89 | 577867.107 | 577867.107 | | | | ug/L |
| | Mo | 95 | 53996.889 | 0.093 | **434.084203** | 11.33 | 2.6 | ug/L |
| | Mo | 97 | 33641.406 | 0.058 | **434.234176** | 8.87 | 2.0 | ug/L |
| | Mo | 98 | 85230.341 | 0.147 | **431.818921** | 12.96 | 3.0 | ug/L |
| | Ag | 107 | 148018.893 | 0.613 | **457.108737** | 10.76 | 2.4 | ug/L |
| | Ag | 109 | 140732.471 | 0.583 | **456.339939** | 7.27 | 1.6 | ug/L |
| | Cd | 111 | 35773.354 | 0.148 | **469.956683** | 13.27 | 2.8 | ug/L |
| | Cd | 114 | 82205.045 | 0.341 | **465.707892** | 9.93 | 2.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 241397.994 | 241397.994 | | | | ug/L |
| \| | Sn | 120 | 163253.157 | 0.673 | **479.655096** | 9.50 | 2.0 | ug/L |
| \| | Sb | 121 | 116937.679 | 0.483 | **471.031809** | 9.35 | 2.0 | ug/L |
| \| | Sb | 123 | 91092.729 | 0.376 | **473.489769** | 5.36 | 1.1 | ug/L |
| \| | Ba | 135 | 40030.642 | 0.095 | **500.716184** | 15.43 | 3.1 | ug/L |
| \| | Ba | 137 | 71325.863 | 0.169 | **505.110536** | 4.20 | 0.8 | ug/L |
| \| | Tb | 159 | 379138.850 | -0.021 | | | | ug/L |
| \|> | Ho | 165 | 421016.948 | 421016.948 | | | | ug/L |
| \| | Tl | 203 | 179808.579 | 0.427 | **461.941162** | 7.56 | 1.6 | ug/L |
| \| | Tl | 205 | 423314.452 | 1.005 | **458.345385** | 4.40 | 1.0 | ug/L |
| \| | Pb | 208 | 573733.186 | 1.363 | **456.208601** | 5.27 | 1.2 | ug/L |
| | Kr | 83 | 25.533 | 4.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.220 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 107.360 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 94.081 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.270 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Tuesday, February 16, 2010 10:58:29
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 4.024
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26342.558 | 0.000 | | | | ug/L |
| | Li | 7 | 110429.529 | 0.299 | **113.619365** | 6.05 | 5.3 | ug/L |
| | Be | 9 | 23951.240 | 0.067 | **107.927759** | 4.38 | 4.1 | ug/L |
| | B | 11 | 30861.791 | 0.084 | **115.209271** | 3.10 | 2.7 | ug/L |
| | Na | 23 | 3050795.967 | 8.439 | **5249.771417** | 441.65 | 8.4 | ug/L |
| | Mg | 24 | 2233194.553 | 6.204 | **5340.932647** | 306.65 | 5.7 | ug/L |
| | Al | 27 | 7171916.115 | 19.918 | **5301.691364** | 250.60 | 4.7 | ug/L |
| | K | 39 | 6238530.081 | 17.175 | **5917.369479** | 157.85 | 2.7 | ug/L |
| | Ca | 43 | 26460.097 | 0.073 | **4884.381935** | 112.34 | 2.3 | ug/L |
| > | Sc | 45 | 359451.859 | 359451.859 | | | | ug/L |
| | Ti | 49 | 13294.148 | 0.036 | **97.940249** | 2.17 | 2.2 | ug/L |
| | Co | 59 | 206791.230 | 0.575 | **97.629938** | 5.50 | 5.6 | ug/L |
| | Ni | 60 | 40574.745 | 0.113 | **97.084273** | 3.30 | 3.4 | ug/L |
| | Ni | 62 | 6138.454 | 0.017 | **95.889864** | 6.76 | 7.1 | ug/L |
| | Cu | 63 | 96924.216 | 0.269 | **95.161903** | 2.69 | 2.8 | ug/L |
| | Cu | 65 | 46642.336 | 0.130 | **96.306879** | 2.47 | 2.6 | ug/L |
| | Zn | 66 | 30939.444 | 0.086 | **96.221979** | 0.84 | 0.9 | ug/L |
| | Zn | 67 | 6059.720 | 0.014 | **94.749834** | 4.71 | 5.0 | ug/L |
| | Zn | 68 | 22438.026 | 0.062 | **96.274707** | 3.15 | 3.3 | ug/L |
| | V | 51 | 202871.745 | 0.565 | **98.893317** | 2.54 | 2.6 | ug/L |
| | Cr | 52 | 173686.837 | 0.475 | **98.762593** | 3.56 | 3.6 | ug/L |
| | Cr | 53 | 33091.075 | 0.056 | **89.662611** | 8.53 | 9.5 | ug/L |
| | Mn | 55 | 314518.196 | 0.875 | **100.744632** | 5.80 | 5.8 | ug/L |
| | Fe | 54 | 784200.758 | 2.142 | **5028.074784** | 289.59 | 5.8 | ug/L |
| | Fe | 57 | 319601.728 | 0.886 | **4955.678846** | 264.81 | 5.3 | ug/L |
| | As | 75 | 34484.841 | 0.069 | **103.577860** | 2.40 | 2.3 | ug/L |
| | Se | 77 | 15270.493 | 0.027 | **505.430223** | 36.34 | 7.2 | ug/L |
| | Se | 82 | 17491.416 | 0.035 | **526.273722** | 14.20 | 2.7 | ug/L |
| | Sr | 88 | 462181.112 | 0.915 | **101.183709** | 3.87 | 3.8 | ug/L |
| > | Y | 89 | 505182.547 | 505182.547 | | | | ug/L |
| | Mo | 95 | 54498.476 | 0.108 | **100.327896** | 5.23 | 5.2 | ug/L |
| | Mo | 97 | 33941.414 | 0.067 | **100.306265** | 4.91 | 4.9 | ug/L |
| | Mo | 98 | 86764.941 | 0.171 | **100.575224** | 3.61 | 3.6 | ug/L |
| | Ag | 107 | 158824.413 | 0.655 | **97.655109** | 3.80 | 3.9 | ug/L |
| | Ag | 109 | 150846.018 | 0.622 | **97.370846** | 2.63 | 2.7 | ug/L |
| | Cd | 111 | 37994.443 | 0.157 | **99.316812** | 1.97 | 2.0 | ug/L |
| | Cd | 114 | 88056.980 | 0.363 | **99.273610** | 2.31 | 2.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 242706.854 | 242706.854 | | | | ug/L |
| \| | Sn | 120 | 167503.860 | 0.687 | **97.995557** | 5.37 | 5.5 | ug/L |
| \| | Sb | 121 | 119587.685 | 0.491 | **95.902014** | 5.08 | 5.3 | ug/L |
| \| | Sb | 123 | 92667.557 | 0.381 | **95.890991** | 4.62 | 4.8 | ug/L |
| \| | Ba | 135 | 37344.434 | 0.091 | **95.901192** | 1.60 | 1.7 | ug/L |
| \| | Ba | 137 | 65987.189 | 0.161 | **95.961229** | 3.12 | 3.3 | ug/L |
| \| | Tb | 159 | 372151.793 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 410346.912 | 410346.912 | | | | ug/L |
| \| | Tl | 203 | 183794.633 | 0.448 | **96.980312** | 3.24 | 3.3 | ug/L |
| \| | Tl | 205 | 436990.443 | 1.065 | **97.174946** | 3.25 | 3.3 | ug/L |
| \| | Pb | 208 | 597111.799 | 1.456 | **97.549161** | 4.66 | 4.8 | ug/L |
| | Kr | 83 | 20.733 | 0.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 113.619 | | |
| Be | 9 | 107.928 | | |
| B | 11 | 115.209 | | |
| Na | 23 | 104.995 | | |
| Mg | 24 | 106.819 | | |
| Al | 27 | 103.955 | | |
| K | 39 | 118.347 | | |
| Ca | 43 | 97.688 | | |
| Sc | 45 | | 97.998 | |
| Ti | 49 | 97.940 | | |
| Co | 59 | 97.630 | | |
| Ni | 60 | 97.084 | | |
| Ni | 62 | 95.890 | | |
| Cu | 63 | 95.162 | | |
| Cu | 65 | 96.307 | | |
| Zn | 66 | 96.222 | | |
| Zn | 67 | 94.750 | | |
| Zn | 68 | 96.275 | | |
| V | 51 | 98.893 | | |
| Cr | 52 | 98.763 | | |
| Cr | 53 | 89.663 | | |
| Mn | 55 | 100.745 | | |
| Fe | 54 | 100.561 | | |
| Fe | 57 | 99.114 | | |
| As | 75 | 103.578 | | |
| Se | 77 | 101.086 | | |
| Se | 82 | 105.255 | | |
| Sr | 88 | 101.184 | | |
| Y | 89 | | 93.856 | |
| Mo | 95 | 100.328 | | |
| Mo | 97 | 100.306 | | |
| Mo | 98 | 100.575 | | |
| Ag | 107 | 97.655 | | |
| Ag | 109 | 97.371 | | |
| Cd | 111 | 99.317 | | |
| Cd | 114 | 99.274 | | |
| In | 115 | | 94.591 | |
| Sn | 120 | 97.996 | | |
| Sb | 121 | 95.902 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 95.891 | |
| Ba | 135 | 95.901 | |
| Ba | 137 | 95.961 | |
| Tb | 159 | | |
| Ho | 165 | | 97.729 |
| Tl | 203 | 96.980 | |
| Tl | 205 | 97.175 | |
| Pb | 208 | 97.549 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Tuesday, February 16, 2010 11:02:24
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 5.025
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30102.500 | 0.010 | | | | ug/L |
| | Li | 7 | 5601.373 | 0.008 | **3.335324** | 0.15 | 4.4 | ug/L |
| | Be | 9 | 532.685 | 0.001 | **2.943447** | 0.28 | 9.6 | ug/L |
| | B | 11 | 6752.296 | 0.017 | **24.302305** | 0.16 | 0.7 | ug/L |
| | Na | 23 | 71195.446 | 0.139 | **103.636651** | 6.32 | 6.1 | ug/L |
| | Mg | 24 | 21496.751 | 0.047 | **50.458554** | 3.98 | 7.9 | ug/L |
| | Al | 27 | 72870.281 | 0.154 | **54.952195** | 1.44 | 2.6 | ug/L |
| | K | 39 | 144139.268 | 0.214 | **82.778247** | 5.01 | 6.1 | ug/L |
| | Ca | 43 | 1209.428 | 0.003 | **186.682386** | 6.50 | 3.5 | ug/L |
| > | Sc | 45 | 360754.123 | 360754.123 | | | | ug/L |
| | Ti | 49 | 1050.739 | 0.002 | **5.049690** | 0.58 | 11.5 | ug/L |
| | Co | 59 | 4319.879 | 0.012 | **2.451864** | 0.01 | 0.4 | ug/L |
| | Ni | 60 | 820.044 | 0.002 | **1.911823** | 0.08 | 4.0 | ug/L |
| | Ni | 62 | 142.668 | 0.000 | **1.700499** | 0.08 | 4.5 | ug/L |
| | Cu | 63 | 2127.628 | 0.006 | **1.973837** | 0.04 | 2.0 | ug/L |
| | Cu | 65 | 1016.067 | 0.003 | **1.599961** | 0.08 | 4.7 | ug/L |
| | Zn | 66 | 1992.258 | 0.005 | **6.258462** | 0.33 | 5.2 | ug/L |
| | Zn | 67 | 1434.802 | 0.001 | **3.595830** | 3.63 | 101.0 | ug/L |
| | Zn | 68 | 1490.811 | 0.004 | **5.968506** | 0.12 | 2.0 | ug/L |
| | V | 51 | 19883.648 | 0.056 | **9.911222** | 0.45 | 4.5 | ug/L |
| | Cr | 52 | 9796.235 | 0.019 | **3.598630** | 0.14 | 4.0 | ug/L |
| | Cr | 53 | 14507.673 | 0.004 | **-3.526653** | 2.27 | 64.3 | ug/L |
| | Mn | 55 | 6824.359 | 0.018 | **1.829569** | 0.03 | 1.5 | ug/L |
| | Fe | 54 | 28795.675 | 0.039 | **94.448369** | 5.45 | 5.8 | ug/L |
| | Fe | 57 | 7270.768 | 0.016 | **98.676582** | 0.23 | 0.2 | ug/L |
| | As | 75 | 791.141 | 0.002 | **2.983983** | 0.40 | 13.3 | ug/L |
| | Se | 77 | 2062.277 | 0.000 | **1.235790** | 1.34 | 108.6 | ug/L |
| | Se | 82 | 190.387 | 0.000 | **5.577443** | 0.20 | 3.6 | ug/L |
| | Sr | 88 | 5109.030 | 0.010 | **1.232423** | 0.01 | 1.1 | ug/L |
| > | Y | 89 | 508254.347 | 508254.347 | | | | ug/L |
| | Mo | 95 | 1242.767 | 0.002 | **1.974971** | 0.01 | 0.7 | ug/L |
| | Mo | 97 | 792.041 | 0.001 | **2.129152** | 0.04 | 2.1 | ug/L |
| | Mo | 98 | 1989.965 | 0.003 | **2.302417** | 0.09 | 3.7 | ug/L |
| | Ag | 107 | 1658.846 | 0.007 | **0.567465** | 0.05 | 8.6 | ug/L |
| | Ag | 109 | 1610.835 | 0.007 | **0.567531** | 0.02 | 3.9 | ug/L |
| | Cd | 111 | 801.542 | 0.003 | **1.978632** | 0.06 | 3.0 | ug/L |
| | Cd | 114 | 1886.886 | 0.008 | **2.022752** | 0.12 | 5.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 243653.742 | 243653.742 | | | | ug/L |
| \| | Sn | 120 | 8556.565 | 0.032 | **4.561299** | 0.13 | 2.8 | ug/L |
| \| | Sb | 121 | 7889.381 | 0.030 | **6.207809** | 0.30 | 4.8 | ug/L |
| \| | Sb | 123 | 6129.847 | 0.024 | **6.282614** | 0.19 | 3.0 | ug/L |
| \| | Ba | 135 | 1870.227 | 0.004 | **5.090178** | 0.09 | 1.9 | ug/L |
| \| | Ba | 137 | 3430.099 | 0.008 | **5.302213** | 0.22 | 4.1 | ug/L |
| \| | Tb | 159 | 377995.609 | -0.018 | | | | ug/L |
| \|> | Ho | 165 | 418305.874 | 418305.874 | | | | ug/L |
| \| | Tl | 203 | 4115.768 | 0.010 | **1.478588** | 0.05 | 3.3 | ug/L |
| \| | Tl | 205 | 9651.387 | 0.023 | **1.530089** | 0.02 | 1.5 | ug/L |
| \| | Pb | 208 | 6417.725 | 0.015 | **0.223559** | 0.05 | 23.0 | ug/L |
| | Kr | 83 | 19.067 | -1.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 166.766 | | |
| Be | 9 | 147.172 | | |
| B | 11 | 121.512 | | |
| Na | 23 | 103.637 | | |
| Mg | 24 | 100.917 | | |
| Al | 27 | 109.904 | | |
| K | 39 | 110.371 | | |
| Ca | 43 | 93.341 | | |
| Sc | 45 | | 98.353 | |
| Ti | 49 | 100.994 | | |
| Co | 59 | 122.593 | | |
| Ni | 60 | 95.591 | | |
| Ni | 62 | 85.025 | | |
| Cu | 63 | 98.692 | | |
| Cu | 65 | 79.998 | | |
| Zn | 66 | 104.308 | | |
| Zn | 67 | 59.931 | | |
| Zn | 68 | 99.475 | | |
| V | 51 | 99.112 | | |
| Cr | 52 | 89.966 | | |
| Cr | 53 | -88.166 | | |
| Mn | 55 | 91.478 | | |
| Fe | 54 | 94.448 | | |
| Fe | 57 | 98.677 | | |
| As | 75 | 74.600 | | |
| Se | 77 | 24.716 | | |
| Se | 82 | 111.549 | | |
| Sr | 88 | 123.242 | | |
| Y | 89 | | 94.427 | |
| Mo | 95 | 98.749 | | |
| Mo | 97 | 106.458 | | |
| Mo | 98 | 115.121 | | |
| Ag | 107 | 56.747 | | |
| Ag | 109 | 56.753 | | |
| Cd | 111 | 98.932 | | |
| Cd | 114 | 101.138 | | |
| In | 115 | | 94.960 | |
| Sn | 120 | 114.032 | | |
| Sb | 121 | 124.156 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 125.652 | |
| Ba | 135 | 101.804 | |
| Ba | 137 | 106.044 | |
| Tb | 159 | | |
| Ho | 165 | | 99.624 |
| Tl | 203 | 73.929 | |
| Tl | 205 | 76.504 | |
| Pb | 208 | 22.356 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Tuesday, February 16, 2010 11:05:27
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 6.026
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29474.967 | 0.008 | | | | ug/L |
| | Li | 7 | 3246.686 | 0.001 | **0.865073** | 0.12 | 13.3 | ug/L |
| | Be | 9 | 4.667 | 0.000 | **0.587051** | 0.01 | 1.7 | ug/L |
| | B | 11 | 607.357 | 0.000 | **1.248321** | 0.12 | 9.8 | ug/L |
| | Na | 23 | 12710.584 | -0.023 | **3.106593** | 1.92 | 61.7 | ug/L |
| | Mg | 24 | 133.335 | -0.013 | **-0.450198** | 0.15 | 32.6 | ug/L |
| | Al | 27 | 800.042 | -0.046 | **1.908057** | 0.08 | 4.1 | ug/L |
| | K | 39 | 50431.506 | -0.045 | **-6.635119** | 0.18 | 2.8 | ug/L |
| | Ca | 43 | 134.668 | -0.000 | **-12.570152** | 4.44 | 35.3 | ug/L |
| > | Sc | 45 | 361223.572 | 361223.572 | | | | ug/L |
| | Ti | 49 | 358.008 | -0.000 | **-0.190943** | 0.15 | 76.9 | ug/L |
| | Co | 59 | 17.333 | -0.000 | **0.438080** | 0.00 | 1.1 | ug/L |
| | Ni | 60 | 12.000 | -0.000 | **-0.014164** | 0.01 | 35.9 | ug/L |
| | Ni | 62 | 32.000 | -0.000 | **-0.032930** | 0.25 | 747.0 | ug/L |
| | Cu | 63 | 163.335 | 0.000 | **0.050086** | 0.01 | 28.0 | ug/L |
| | Cu | 65 | 89.334 | 0.000 | **-0.316398** | 0.04 | 12.3 | ug/L |
| | Zn | 66 | 90.667 | -0.000 | **0.368801** | 0.05 | 14.9 | ug/L |
| | Zn | 67 | 1181.424 | 0.001 | **-1.412829** | 2.05 | 145.4 | ug/L |
| | Zn | 68 | 101.334 | -0.000 | **0.002537** | 0.08 | 2992.5 | ug/L |
| | V | 51 | 187.684 | 0.001 | **0.359114** | 0.75 | 207.8 | ug/L |
| | Cr | 52 | 3075.281 | 0.000 | **-0.290031** | 0.02 | 7.5 | ug/L |
| | Cr | 53 | 14365.404 | 0.004 | **-4.297157** | 2.67 | 62.0 | ug/L |
| | Mn | 55 | 301.339 | -0.000 | **-0.258068** | 0.01 | 3.9 | ug/L |
| | Fe | 54 | 13018.355 | -0.005 | **-8.196683** | 4.27 | 52.1 | ug/L |
| | Fe | 57 | 725.368 | -0.002 | **-2.667271** | 0.31 | 11.6 | ug/L |
| | As | 75 | -361.673 | -0.000 | **-0.438290** | 0.12 | 27.0 | ug/L |
| | Se | 77 | 1994.259 | 0.000 | **-0.878782** | 1.68 | 191.6 | ug/L |
| | Se | 82 | 4.714 | -0.000 | **0.027006** | 0.07 | 247.7 | ug/L |
| | Sr | 88 | 172.669 | 0.000 | **0.160493** | 0.00 | 2.6 | ug/L |
| > | Y | 89 | 505100.117 | 505100.117 | | | | ug/L |
| | Mo | 95 | 17.333 | -0.000 | **-0.271697** | 0.02 | 7.3 | ug/L |
| | Mo | 97 | 12.000 | -0.000 | **-0.164248** | 0.02 | 13.5 | ug/L |
| | Mo | 98 | 35.114 | -0.001 | **0.051575** | 0.01 | 12.7 | ug/L |
| | Ag | 107 | 16.000 | 0.000 | **-0.443087** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 8.667 | 0.000 | **-0.467466** | 0.00 | 0.4 | ug/L |
| | Cd | 111 | 2.833 | -0.000 | **-0.103301** | 0.00 | 2.0 | ug/L |
| | Cd | 114 | 6.180 | 0.000 | **-0.091452** | 0.00 | 3.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 248932.134 | 248932.134 | | | | ug/L |
| \| | Sn | 120 | 666.551 | -0.001 | **-0.060529** | 0.02 | 39.1 | ug/L |
| \| | Sb | 121 | 596.690 | 0.001 | **0.369720** | 0.06 | 16.8 | ug/L |
| \| | Sb | 123 | 488.589 | 0.000 | **0.458655** | 0.04 | 7.8 | ug/L |
| \| | Ba | 135 | 11.333 | -0.000 | **0.426803** | 0.01 | 2.7 | ug/L |
| \| | Ba | 137 | 20.667 | -0.000 | **0.461037** | 0.00 | 0.7 | ug/L |
| \| | Tb | 159 | 391390.520 | -0.005 | | | | ug/L |
| \|> | Ho | 165 | 427352.710 | 427352.710 | | | | ug/L |
| \| | Tl | 203 | 26.667 | 0.000 | **-0.652162** | 0.01 | 0.8 | ug/L |
| \| | Tl | 205 | 70.000 | 0.000 | **-0.571707** | 0.00 | 0.1 | ug/L |
| \| | Pb | 208 | 105.334 | 0.000 | **-0.796628** | 0.00 | 0.2 | ug/L |
| | Kr | 83 | 19.533 | -1.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.481 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 93.841 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 97.017 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 101.779 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20BPDSD**
Sample Date/Time: Tuesday, February 16, 2010 11:08:31
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20BPDSD.027
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24034.794 | -0.004 | | | | ug/L |
| | Li | 7 | 133609.272 | 0.375 | **711.114073** | 33.80 | 4.8 | ug/L |
| | Be | 9 | 23763.323 | 0.068 | **551.451075** | 23.44 | 4.3 | ug/L |
| | B | 11 | 34777.787 | 0.098 | **669.557548** | 24.66 | 3.7 | ug/L |
| | Na | 23 | 35516097.276 | 101.724 | **315421.652117** | 3704.56 | 1.2 | ug/L |
| | Mg | 24 | 11790253.937 | 33.797 | **145252.002457** | 6531.15 | 4.5 | ug/L |
| | Al | 27 | 7446516.989 | 21.300 | **28342.858514** | 1023.19 | 3.6 | ug/L |
| | K | 39 | 6863308.001 | 19.506 | **33595.591821** | 2393.11 | 7.1 | ug/L |
| | Ca | 43 | 187964.949 | 0.538 | **179856.955710** | 3211.80 | 1.8 | ug/L |
| > | Sc | 45 | 349012.278 | 349012.278 | | | | ug/L |
| | Ti | 49 | 13606.691 | 0.038 | **517.239351** | 17.95 | 3.5 | ug/L |
| | Co | 59 | 224862.108 | 0.645 | **546.445742** | 19.83 | 3.6 | ug/L |
| | Ni | 60 | 43264.705 | 0.124 | **533.166168** | 20.86 | 3.9 | ug/L |
| | Ni | 62 | 6713.599 | 0.019 | **540.380625** | 30.73 | 5.7 | ug/L |
| | Cu | 63 | 92961.055 | 0.266 | **470.123023** | 16.57 | 3.5 | ug/L |
| | Cu | 65 | 43886.177 | 0.126 | **466.670614** | 14.67 | 3.1 | ug/L |
| | Zn | 66 | 33617.306 | 0.096 | **538.624655** | 18.80 | 3.5 | ug/L |
| | Zn | 67 | 6621.515 | 0.016 | **548.579109** | 16.53 | 3.0 | ug/L |
| | Zn | 68 | 23648.296 | 0.067 | **522.804001** | 13.91 | 2.7 | ug/L |
| | V | 51 | 206041.508 | 0.592 | **517.334694** | 19.72 | 3.8 | ug/L |
| | Cr | 52 | 173399.526 | 0.489 | **508.326496** | 28.09 | 5.5 | ug/L |
| | Cr | 53 | 34611.707 | 0.063 | **512.306859** | 39.33 | 7.7 | ug/L |
| | Mn | 55 | 1391285.703 | 3.989 | **2301.422221** | 110.42 | 4.8 | ug/L |
| | Fe | 54 | 1100269.571 | 3.114 | **36540.668732** | 1778.22 | 4.9 | ug/L |
| | Fe | 57 | 448396.249 | 1.282 | **35839.113560** | 1719.54 | 4.8 | ug/L |
| | As | 75 | 33588.183 | 0.060 | **449.529375** | 13.53 | 3.0 | ug/L |
| | Se | 77 | 14577.136 | 0.022 | **2088.096965** | 26.81 | 1.3 | ug/L |
| | Se | 82 | 16495.399 | 0.029 | **2209.040885** | 47.70 | 2.2 | ug/L |
| | Sr | 88 | 1828300.417 | 3.223 | **1779.637784** | 9.66 | 0.5 | ug/L |
| > | Y | 89 | 567311.039 | 567311.039 | | | | ug/L |
| | Mo | 95 | 55604.988 | 0.098 | **455.209512** | 6.02 | 1.3 | ug/L |
| | Mo | 97 | 34181.801 | 0.060 | **449.285016** | 6.54 | 1.5 | ug/L |
| | Mo | 98 | 87742.747 | 0.154 | **452.547179** | 8.33 | 1.8 | ug/L |
| | Ag | 107 | 150560.000 | 0.639 | **476.326898** | 6.74 | 1.4 | ug/L |
| | Ag | 109 | 144059.940 | 0.611 | **478.566176** | 4.72 | 1.0 | ug/L |
| | Cd | 111 | 36555.154 | 0.155 | **491.896428** | 4.39 | 0.9 | ug/L |
| | Cd | 114 | 85030.669 | 0.361 | **493.429969** | 2.94 | 0.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 235671.158 | 235671.158 | | | | ug/L |
| \| | Sn | 120 | 168318.353 | 0.711 | **506.757132** | 18.16 | 3.6 | ug/L |
| \| | Sb | 121 | 121869.482 | 0.515 | **502.906254** | 14.53 | 2.9 | ug/L |
| L | Sb | 123 | 95364.862 | 0.403 | **507.793250** | 11.38 | 2.2 | ug/L |
| ⌈ | Ba | 135 | 41464.129 | 0.100 | **528.351126** | 14.72 | 2.8 | ug/L |
| \| | Ba | 137 | 73074.179 | 0.177 | **527.142267** | 14.99 | 2.8 | ug/L |
| \| | Tb | 159 | 370801.207 | -0.025 | | | | ug/L |
| \|> | Ho | 165 | 413360.328 | 413360.328 | | | | ug/L |
| \| | Tl | 203 | 181368.413 | 0.439 | **474.805905** | 13.05 | 2.7 | ug/L |
| \| | Tl | 205 | 432566.934 | 1.047 | **477.285265** | 11.85 | 2.5 | ug/L |
| L | Pb | 208 | 589096.849 | 1.426 | **477.471364** | 18.90 | 4.0 | ug/L |
| | Kr | 83 | 24.133 | 3.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.152 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 105.399 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.849 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 98.446 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-27B**
Sample Date/Time: Tuesday, February 16, 2010 11:11:12
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-27B.028
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30533.784 | 0.011 | | | | ug/L |
| | Li | 7 | 22182.669 | 0.053 | **20.543058** | 2.06 | 10.0 | ug/L |
| | Be | 9 | 694.698 | 0.002 | **3.643907** | 0.34 | 9.3 | ug/L |
| | B | 11 | 12185.676 | 0.032 | **44.392237** | 4.78 | 10.8 | ug/L |
| | Na | 23 | 38412510.339 | 105.719 | **65561.525594** | 6402.09 | 9.8 | ug/L |
| | Mg | 24 | 3325441.133 | 9.145 | **7867.976647** | 790.75 | 10.1 | ug/L |
| | Al | 27 | 6019041.560 | 16.523 | **4400.312617** | 388.95 | 8.8 | ug/L |
| | K | 39 | 1137160.814 | 2.944 | **1021.904407** | 75.95 | 7.4 | ug/L |
| | Ca | 43 | 275325.479 | 0.757 | **50610.553116** | 3723.11 | 7.4 | ug/L |
| > | Sc | 45 | 363949.531 | 363949.531 | | | | ug/L |
| | Ti | 49 | 973.395 | 0.001 | **4.421514** | 0.99 | 22.4 | ug/L |
| | Co | 59 | 166755.473 | 0.459 | **77.927967** | 5.92 | 7.6 | ug/L |
| | Ni | 60 | 9308.969 | 0.026 | **21.992565** | 1.64 | 7.5 | ug/L |
| | Ni | 62 | 1477.475 | 0.004 | **22.414778** | 1.70 | 7.6 | ug/L |
| | Cu | 63 | 76776.205 | 0.211 | **74.514966** | 5.13 | 6.9 | ug/L |
| | Cu | 65 | 37236.607 | 0.102 | **75.906609** | 4.36 | 5.7 | ug/L |
| | Zn | 66 | 37495.221 | 0.103 | **115.314344** | 7.56 | 6.6 | ug/L |
| | Zn | 67 | 7354.181 | 0.018 | **118.531872** | 6.77 | 5.7 | ug/L |
| | Zn | 68 | 26963.187 | 0.074 | **114.450570** | 6.27 | 5.5 | ug/L |
| | V | 51 | 1146.775 | 0.004 | **0.831970** | 0.03 | 3.2 | ug/L |
| | Cr | 52 | 6636.862 | 0.010 | **1.741093** | 0.16 | 9.0 | ug/L |
| | Cr | 53 | 16359.377 | 0.009 | **5.024456** | 2.75 | 54.7 | ug/L |
| | Mn | 55 | 19548234.433 | 53.788 | **6209.581065** | 393.25 | 6.3 | ug/L |
| | Fe | 54 | 70123.292 | 0.152 | **359.676200** | 24.75 | 6.9 | ug/L |
| | Fe | 57 | 25544.387 | 0.066 | **378.761817** | 28.93 | 7.6 | ug/L |
| | As | 75 | 980.524 | 0.002 | **2.898144** | 0.63 | 21.7 | ug/L |
| | Se | 77 | 2830.521 | 0.001 | **6.962380** | 5.13 | 73.7 | ug/L |
| | Se | 82 | 24.745 | 0.000 | **0.461822** | 0.11 | 23.3 | ug/L |
| | Sr | 88 | 1135989.732 | 1.747 | **193.044658** | 8.23 | 4.3 | ug/L |
| > | Y | 89 | 650666.983 | 650666.983 | | | | ug/L |
| | Mo | 95 | 305.339 | 0.000 | **0.133375** | 0.01 | 7.8 | ug/L |
| | Mo | 97 | 168.669 | -0.000 | **0.188708** | 0.08 | 41.0 | ug/L |
| | Mo | 98 | 425.647 | 0.000 | **0.394770** | 0.06 | 14.7 | ug/L |
| | Ag | 107 | 26.000 | 0.000 | **-0.436209** | 0.01 | 1.9 | ug/L |
| | Ag | 109 | 20.667 | 0.000 | **-0.459181** | 0.01 | 1.2 | ug/L |
| | Cd | 111 | 12025.736 | 0.051 | **32.243658** | 3.50 | 10.8 | ug/L |
| | Cd | 114 | 28172.293 | 0.119 | **32.540773** | 2.55 | 7.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 237132.833 | 237132.833 | | | | ug/L |
| \| | Sn | 120 | 819.148 | -0.000 | **0.049369** | 0.01 | 28.9 | ug/L |
| \| | Sb | 121 | 1438.802 | 0.004 | **1.088934** | 0.15 | 13.7 | ug/L |
| \| | Sb | 123 | 1121.816 | 0.003 | **1.157995** | 0.11 | 9.5 | ug/L |
| \| | Ba | 135 | 10023.210 | 0.024 | **25.408449** | 2.84 | 11.2 | ug/L |
| \| | Ba | 137 | 17650.962 | 0.042 | **25.364973** | 3.04 | 12.0 | ug/L |
| \| | Tb | 159 | 382147.102 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 422105.488 | 422105.488 | | | | ug/L |
| \| | Tl | 203 | 990.730 | 0.002 | **-0.153116** | 0.04 | 23.1 | ug/L |
| \| | Tl | 205 | 2357.028 | 0.005 | **-0.073381** | 0.03 | 40.4 | ug/L |
| \| | Pb | 208 | 22693.120 | 0.054 | **2.828378** | 0.31 | 10.8 | ug/L |
| | Kr | 83 | 32.600 | 11.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 99.224 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 120.885 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 92.418 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.529 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020461-01E**
Sample Date/Time: Tuesday, February 16, 2010 11:13:52
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020461-01E.029
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30141.893 | 0.015 | | | | ug/L |
| | Li | 7 | 5543.332 | 0.008 | **3.587026** | 0.29 | 8.0 | ug/L |
| | Be | 9 | 12.000 | 0.000 | **0.622662** | 0.02 | 2.4 | ug/L |
| | B | 11 | 2517.746 | 0.006 | **8.927012** | 0.44 | 4.9 | ug/L |
| | Na | 23 | 15077698.646 | 43.992 | **27291.647226** | 1183.11 | 4.3 | ug/L |
| | Mg | 24 | 3099215.304 | 9.038 | **7776.003854** | 96.25 | 1.2 | ug/L |
| | Al | 27 | 34108.375 | 0.052 | **27.842637** | 6.94 | 24.9 | ug/L |
| | K | 39 | 2838323.082 | 8.106 | **2797.427519** | 110.21 | 3.9 | ug/L |
| | Ca | 43 | 80926.735 | 0.236 | **15763.698526** | 879.77 | 5.6 | ug/L |
| > | Sc | 45 | 342480.294 | 342480.294 | | | | ug/L |
| | Ti | 49 | 708.700 | 0.001 | **2.753373** | 0.58 | 21.2 | ug/L |
| | Co | 59 | 342.676 | 0.001 | **0.600177** | 0.11 | 18.9 | ug/L |
| | Ni | 60 | 829.378 | 0.002 | **2.041272** | 0.10 | 4.9 | ug/L |
| | Ni | 62 | 160.002 | 0.000 | **2.115162** | 0.75 | 35.3 | ug/L |
| | Cu | 63 | 2374.367 | 0.007 | **2.341502** | 0.17 | 7.1 | ug/L |
| | Cu | 65 | 1161.421 | 0.003 | **2.028621** | 0.04 | 2.2 | ug/L |
| | Zn | 66 | 33445.889 | 0.097 | **109.170011** | 1.35 | 1.2 | ug/L |
| | Zn | 67 | 6633.526 | 0.017 | **112.500500** | 2.83 | 2.5 | ug/L |
| | Zn | 68 | 24306.358 | 0.071 | **109.485346** | 1.48 | 1.4 | ug/L |
| | V | 51 | 3717.242 | 0.012 | **2.172940** | 0.36 | 16.6 | ug/L |
| | Cr | 52 | 14223.138 | 0.033 | **6.597107** | 0.08 | 1.1 | ug/L |
| | Cr | 53 | 16879.834 | 0.013 | **12.768546** | 1.44 | 11.3 | ug/L |
| | Mn | 55 | 83148.774 | 0.243 | **27.777414** | 8.46 | 30.4 | ug/L |
| | Fe | 54 | 22578.844 | 0.025 | **61.938841** | 8.77 | 14.2 | ug/L |
| | Fe | 57 | 2810.514 | 0.004 | **31.984233** | 2.92 | 9.1 | ug/L |
| | As | 75 | -485.983 | -0.000 | **-0.872486** | 0.20 | 23.1 | ug/L |
| | Se | 77 | 2402.375 | 0.001 | **18.288174** | 1.95 | 10.7 | ug/L |
| | Se | 82 | 1.177 | -0.000 | **-0.078358** | 0.07 | 87.1 | ug/L |
| | Sr | 88 | 371710.878 | 0.765 | **84.640518** | 5.09 | 6.0 | ug/L |
| > | Y | 89 | 486217.319 | 486217.319 | | | | ug/L |
| | Mo | 95 | 212.003 | 0.000 | **0.101794** | 0.03 | 28.0 | ug/L |
| | Mo | 97 | 131.334 | 0.000 | **0.204060** | 0.03 | 16.5 | ug/L |
| | Mo | 98 | 321.861 | 0.000 | **0.398404** | 0.03 | 8.4 | ug/L |
| | Ag | 107 | 13.333 | 0.000 | **-0.443988** | 0.00 | 0.2 | ug/L |
| | Ag | 109 | 5.333 | -0.000 | **-0.469244** | 0.00 | 0.2 | ug/L |
| | Cd | 111 | 15.333 | 0.000 | **-0.067901** | 0.03 | 48.9 | ug/L |
| | Cd | 114 | 33.198 | 0.000 | **-0.058565** | 0.04 | 73.9 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 229272.389 | 229272.389 | | | | ug/L |
| \| | Sn | 120 | 607.179 | -0.001 | **-0.064770** | 0.01 | 16.7 | ug/L |
| \| | Sb | 121 | 438.012 | 0.000 | **0.274733** | 0.02 | 8.9 | ug/L |
| \| | Sb | 123 | 350.912 | -0.000 | **0.350060** | 0.01 | 2.2 | ug/L |
| \| | Ba | 135 | 16885.858 | 0.043 | **45.113001** | 2.14 | 4.7 | ug/L |
| \| | Ba | 137 | 29964.986 | 0.076 | **45.331771** | 2.29 | 5.1 | ug/L |
| \| | Tb | 159 | 360181.150 | -0.013 | | | | ug/L |
| \|> | Ho | 165 | 396602.711 | 396602.711 | | | | ug/L |
| \| | Tl | 203 | 36.000 | 0.000 | **-0.645645** | 0.01 | 1.5 | ug/L |
| \| | Tl | 205 | 74.667 | 0.000 | **-0.569400** | 0.00 | 0.8 | ug/L |
| \| | Pb | 208 | 490.006 | 0.001 | **-0.729578** | 0.01 | 1.4 | ug/L |
| | Kr | 83 | 20.000 | -0.667 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.371 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.333 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 89.355 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 94.455 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020461-02E**
Sample Date/Time: Tuesday, February 16, 2010 11:16:33
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020461-02E.030
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30289.903 | 0.013 | | | | ug/L |
| | Li | 7 | 7776.598 | 0.014 | **5.885132** | 0.24 | 4.0 | ug/L |
| | Be | 9 | 202.669 | 0.001 | **1.501636** | 0.07 | 4.8 | ug/L |
| | B | 11 | 1909.571 | 0.004 | **6.377838** | 0.54 | 8.5 | ug/L |
| | Na | 23 | 7827176.732 | 22.364 | **13882.687130** | 117.41 | 0.8 | ug/L |
| | Mg | 24 | 1760676.600 | 5.031 | **4333.197517** | 47.45 | 1.1 | ug/L |
| | Al | 27 | 221092.532 | 0.585 | **169.464214** | 5.47 | 3.2 | ug/L |
| | K | 39 | 6458890.317 | 18.317 | **6310.004942** | 133.23 | 2.1 | ug/L |
| | Ca | 43 | 12869.437 | 0.036 | **2426.958080** | 114.43 | 4.7 | ug/L |
| > | Sc | 45 | 349086.583 | 349086.583 | | | | ug/L |
| | Ti | 49 | 635.360 | 0.001 | **2.072785** | 0.67 | 32.3 | ug/L |
| | Co | 59 | 33316.031 | 0.095 | **16.546422** | 0.54 | 3.3 | ug/L |
| | Ni | 60 | 1416.131 | 0.004 | **3.447395** | 0.26 | 7.4 | ug/L |
| | Ni | 62 | 265.338 | 0.001 | **3.759421** | 0.27 | 7.2 | ug/L |
| | Cu | 63 | 925.389 | 0.002 | **0.826961** | 0.02 | 2.8 | ug/L |
| | Cu | 65 | 461.347 | 0.001 | **0.484619** | 0.05 | 10.7 | ug/L |
| | Zn | 66 | 7234.072 | 0.020 | **23.234410** | 1.18 | 5.1 | ug/L |
| | Zn | 67 | 4454.623 | 0.010 | **65.711585** | 1.65 | 2.5 | ug/L |
| | Zn | 68 | 11507.275 | 0.033 | **50.626445** | 1.98 | 3.9 | ug/L |
| | V | 51 | 295.514 | 0.002 | **0.430979** | 0.45 | 105.4 | ug/L |
| | Cr | 52 | 4142.449 | 0.003 | **0.409132** | 0.04 | 10.6 | ug/L |
| | Cr | 53 | 15901.753 | 0.009 | **6.049887** | 1.20 | 19.9 | ug/L |
| | Mn | 55 | 5766875.820 | 16.520 | **1907.012210** | 51.72 | 2.7 | ug/L |
| | Fe | 54 | 20716.583 | 0.018 | **46.397513** | 1.37 | 3.0 | ug/L |
| | Fe | 57 | 2091.618 | 0.002 | **19.585452** | 1.83 | 9.3 | ug/L |
| | As | 75 | -499.059 | -0.000 | **-0.679625** | 0.19 | 28.5 | ug/L |
| | Se | 77 | 2346.358 | 0.000 | **2.311180** | 2.03 | 87.9 | ug/L |
| | Se | 82 | 6.823 | 0.000 | **0.067514** | 0.06 | 82.8 | ug/L |
| | Sr | 88 | 195594.674 | 0.343 | **38.002092** | 2.04 | 5.4 | ug/L |
| > | Y | 89 | 570661.947 | 570661.947 | | | | ug/L |
| | Mo | 95 | 31.333 | -0.000 | **-0.252852** | 0.00 | 0.9 | ug/L |
| | Mo | 97 | 17.333 | -0.000 | **-0.155117** | 0.02 | 14.4 | ug/L |
| | Mo | 98 | 42.968 | -0.001 | **0.055401** | 0.02 | 30.5 | ug/L |
| | Ag | 107 | 24.000 | 0.000 | **-0.437246** | 0.01 | 1.4 | ug/L |
| | Ag | 109 | 18.667 | 0.000 | **-0.460158** | 0.01 | 2.3 | ug/L |
| | Cd | 111 | 56.334 | 0.000 | **0.043460** | 0.02 | 53.0 | ug/L |
| | Cd | 114 | 137.764 | 0.001 | **0.063857** | 0.04 | 55.6 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 233134.378 | 233134.378 | | | | ug/L |
| \| | Sn | 120 | 649.883 | -0.001 | **-0.045224** | 0.01 | 24.0 | ug/L |
| \| | Sb | 121 | 317.340 | -0.001 | **0.168091** | 0.03 | 16.3 | ug/L |
| \| | Sb | 123 | 282.579 | -0.000 | **0.270734** | 0.03 | 10.8 | ug/L |
| \| | Ba | 135 | 585021.005 | 1.437 | **1508.555933** | 97.62 | 6.5 | ug/L |
| \| | Ba | 137 | 1043259.569 | 2.563 | **1522.530484** | 97.51 | 6.4 | ug/L |
| \| | Tb | 159 | 367451.572 | -0.019 | | | | ug/L |
| \|> | Ho | 165 | 407353.577 | 407353.577 | | | | ug/L |
| \| | Tl | 203 | 317.340 | 0.001 | **-0.495627** | 0.01 | 3.0 | ug/L |
| \| | Tl | 205 | 801.375 | 0.002 | **-0.406145** | 0.01 | 2.7 | ug/L |
| \| | Pb | 208 | 1542.728 | 0.004 | **-0.557481** | 0.01 | 1.6 | ug/L |
| | Kr | 83 | 22.600 | 1.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.172 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 106.021 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 90.860 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| b | 123 | |
| a | 135 | |
| a | 137 | |
| b | 159 | |
| lo | 165 | 97.016 |
| l | 203 | |
| l | 205 | |
| b | 208 | |
| r | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020461-03E**
Sample Date/Time: Tuesday, February 16, 2010 11:19:14
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020461-03E.031
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31655.893 | 0.015 | | | | ug/L |
| | Li | 7 | 5436.587 | 0.007 | **3.225332** | 0.12 | 3.8 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **0.611538** | 0.01 | 1.5 | ug/L |
| | B | 11 | 2109.623 | 0.004 | **6.970367** | 0.42 | 6.0 | ug/L |
| | Na | 23 | 3738402.092 | 10.418 | **6476.274044** | 105.69 | 1.6 | ug/L |
| | Mg | 24 | 3097251.538 | 8.666 | **7456.859581** | 142.30 | 1.9 | ug/L |
| | Al | 27 | 22280.559 | 0.014 | **17.894569** | 0.23 | 1.3 | ug/L |
| | K | 39 | 2139783.446 | 5.811 | **2007.891088** | 79.98 | 4.0 | ug/L |
| | Ca | 43 | 68264.312 | 0.191 | **12747.673540** | 276.74 | 2.2 | ug/L |
| > | Sc | 45 | 356896.320 | 356896.320 | | | | ug/L |
| | Ti | 49 | 774.706 | 0.001 | **3.029765** | 0.62 | 20.6 | ug/L |
| | Co | 59 | 2596.439 | 0.007 | **1.657992** | 0.05 | 3.3 | ug/L |
| | Ni | 60 | 1152.086 | 0.003 | **2.734016** | 0.16 | 5.9 | ug/L |
| | Ni | 62 | 186.669 | 0.000 | **2.419259** | 0.29 | 12.0 | ug/L |
| | Cu | 63 | 4617.386 | 0.013 | **4.459894** | 0.03 | 0.6 | ug/L |
| | Cu | 65 | 2230.991 | 0.006 | **4.163053** | 0.27 | 6.4 | ug/L |
| | Zn | 66 | 5529.990 | 0.015 | **17.389190** | 0.60 | 3.4 | ug/L |
| | Zn | 67 | 2457.726 | 0.004 | **24.163301** | 1.22 | 5.1 | ug/L |
| | Zn | 68 | 4082.417 | 0.011 | **17.285287** | 0.71 | 4.1 | ug/L |
| | V | 51 | 1865.234 | 0.006 | **1.193806** | 0.14 | 11.9 | ug/L |
| | Cr | 52 | 10403.031 | 0.021 | **4.013852** | 0.08 | 1.9 | ug/L |
| | Cr | 53 | 18164.095 | 0.015 | **15.659513** | 3.17 | 20.2 | ug/L |
| | Mn | 55 | 1472881.544 | 4.126 | **476.140022** | 7.41 | 1.6 | ug/L |
| | Fe | 54 | 28577.124 | 0.039 | **95.049602** | 6.15 | 6.5 | ug/L |
| | Fe | 57 | 5279.146 | 0.011 | **68.711359** | 2.06 | 3.0 | ug/L |
| | As | 75 | -633.330 | -0.001 | **-1.277588** | 0.38 | 30.1 | ug/L |
| | Se | 77 | 2649.123 | 0.002 | **25.641126** | 1.91 | 7.4 | ug/L |
| | Se | 82 | 6.651 | 0.000 | **0.087764** | 0.15 | 175.1 | ug/L |
| | Sr | 88 | 219638.285 | 0.441 | **48.868477** | 0.45 | 0.9 | ug/L |
| > | Y | 89 | 497491.335 | 497491.335 | | | | ug/L |
| | Mo | 95 | 110.001 | -0.000 | **-0.098106** | 0.02 | 22.2 | ug/L |
| | Mo | 97 | 62.000 | -0.000 | **-0.014166** | 0.05 | 350.7 | ug/L |
| | Mo | 98 | 145.928 | -0.000 | **0.182639** | 0.00 | 2.7 | ug/L |
| | Ag | 107 | 10.000 | 0.000 | **-0.446500** | 0.00 | 0.3 | ug/L |
| | Ag | 109 | 4.667 | -0.000 | **-0.469864** | 0.00 | 0.2 | ug/L |
| | Cd | 111 | 39.000 | 0.000 | **-0.007386** | 0.02 | 238.5 | ug/L |
| | Cd | 114 | 94.521 | 0.000 | **0.009246** | 0.00 | 44.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \| > | In | 115 | 240713.940 | 240713.940 | | | | ug/L |
| \| | Sn | 120 | 687.904 | -0.001 | **-0.034796** | 0.03 | 87.3 | ug/L |
| \| | Sb | 121 | 314.673 | -0.001 | **0.157413** | 0.03 | 20.0 | ug/L |
| L | Sb | 123 | 277.413 | -0.000 | **0.255022** | 0.02 | 9.2 | ug/L |
| ⌈ | Ba | 135 | 14058.173 | 0.033 | **35.550357** | 1.56 | 4.4 | ug/L |
| \| | Ba | 137 | 24674.853 | 0.059 | **35.347482** | 1.33 | 3.8 | ug/L |
| \| | Tb | 159 | 380695.446 | -0.015 | | | | ug/L |
| \| > | Ho | 165 | 419850.805 | 419850.805 | | | | ug/L |
| \| | Tl | 203 | 28.000 | 0.000 | **-0.651108** | 0.00 | 0.5 | ug/L |
| \| | Tl | 205 | 62.667 | 0.000 | **-0.572987** | 0.01 | 0.9 | ug/L |
| L | Pb | 208 | 1452.055 | 0.003 | **-0.579598** | 0.01 | 1.1 | ug/L |
| | Kr | 83 | 19.067 | -1.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.301 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 92.427 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 93.814 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 99.992 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Cr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020461-04E**
Sample Date/Time: Tuesday, February 16, 2010 11:21:55
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020461-04E.032
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31933.309 | 0.016 | | | | ug/L |
| | Li | 7 | 4756.807 | 0.005 | **2.503154** | 0.20 | 8.0 | ug/L |
| | Be | 9 | 10.667 | 0.000 | **0.613950** | 0.02 | 3.0 | ug/L |
| | B | 11 | 2444.390 | 0.005 | **8.266808** | 1.00 | 12.1 | ug/L |
| | Na | 23 | 2249136.278 | 6.249 | **3892.130507** | 174.93 | 4.5 | ug/L |
| | Mg | 24 | 3224307.190 | 9.033 | **7771.597514** | 459.68 | 5.9 | ug/L |
| | Al | 27 | 38424.155 | 0.060 | **29.961182** | 2.34 | 7.8 | ug/L |
| | K | 39 | 1442386.274 | 3.860 | **1336.963854** | 65.79 | 4.9 | ug/L |
| | Ca | 43 | 50171.346 | 0.140 | **9381.207889** | 870.38 | 9.3 | ug/L |
| > | Sc | 45 | 357049.229 | 357049.229 | | | | ug/L |
| | Ti | 49 | 883.384 | 0.001 | **3.872964** | 0.63 | 16.2 | ug/L |
| | Co | 59 | 274.672 | 0.001 | **0.559908** | 0.01 | 1.8 | ug/L |
| | Ni | 60 | 754.037 | 0.002 | **1.778915** | 0.19 | 10.5 | ug/L |
| | Ni | 62 | 160.002 | 0.000 | **2.010446** | 0.53 | 26.3 | ug/L |
| | Cu | 63 | 6181.151 | 0.017 | **6.019562** | 0.48 | 8.0 | ug/L |
| | Cu | 65 | 2988.584 | 0.008 | **5.767189** | 0.88 | 15.3 | ug/L |
| | Zn | 66 | 6211.842 | 0.017 | **19.548969** | 1.11 | 5.7 | ug/L |
| | Zn | 67 | 2885.876 | 0.005 | **32.803922** | 6.08 | 18.5 | ug/L |
| | Zn | 68 | 4761.477 | 0.013 | **20.290933** | 2.25 | 11.1 | ug/L |
| | V | 51 | 1737.211 | 0.006 | **1.121585** | 0.35 | 31.3 | ug/L |
| | Cr | 52 | 12881.444 | 0.028 | **5.470393** | 0.38 | 6.9 | ug/L |
| | Cr | 53 | 18958.690 | 0.017 | **19.802144** | 7.27 | 36.7 | ug/L |
| | Mn | 55 | 29004.626 | 0.080 | **9.043646** | 0.69 | 7.6 | ug/L |
| | Fe | 54 | 26546.063 | 0.033 | **81.822305** | 7.91 | 9.7 | ug/L |
| | Fe | 57 | 2283.673 | 0.002 | **21.913114** | 2.82 | 12.9 | ug/L |
| | As | 75 | -520.491 | -0.000 | **-0.996800** | 0.69 | 68.8 | ug/L |
| | Se | 77 | 2668.464 | 0.002 | **28.267503** | 11.69 | 41.3 | ug/L |
| | Se | 82 | 7.259 | 0.000 | **0.106046** | 0.19 | 181.6 | ug/L |
| | Sr | 88 | 98970.711 | 0.203 | **22.521344** | 2.77 | 12.3 | ug/L |
| > | Y | 89 | 491422.742 | 491422.742 | | | | ug/L |
| | Mo | 95 | 23.333 | -0.000 | **-0.260328** | 0.01 | 3.8 | ug/L |
| | Mo | 97 | 12.667 | -0.000 | **-0.161337** | 0.01 | 6.5 | ug/L |
| | Mo | 98 | 47.416 | -0.001 | **0.067510** | 0.00 | 2.8 | ug/L |
| | Ag | 107 | 6.667 | 0.000 | **-0.448403** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 2.667 | -0.000 | **-0.471167** | 0.00 | 0.1 | ug/L |
| | Cd | 111 | 16.667 | 0.000 | **-0.065060** | 0.01 | 18.3 | ug/L |
| | Cd | 114 | 30.326 | 0.000 | **-0.063134** | 0.01 | 10.8 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 235128.420 | 235128.420 | | | | ug/L |
| \| | Sn | 120 | 685.980 | -0.001 | **-0.027455** | 0.03 | 105.9 | ug/L |
| \| | Sb | 121 | 341.341 | -0.000 | **0.186977** | 0.05 | 26.8 | ug/L |
| L | Sb | 123 | 312.170 | -0.000 | **0.299922** | 0.03 | 11.4 | ug/L |
| Γ | Ba | 135 | 18780.931 | 0.045 | **48.155918** | 3.81 | 7.9 | ug/L |
| \| | Ba | 137 | 33593.991 | 0.081 | **48.784973** | 4.10 | 8.4 | ug/L |
| \| | Tb | 159 | 372416.434 | -0.021 | | | | ug/L |
| \|> | Ho | 165 | 413363.112 | 413363.112 | | | | ug/L |
| \| | Tl | 203 | 22.000 | 0.000 | **-0.654037** | 0.00 | 0.2 | ug/L |
| \| | Tl | 205 | 44.000 | 0.000 | **-0.576895** | 0.00 | 0.6 | ug/L |
| L | Pb | 208 | 1498.724 | 0.003 | **-0.568253** | 0.01 | 1.7 | ug/L |
| | Kr | 83 | 18.067 | -2.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.343 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 91.300 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.637 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

**00677**


Sample ID: 10020461-04E
Report Date/Time: Tuesday, February 16, 2010 11:23:52

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 98.447 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20B**
Sample Date/Time: Tuesday, February 16, 2010 11:27:56
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20B.033
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28834.781 | 0.010 | | | | ug/L |
| | Li | 7 | 24157.875 | 0.061 | **118.403119** | 1.70 | 1.4 | ug/L |
| | Be | 9 | 366.009 | 0.001 | **11.292911** | 0.34 | 3.0 | ug/L |
| | B | 11 | 4984.282 | 0.013 | **91.719427** | 2.90 | 3.2 | ug/L |
| | Na | 23 | 35060612.963 | 100.622 | **312007.192133** | 10843.57 | 3.5 | ug/L |
| | Mg | 24 | 10097487.753 | 28.986 | **124580.805781** | 2115.25 | 1.7 | ug/L |
| | Al | 27 | 143714.421 | 0.364 | **554.397629** | 17.83 | 3.2 | ug/L |
| | K | 39 | 1026767.968 | 2.765 | **4800.177534** | 368.55 | 7.7 | ug/L |
| | Ca | 43 | 167934.489 | 0.482 | **160974.397905** | 4564.21 | 2.8 | ug/L |
| > | Sc | 45 | 348227.400 | 348227.400 | | | | ug/L |
| | Ti | 49 | 626.025 | 0.001 | **10.054097** | 0.50 | 4.9 | ug/L |
| | Co | 59 | 24948.407 | 0.071 | **62.643194** | 1.79 | 2.9 | ug/L |
| | Ni | 60 | 5439.259 | 0.016 | **66.978962** | 3.80 | 5.7 | ug/L |
| | Ni | 62 | 865.382 | 0.002 | **67.462332** | 2.49 | 3.7 | ug/L |
| | Cu | 63 | 560.687 | 0.001 | **2.296138** | 0.24 | 10.7 | ug/L |
| | Cu | 65 | 272.005 | 0.001 | **0.406212** | 0.29 | 71.2 | ug/L |
| | Zn | 66 | 5271.141 | 0.015 | **84.997439** | 4.15 | 4.9 | ug/L |
| | Zn | 67 | 1997.594 | 0.003 | **80.025511** | 13.73 | 17.2 | ug/L |
| | Zn | 68 | 3716.898 | 0.010 | **80.510697** | 2.94 | 3.7 | ug/L |
| | V | 51 | -8.780 | 0.001 | **1.374257** | 2.44 | 177.4 | ug/L |
| | Cr | 52 | 3233.346 | 0.001 | **-0.645895** | 0.16 | 24.1 | ug/L |
| | Cr | 53 | 14294.611 | 0.005 | **-10.170086** | 12.42 | 122.1 | ug/L |
| | Mn | 55 | 1132264.921 | 3.251 | **1875.614239** | 71.38 | 3.8 | ug/L |
| | Fe | 54 | 341982.877 | 0.941 | **11054.652767** | 252.25 | 2.3 | ug/L |
| | Fe | 57 | 141056.430 | 0.401 | **11244.504237** | 444.43 | 4.0 | ug/L |
| | As | 75 | -397.063 | -0.000 | **-2.081028** | 0.80 | 38.5 | ug/L |
| | Se | 77 | 2273.670 | 0.000 | **0.855328** | 14.58 | 1704.7 | ug/L |
| | Se | 82 | 7.603 | 0.000 | **0.441226** | 0.26 | 58.1 | ug/L |
| | Sr | 88 | 1413198.571 | 2.487 | **1373.769312** | 13.89 | 1.0 | ug/L |
| > | Y | 89 | 568179.816 | 568179.816 | | | | ug/L |
| | Mo | 95 | 60.000 | -0.000 | **-1.028487** | 0.11 | 10.6 | ug/L |
| | Mo | 97 | 50.667 | -0.000 | **-0.336856** | 0.25 | 74.5 | ug/L |
| | Mo | 98 | 122.823 | -0.000 | **0.687487** | 0.01 | 2.1 | ug/L |
| | Ag | 107 | 11.333 | 0.000 | **-2.227777** | 0.03 | 1.1 | ug/L |
| | Ag | 109 | 2.000 | -0.000 | **-2.357887** | 0.01 | 0.3 | ug/L |
| | Cd | 111 | 12.667 | 0.000 | **-0.382204** | 0.04 | 10.9 | ug/L |
| | Cd | 114 | 19.999 | 0.000 | **-0.375408** | 0.01 | 3.8 | ug/L |

00679

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 236194.645 | 236194.645 | | | | ug/L |
| \| | Sn | 120 | 611.957 | -0.001 | **-0.366008** | 0.12 | 33.4 | ug/L |
| \| | Sb | 121 | 283.339 | -0.001 | **0.680869** | 0.13 | 19.2 | ug/L |
| \| | Sb | 123 | 241.999 | -0.001 | **1.113176** | 0.14 | 12.9 | ug/L |
| \| | Ba | 135 | 3105.294 | 0.008 | **42.039490** | 1.16 | 2.8 | ug/L |
| \| | Ba | 137 | 5642.069 | 0.014 | **43.367895** | 0.73 | 1.7 | ug/L |
| \| | Tb | 159 | 370615.946 | -0.010 | | | | ug/L |
| \|> | Ho | 165 | 406625.834 | 406625.834 | | | | ug/L |
| \| | Tl | 203 | 13.333 | 0.000 | **-3.292438** | 0.01 | 0.3 | ug/L |
| \| | Tl | 205 | 29.333 | -0.000 | **-2.900434** | 0.01 | 0.2 | ug/L |
| \| | Pb | 208 | 172.667 | 0.000 | **-3.923115** | 0.03 | 0.7 | ug/L |
| | Kr | 83 | 25.133 | 4.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.938 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 105.560 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 92.053 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 96.842 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Cr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Tuesday, February 16, 2010 11:30:55
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 4.034
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24597.621 | -0.002 | | | | ug/L |
| | Li | 7 | 107163.577 | 0.302 | **114.717024** | 3.27 | 2.9 | ug/L |
| | Be | 9 | 23206.291 | 0.067 | **108.786077** | 2.20 | 2.0 | ug/L |
| | B | 11 | 28364.296 | 0.081 | **110.146497** | 6.23 | 5.7 | ug/L |
| | Na | 23 | 3022145.712 | 8.693 | **5406.978853** | 99.79 | 1.8 | ug/L |
| | Mg | 24 | 2201577.922 | 6.362 | **5477.230734** | 225.19 | 4.1 | ug/L |
| | Al | 27 | 6972039.187 | 20.141 | **5360.859770** | 69.31 | 1.3 | ug/L |
| | K | 39 | 6029962.471 | 17.276 | **5951.988623** | 249.27 | 4.2 | ug/L |
| | Ca | 43 | 25622.656 | 0.074 | **4922.610129** | 236.36 | 4.8 | ug/L |
| > | Sc | 45 | 345324.128 | 345324.128 | | | | ug/L |
| | Ti | 49 | 12453.410 | 0.035 | **95.410991** | 2.21 | 2.3 | ug/L |
| | Co | 59 | 196016.032 | 0.567 | **96.273983** | 1.96 | 2.0 | ug/L |
| | Ni | 60 | 38153.732 | 0.110 | **94.979086** | 1.07 | 1.1 | ug/L |
| | Ni | 62 | 5907.602 | 0.017 | **95.994580** | 1.41 | 1.5 | ug/L |
| | Cu | 63 | 92671.650 | 0.268 | **94.676462** | 1.75 | 1.8 | ug/L |
| | Cu | 65 | 44334.079 | 0.128 | **95.255193** | 1.77 | 1.9 | ug/L |
| | Zn | 66 | 29302.376 | 0.084 | **94.852379** | 0.76 | 0.8 | ug/L |
| | Zn | 67 | 6034.367 | 0.015 | **99.051200** | 3.14 | 3.2 | ug/L |
| | Zn | 68 | 21608.983 | 0.062 | **96.485864** | 1.90 | 2.0 | ug/L |
| | V | 51 | 193033.221 | 0.560 | **97.913630** | 3.73 | 3.8 | ug/L |
| | Cr | 52 | 165034.698 | 0.469 | **97.615969** | 1.95 | 2.0 | ug/L |
| | Cr | 53 | 32392.059 | 0.058 | **92.680520** | 1.65 | 1.8 | ug/L |
| | Mn | 55 | 295524.477 | 0.855 | **98.443418** | 0.92 | 0.9 | ug/L |
| | Fe | 54 | 733046.632 | 2.082 | **4886.253186** | 34.41 | 0.7 | ug/L |
| | Fe | 57 | 302488.829 | 0.872 | **4878.219944** | 42.92 | 0.9 | ug/L |
| | As | 75 | 32533.239 | 0.066 | **99.143521** | 0.96 | 1.0 | ug/L |
| | Se | 77 | 14556.427 | 0.026 | **485.918894** | 11.58 | 2.4 | ug/L |
| | Se | 82 | 16694.510 | 0.034 | **509.555727** | 12.87 | 2.5 | ug/L |
| | Sr | 88 | 443103.248 | 0.890 | **98.410538** | 3.09 | 3.1 | ug/L |
| > | Y | 89 | 497929.077 | 497929.077 | | | | ug/L |
| | Mo | 95 | 52219.323 | 0.104 | **97.474558** | 2.46 | 2.5 | ug/L |
| | Mo | 97 | 32282.267 | 0.065 | **96.742657** | 2.45 | 2.5 | ug/L |
| | Mo | 98 | 82910.148 | 0.166 | **97.482592** | 2.20 | 2.3 | ug/L |
| | Ag | 107 | 151745.684 | 0.641 | **95.572836** | 2.64 | 2.8 | ug/L |
| | Ag | 109 | 147600.070 | 0.623 | **97.619425** | 2.19 | 2.2 | ug/L |
| | Cd | 111 | 37189.705 | 0.157 | **99.622118** | 2.84 | 2.9 | ug/L |
| | Cd | 114 | 86858.578 | 0.367 | **100.340650** | 3.03 | 3.0 | ug/L |

**00682**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 236816.635 | 236816.635 | | | | ug/L |
| \| | Sn | 120 | 162956.744 | 0.685 | **97.620421** | 1.12 | 1.2 | ug/L |
| \| | Sb | 121 | 118126.791 | 0.497 | **97.022897** | 1.88 | 1.9 | ug/L |
| \| | Sb | 123 | 91610.910 | 0.385 | **97.097007** | 2.17 | 2.2 | ug/L |
| \| | Ba | 135 | 36811.893 | 0.091 | **95.569382** | 1.84 | 1.9 | ug/L |
| \| | Ba | 137 | 65151.711 | 0.160 | **95.750916** | 3.48 | 3.6 | ug/L |
| \| | Tb | 159 | 367982.664 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 405814.395 | 405814.395 | | | | ug/L |
| \| | Tl | 203 | 181076.812 | 0.446 | **96.558876** | 1.06 | 1.1 | ug/L |
| \| | Tl | 205 | 429799.522 | 1.059 | **96.589979** | 0.44 | 0.5 | ug/L |
| \| | Pb | 208 | 582509.386 | 1.435 | **96.148751** | 1.04 | 1.1 | ug/L |
| | Kr | 83 | 21.467 | 0.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 114.717 | | |
| Be | 9 | 108.786 | | |
| B | 11 | 110.146 | | |
| Na | 23 | 108.140 | | |
| Mg | 24 | 109.545 | | |
| Al | 27 | 105.115 | | |
| K | 39 | 119.040 | | |
| Ca | 43 | 98.452 | | |
| Sc | 45 | | 94.146 | |
| Ti | 49 | 95.411 | | |
| Co | 59 | 96.274 | | |
| Ni | 60 | 94.979 | | |
| Ni | 62 | 95.995 | | |
| Cu | 63 | 94.676 | | |
| Cu | 65 | 95.255 | | |
| Zn | 66 | 94.852 | | |
| Zn | 67 | 99.051 | | |
| Zn | 68 | 96.486 | | |
| V | 51 | 97.914 | | |
| Cr | 52 | 97.616 | | |
| Cr | 53 | 92.681 | | |
| Mn | 55 | 98.443 | | |
| Fe | 54 | 97.725 | | |
| Fe | 57 | 97.564 | | |
| As | 75 | 99.144 | | |
| Se | 77 | 97.184 | | |
| Se | 82 | 101.911 | | |
| Sr | 88 | 98.411 | | |
| Y | 89 | | 92.509 | |
| Mo | 95 | 97.475 | | |
| Mo | 97 | 96.743 | | |
| Mo | 98 | 97.483 | | |
| Ag | 107 | 95.573 | | |
| Ag | 109 | 97.619 | | |
| Cd | 111 | 99.622 | | |
| Cd | 114 | 100.341 | | |
| In | 115 | | 92.295 | |
| Sn | 120 | 97.620 | | |
| Sb | 121 | 97.023 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 97.097 | |
| Ba | 135 | 95.569 | |
| Ba | 137 | 95.751 | |
| Tb | 159 | | |
| Ho | 165 | | 96.649 |
| Tl | 203 | 96.559 | |
| Tl | 205 | 96.590 | |
| Pb | 208 | 96.149 | |
| Cr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Tuesday, February 16, 2010 11:34:17
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 5.035
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28954.617 | 0.010 | | | | ug/L |
| | Li | 7 | 5293.822 | 0.007 | **3.235860** | 0.23 | 7.1 | ug/L |
| | Be | 9 | 447.346 | 0.001 | **2.645208** | 0.19 | 7.2 | ug/L |
| | B | 11 | 6433.357 | 0.017 | **24.072381** | 0.86 | 3.6 | ug/L |
| | Na | 23 | 69142.826 | 0.141 | **104.949126** | 5.46 | 5.2 | ug/L |
| | Mg | 24 | 24104.426 | 0.056 | **58.947593** | 3.15 | 5.3 | ug/L |
| | Al | 27 | 69010.440 | 0.151 | **54.169660** | 3.76 | 6.9 | ug/L |
| | K | 39 | 136976.873 | 0.210 | **81.167767** | 5.82 | 7.2 | ug/L |
| | Ca | 43 | 1224.098 | 0.003 | **198.582940** | 15.02 | 7.6 | ug/L |
| > | Sc | 45 | 346987.481 | 346987.481 | | | | ug/L |
| | Ti | 49 | 960.060 | 0.002 | **4.655675** | 0.22 | 4.7 | ug/L |
| | Co | 59 | 4074.412 | 0.012 | **2.412813** | 0.01 | 0.6 | ug/L |
| | Ni | 60 | 843.380 | 0.002 | **2.047713** | 0.01 | 0.5 | ug/L |
| | Ni | 62 | 170.669 | 0.000 | **2.238633** | 0.40 | 17.7 | ug/L |
| | Cu | 63 | 1996.926 | 0.005 | **1.923874** | 0.10 | 5.1 | ug/L |
| | Cu | 65 | 961.394 | 0.003 | **1.565974** | 0.12 | 7.4 | ug/L |
| | Zn | 66 | 1968.252 | 0.005 | **6.422871** | 0.11 | 1.7 | ug/L |
| | Zn | 67 | 1494.812 | 0.002 | **5.932814** | 1.11 | 18.8 | ug/L |
| | Zn | 68 | 1540.154 | 0.004 | **6.442543** | 0.04 | 0.7 | ug/L |
| | V | 51 | 20757.296 | 0.061 | **10.737101** | 0.45 | 4.2 | ug/L |
| | Cr | 52 | 9858.314 | 0.020 | **3.862042** | 0.16 | 4.0 | ug/L |
| | Cr | 53 | 14860.345 | 0.007 | **1.193894** | 3.03 | 254.0 | ug/L |
| | Mn | 55 | 6872.403 | 0.019 | **1.933743** | 0.10 | 5.0 | ug/L |
| | Fe | 54 | 27150.566 | 0.037 | **90.754363** | 2.41 | 2.7 | ug/L |
| | Fe | 57 | 6997.849 | 0.016 | **98.776572** | 2.51 | 2.5 | ug/L |
| | As | 75 | 861.920 | 0.002 | **3.245137** | 0.31 | 9.7 | ug/L |
| | Se | 77 | 1984.256 | 0.000 | **0.007607** | 4.94 | 64993.9 | ug/L |
| | Se | 82 | 187.517 | 0.000 | **5.615763** | 0.25 | 4.5 | ug/L |
| | Sr | 88 | 4889.555 | 0.010 | **1.209045** | 0.07 | 5.5 | ug/L |
| > | Y | 89 | 497440.033 | 497440.033 | | | | ug/L |
| | Mo | 95 | 1125.416 | 0.002 | **1.805236** | 0.05 | 2.8 | ug/L |
| | Mo | 97 | 768.038 | 0.001 | **2.110810** | 0.18 | 8.6 | ug/L |
| | Mo | 98 | 1874.977 | 0.003 | **2.218476** | 0.10 | 4.6 | ug/L |
| | Ag | 107 | 1606.835 | 0.007 | **0.551605** | 0.04 | 7.0 | ug/L |
| | Ag | 109 | 1535.487 | 0.006 | **0.535160** | 0.06 | 10.8 | ug/L |
| | Cd | 111 | 763.705 | 0.003 | **1.911116** | 0.01 | 0.7 | ug/L |
| | Cd | 114 | 1777.843 | 0.007 | **1.929537** | 0.11 | 5.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 239845.048 | 239845.048 | | | | ug/L |
| \| | Sn | 120 | 8241.612 | 0.031 | **4.457888** | 0.22 | 4.9 | ug/L |
| \| | Sb | 121 | 7637.123 | 0.030 | **6.103964** | 0.21 | 3.5 | ug/L |
| \| | Sb | 123 | 6035.692 | 0.024 | **6.285532** | 0.16 | 2.5 | ug/L |
| \| | Ba | 135 | 1834.219 | 0.004 | **5.166539** | 0.29 | 5.6 | ug/L |
| \| | Ba | 137 | 3327.387 | 0.008 | **5.327856** | 0.28 | 5.3 | ug/L |
| \| | Tb | 159 | 368682.334 | -0.009 | | | | ug/L |
| \|> | Ho | 165 | 404002.004 | 404002.004 | | | | ug/L |
| \| | Tl | 203 | 3992.370 | 0.010 | **1.488835** | 0.09 | 6.3 | ug/L |
| \| | Tl | 205 | 9478.504 | 0.023 | **1.568270** | 0.10 | 6.4 | ug/L |
| \| | Pb | 208 | 6304.355 | 0.015 | **0.242272** | 0.06 | 25.8 | ug/L |
| | Kr | 83 | 19.400 | -1.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 161.793 | | |
| Be | 9 | 132.260 | | |
| B | 11 | 120.362 | | |
| Na | 23 | 104.949 | | |
| Mg | 24 | 117.895 | | |
| Al | 27 | 108.339 | | |
| K | 39 | 108.224 | | |
| Ca | 43 | 99.291 | | |
| Sc | 45 | | 94.600 | |
| Ti | 49 | 93.113 | | |
| Co | 59 | 120.641 | | |
| Ni | 60 | 102.386 | | |
| Ni | 62 | 111.932 | | |
| Cu | 63 | 96.194 | | |
| Cu | 65 | 78.299 | | |
| Zn | 66 | 107.048 | | |
| Zn | 67 | 98.880 | | |
| Zn | 68 | 107.376 | | |
| V | 51 | 107.371 | | |
| Cr | 52 | 96.551 | | |
| Cr | 53 | 29.847 | | |
| Mn | 55 | 96.687 | | |
| Fe | 54 | 90.754 | | |
| Fe | 57 | 98.777 | | |
| As | 75 | 81.128 | | |
| Se | 77 | 0.152 | | |
| Se | 82 | 112.315 | | |
| Sr | 88 | 120.905 | | |
| Y | 89 | | 92.418 | |
| Mo | 95 | 90.262 | | |
| Mo | 97 | 105.541 | | |
| Mo | 98 | 110.924 | | |
| Ag | 107 | 55.161 | | |
| Ag | 109 | 53.516 | | |
| Cd | 111 | 95.556 | | |
| Cd | 114 | 96.477 | | |
| In | 115 | | 93.475 | |
| Sn | 120 | 111.447 | | |
| Sb | 121 | 122.079 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 125.711 | |
| Ba | 135 | 103.331 | |
| Ba | 137 | 106.557 | |
| Tb | 159 | | |
| Ho | 165 | | 96.217 |
| Tl | 203 | 74.442 | |
| Tl | 205 | 78.414 | |
| Pb | 208 | 24.227 | |
| Cr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Tuesday, February 16, 2010 11:40:14
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 6.036
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28271.547 | 0.009 | | | | ug/L |
| | Li | 7 | 3015.258 | 0.001 | **0.776482** | 0.09 | 12.1 | ug/L |
| | Be | 9 | 4.000 | -0.000 | **0.585193** | 0.01 | 1.7 | ug/L |
| | B | 11 | 555.353 | 0.000 | **1.155639** | 0.08 | 6.7 | ug/L |
| | Na | 23 | 11274.931 | -0.026 | **1.628354** | 0.92 | 56.3 | ug/L |
| | Mg | 24 | 300.006 | -0.012 | **-0.023795** | 0.24 | 1001.6 | ug/L |
| | Al | 27 | 738.369 | -0.046 | **1.890441** | 0.06 | 3.1 | ug/L |
| | K | 39 | 45266.663 | -0.054 | **-9.467420** | 3.09 | 32.7 | ug/L |
| | Ca | 43 | 144.001 | -0.000 | **-9.470654** | 1.10 | 11.6 | ug/L |
| > | Sc | 45 | 344408.033 | 344408.033 | | | | ug/L |
| | Ti | 49 | 392.677 | -0.000 | **0.217749** | 0.01 | 5.1 | ug/L |
| | Co | 59 | 42.667 | -0.000 | **0.450938** | 0.01 | 2.3 | ug/L |
| | Ni | 60 | 8.667 | -0.000 | **-0.021224** | 0.01 | 52.9 | ug/L |
| | Ni | 62 | 37.333 | -0.000 | **0.081537** | 0.08 | 98.1 | ug/L |
| | Cu | 63 | 161.335 | 0.000 | **0.056132** | 0.02 | 28.6 | ug/L |
| | Cu | 65 | 78.667 | 0.000 | **-0.330829** | 0.02 | 5.4 | ug/L |
| | Zn | 66 | 58.667 | -0.000 | **0.280053** | 0.07 | 23.3 | ug/L |
| | Zn | 67 | 1078.742 | 0.000 | **-2.393088** | 1.05 | 43.9 | ug/L |
| | Zn | 68 | 117.334 | -0.000 | **0.096058** | 0.10 | 102.6 | ug/L |
| | V | 51 | 330.621 | 0.002 | **0.448987** | 0.03 | 6.1 | ug/L |
| | Cr | 52 | 2944.564 | 0.000 | **-0.282508** | 0.03 | 10.9 | ug/L |
| | Cr | 53 | 13790.353 | 0.004 | **-3.823181** | 2.57 | 67.2 | ug/L |
| | Mn | 55 | 494.683 | 0.001 | **-0.188632** | 0.01 | 4.5 | ug/L |
| | Fe | 54 | 12563.946 | -0.005 | **-7.240664** | 1.74 | 24.1 | ug/L |
| | Fe | 57 | 680.030 | -0.002 | **-2.866159** | 0.64 | 22.3 | ug/L |
| | As | 75 | -345.795 | -0.000 | **-0.403019** | 0.13 | 32.4 | ug/L |
| | Se | 77 | 1887.565 | 0.000 | **-4.120355** | 3.60 | 87.3 | ug/L |
| | Se | 82 | 2.315 | -0.000 | **-0.045096** | 0.05 | 107.4 | ug/L |
| | Sr | 88 | 138.668 | 0.000 | **0.153277** | 0.00 | 3.0 | ug/L |
| > | Y | 89 | 499634.346 | 499634.346 | | | | ug/L |
| | Mo | 95 | 22.000 | -0.000 | **-0.263001** | 0.01 | 5.0 | ug/L |
| | Mo | 97 | 14.667 | -0.000 | **-0.156027** | 0.02 | 13.9 | ug/L |
| | Mo | 98 | 27.854 | -0.001 | **0.043725** | 0.01 | 20.7 | ug/L |
| | Ag | 107 | 12.667 | 0.000 | **-0.444756** | 0.00 | 0.6 | ug/L |
| | Ag | 109 | 8.667 | 0.000 | **-0.467186** | 0.00 | 0.2 | ug/L |
| | Cd | 111 | 4.167 | -0.000 | **-0.099422** | 0.00 | 2.0 | ug/L |
| | Cd | 114 | 6.175 | 0.000 | **-0.091171** | 0.00 | 1.2 | ug/L |

**00688**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 237650.015 | 237650.015 | | | | ug/L |
| \| | Sn | 120 | 677.971 | -0.001 | **-0.036103** | 0.03 | 85.4 | ug/L |
| \| | Sb | 121 | 654.695 | 0.001 | **0.439298** | 0.07 | 16.9 | ug/L |
| \| | Sb | 123 | 498.095 | 0.000 | **0.492231** | 0.06 | 11.2 | ug/L |
| \| | Ba | 135 | 10.667 | -0.000 | **0.426869** | 0.01 | 1.9 | ug/L |
| \| | Ba | 137 | 23.333 | -0.000 | **0.466844** | 0.01 | 1.3 | ug/L |
| \| | Tb | 159 | 371284.439 | 0.004 | | | | ug/L |
| \|> | Ho | 165 | 400997.238 | 400997.238 | | | | ug/L |
| \| | Tl | 203 | 26.667 | 0.000 | **-0.651171** | 0.00 | 0.5 | ug/L |
| \| | Tl | 205 | 73.334 | 0.000 | **-0.569945** | 0.00 | 0.7 | ug/L |
| \| | Pb | 208 | 82.000 | -0.000 | **-0.799497** | 0.00 | 0.6 | ug/L |
| | Kr | 83 | 19.400 | -1.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.896 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 92.825 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 92.620 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.502 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

00690

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Tuesday, February 16, 2010 12:11:51
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\ICSA.037
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26740.801 | 0.004 | | | | ug/L |
| | Li | 7 | 3030.597 | 0.001 | **0.766888** | 0.11 | 14.3 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **0.600503** | 0.04 | 5.9 | ug/L |
| | B | 11 | 843.380 | 0.001 | **2.259630** | 0.13 | 5.7 | ug/L |
| | Na | 23 | 55265429.894 | 159.119 | **98668.491223** | 3381.09 | 3.4 | ug/L |
| | Mg | 24 | 39463839.023 | 113.649 | **97663.084558** | 2328.52 | 2.4 | ug/L |
| | Al | 27 | 125813394.590 | 362.307 | **96194.049574** | 2160.81 | 2.2 | ug/L |
| | K | 39 | 91085313.920 | 262.146 | **90188.672144** | 1156.07 | 1.3 | ug/L |
| | Ca | 43 | 507531.565 | 1.461 | **97655.825265** | 1723.84 | 1.8 | ug/L |
| > | Sc | 45 | 347223.792 | 347223.792 | | | | ug/L |
| | Ti | 49 | 265041.588 | 0.762 | **2077.877149** | 24.64 | 1.2 | ug/L |
| | Co | 59 | 3638.194 | 0.010 | **2.199074** | 0.01 | 0.7 | ug/L |
| | Ni | 60 | 1172.756 | 0.003 | **2.861727** | 0.13 | 4.5 | ug/L |
| | Ni | 62 | 736.035 | 0.002 | **11.430798** | 0.69 | 6.0 | ug/L |
| | Cu | 63 | 2162.304 | 0.006 | **2.090012** | 0.04 | 1.7 | ug/L |
| | Cu | 65 | 1325.448 | 0.004 | **2.345712** | 0.14 | 6.2 | ug/L |
| | Zn | 66 | 1237.433 | 0.003 | **4.068894** | 0.21 | 5.2 | ug/L |
| | Zn | 67 | 816.043 | -0.000 | **-7.935781** | 0.94 | 11.8 | ug/L |
| | Zn | 68 | 333.341 | 0.001 | **1.053627** | 0.22 | 20.6 | ug/L |
| | V | 51 | 324.874 | 0.002 | **0.443741** | 0.43 | 96.2 | ug/L |
| | Cr | 52 | 6433.409 | 0.010 | **1.797384** | 0.65 | 36.4 | ug/L |
| | Cr | 53 | 9976.467 | -0.007 | **-24.153636** | 1.34 | 5.5 | ug/L |
| | Mn | 55 | 22338.398 | 0.063 | **7.073116** | 0.17 | 2.4 | ug/L |
| | Fe | 54 | 14634876.428 | 42.110 | **98772.523730** | 2596.42 | 2.6 | ug/L |
| | Fe | 57 | 6203672.889 | 17.863 | **99774.466515** | 1620.57 | 1.6 | ug/L |
| | As | 75 | -401.980 | -0.000 | **-0.605493** | 0.60 | 99.9 | ug/L |
| | Se | 77 | 2089.617 | 0.001 | **5.175971** | 3.01 | 58.2 | ug/L |
| | Se | 82 | -9.976 | -0.000 | **-0.424235** | 0.16 | 37.1 | ug/L |
| | Sr | 88 | 10867.676 | 0.022 | **2.568447** | 0.03 | 1.2 | ug/L |
| > | Y | 89 | 490559.384 | 490559.384 | | | | ug/L |
| | Mo | 95 | 1099214.266 | 2.241 | **2088.677981** | 32.18 | 1.5 | ug/L |
| | Mo | 97 | 669785.104 | 1.365 | **2041.217980** | 34.95 | 1.7 | ug/L |
| | Mo | 98 | 1740624.621 | 3.548 | **2076.854167** | 29.82 | 1.4 | ug/L |
| | Ag | 107 | 150.001 | 0.001 | **-0.355930** | 0.02 | 4.5 | ug/L |
| | Ag | 109 | 123.334 | 0.001 | **-0.389061** | 0.01 | 3.8 | ug/L |
| | Cd | 111 | 1000.565 | 0.004 | **2.627809** | 0.10 | 3.8 | ug/L |
| | Cd | 114 | 1733.491 | 0.007 | **1.947433** | 0.08 | 4.1 | ug/L |

00691

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 232027.842 | 232027.842 | | | | ug/L |
| \| | Sn | 120 | 803.983 | 0.000 | **0.051674** | 0.02 | 35.9 | ug/L |
| \| | Sb | 121 | 567.354 | 0.001 | **0.378415** | 0.03 | 7.5 | ug/L |
| \| | Sb | 123 | 492.095 | 0.001 | **0.497484** | 0.07 | 14.2 | ug/L |
| \| | Ba | 135 | 599.357 | 0.002 | **2.044763** | 0.03 | 1.6 | ug/L |
| \| | Ba | 137 | 1043.404 | 0.003 | **2.053860** | 0.05 | 2.4 | ug/L |
| \| | Tb | 159 | 340774.092 | -0.030 | | | | ug/L |
| \|> | Ho | 165 | 382059.494 | 382059.494 | | | | ug/L |
| \| | Tl | 203 | 261.338 | 0.001 | **-0.516620** | 0.02 | 4.6 | ug/L |
| \| | Tl | 205 | 634.026 | 0.002 | **-0.434462** | 0.00 | 0.9 | ug/L |
| \| | Pb | 208 | 1531.393 | 0.004 | **-0.542547** | 0.00 | 0.7 | ug/L |
| | Kr | 83 | 39.533 | 18.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.664 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 91.139 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 90.429 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 90.992 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Cr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Tuesday, February 16, 2010 12:14:32
Sample Type: Spike - 2 of 19
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\ICSAB.038
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26187.341 | 0.006 | | | | ug/L |
| | Li | 7 | 2933.227 | 0.001 | **0.815898** | 0.10 | 12.2 | ug/L |
| | Be | 9 | 4.667 | 0.000 | **0.589367** | 0.02 | 2.7 | ug/L |
| | B | 11 | 812.043 | 0.001 | **2.291626** | 0.04 | 1.6 | ug/L |
| | Na | 23 | 55522369.763 | 167.850 | **104081.741038** | 8983.43 | 8.6 | ug/L |
| | Mg | 24 | 39602088.141 | 119.718 | **102877.765676** | 7604.30 | 7.4 | ug/L |
| | Al | 27 | 123990250.099 | 374.650 | **99470.673250** | 3976.25 | 4.0 | ug/L |
| | K | 39 | 92535575.620 | 279.466 | **96146.828308** | 3846.11 | 4.0 | ug/L |
| | Ca | 43 | 485440.670 | 1.466 | **97970.693942** | 1467.74 | 1.5 | ug/L |
| > | Sc | 45 | 331131.511 | 331131.511 | | | | ug/L |
| | Ti | 49 | 254803.368 | 0.769 | **2096.046584** | 82.06 | 3.9 | ug/L |
| | Co | 59 | 161880.271 | 0.489 | **83.014051** | 2.19 | 2.6 | ug/L |
| | Ni | 60 | 30638.239 | 0.093 | **79.567097** | 2.29 | 2.9 | ug/L |
| | Ni | 62 | 5139.053 | 0.015 | **87.102845** | 6.04 | 6.9 | ug/L |
| | Cu | 63 | 71095.745 | 0.214 | **75.751435** | 1.84 | 2.4 | ug/L |
| | Cu | 65 | 34329.809 | 0.104 | **76.820161** | 0.13 | 0.2 | ug/L |
| | Zn | 66 | 11541.988 | 0.034 | **39.023440** | 0.43 | 1.1 | ug/L |
| | Zn | 67 | 2755.161 | 0.006 | **34.375491** | 4.49 | 13.1 | ug/L |
| | Zn | 68 | 7737.225 | 0.023 | **35.756300** | 0.65 | 1.8 | ug/L |
| | V | 51 | 159388.627 | 0.482 | **84.413428** | 3.81 | 4.5 | ug/L |
| | Cr | 52 | 137954.532 | 0.408 | **84.893315** | 3.94 | 4.6 | ug/L |
| | Cr | 53 | 26069.448 | 0.043 | **65.730079** | 6.82 | 10.4 | ug/L |
| | Mn | 55 | 256787.138 | 0.775 | **89.225542** | 2.84 | 3.2 | ug/L |
| | Fe | 54 | 14097031.122 | 42.563 | **99834.577052** | 4309.21 | 4.3 | ug/L |
| | Fe | 57 | 5861411.581 | 17.705 | **98893.716289** | 2592.99 | 2.6 | ug/L |
| | As | 75 | 11314.388 | 0.025 | **36.855283** | 0.98 | 2.7 | ug/L |
| | Se | 77 | 3095.957 | 0.003 | **49.638505** | 1.40 | 2.8 | ug/L |
| | Se | 82 | 1229.062 | 0.003 | **39.551218** | 1.24 | 3.1 | ug/L |
| | Sr | 88 | 10489.822 | 0.022 | **2.582836** | 0.13 | 5.1 | ug/L |
| > | Y | 89 | 471014.469 | 471014.469 | | | | ug/L |
| | Mo | 95 | 1067658.740 | 2.267 | **2113.128915** | 81.23 | 3.8 | ug/L |
| | Mo | 97 | 649433.885 | 1.379 | **2061.508978** | 79.13 | 3.8 | ug/L |
| | Mo | 98 | 1673352.371 | 3.553 | **2079.775224** | 62.89 | 3.0 | ug/L |
| | Ag | 107 | 28958.411 | 0.132 | **19.356382** | 0.46 | 2.4 | ug/L |
| | Ag | 109 | 27232.795 | 0.124 | **19.099807** | 0.83 | 4.4 | ug/L |
| | Cd | 111 | 14385.607 | 0.066 | **41.603733** | 1.51 | 3.6 | ug/L |
| | Cd | 114 | 33159.642 | 0.151 | **41.373135** | 2.01 | 4.9 | ug/L |

00694

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 219122.088 | 219122.088 | | | | ug/L |
| \| | Sn | 120 | 766.654 | 0.000 | **0.056546** | 0.03 | 48.7 | ug/L |
| \| | Sb | 121 | 435.346 | 0.000 | **0.289847** | 0.04 | 12.3 | ug/L |
| \| | Sb | 123 | 316.836 | -0.000 | **0.328331** | 0.02 | 5.7 | ug/L |
| \| | Ba | 135 | 551.353 | 0.001 | **1.982264** | 0.12 | 6.1 | ug/L |
| \| | Ba | 137 | 961.394 | 0.003 | **1.996999** | 0.13 | 6.7 | ug/L |
| \| | Tb | 159 | 325544.008 | -0.031 | | | | ug/L |
| \|> | Ho | 165 | 365427.102 | 365427.102 | | | | ug/L |
| \| | Tl | 203 | 267.338 | 0.001 | **-0.506125** | 0.01 | 1.3 | ug/L |
| \| | Tl | 205 | 637.360 | 0.002 | **-0.426568** | 0.01 | 1.4 | ug/L |
| \| | Pb | 208 | 1466.056 | 0.004 | **-0.541960** | 0.02 | 3.3 | ug/L |
| | Kr | 83 | 39.533 | 18.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.277 | |
| Ti | 49 | | | |
| Co | 59 | | | 101.019 |
| Ni | 60 | | | 95.882 |
| Ni | 62 | | | 94.590 |
| Cu | 63 | | | 92.077 |
| Cu | 65 | | | 93.093 |
| Zn | 66 | | | 87.386 |
| Zn | 67 | | | 105.778 |
| Zn | 68 | | | 86.757 |
| V | 51 | | | 104.962 |
| Cr | 52 | | | 103.870 |
| Cr | 53 | | | 112.355 |
| Mn | 55 | | | 102.691 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 93.652 |
| Se | 77 | | | 111.156 |
| Se | 82 | | | 99.939 |
| Sr | 88 | | | |
| Y | 89 | | 87.508 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 98.562 |
| Ag | 109 | | | 97.444 |
| Cd | 111 | | | 97.440 |
| Cd | 114 | | | 98.564 |
| In | 115 | | 85.399 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

**00695**

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.030 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-02A**
Sample Date/Time: Tuesday, February 16, 2010 12:22:11
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-02A.039
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29518.264 | 0.006 | | | | ug/L |
| | Li | 7 | 46526.979 | 0.116 | **221.826240** | 3.65 | 1.6 | ug/L |
| | Be | 9 | 1113.414 | 0.003 | **26.730837** | 2.13 | 8.0 | ug/L |
| | B | 11 | 15461.564 | 0.040 | **273.879045** | 14.34 | 5.2 | ug/L |
| | Na | 23 | 35761358.059 | 95.370 | **295726.795647** | 9223.26 | 3.1 | ug/L |
| | Mg | 24 | 6809161.795 | 18.153 | **78043.466647** | 2244.21 | 2.9 | ug/L |
| | Al | 27 | 55599747.697 | 148.321 | **196941.609698** | 7008.87 | 3.6 | ug/L |
| | K | 39 | 1441543.800 | 3.661 | **6342.381565** | 189.32 | 3.0 | ug/L |
| | Ca | 43 | 83710.637 | 0.223 | **74451.255472** | 2293.42 | 3.1 | ug/L |
| > | Sc | 45 | 374851.465 | 374851.465 | | | | ug/L |
| | Ti | 49 | 1184.091 | 0.002 | **28.628076** | 2.40 | 8.4 | ug/L |
| | Co | 59 | 70965.854 | 0.189 | **162.008064** | 2.70 | 1.7 | ug/L |
| | Ni | 60 | 18049.828 | 0.048 | **206.888286** | 6.37 | 3.1 | ug/L |
| | Ni | 62 | 2843.193 | 0.007 | **211.367662** | 11.19 | 5.3 | ug/L |
| | Cu | 63 | 612.691 | 0.001 | **2.340276** | 0.11 | 4.9 | ug/L |
| | Cu | 65 | 556.020 | 0.001 | **3.023973** | 0.17 | 5.5 | ug/L |
| | Zn | 66 | 18827.017 | 0.050 | **280.974674** | 8.42 | 3.0 | ug/L |
| | Zn | 67 | 4166.463 | 0.008 | **270.596141** | 22.15 | 8.2 | ug/L |
| | Zn | 68 | 14991.936 | 0.040 | **307.623275** | 10.77 | 3.5 | ug/L |
| | V | 51 | 50275.123 | 0.135 | **118.555139** | 2.70 | 2.3 | ug/L |
| | Cr | 52 | 30037.199 | 0.072 | **73.259359** | 1.96 | 2.7 | ug/L |
| | Cr | 53 | 15651.918 | 0.006 | **-3.675245** | 17.92 | 487.5 | ug/L |
| | Mn | 55 | 2772623.824 | 7.398 | **4269.119948** | 118.76 | 2.8 | ug/L |
| | Fe | 54 | 5876029.659 | 15.639 | **183427.609232** | 4867.85 | 2.7 | ug/L |
| | Fe | 57 | 2433307.278 | 6.488 | **181239.905233** | 4442.89 | 2.5 | ug/L |
| | As | 75 | 389.432 | 0.001 | **6.429614** | 0.56 | 8.8 | ug/L |
| | Se | 77 | 2083.616 | -0.001 | **-162.765081** | 16.65 | 10.2 | ug/L |
| | Se | 82 | 25.691 | 0.000 | **1.577724** | 0.57 | 36.3 | ug/L |
| | Sr | 88 | 776050.164 | 0.857 | **473.568633** | 10.05 | 2.1 | ug/L |
| > | Y | 89 | 905972.721 | 905972.721 | | | | ug/L |
| | Mo | 95 | 686.699 | 0.000 | **2.011510** | 1.01 | 50.2 | ug/L |
| | Mo | 97 | 418.679 | 0.000 | **2.452489** | 1.04 | 42.5 | ug/L |
| | Mo | 98 | 1089.267 | 0.001 | **3.574672** | 0.86 | 24.1 | ug/L |
| | Ag | 107 | 24.667 | 0.000 | **-2.187338** | 0.01 | 0.2 | ug/L |
| | Ag | 109 | 7.333 | 0.000 | **-2.341064** | 0.01 | 0.6 | ug/L |
| | Cd | 111 | 49.833 | 0.000 | **0.102949** | 0.08 | 78.9 | ug/L |
| | Cd | 114 | 117.437 | 0.000 | **0.171075** | 0.13 | 78.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 241955.478 | 241955.478 | | | | ug/L |
| \| | Sn | 120 | 712.606 | -0.001 | **-0.113061** | 0.05 | 46.0 | ug/L |
| \| | Sb | 121 | 336.674 | -0.001 | **0.867110** | 0.05 | 6.3 | ug/L |
| \| | Sb | 123 | 270.415 | -0.000 | **1.232959** | 0.08 | 6.6 | ug/L |
| \| | Ba | 135 | 1192.093 | 0.003 | **16.375233** | 0.96 | 5.8 | ug/L |
| \| | Ba | 137 | 2130.296 | 0.005 | **16.705884** | 1.03 | 6.2 | ug/L |
| \| | Tb | 159 | 389089.987 | -0.026 | | | | ug/L |
| \|> | Ho | 165 | 434678.597 | 434678.597 | | | | ug/L |
| \| | Tl | 203 | 17.333 | 0.000 | **-3.284838** | 0.01 | 0.3 | ug/L |
| \| | Tl | 205 | 42.667 | -0.000 | **-2.888559** | 0.01 | 0.2 | ug/L |
| \| | Pb | 208 | 2185.457 | 0.005 | **-2.368593** | 0.06 | 2.3 | ug/L |
| | Kr | 83 | 39.467 | 18.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 102.196 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 168.318 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 94.298 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

**00698**

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 103.523 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Cr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-02A**
Sample Date/Time: Tuesday, February 16, 2010 12:25:05
Sample Type: Sample
Sample Description: 25
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-02A.040
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 0.4000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29317.426 | 0.011 | | | | ug/L |
| | Li | 7 | 11432.495 | 0.025 | **245.431893** | 5.99 | 2.4 | ug/L |
| | Be | 9 | 212.670 | 0.001 | **38.634111** | 1.63 | 4.2 | ug/L |
| | B | 11 | 3238.682 | 0.008 | **287.542514** | 5.36 | 1.9 | ug/L |
| | Na | 23 | 6621858.670 | 18.873 | **292963.655142** | 772.93 | 0.3 | ug/L |
| | Mg | 24 | 1250816.663 | 3.564 | **76819.111612** | 1574.40 | 2.0 | ug/L |
| | Al | 27 | 10819285.108 | 30.888 | **205347.892996** | 5527.50 | 2.7 | ug/L |
| | K | 39 | 326198.303 | 0.747 | **6651.258094** | 535.31 | 8.0 | ug/L |
| | Ca | 43 | 15927.138 | 0.045 | **75171.722499** | 1429.93 | 1.9 | ug/L |
| > | Sc | 45 | 349768.979 | 349768.979 | | | | ug/L |
| | Ti | 49 | 522.018 | 0.000 | **29.536225** | 6.84 | 23.2 | ug/L |
| | Co | 59 | 13745.606 | 0.039 | **176.697992** | 5.25 | 3.0 | ug/L |
| | Ni | 60 | 3491.459 | 0.010 | **213.576208** | 2.03 | 1.0 | ug/L |
| | Ni | 62 | 606.691 | 0.002 | **231.646714** | 19.81 | 8.6 | ug/L |
| | Cu | 63 | 143.335 | 0.000 | **0.881708** | 0.74 | 83.9 | ug/L |
| | Cu | 65 | 138.668 | 0.000 | **-5.116785** | 1.70 | 33.2 | ug/L |
| | Zn | 66 | 4345.227 | 0.012 | **349.222133** | 11.65 | 3.3 | ug/L |
| | Zn | 67 | 1772.204 | 0.002 | **282.584672** | 43.76 | 15.5 | ug/L |
| | Zn | 68 | 2932.559 | 0.008 | **313.837534** | 4.97 | 1.6 | ug/L |
| | V | 51 | 9062.363 | 0.027 | **120.268018** | 8.15 | 6.8 | ug/L |
| | Cr | 52 | 7924.750 | 0.014 | **66.515048** | 4.37 | 6.6 | ug/L |
| | Cr | 53 | 12830.024 | 0.000 | **-246.559265** | 42.87 | 17.4 | ug/L |
| | Mn | 55 | 512836.596 | 1.466 | **4223.816835** | 75.35 | 1.8 | ug/L |
| | Fe | 54 | 1110160.220 | 3.134 | **183855.184672** | 4844.31 | 2.6 | ug/L |
| | Fe | 57 | 456010.326 | 1.300 | **181731.472533** | 3858.00 | 2.1 | ug/L |
| | As | 75 | -208.408 | 0.000 | **2.352240** | 10.74 | 456.6 | ug/L |
| | Se | 77 | 1821.549 | -0.001 | **-400.728385** | 58.91 | 14.7 | ug/L |
| | Se | 82 | 5.094 | -0.000 | **0.482589** | 4.24 | 877.9 | ug/L |
| | Sr | 88 | 145234.802 | 0.252 | **698.473317** | 25.68 | 3.7 | ug/L |
| > | Y | 89 | 576433.354 | 576433.354 | | | | ug/L |
| | Mo | 95 | 111.334 | -0.000 | **-3.098883** | 0.38 | 12.3 | ug/L |
| | Mo | 97 | 65.334 | -0.000 | **-0.768505** | 1.00 | 129.9 | ug/L |
| | Mo | 98 | 166.303 | -0.000 | **4.497345** | 0.42 | 9.4 | ug/L |
| | Ag | 107 | 12.000 | 0.000 | **-11.130370** | 0.06 | 0.6 | ug/L |
| | Ag | 109 | 4.667 | -0.000 | **-11.746565** | 0.05 | 0.4 | ug/L |
| | Cd | 111 | 9.167 | 0.000 | **-2.155277** | 0.05 | 2.1 | ug/L |
| | Cd | 114 | 20.513 | 0.000 | **-1.870927** | 0.14 | 7.7 | ug/L |

**00700**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 239100.034 | 239100.034 | | | | ug/L |
| \| | Sn | 120 | 643.993 | -0.001 | **-1.466764** | 0.39 | 26.9 | ug/L |
| \| | Sb | 121 | 252.004 | -0.001 | **2.688940** | 0.18 | 6.6 | ug/L |
| L | Sb | 123 | 242.335 | -0.001 | **5.502129** | 0.11 | 1.9 | ug/L |
| Γ | Ba | 135 | 228.003 | 0.001 | **24.593437** | 0.27 | 1.1 | ug/L |
| \| | Ba | 137 | 394.677 | 0.001 | **25.134046** | 0.49 | 1.9 | ug/L |
| \| | Tb | 159 | 370550.445 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 409018.409 | 409018.409 | | | | ug/L |
| \| | Tl | 203 | 6.667 | -0.000 | **-16.552541** | 0.06 | 0.4 | ug/L |
| \| | Tl | 205 | 8.667 | -0.000 | **-14.619398** | 0.04 | 0.3 | ug/L |
| L | Pb | 208 | 454.672 | 0.001 | **-18.454912** | 0.09 | 0.5 | ug/L |
| | Kr | 83 | 22.067 | 1.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.358 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 107.094 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 93.185 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

**00701**

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 97.412 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Cr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-13A**
Sample Date/Time: Tuesday, February 16, 2010 12:32:01
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-13A.041
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30528.149 | 0.011 | | | | ug/L |
| | Li | 7 | 6329.273 | 0.009 | **20.170962** | 1.79 | 8.9 | ug/L |
| | Be | 9 | 236.004 | 0.001 | **8.045362** | 0.17 | 2.1 | ug/L |
| | B | 11 | 1305.445 | 0.002 | **19.105253** | 1.78 | 9.3 | ug/L |
| | Na | 23 | 3028350.226 | 8.250 | **25663.675723** | 803.12 | 3.1 | ug/L |
| | Mg | 24 | 969326.283 | 2.647 | **11424.936880** | 60.16 | 0.5 | ug/L |
| | Al | 27 | 4271626.173 | 11.678 | **15570.708292** | 479.05 | 3.1 | ug/L |
| | K | 39 | 171729.739 | 0.286 | **537.544812** | 28.61 | 5.3 | ug/L |
| | Ca | 43 | 27303.065 | 0.074 | **24854.964274** | 761.48 | 3.1 | ug/L |
| > | Sc | 45 | 364383.958 | 364383.958 | | | | ug/L |
| | Ti | 49 | 541.353 | 0.000 | **5.803234** | 2.15 | 37.0 | ug/L |
| | Co | 59 | 32856.708 | 0.090 | **78.296583** | 2.50 | 3.2 | ug/L |
| | Ni | 60 | 2050.273 | 0.006 | **23.987184** | 1.01 | 4.2 | ug/L |
| | Ni | 62 | 317.340 | 0.001 | **21.916633** | 1.72 | 7.9 | ug/L |
| | Cu | 63 | 2623.781 | 0.007 | **12.173545** | 0.69 | 5.7 | ug/L |
| | Cu | 65 | 1285.441 | 0.003 | **10.643131** | 0.76 | 7.1 | ug/L |
| | Zn | 66 | 4869.541 | 0.013 | **75.082867** | 1.65 | 2.2 | ug/L |
| | Zn | 67 | 1845.556 | 0.002 | **56.384919** | 18.03 | 32.0 | ug/L |
| | Zn | 68 | 3560.826 | 0.009 | **73.534282** | 4.50 | 6.1 | ug/L |
| | V | 51 | 552.147 | 0.002 | **2.734938** | 0.83 | 30.4 | ug/L |
| | Cr | 52 | 3071.280 | -0.000 | **-1.540445** | 0.27 | 17.4 | ug/L |
| | Cr | 53 | 13239.389 | 0.000 | **-52.483542** | 11.03 | 21.0 | ug/L |
| | Mn | 55 | 1748416.993 | 4.798 | **2768.649530** | 71.53 | 2.6 | ug/L |
| | Fe | 54 | 17352.390 | 0.006 | **94.470494** | 1.48 | 1.6 | ug/L |
| | Fe | 57 | 2271.002 | 0.002 | **104.602550** | 4.08 | 3.9 | ug/L |
| | As | 75 | -323.603 | 0.000 | **-1.118950** | 3.16 | 282.0 | ug/L |
| | Se | 77 | 1928.242 | -0.000 | **-60.730175** | 21.26 | 35.0 | ug/L |
| | Se | 82 | 11.547 | 0.000 | **0.951839** | 0.34 | 35.6 | ug/L |
| | Sr | 88 | 160168.325 | 0.279 | **154.731475** | 8.43 | 5.4 | ug/L |
| > | Y | 89 | 574424.158 | 574424.158 | | | | ug/L |
| | Mo | 95 | 43.333 | -0.000 | **-1.168067** | 0.11 | 9.5 | ug/L |
| | Mo | 97 | 37.333 | -0.000 | **-0.511304** | 0.15 | 28.9 | ug/L |
| | Mo | 98 | 77.261 | -0.000 | **0.449108** | 0.03 | 6.0 | ug/L |
| | Ag | 107 | 4.000 | -0.000 | **-2.251497** | 0.01 | 0.3 | ug/L |
| | Ag | 109 | 4.667 | -0.000 | **-2.349925** | 0.01 | 0.4 | ug/L |
| | Cd | 111 | 3049.438 | 0.012 | **38.484585** | 1.94 | 5.0 | ug/L |
| | Cd | 114 | 7152.256 | 0.029 | **38.961569** | 0.76 | 1.9 | ug/L |

00703

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 248257.965 | 248257.965 | | | | ug/L |
| \| | Sn | 120 | 690.604 | -0.001 | **-0.228106** | 0.20 | 86.4 | ug/L |
| \| | Sb | 121 | 325.340 | -0.001 | **0.792307** | 0.23 | 29.0 | ug/L |
| L | Sb | 123 | 245.747 | -0.001 | **1.069847** | 0.07 | 6.6 | ug/L |
| Γ | Ba | 135 | 1598.166 | 0.004 | **22.037535** | 1.05 | 4.7 | ug/L |
| \| | Ba | 137 | 2863.866 | 0.007 | **22.484962** | 0.54 | 2.4 | ug/L |
| \| | Tb | 159 | 379110.116 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 418451.260 | 418451.260 | | | | ug/L |
| \| | Tl | 203 | 29.333 | 0.000 | **-3.251779** | 0.02 | 0.8 | ug/L |
| \| | Tl | 205 | 75.334 | 0.000 | **-2.851103** | 0.01 | 0.3 | ug/L |
| L | Pb | 208 | 791.349 | 0.002 | **-3.427654** | 0.01 | 0.4 | ug/L |
| | Kr | 83 | 23.733 | 3.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 99.343 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 106.720 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 96.754 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 99.659 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20A**
Sample Date/Time: Tuesday, February 16, 2010 12:34:41
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-20A.042
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29892.880 | 0.011 | | | | ug/L |
| | Li | 7 | 22478.798 | 0.055 | **106.931447** | 1.36 | 1.3 | ug/L |
| | Be | 9 | 539.352 | 0.002 | **15.060167** | 0.40 | 2.7 | ug/L |
| | B | 11 | 4654.075 | 0.012 | **83.572683** | 3.91 | 4.7 | ug/L |
| | Na | 23 | 32701437.807 | 92.032 | **285379.317369** | 4565.84 | 1.6 | ug/L |
| | Mg | 24 | 9008383.198 | 25.354 | **108978.890044** | 3370.63 | 3.1 | ug/L |
| | Al | 27 | 340123.023 | 0.910 | **1278.125290** | 29.40 | 2.3 | ug/L |
| | K | 39 | 942789.036 | 2.469 | **4292.641099** | 249.93 | 5.8 | ug/L |
| | Ca | 43 | 152647.123 | 0.429 | **143496.260840** | 4862.34 | 3.4 | ug/L |
| > | Sc | 45 | 355090.533 | 355090.533 | | | | ug/L |
| | Ti | 49 | 650.027 | 0.001 | **10.500363** | 0.34 | 3.3 | ug/L |
| | Co | 59 | 22760.312 | 0.064 | **56.273723** | 2.14 | 3.8 | ug/L |
| | Ni | 60 | 4898.227 | 0.014 | **59.115237** | 2.18 | 3.7 | ug/L |
| | Ni | 62 | 773.372 | 0.002 | **58.795245** | 2.04 | 3.5 | ug/L |
| | Cu | 63 | 592.690 | 0.001 | **2.400987** | 0.18 | 7.4 | ug/L |
| | Cu | 65 | 289.339 | 0.001 | **0.532554** | 0.05 | 9.4 | ug/L |
| | Zn | 66 | 5053.660 | 0.014 | **79.923802** | 1.47 | 1.8 | ug/L |
| | Zn | 67 | 1920.241 | 0.003 | **68.511978** | 14.88 | 21.7 | ug/L |
| | Zn | 68 | 3555.488 | 0.010 | **75.380978** | 1.30 | 1.7 | ug/L |
| | V | 51 | 930.834 | 0.003 | **3.703483** | 1.51 | 40.8 | ug/L |
| | Cr | 52 | 3282.701 | 0.001 | **-0.690330** | 0.24 | 34.8 | ug/L |
| | Cr | 53 | 13449.083 | 0.002 | **-38.719207** | 5.10 | 13.2 | ug/L |
| | Mn | 55 | 1040927.750 | 2.931 | **1690.548042** | 28.82 | 1.7 | ug/L |
| | Fe | 54 | 1126338.521 | 3.131 | **36737.786207** | 502.38 | 1.4 | ug/L |
| | Fe | 57 | 464745.543 | 1.305 | **36482.305286** | 590.83 | 1.6 | ug/L |
| | As | 75 | -242.482 | 0.000 | **0.570352** | 1.58 | 276.2 | ug/L |
| | Se | 77 | 2303.011 | -0.000 | **-66.207116** | 4.96 | 7.5 | ug/L |
| | Se | 82 | 21.704 | 0.000 | **1.790995** | 0.24 | 13.3 | ug/L |
| | Sr | 88 | 1290332.579 | 1.852 | **1022.980584** | 17.21 | 1.7 | ug/L |
| > | Y | 89 | 696767.444 | 696767.444 | | | | ug/L |
| | Mo | 95 | 186.669 | -0.000 | **-0.271248** | 0.08 | 29.6 | ug/L |
| | Mo | 97 | 138.001 | -0.000 | **0.479962** | 0.12 | 24.4 | ug/L |
| | Mo | 98 | 313.267 | -0.000 | **1.369881** | 0.13 | 9.7 | ug/L |
| | Ag | 107 | 13.333 | 0.000 | **-2.221622** | 0.00 | 0.2 | ug/L |
| | Ag | 109 | 3.333 | -0.000 | **-2.353648** | 0.01 | 0.6 | ug/L |
| | Cd | 111 | 13.333 | 0.000 | **-0.374540** | 0.05 | 14.0 | ug/L |
| | Cd | 114 | 21.368 | 0.000 | **-0.368355** | 0.04 | 10.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 237729.071 | 237729.071 | | | | ug/L |
| \| | Sn | 120 | 633.941 | -0.001 | **-0.312235** | 0.09 | 30.2 | ug/L |
| \| | Sb | 121 | 313.340 | -0.001 | **0.794902** | 0.03 | 3.5 | ug/L |
| \| | Sb | 123 | 238.498 | -0.001 | **1.087810** | 0.03 | 3.1 | ug/L |
| \| | Ba | 135 | 3129.970 | 0.007 | **41.277990** | 0.98 | 2.4 | ug/L |
| \| | Ba | 137 | 5541.996 | 0.013 | **41.527168** | 0.39 | 0.9 | ug/L |
| \| | Tb | 159 | 376933.443 | -0.020 | | | | ug/L |
| \|> | Ho | 165 | 417942.256 | 417942.256 | | | | ug/L |
| \| | Tl | 203 | 7.333 | -0.000 | **-3.309149** | 0.01 | 0.3 | ug/L |
| \| | Tl | 205 | 22.000 | -0.000 | **-2.909479** | 0.00 | 0.1 | ug/L |
| \| | Pb | 208 | 1482.056 | 0.003 | **-2.869165** | 0.07 | 2.3 | ug/L |
| | Kr | 83 | 29.267 | 8.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.809 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 129.450 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 92.651 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

**00707**

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 99.537 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-21A**
Sample Date/Time: Tuesday, February 16, 2010 12:37:23
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-21A.043
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31072.859 | 0.009 | | | | ug/L |
| | Li | 7 | 25530.350 | 0.060 | **22.961169** | 1.85 | 8.0 | ug/L |
| | Be | 9 | 456.014 | 0.001 | **2.508482** | 0.23 | 9.1 | ug/L |
| | B | 11 | 11268.916 | 0.028 | **39.258019** | 1.77 | 4.5 | ug/L |
| | Na | 23 | 8073349.944 | 21.308 | **13228.437360** | 1776.76 | 13.4 | ug/L |
| | Mg | 24 | 2524224.656 | 6.665 | **5737.692354** | 779.11 | 13.6 | ug/L |
| | Al | 27 | 8725314.436 | 23.019 | **6124.753889** | 455.75 | 7.4 | ug/L |
| | K | 39 | 1989918.367 | 5.078 | **1755.709206** | 219.44 | 12.5 | ug/L |
| | Ca | 43 | 73142.139 | 0.193 | **12869.865451** | 291.37 | 2.3 | ug/L |
| > | Sc | 45 | 378969.932 | 378969.932 | | | | ug/L |
| | Ti | 49 | 1004.066 | 0.001 | **4.336331** | 0.78 | 18.0 | ug/L |
| | Co | 59 | 19264.094 | 0.051 | **9.020947** | 0.34 | 3.7 | ug/L |
| | Ni | 60 | 6730.276 | 0.018 | **15.244335** | 0.53 | 3.5 | ug/L |
| | Ni | 62 | 1058.740 | 0.003 | **15.253735** | 0.82 | 5.4 | ug/L |
| | Cu | 63 | 35827.242 | 0.094 | **33.317236** | 1.45 | 4.4 | ug/L |
| | Cu | 65 | 17296.771 | 0.046 | **33.596934** | 2.29 | 6.8 | ug/L |
| | Zn | 66 | 17593.434 | 0.046 | **51.995071** | 2.53 | 4.9 | ug/L |
| | Zn | 67 | 4294.532 | 0.009 | **55.664501** | 2.50 | 4.5 | ug/L |
| | Zn | 68 | 13151.240 | 0.034 | **53.404509** | 3.61 | 6.8 | ug/L |
| | V | 51 | 5896.957 | 0.016 | **2.994702** | 0.65 | 21.7 | ug/L |
| | Cr | 52 | 7282.114 | 0.011 | **1.947671** | 0.25 | 13.0 | ug/L |
| | Cr | 53 | 15702.011 | 0.005 | **-1.290926** | 2.55 | 197.7 | ug/L |
| | Mn | 55 | 968097.066 | 2.557 | **294.987551** | 17.69 | 6.0 | ug/L |
| | Fe | 54 | 437587.634 | 1.115 | **2619.183227** | 149.58 | 5.7 | ug/L |
| | Fe | 57 | 177103.062 | 0.464 | **2599.780706** | 151.48 | 5.8 | ug/L |
| | As | 75 | 492.725 | 0.001 | **1.802552** | 0.25 | 13.6 | ug/L |
| | Se | 77 | 2216.321 | -0.000 | **-9.781952** | 5.63 | 57.6 | ug/L |
| | Se | 82 | 22.327 | 0.000 | **0.419211** | 0.08 | 19.6 | ug/L |
| | Sr | 88 | 312950.391 | 0.492 | **54.470209** | 2.82 | 5.2 | ug/L |
| > | Y | 89 | 636261.945 | 636261.945 | | | | ug/L |
| | Mo | 95 | 68.667 | -0.000 | **-0.203462** | 0.01 | 3.4 | ug/L |
| | Mo | 97 | 30.667 | -0.000 | **-0.127940** | 0.02 | 12.3 | ug/L |
| | Mo | 98 | 89.708 | -0.000 | **0.093867** | 0.02 | 22.2 | ug/L |
| | Ag | 107 | 12.667 | 0.000 | **-0.444985** | 0.00 | 0.9 | ug/L |
| | Ag | 109 | 8.667 | 0.000 | **-0.467403** | 0.00 | 0.4 | ug/L |
| | Cd | 111 | 3730.905 | 0.015 | **9.488109** | 0.47 | 4.9 | ug/L |
| | Cd | 114 | 8772.000 | 0.036 | **9.636104** | 0.63 | 6.5 | ug/L |

00709

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 247080.801 | 247080.801 | | | | ug/L |
| \| | Sn | 120 | 727.899 | -0.001 | **-0.022529** | 0.02 | 79.1 | ug/L |
| \| | Sb | 121 | 41979.639 | 0.168 | **33.026639** | 2.10 | 6.4 | ug/L |
| \| | Sb | 123 | 32538.010 | 0.130 | **33.060128** | 1.52 | 4.6 | ug/L |
| \| | Ba | 135 | 24761.801 | 0.056 | **59.526716** | 3.02 | 5.1 | ug/L |
| \| | Ba | 137 | 44196.607 | 0.100 | **60.145977** | 2.31 | 3.8 | ug/L |
| \| | Tb | 159 | 395469.826 | -0.022 | | | | ug/L |
| \|> | Ho | 165 | 439868.973 | 439868.973 | | | | ug/L |
| \| | Tl | 203 | 101.334 | 0.000 | **-0.615381** | 0.01 | 0.9 | ug/L |
| \| | Tl | 205 | 209.336 | 0.000 | **-0.543067** | 0.00 | 0.6 | ug/L |
| \| | Pb | 208 | 1434231.845 | 3.265 | **219.740538** | 13.53 | 6.2 | ug/L |
| | Kr | 83 | 26.400 | 5.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 103.319 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 118.209 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 96.295 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 104.760 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-22A**
Sample Date/Time: Tuesday, February 16, 2010 12:40:04
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-22A.044
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28262.081 | 0.004 | | | | ug/L |
| | Li | 7 | 84183.722 | 0.222 | **84.179000** | 2.28 | 2.7 | ug/L |
| | Be | 9 | 2248.329 | 0.006 | **10.438403** | 0.31 | 2.9 | ug/L |
| | B | 11 | 9722.149 | 0.025 | **34.854856** | 1.95 | 5.6 | ug/L |
| | Na | 23 | 46821451.489 | 127.613 | **79135.304480** | 2794.73 | 3.5 | ug/L |
| | Mg | 24 | 13484591.134 | 36.757 | **31593.981797** | 1528.90 | 4.8 | ug/L |
| | Al | 27 | 10339610.420 | 28.144 | **7485.299795** | 82.20 | 1.1 | ug/L |
| | K | 39 | 2665595.803 | 7.082 | **2445.375008** | 101.19 | 4.1 | ug/L |
| | Ca | 43 | 329331.902 | 0.897 | **59981.495870** | 1407.73 | 2.3 | ug/L |
| > | Sc | 45 | 366785.323 | 366785.323 | | | | ug/L |
| | Ti | 49 | 1328.781 | 0.002 | **6.984851** | 0.20 | 2.8 | ug/L |
| | Co | 59 | 82226.642 | 0.224 | **38.291671** | 1.28 | 3.4 | ug/L |
| | Ni | 60 | 15899.757 | 0.043 | **37.250038** | 1.44 | 3.9 | ug/L |
| | Ni | 62 | 2615.112 | 0.007 | **39.714682** | 2.13 | 5.4 | ug/L |
| | Cu | 63 | 973.395 | 0.002 | **0.827826** | 0.02 | 2.6 | ug/L |
| | Cu | 65 | 597.357 | 0.001 | **0.713722** | 0.03 | 4.6 | ug/L |
| | Zn | 66 | 25772.441 | 0.070 | **78.572061** | 1.75 | 2.2 | ug/L |
| | Zn | 67 | 5868.906 | 0.013 | **88.626297** | 2.30 | 2.6 | ug/L |
| | Zn | 68 | 19103.699 | 0.052 | **80.249533** | 2.37 | 2.9 | ug/L |
| | V | 51 | 60556.423 | 0.166 | **29.118298** | 0.27 | 0.9 | ug/L |
| | Cr | 52 | 47869.825 | 0.122 | **25.159590** | 0.50 | 2.0 | ug/L |
| | Cr | 53 | 21413.775 | 0.022 | **29.106168** | 3.52 | 12.1 | ug/L |
| | Mn | 55 | 5181330.684 | 14.127 | **1630.729484** | 25.69 | 1.6 | ug/L |
| | Fe | 54 | 3305681.722 | 8.973 | **21050.262370** | 519.83 | 2.5 | ug/L |
| | Fe | 57 | 1361361.597 | 3.708 | **20718.821930** | 423.41 | 2.0 | ug/L |
| | As | 75 | -62.603 | 0.001 | **0.502502** | 0.78 | 155.2 | ug/L |
| | Se | 77 | 2951.900 | 0.000 | **-1.308898** | 2.38 | 181.8 | ug/L |
| | Se | 82 | 21.354 | 0.000 | **0.317307** | 0.12 | 38.8 | ug/L |
| | Sr | 88 | 1913580.089 | 2.543 | **280.891867** | 2.99 | 1.1 | ug/L |
| > | Y | 89 | 752371.387 | 752371.387 | | | | ug/L |
| | Mo | 95 | 36.667 | -0.000 | **-0.258478** | 0.01 | 2.7 | ug/L |
| | Mo | 97 | 16.000 | -0.000 | **-0.168303** | 0.00 | 2.4 | ug/L |
| | Mo | 98 | 44.521 | -0.001 | **0.045592** | 0.01 | 23.9 | ug/L |
| | Ag | 107 | 14.667 | 0.000 | **-0.443252** | 0.00 | 0.4 | ug/L |
| | Ag | 109 | 9.333 | 0.000 | **-0.466560** | 0.00 | 0.7 | ug/L |
| | Cd | 111 | 1009.900 | 0.004 | **2.657329** | 0.02 | 0.6 | ug/L |
| | Cd | 114 | 2361.814 | 0.010 | **2.691757** | 0.14 | 5.3 | ug/L |

00712

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 231661.378 | 231661.378 | | | | ug/L |
| \| | Sn | 120 | 669.133 | -0.001 | **-0.030716** | 0.01 | 30.4 | ug/L |
| \| | Sb | 121 | 514.017 | 0.000 | **0.334363** | 0.02 | 7.2 | ug/L |
| L | Sb | 123 | 454.414 | 0.000 | **0.458586** | 0.06 | 13.1 | ug/L |
| ⌈ | Ba | 135 | 4924.910 | 0.012 | **12.563857** | 0.32 | 2.6 | ug/L |
| \| | Ba | 137 | 8447.305 | 0.020 | **12.240374** | 0.25 | 2.1 | ug/L |
| \| | Tb | 159 | 378961.137 | -0.029 | | | | ug/L |
| \|> | Ho | 165 | 424713.923 | 424713.923 | | | | ug/L |
| \| | Tl | 203 | 53.334 | 0.000 | **-0.638293** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 120.001 | 0.000 | **-0.560805** | 0.00 | 0.2 | ug/L |
| L | Pb | 208 | 9232.837 | 0.022 | **0.655380** | 0.04 | 5.4 | ug/L |
| | Kr | 83 | 39.933 | 19.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 99.997 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 139.781 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 90.286 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 101.150 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-22A**
Sample Date/Time: Tuesday, February 16, 2010 12:42:46
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-22A.045
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30751.077 | 0.012 | | | | ug/L |
| | Li | 7 | 19173.874 | 0.045 | **88.016614** | 3.13 | 3.6 | ug/L |
| | Be | 9 | 467.348 | 0.001 | **13.286123** | 0.17 | 1.3 | ug/L |
| | B | 11 | 2290.341 | 0.005 | **37.925915** | 1.09 | 2.9 | ug/L |
| | Na | 23 | 9321917.118 | 25.845 | **80204.442996** | 1358.67 | 1.7 | ug/L |
| | Mg | 24 | 2711567.920 | 7.524 | **32376.089804** | 898.35 | 2.8 | ug/L |
| | Al | 27 | 2183322.887 | 6.019 | **8059.903699** | 233.15 | 2.9 | ug/L |
| | K | 39 | 554856.215 | 1.357 | **2379.600669** | 104.21 | 4.4 | ug/L |
| | Ca | 43 | 65466.738 | 0.181 | **60615.717433** | 790.08 | 1.3 | ug/L |
| > | Sc | 45 | 359875.753 | 359875.753 | | | | ug/L |
| | Ti | 49 | 576.688 | 0.000 | **7.402887** | 1.46 | 19.8 | ug/L |
| | Co | 59 | 17267.360 | 0.048 | **42.662184** | 0.52 | 1.2 | ug/L |
| | Ni | 60 | 3493.460 | 0.010 | **41.537233** | 0.72 | 1.7 | ug/L |
| | Ni | 62 | 577.355 | 0.001 | **42.593259** | 5.22 | 12.3 | ug/L |
| | Cu | 63 | 214.670 | 0.000 | **0.506177** | 0.03 | 5.9 | ug/L |
| | Cu | 65 | 157.335 | 0.000 | **-0.875911** | 0.34 | 39.2 | ug/L |
| | Zn | 66 | 6377.310 | 0.017 | **99.426917** | 3.64 | 3.7 | ug/L |
| | Zn | 67 | 2413.712 | 0.004 | **114.443941** | 4.68 | 4.1 | ug/L |
| | Zn | 68 | 4832.185 | 0.013 | **101.824333** | 3.52 | 3.5 | ug/L |
| | V | 51 | 11941.137 | 0.034 | **30.387546** | 2.14 | 7.0 | ug/L |
| | Cr | 52 | 12312.514 | 0.026 | **25.351988** | 0.33 | 1.3 | ug/L |
| | Cr | 53 | 15739.421 | 0.008 | **13.924503** | 1.39 | 10.0 | ug/L |
| | Mn | 55 | 1073564.641 | 2.983 | **1720.614864** | 34.42 | 2.0 | ug/L |
| | Fe | 54 | 695636.644 | 1.892 | **22209.482653** | 465.67 | 2.1 | ug/L |
| | Fe | 57 | 281174.373 | 0.777 | **21752.446761** | 426.01 | 2.0 | ug/L |
| | As | 75 | -276.957 | 0.000 | **-0.522165** | 2.08 | 397.4 | ug/L |
| | Se | 77 | 1984.256 | -0.000 | **-43.790231** | 6.21 | 14.2 | ug/L |
| | Se | 82 | 7.025 | 0.000 | **0.378964** | 0.49 | 128.5 | ug/L |
| | Sr | 88 | 383460.891 | 0.684 | **378.175553** | 6.94 | 1.8 | ug/L |
| > | Y | 89 | 560725.681 | 560725.681 | | | | ug/L |
| | Mo | 95 | 13.333 | -0.000 | **-1.408863** | 0.03 | 1.9 | ug/L |
| | Mo | 97 | 11.333 | -0.000 | **-0.849018** | 0.04 | 5.0 | ug/L |
| | Mo | 98 | 21.187 | -0.001 | **0.165611** | 0.02 | 9.2 | ug/L |
| | Ag | 107 | 9.333 | 0.000 | **-2.234562** | 0.02 | 1.0 | ug/L |
| | Ag | 109 | 3.333 | -0.000 | **-2.353740** | 0.01 | 0.3 | ug/L |
| | Cd | 111 | 227.670 | 0.001 | **2.458686** | 0.23 | 9.2 | ug/L |
| | Cd | 114 | 548.813 | 0.002 | **2.638168** | 0.18 | 6.8 | ug/L |

00715

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 240011.146 | 240011.146 | | | | ug/L |
| \| | Sn | 120 | 664.585 | -0.001 | **-0.238898** | 0.02 | 6.6 | ug/L |
| \| | Sb | 121 | 357.342 | -0.000 | **0.961139** | 0.09 | 9.5 | ug/L |
| \| | Sb | 123 | 276.247 | -0.000 | **1.273219** | 0.02 | 1.6 | ug/L |
| \| | Ba | 135 | 1006.066 | 0.002 | **14.516013** | 0.51 | 3.5 | ug/L |
| \| | Ba | 137 | 1738.863 | 0.004 | **14.399944** | 0.33 | 2.3 | ug/L |
| \| | Tb | 159 | 381407.989 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 421735.951 | 421735.951 | | | | ug/L |
| \| | Tl | 203 | 17.333 | 0.000 | **-3.283685** | 0.01 | 0.4 | ug/L |
| \| | Tl | 205 | 23.333 | -0.000 | **-2.908076** | 0.01 | 0.4 | ug/L |
| \| | Pb | 208 | 1972.101 | 0.004 | **-2.486990** | 0.03 | 1.2 | ug/L |
| | Kr | 83 | 22.400 | 1.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.113 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 104.175 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 93.540 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 100.441 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-23A**
Sample Date/Time: Tuesday, February 16, 2010 12:45:28
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-23A.046
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 10831.143 | -0.046 | | | | ug/L |
| \| | Li | 7 | 367012.051 | 0.927 | **350.848316** | 8.46 | 2.4 | ug/L |
| \| | Be | 9 | 6742.287 | 0.017 | **28.241101** | 0.78 | 2.8 | ug/L |
| \| | B | 11 | 256255.401 | 0.652 | **882.924022** | 18.58 | 2.1 | ug/L |
| \| | Na | 23 | 192319491.561 | 490.198 | **303931.078582** | 11142.96 | 3.7 | ug/L |
| \| | Mg | 24 | 45622208.807 | 116.270 | **99914.843835** | 1793.07 | 1.8 | ug/L |
| \| | Al | 27 | 457349893.405 | 1165.561 | **309430.350953** | 3010.24 | 1.0 | ug/L |
| \| | K | 39 | 2840404.133 | 7.054 | **2435.512758** | 47.86 | 2.0 | ug/L |
| \| | Ca | 43 | 736174.316 | 1.876 | **125381.802643** | 2863.40 | 2.3 | ug/L |
| \|> | Sc | 45 | 392391.022 | 392391.022 | | | | ug/L |
| \| | Ti | 49 | 6057.718 | 0.014 | **39.199837** | 1.06 | 2.7 | ug/L |
| \| | Co | 59 | 708653.016 | 1.806 | **305.393529** | 3.42 | 1.1 | ug/L |
| \| | Ni | 60 | 165148.656 | 0.421 | **361.958849** | 3.99 | 1.1 | ug/L |
| \| | Ni | 62 | 26112.249 | 0.066 | **375.029039** | 8.54 | 2.3 | ug/L |
| \| | Cu | 63 | 11933.920 | 0.030 | **10.634778** | 0.36 | 3.4 | ug/L |
| \| | Cu | 65 | 7312.815 | 0.019 | **13.405465** | 0.93 | 6.9 | ug/L |
| \| | Zn | 66 | 329786.332 | 0.840 | **938.790650** | 12.87 | 1.4 | ug/L |
| \| | Zn | 67 | 51858.236 | 0.129 | **910.384308** | 3.55 | 0.4 | ug/L |
| \| | Zn | 68 | 234405.920 | 0.597 | **924.882278** | 13.29 | 1.4 | ug/L |
| \| | V | 51 | 344537.678 | 0.879 | **153.648899** | 1.09 | 0.7 | ug/L |
| \| | Cr | 52 | 182466.077 | 0.457 | **94.932442** | 1.05 | 1.1 | ug/L |
| \| | Cr | 53 | 33284.526 | 0.049 | **76.575293** | 2.61 | 3.4 | ug/L |
| \| | Mn | 55 | 29628430.476 | 75.511 | **8717.528762** | 85.46 | 1.0 | ug/L |
| \| | Fe | 54 | 28016052.866 | 71.362 | **167384.054911** | 1792.48 | 1.1 | ug/L |
| ⌊ | Fe | 57 | 11740538.905 | 29.919 | **167111.201216** | 2423.99 | 1.5 | ug/L |
| ⌈ | As | 75 | 7887.149 | 0.004 | **5.550880** | 0.10 | 1.8 | ug/L |
| \| | Se | 77 | 3474.118 | -0.002 | **-49.222588** | 0.28 | 0.6 | ug/L |
| \| | Se | 82 | 152.074 | 0.000 | **0.839735** | 0.09 | 10.9 | ug/L |
| \| | Sr | 88 | 3671891.826 | 1.517 | **167.612445** | 0.69 | 0.4 | ug/L |
| \|> | Y | 89 | 2420396.249 | 2420396.249 | | | | ug/L |
| \| | Mo | 95 | 72.667 | -0.000 | **-0.276010** | 0.00 | 0.5 | ug/L |
| \| | Mo | 97 | 36.000 | -0.000 | **-0.177886** | 0.01 | 2.9 | ug/L |
| ⌊ | Mo | 98 | 78.822 | -0.001 | **0.030077** | 0.00 | 8.8 | ug/L |
| ⌈ | Ag | 107 | 214.003 | 0.001 | **-0.297559** | 0.02 | 7.8 | ug/L |
| \| | Ag | 109 | 129.334 | 0.001 | **-0.374278** | 0.02 | 5.8 | ug/L |
| \| | Cd | 111 | 4767.144 | 0.023 | **14.541438** | 0.44 | 3.0 | ug/L |
| \| | Cd | 114 | 11175.254 | 0.054 | **14.710856** | 0.22 | 1.5 | ug/L |

00718

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 206623.707 | 206623.707 | | | | ug/L |
| \| | Sn | 120 | 1090.422 | 0.002 | **0.309750** | 0.03 | 10.6 | ug/L |
| \| | Sb | 121 | 1944.246 | 0.008 | **1.734312** | 0.05 | 2.8 | ug/L |
| \| | Sb | 123 | 1565.638 | 0.006 | **1.868051** | 0.04 | 2.2 | ug/L |
| \| | Ba | 135 | 4312.543 | 0.009 | **10.188432** | 0.27 | 2.7 | ug/L |
| \| | Ba | 137 | 7422.913 | 0.016 | **9.969494** | 0.06 | 0.6 | ug/L |
| \| | Tb | 159 | 419284.244 | -0.014 | | | | ug/L |
| \|> | Ho | 165 | 462151.757 | 462151.757 | | | | ug/L |
| \| | Tl | 203 | 68.000 | 0.000 | **-0.633623** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 158.668 | 0.000 | **-0.555218** | 0.00 | 0.4 | ug/L |
| \| | Pb | 208 | 231361.978 | 0.500 | **33.005337** | 0.60 | 1.8 | ug/L |
| | Kr | 83 | 221.137 | 200.470 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 106.978 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 449.677 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.528 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 110.066 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Tuesday, February 16, 2010 12:48:10
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 4.047
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25869.925 | -0.001 | | | | ug/L |
| | Li | 7 | 106091.848 | 0.289 | **109.836306** | 5.60 | 5.1 | ug/L |
| | Be | 9 | 23219.665 | 0.065 | **105.393925** | 1.48 | 1.4 | ug/L |
| | B | 11 | 31190.552 | 0.086 | **117.305005** | 5.67 | 4.8 | ug/L |
| | Na | 23 | 3113753.534 | 8.671 | **5393.522120** | 119.31 | 2.2 | ug/L |
| | Mg | 24 | 2231819.917 | 6.245 | **5376.073431** | 147.78 | 2.7 | ug/L |
| | Al | 27 | 7281168.340 | 20.366 | **5420.467090** | 66.05 | 1.2 | ug/L |
| | K | 39 | 5883132.723 | 16.309 | **5619.455640** | 184.15 | 3.3 | ug/L |
| | Ca | 43 | 26729.025 | 0.074 | **4971.477536** | 42.28 | 0.9 | ug/L |
| > | Sc | 45 | 356680.437 | 356680.437 | | | | ug/L |
| | Ti | 49 | 12899.476 | 0.035 | **95.690519** | 1.54 | 1.6 | ug/L |
| | Co | 59 | 200320.463 | 0.561 | **95.258378** | 1.12 | 1.2 | ug/L |
| | Ni | 60 | 38697.765 | 0.108 | **93.269743** | 1.16 | 1.2 | ug/L |
| | Ni | 62 | 5991.666 | 0.017 | **94.251488** | 1.35 | 1.4 | ug/L |
| | Cu | 63 | 94769.608 | 0.265 | **93.732084** | 0.97 | 1.0 | ug/L |
| | Cu | 65 | 45392.205 | 0.127 | **94.415333** | 0.10 | 0.1 | ug/L |
| | Zn | 66 | 30152.353 | 0.084 | **94.499881** | 3.08 | 3.3 | ug/L |
| | Zn | 67 | 6174.477 | 0.015 | **97.905474** | 1.37 | 1.4 | ug/L |
| | Zn | 68 | 22189.309 | 0.062 | **95.914421** | 2.57 | 2.7 | ug/L |
| | V | 51 | 198996.493 | 0.559 | **97.724809** | 2.08 | 2.1 | ug/L |
| | Cr | 52 | 169751.727 | 0.467 | **97.202044** | 2.07 | 2.1 | ug/L |
| | Cr | 53 | 33838.955 | 0.059 | **94.590961** | 3.02 | 3.2 | ug/L |
| | Mn | 55 | 306128.395 | 0.857 | **98.733142** | 1.02 | 1.0 | ug/L |
| | Fe | 54 | 758205.895 | 2.085 | **4893.082926** | 36.76 | 0.8 | ug/L |
| | Fe | 57 | 311818.473 | 0.870 | **4868.732550** | 16.08 | 0.3 | ug/L |
| | As | 75 | 32761.767 | 0.066 | **98.683024** | 3.48 | 3.5 | ug/L |
| | Se | 77 | 15036.683 | 0.026 | **497.727709** | 9.71 | 2.0 | ug/L |
| | Se | 82 | 16294.315 | 0.032 | **491.477854** | 9.86 | 2.0 | ug/L |
| | Sr | 88 | 438312.432 | 0.870 | **96.195778** | 2.97 | 3.1 | ug/L |
| > | Y | 89 | 503691.731 | 503691.731 | | | | ug/L |
| | Mo | 95 | 52573.061 | 0.104 | **96.984410** | 1.56 | 1.6 | ug/L |
| | Mo | 97 | 32466.383 | 0.064 | **96.158775** | 2.31 | 2.4 | ug/L |
| | Mo | 98 | 83572.442 | 0.165 | **97.117955** | 2.22 | 2.3 | ug/L |
| | Ag | 107 | 153304.612 | 0.652 | **97.282154** | 1.23 | 1.3 | ug/L |
| | Ag | 109 | 146494.815 | 0.623 | **97.603675** | 1.28 | 1.3 | ug/L |
| | Cd | 111 | 36910.696 | 0.157 | **99.609894** | 1.80 | 1.8 | ug/L |
| | Cd | 114 | 84928.864 | 0.361 | **98.825810** | 1.52 | 1.5 | ug/L |

00721

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 235045.114 | 235045.114 | | | | ug/L |
| \| | Sn | 120 | 162286.698 | 0.687 | **97.942378** | 0.71 | 0.7 | ug/L |
| \| | Sb | 121 | 116637.005 | 0.494 | **96.514995** | 0.93 | 1.0 | ug/L |
| \| | Sb | 123 | 90524.102 | 0.384 | **96.657589** | 1.11 | 1.1 | ug/L |
| \| | Ba | 135 | 36651.108 | 0.091 | **95.877820** | 1.52 | 1.6 | ug/L |
| \| | Ba | 137 | 64227.077 | 0.159 | **95.117725** | 1.60 | 1.7 | ug/L |
| \| | Tb | 159 | 364777.952 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 402808.421 | 402808.421 | | | | ug/L |
| \| | Tl | 203 | 180816.881 | 0.449 | **97.151429** | 0.97 | 1.0 | ug/L |
| \| | Tl | 205 | 427803.146 | 1.062 | **96.875786** | 1.20 | 1.2 | ug/L |
| \| | Pb | 208 | 584690.756 | 1.452 | **97.258215** | 2.14 | 2.2 | ug/L |
| | Kr | 83 | 22.933 | 2.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 109.836 | | |
| Be | 9 | 105.394 | | |
| B | 11 | 117.305 | | |
| Na | 23 | 107.870 | | |
| Mg | 24 | 107.521 | | |
| Al | 27 | 106.284 | | |
| K | 39 | 112.389 | | |
| Ca | 43 | 99.430 | | |
| Sc | 45 | | 97.242 | |
| Ti | 49 | 95.691 | | |
| Co | 59 | 95.258 | | |
| Ni | 60 | 93.270 | | |
| Ni | 62 | 94.251 | | |
| Cu | 63 | 93.732 | | |
| Cu | 65 | 94.415 | | |
| Zn | 66 | 94.500 | | |
| Zn | 67 | 97.905 | | |
| Zn | 68 | 95.914 | | |
| V | 51 | 97.725 | | |
| Cr | 52 | 97.202 | | |
| Cr | 53 | 94.591 | | |
| Mn | 55 | 98.733 | | |
| Fe | 54 | 97.862 | | |
| Fe | 57 | 97.375 | | |
| As | 75 | 98.683 | | |
| Se | 77 | 99.546 | | |
| Se | 82 | 98.296 | | |
| Sr | 88 | 96.196 | | |
| Y | 89 | | 93.579 | |
| Mo | 95 | 96.984 | | |
| Mo | 97 | 96.159 | | |
| Mo | 98 | 97.118 | | |
| Ag | 107 | 97.282 | | |
| Ag | 109 | 97.604 | | |
| Cd | 111 | 99.610 | | |
| Cd | 114 | 98.826 | | |
| In | 115 | | 91.605 | |
| Sn | 120 | 97.942 | | |
| Sb | 121 | 96.515 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 96.658 | |
| Ba | 135 | 95.878 | |
| Ba | 137 | 95.118 | |
| Tb | 159 | | |
| Ho | 165 | | 95.933 |
| Tl | 203 | 97.151 | |
| Tl | 205 | 96.876 | |
| Pb | 208 | 97.258 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Tuesday, February 16, 2010 12:50:50
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 6.048
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28989.690 | 0.010 | | | | ug/L |
| | Li | 7 | 3164.651 | 0.001 | **0.887813** | 0.13 | 14.8 | ug/L |
| | Be | 9 | 8.000 | 0.000 | **0.603251** | 0.02 | 4.0 | ug/L |
| | B | 11 | 2253.667 | 0.005 | **7.691272** | 1.11 | 14.4 | ug/L |
| | Na | 23 | 15415.580 | -0.014 | **8.652296** | 3.34 | 38.6 | ug/L |
| | Mg | 24 | 1200.102 | -0.010 | **2.179496** | 1.08 | 49.4 | ug/L |
| | Al | 27 | 9883.062 | -0.020 | **8.822812** | 0.84 | 9.5 | ug/L |
| | K | 39 | 43154.130 | -0.062 | **-12.225782** | 1.38 | 11.3 | ug/L |
| | Ca | 43 | 182.669 | 0.000 | **-2.507163** | 4.93 | 196.6 | ug/L |
| > | Sc | 45 | 349795.075 | 349795.075 | | | | ug/L |
| | Ti | 49 | 322.673 | -0.000 | **-0.375563** | 0.12 | 32.5 | ug/L |
| | Co | 59 | 93.334 | 0.000 | **0.474955** | 0.01 | 2.0 | ug/L |
| | Ni | 60 | 19.333 | 0.000 | **0.004732** | 0.02 | 332.9 | ug/L |
| | Ni | 62 | 28.000 | -0.000 | **-0.079161** | 0.17 | 213.9 | ug/L |
| | Cu | 63 | 181.335 | 0.000 | **0.073706** | 0.01 | 14.9 | ug/L |
| | Cu | 65 | 98.667 | 0.000 | **-0.290924** | 0.06 | 20.4 | ug/L |
| | Zn | 66 | 109.334 | -0.000 | **0.438330** | 0.07 | 16.4 | ug/L |
| | Zn | 67 | 1345.451 | 0.001 | **2.651111** | 1.96 | 74.0 | ug/L |
| | Zn | 68 | 133.335 | -0.000 | **0.157715** | 0.07 | 45.7 | ug/L |
| | V | 51 | 250.695 | 0.002 | **0.406382** | 0.10 | 24.0 | ug/L |
| | Cr | 52 | 3101.293 | 0.000 | **-0.216620** | 0.10 | 46.1 | ug/L |
| | Cr | 53 | 14315.310 | 0.005 | **-2.264491** | 1.13 | 49.9 | ug/L |
| | Mn | 55 | 920.056 | 0.002 | **-0.050847** | 0.04 | 76.9 | ug/L |
| | Fe | 54 | 13045.004 | -0.004 | **-5.327562** | 2.93 | 55.1 | ug/L |
| | Fe | 57 | 912.054 | -0.002 | **0.674084** | 1.09 | 162.3 | ug/L |
| | As | 75 | -242.064 | 0.000 | **-0.107486** | 0.26 | 245.7 | ug/L |
| | Se | 77 | 1888.232 | 0.000 | **-2.566719** | 5.07 | 197.6 | ug/L |
| | Se | 82 | 9.512 | 0.000 | **0.181282** | 0.22 | 120.1 | ug/L |
| | Sr | 88 | 236.004 | 0.000 | **0.175896** | 0.00 | 2.6 | ug/L |
| > | Y | 89 | 489290.929 | 489290.929 | | | | ug/L |
| | Mo | 95 | 99.334 | -0.000 | **-0.114851** | 0.02 | 14.4 | ug/L |
| | Mo | 97 | 67.334 | -0.000 | **0.005648** | 0.02 | 392.5 | ug/L |
| | Mo | 98 | 166.970 | -0.000 | **0.210626** | 0.03 | 12.0 | ug/L |
| | Ag | 107 | 14.667 | 0.000 | **-0.443389** | 0.00 | 1.0 | ug/L |
| | Ag | 109 | 22.000 | 0.000 | **-0.458226** | 0.00 | 0.6 | ug/L |
| | Cd | 111 | 7.833 | 0.000 | **-0.089441** | 0.01 | 6.0 | ug/L |
| | Cd | 114 | 6.576 | 0.000 | **-0.090624** | 0.00 | 4.3 | ug/L |

00724

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 235507.189 | 235507.189 | | | | ug/L |
| \| | Sn | 120 | 765.979 | -0.000 | **0.021225** | 0.04 | 187.9 | ug/L |
| \| | Sb | 121 | 2185.645 | 0.007 | **1.709261** | 0.13 | 7.6 | ug/L |
| \| | Sb | 123 | 1682.264 | 0.006 | **1.759017** | 0.14 | 8.1 | ug/L |
| \| | Ba | 135 | 15.333 | -0.000 | **0.439636** | 0.01 | 1.4 | ug/L |
| \| | Ba | 137 | 35.333 | 0.000 | **0.485540** | 0.01 | 2.6 | ug/L |
| \| | Tb | 159 | 358569.423 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 395503.962 | 395503.962 | | | | ug/L |
| \| | Tl | 203 | 162.668 | 0.000 | **-0.576135** | 0.01 | 2.0 | ug/L |
| \| | Tl | 205 | 367.342 | 0.001 | **-0.501383** | 0.01 | 1.7 | ug/L |
| \| | Pb | 208 | 184.668 | 0.000 | **-0.781646** | 0.01 | 1.1 | ug/L |
| | Kr | 83 | 19.800 | -0.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.365 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.904 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.785 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 94.194 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-23A**
Sample Date/Time: Tuesday, February 16, 2010 12:53:32
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-23A.049
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25056.971 | -0.003 | | | | ug/L |
| | Li | 7 | 98090.947 | 0.265 | **503.876147** | 20.59 | 4.1 | ug/L |
| | Be | 9 | 1945.579 | 0.005 | **46.503516** | 1.78 | 3.8 | ug/L |
| | B | 11 | 76379.625 | 0.211 | **1434.578607** | 17.80 | 1.2 | ug/L |
| | Na | 23 | 53139836.437 | 148.088 | **459147.750811** | 18616.23 | 4.1 | ug/L |
| | Mg | 24 | 12425728.574 | 34.620 | **148786.378473** | 4389.80 | 3.0 | ug/L |
| | Al | 27 | 126594253.398 | 352.926 | **468518.457619** | 26262.69 | 5.6 | ug/L |
| | K | 39 | 967023.832 | 2.511 | **4364.535515** | 292.21 | 6.7 | ug/L |
| | Ca | 43 | 189899.633 | 0.529 | **176663.506714** | 2607.94 | 1.5 | ug/L |
| > | Sc | 45 | 358936.294 | 358936.294 | | | | ug/L |
| | Ti | 49 | 1854.224 | 0.004 | **55.969292** | 4.60 | 8.2 | ug/L |
| | Co | 59 | 188622.005 | 0.526 | **446.032634** | 14.10 | 3.2 | ug/L |
| | Ni | 60 | 45421.714 | 0.127 | **544.119906** | 10.01 | 1.8 | ug/L |
| | Ni | 62 | 7224.732 | 0.020 | **564.962823** | 22.56 | 4.0 | ug/L |
| | Cu | 63 | 3293.372 | 0.009 | **15.652462** | 0.25 | 1.6 | ug/L |
| | Cu | 65 | 2104.289 | 0.006 | **19.377604** | 2.28 | 11.8 | ug/L |
| | Zn | 66 | 97234.775 | 0.271 | **1513.373554** | 16.13 | 1.1 | ug/L |
| | Zn | 67 | 16660.691 | 0.044 | **1519.539591** | 30.14 | 2.0 | ug/L |
| | Zn | 68 | 71016.985 | 0.197 | **1530.654558** | 39.20 | 2.6 | ug/L |
| | V | 51 | 91695.406 | 0.256 | **224.608008** | 9.51 | 4.2 | ug/L |
| | Cr | 52 | 49830.255 | 0.130 | **134.525980** | 5.36 | 4.0 | ug/L |
| | Cr | 53 | 19062.259 | 0.017 | **98.146028** | 6.22 | 6.3 | ug/L |
| | Mn | 55 | 7906787.283 | 22.038 | **12720.395266** | 397.65 | 3.1 | ug/L |
| | Fe | 54 | 7527970.227 | 20.940 | **245591.030961** | 7981.93 | 3.3 | ug/L |
| | Fe | 57 | 3108919.221 | 8.662 | **241934.786564** | 8196.96 | 3.4 | ug/L |
| | As | 75 | 1693.189 | 0.002 | **16.246359** | 0.66 | 4.1 | ug/L |
| | Se | 77 | 2315.015 | -0.001 | **-156.531305** | 7.22 | 4.6 | ug/L |
| | Se | 82 | 47.998 | 0.000 | **3.147765** | 0.73 | 23.1 | ug/L |
| | Sr | 88 | 940937.191 | 0.962 | **531.778497** | 9.64 | 1.8 | ug/L |
| > | Y | 89 | 978061.495 | 978061.495 | | | | ug/L |
| | Mo | 95 | 37.333 | -0.000 | **-1.341609** | 0.09 | 6.8 | ug/L |
| | Mo | 97 | 18.000 | -0.000 | **-0.862370** | 0.06 | 6.6 | ug/L |
| | Mo | 98 | 45.187 | -0.001 | **0.190540** | 0.04 | 20.8 | ug/L |
| | Ag | 107 | 66.667 | 0.000 | **-2.033323** | 0.03 | 1.6 | ug/L |
| | Ag | 109 | 39.333 | 0.000 | **-2.221248** | 0.04 | 1.8 | ug/L |
| | Cd | 111 | 1417.631 | 0.007 | **20.223667** | 0.45 | 2.2 | ug/L |
| | Cd | 114 | 3309.264 | 0.015 | **20.425749** | 0.91 | 4.4 | ug/L |

00727

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 216684.968 | 216684.968 | | | | ug/L |
| \| | Sn | 120 | 726.574 | -0.000 | **0.176508** | 0.15 | 87.3 | ug/L |
| \| | Sb | 121 | 1064.074 | 0.003 | **4.290672** | 0.10 | 2.2 | ug/L |
| \| | Sb | 123 | 824.119 | 0.002 | **4.604008** | 0.12 | 2.7 | ug/L |
| \| | Ba | 135 | 1067.408 | 0.003 | **15.559601** | 0.92 | 5.9 | ug/L |
| \| | Ba | 137 | 1898.901 | 0.005 | **15.830357** | 0.22 | 1.4 | ug/L |
| \| | Tb | 159 | 365785.853 | -0.035 | | | | ug/L |
| \|> | Ho | 165 | 412513.994 | 412513.994 | | | | ug/L |
| \| | Tl | 203 | 34.667 | 0.000 | **-3.236783** | 0.00 | 0.0 | ug/L |
| \| | Tl | 205 | 95.334 | 0.000 | **-2.827690** | 0.01 | 0.3 | ug/L |
| \| | Pb | 208 | 61149.264 | 0.148 | **46.008294** | 1.45 | 3.1 | ug/L |
| | Kr | 83 | 59.934 | 39.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.857 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 181.711 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 84.449 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 98.245 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-23A**
Sample Date/Time: Tuesday, February 16, 2010 12:56:13
Sample Type: Sample
Sample Description: 25
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-23A.050
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 0.4000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29563.049 | 0.009 | | | | ug/L |
| | Li | 7 | 19606.326 | 0.047 | **453.872534** | 28.37 | 6.3 | ug/L |
| | Be | 9 | 354.008 | 0.001 | **53.952708** | 2.81 | 5.2 | ug/L |
| | B | 11 | 15530.339 | 0.042 | **1441.585329** | 57.74 | 4.0 | ug/L |
| | Na | 23 | 8979756.426 | 25.016 | **388179.788400** | 13491.72 | 3.5 | ug/L |
| | Mg | 24 | 2150912.763 | 5.993 | **129005.746954** | 7553.34 | 5.9 | ug/L |
| | Al | 27 | 22168588.397 | 61.854 | **410853.934219** | 14605.47 | 3.6 | ug/L |
| | K | 39 | 210343.023 | 0.402 | **3684.339778** | 297.84 | 8.1 | ug/L |
| | Ca | 43 | 32762.974 | 0.091 | **151912.177560** | 2923.29 | 1.9 | ug/L |
| > | Sc | 45 | 358177.798 | 358177.798 | | | | ug/L |
| | Ti | 49 | 570.021 | 0.000 | **36.236052** | 8.61 | 23.8 | ug/L |
| | Co | 59 | 33017.388 | 0.092 | **399.907157** | 9.27 | 2.3 | ug/L |
| | Ni | 60 | 8302.482 | 0.023 | **497.414092** | 20.74 | 4.2 | ug/L |
| | Ni | 62 | 1312.112 | 0.004 | **503.604365** | 24.58 | 4.9 | ug/L |
| | Cu | 63 | 622.692 | 0.001 | **12.614034** | 0.56 | 4.4 | ug/L |
| | Cu | 65 | 353.341 | 0.001 | **5.860307** | 1.17 | 20.0 | ug/L |
| | Zn | 66 | 18311.121 | 0.051 | **1429.752098** | 58.50 | 4.1 | ug/L |
| | Zn | 67 | 4266.518 | 0.009 | **1493.061462** | 115.73 | 7.8 | ug/L |
| | Zn | 68 | 12779.945 | 0.035 | **1370.903430** | 42.46 | 3.1 | ug/L |
| | V | 51 | 15745.293 | 0.045 | **198.942659** | 12.28 | 6.2 | ug/L |
| | Cr | 52 | 11007.206 | 0.022 | **108.582610** | 2.88 | 2.7 | ug/L |
| | Cr | 53 | 15005.956 | 0.006 | **-12.952650** | 24.53 | 189.4 | ug/L |
| | Mn | 55 | 1356950.000 | 3.788 | **10926.598343** | 328.00 | 3.0 | ug/L |
| | Fe | 54 | 1304395.243 | 3.601 | **211239.243320** | 4799.22 | 2.3 | ug/L |
| | Fe | 57 | 538958.863 | 1.501 | **209781.376660** | 7185.37 | 3.4 | ug/L |
| | As | 75 | 12.826 | 0.001 | **16.777539** | 5.56 | 33.1 | ug/L |
| | Se | 77 | 1930.242 | -0.000 | **-310.607207** | 62.46 | 20.1 | ug/L |
| | Se | 82 | 10.534 | 0.000 | **4.053562** | 1.02 | 25.2 | ug/L |
| | Sr | 88 | 159378.085 | 0.276 | **765.682285** | 12.93 | 1.7 | ug/L |
| > | Y | 89 | 576824.379 | 576824.379 | | | | ug/L |
| | Mo | 95 | 16.000 | -0.000 | **-6.953000** | 0.22 | 3.1 | ug/L |
| | Mo | 97 | 8.667 | -0.000 | **-4.440434** | 0.27 | 6.1 | ug/L |
| | Mo | 98 | 23.562 | -0.001 | **0.873469** | 0.09 | 10.7 | ug/L |
| | Ag | 107 | 16.667 | 0.000 | **-11.045511** | 0.05 | 0.4 | ug/L |
| | Ag | 109 | 10.667 | 0.000 | **-11.640042** | 0.05 | 0.4 | ug/L |
| | Cd | 111 | 265.838 | 0.001 | **15.675161** | 0.86 | 5.5 | ug/L |
| | Cd | 114 | 588.785 | 0.003 | **15.160112** | 1.14 | 7.5 | ug/L |

00730

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 228835.780 | 228835.780 | | | | ug/L |
| \| | Sn | 120 | 672.645 | -0.001 | **-0.587359** | 0.38 | 64.4 | ug/L |
| \| | Sb | 121 | 520.684 | 0.000 | **8.633739** | 0.28 | 3.2 | ug/L |
| \| | Sb | 123 | 406.841 | 0.000 | **10.300350** | 0.55 | 5.3 | ug/L |
| \| | Ba | 135 | 202.669 | 0.000 | **23.329575** | 1.82 | 7.8 | ug/L |
| \| | Ba | 137 | 326.674 | 0.001 | **23.003753** | 2.07 | 9.0 | ug/L |
| \| | Tb | 159 | 361379.029 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 398599.761 | 398599.761 | | | | ug/L |
| \| | Tl | 203 | 18.000 | 0.000 | **-16.394835** | 0.05 | 0.3 | ug/L |
| \| | Tl | 205 | 24.667 | -0.000 | **-14.525869** | 0.02 | 0.1 | ug/L |
| \| | Pb | 208 | 10854.315 | 0.027 | **25.676789** | 1.83 | 7.1 | ug/L |
| | Kr | 83 | 25.400 | 4.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.651 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 107.166 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 89.185 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 94.931 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-24A**
Sample Date/Time: Tuesday, February 16, 2010 12:58:54
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-24A.051
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30919.760 | 0.014 | | | | ug/L |
| | Li | 7 | 11977.997 | 0.026 | **10.224250** | 0.79 | 7.7 | ug/L |
| | Be | 9 | 8.667 | 0.000 | **0.605653** | 0.00 | 0.7 | ug/L |
| | B | 11 | 26939.208 | 0.075 | **101.733673** | 7.70 | 7.6 | ug/L |
| | Na | 23 | 31977334.541 | 90.052 | **55848.199440** | 2408.41 | 4.3 | ug/L |
| | Mg | 24 | 853507.123 | 2.393 | **2066.766507** | 168.16 | 8.1 | ug/L |
| | Al | 27 | 38544.928 | 0.060 | **30.174151** | 2.45 | 8.1 | ug/L |
| | K | 39 | 1091112.144 | 2.890 | **1003.189513** | 113.42 | 11.3 | ug/L |
| | Ca | 43 | 20179.804 | 0.056 | **3764.823558** | 251.50 | 6.7 | ug/L |
| > | Sc | 45 | 355068.948 | 355068.948 | | | | ug/L |
| | Ti | 49 | 519.351 | 0.000 | **1.094787** | 0.15 | 14.1 | ug/L |
| | Co | 59 | 136.001 | 0.000 | **0.494406** | 0.01 | 2.8 | ug/L |
| | Ni | 60 | 291.339 | 0.001 | **0.662877** | 0.03 | 4.1 | ug/L |
| | Ni | 62 | 65.334 | 0.000 | **0.509924** | 0.21 | 40.7 | ug/L |
| | Cu | 63 | 3512.136 | 0.010 | **3.387015** | 0.20 | 6.0 | ug/L |
| | Cu | 65 | 1505.481 | 0.004 | **2.664465** | 0.25 | 9.2 | ug/L |
| | Zn | 66 | 1716.192 | 0.004 | **5.494206** | 0.58 | 10.5 | ug/L |
| | Zn | 67 | 1952.248 | 0.003 | **14.364253** | 2.15 | 14.9 | ug/L |
| | Zn | 68 | 1389.459 | 0.003 | **5.626964** | 0.29 | 5.2 | ug/L |
| | V | 51 | 699.778 | 0.003 | **0.629679** | 0.32 | 51.2 | ug/L |
| | Cr | 52 | 3741.577 | 0.002 | **0.132281** | 0.08 | 58.5 | ug/L |
| | Cr | 53 | 16750.224 | 0.011 | **8.986009** | 2.89 | 32.2 | ug/L |
| | Mn | 55 | 34724.964 | 0.097 | **10.946524** | 0.72 | 6.6 | ug/L |
| | Fe | 54 | 53457.663 | 0.109 | **260.571922** | 17.44 | 6.7 | ug/L |
| | Fe | 57 | 15235.114 | 0.039 | **226.043960** | 20.46 | 9.1 | ug/L |
| | As | 75 | 36.955 | 0.001 | **0.732170** | 0.91 | 124.6 | ug/L |
| | Se | 77 | 2424.382 | 0.001 | **18.007176** | 6.03 | 33.5 | ug/L |
| | Se | 82 | 12.658 | 0.000 | **0.279397** | 0.30 | 108.2 | ug/L |
| | Sr | 88 | 131056.583 | 0.266 | **29.537370** | 1.47 | 5.0 | ug/L |
| > | Y | 89 | 492434.952 | 492434.952 | | | | ug/L |
| | Mo | 95 | 1214.763 | 0.002 | **1.999460** | 0.20 | 9.8 | ug/L |
| | Mo | 97 | 744.037 | 0.001 | **2.065775** | 0.43 | 20.9 | ug/L |
| | Mo | 98 | 1877.417 | 0.003 | **2.245338** | 0.15 | 6.8 | ug/L |
| | Ag | 107 | 8.667 | 0.000 | **-0.447113** | 0.00 | 0.4 | ug/L |
| | Ag | 109 | 10.000 | 0.000 | **-0.466133** | 0.01 | 1.2 | ug/L |
| | Cd | 111 | 7.167 | 0.000 | **-0.090938** | 0.00 | 4.9 | ug/L |
| | Cd | 114 | 30.823 | 0.000 | **-0.061812** | 0.00 | 6.6 | ug/L |

00733

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 231510.549 | 231510.549 | | | | ug/L |
| \| | Sn | 120 | 651.960 | -0.001 | **-0.041057** | 0.00 | 10.9 | ug/L |
| \| | Sb | 121 | 477.348 | 0.000 | **0.304254** | 0.04 | 14.4 | ug/L |
| \| | Sb | 123 | 372.004 | 0.000 | **0.369416** | 0.04 | 10.5 | ug/L |
| \| | Ba | 135 | 8116.282 | 0.020 | **21.633372** | 1.41 | 6.5 | ug/L |
| \| | Ba | 137 | 14601.188 | 0.036 | **22.056935** | 1.60 | 7.2 | ug/L |
| \| | Tb | 159 | 363877.022 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 401746.637 | 401746.637 | | | | ug/L |
| \| | Tl | 203 | 8.667 | -0.000 | **-0.660982** | 0.00 | 0.2 | ug/L |
| \| | Tl | 205 | 14.667 | -0.000 | **-0.583384** | 0.00 | 0.2 | ug/L |
| \| | Pb | 208 | 2370.809 | 0.006 | **-0.413796** | 0.03 | 7.7 | ug/L |
| | Kr | 83 | 18.133 | -2.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.803 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 91.488 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 90.227 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.680 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-25A**
Sample Date/Time: Tuesday, February 16, 2010 13:01:35
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-25A.052
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 21726.387 | -0.004 | | | | ug/L |
| | Li | 7 | 83047.927 | 0.258 | **97.961834** | 1.61 | 1.6 | ug/L |
| | Be | 9 | 262.004 | 0.001 | **1.916946** | 0.08 | 4.0 | ug/L |
| | B | 11 | 19051.566 | 0.060 | **81.552144** | 1.18 | 1.5 | ug/L |
| | Na | 23 | 374688402.761 | 1199.765 | **743849.522418** | 18221.33 | 2.4 | ug/L |
| | Mg | 24 | 79480674.517 | 254.549 | **218730.074844** | 4525.13 | 2.1 | ug/L |
| | Al | 27 | 50423.093 | 0.113 | **44.194815** | 0.93 | 2.1 | ug/L |
| | K | 39 | 1062672.379 | 3.221 | **1116.966813** | 66.51 | 6.0 | ug/L |
| | Ca | 43 | 1353798.666 | 4.335 | **289760.895731** | 3901.11 | 1.3 | ug/L |
| > | Sc | 45 | 312292.684 | 312292.684 | | | | ug/L |
| | Ti | 49 | 2119.626 | 0.006 | **15.611962** | 0.67 | 4.3 | ug/L |
| | Co | 59 | 196626.870 | 0.630 | **106.770924** | 1.94 | 1.8 | ug/L |
| | Ni | 60 | 21580.901 | 0.069 | **59.402183** | 0.81 | 1.4 | ug/L |
| | Ni | 62 | 3627.522 | 0.011 | **65.031682** | 1.92 | 2.9 | ug/L |
| | Cu | 63 | 4630.728 | 0.015 | **5.127544** | 0.07 | 1.3 | ug/L |
| | Cu | 65 | 1765.537 | 0.006 | **3.712072** | 0.27 | 7.4 | ug/L |
| | Zn | 66 | 2887.209 | 0.009 | **10.411994** | 0.35 | 3.3 | ug/L |
| | Zn | 67 | 1500.147 | 0.002 | **9.459426** | 2.50 | 26.5 | ug/L |
| | Zn | 68 | 1126.749 | 0.003 | **5.161255** | 0.37 | 7.2 | ug/L |
| | V | 51 | 431.252 | 0.002 | **0.523606** | 0.10 | 18.5 | ug/L |
| | Cr | 52 | 2967.239 | 0.001 | **-0.083778** | 0.06 | 68.6 | ug/L |
| | Cr | 53 | 11417.135 | 0.000 | **-10.079030** | 1.90 | 18.9 | ug/L |
| | Mn | 55 | 43565857.407 | 139.544 | **16110.148034** | 320.98 | 2.0 | ug/L |
| | Fe | 54 | 2640140.152 | 8.415 | **19741.316115** | 402.76 | 2.0 | ug/L |
| | Fe | 57 | 1089230.418 | 3.484 | **19470.226543** | 307.62 | 1.6 | ug/L |
| | As | 75 | -430.595 | -0.000 | **-0.480536** | 0.30 | 63.1 | ug/L |
| | Se | 77 | 4042.396 | 0.003 | **57.599164** | 1.87 | 3.2 | ug/L |
| | Se | 82 | 81.657 | 0.000 | **2.029107** | 0.18 | 9.0 | ug/L |
| | Sr | 88 | 9714478.541 | 16.798 | **1854.683545** | 72.72 | 3.9 | ug/L |
| > | Y | 89 | 578819.951 | 578819.951 | | | | ug/L |
| | Mo | 95 | 524.018 | 0.000 | **0.540324** | 0.04 | 8.3 | ug/L |
| | Mo | 97 | 314.006 | 0.000 | **0.611641** | 0.06 | 9.4 | ug/L |
| | Mo | 98 | 729.222 | 0.001 | **0.748138** | 0.01 | 1.5 | ug/L |
| | Ag | 107 | 20.000 | 0.000 | **-0.437238** | 0.00 | 0.2 | ug/L |
| | Ag | 109 | 9.333 | 0.000 | **-0.465315** | 0.00 | 0.8 | ug/L |
| | Cd | 111 | 13.000 | 0.000 | **-0.067939** | 0.01 | 8.4 | ug/L |
| | Cd | 114 | 6.711 | 0.000 | **-0.088747** | 0.00 | 4.9 | ug/L |

00736

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 193194.231 | 193194.231 | | | | ug/L |
| \| | Sn | 120 | 533.620 | -0.001 | **-0.048167** | 0.04 | 81.9 | ug/L |
| \| | Sb | 121 | 362.675 | -0.000 | **0.267647** | 0.01 | 2.8 | ug/L |
| \| | Sb | 123 | 334.730 | 0.000 | **0.400919** | 0.03 | 6.9 | ug/L |
| \| | Ba | 135 | 7685.839 | 0.023 | **24.734327** | 1.10 | 4.4 | ug/L |
| \| | Ba | 137 | 13760.299 | 0.041 | **25.101180** | 1.39 | 5.5 | ug/L |
| \| | Tb | 159 | 294004.620 | -0.035 | | | | ug/L |
| \|> | Ho | 165 | 331724.865 | 331724.865 | | | | ug/L |
| \| | Tl | 203 | 16.000 | 0.000 | **-0.655030** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 40.667 | 0.000 | **-0.575374** | 0.00 | 0.6 | ug/L |
| \| | Pb | 208 | 759.348 | 0.002 | **-0.658496** | 0.01 | 1.4 | ug/L |
| | Kr | 83 | 52.467 | 31.800 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 85.141 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 107.537 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 75.294 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 79.004 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-26A**
Sample Date/Time: Tuesday, February 16, 2010 13:04:16
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-26A.053
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 28799.509 | 0.007 | | | | ug/L |
| | Li | 7 | 41517.777 | 0.108 | **41.377615** | 1.46 | 3.5 | ug/L |
| | Be | 9 | 9.333 | 0.000 | **0.608611** | 0.03 | 4.4 | ug/L |
| | B | 11 | 18978.054 | 0.052 | **70.868402** | 2.07 | 2.9 | ug/L |
| | Na | 23 | 46424362.601 | 129.894 | **80549.378392** | 2684.72 | 3.3 | ug/L |
| | Mg | 24 | 9683525.906 | 27.100 | **23295.930074** | 1197.58 | 5.1 | ug/L |
| | Al | 27 | 105208.180 | 0.246 | **79.510475** | 2.90 | 3.6 | ug/L |
| | K | 39 | 2808263.448 | 7.678 | **2650.420575** | 149.82 | 5.7 | ug/L |
| | Ca | 43 | 227614.495 | 0.637 | **42546.658329** | 832.29 | 2.0 | ug/L |
| > | Sc | 45 | 357325.769 | 357325.769 | | | | ug/L |
| | Ti | 49 | 704.699 | 0.001 | **2.486824** | 0.12 | 5.0 | ug/L |
| | Co | 59 | 284.005 | 0.001 | **0.564143** | 0.00 | 0.8 | ug/L |
| | Ni | 60 | 304.673 | 0.001 | **0.691148** | 0.10 | 14.7 | ug/L |
| | Ni | 62 | 65.334 | 0.000 | **0.502058** | 0.11 | 21.7 | ug/L |
| | Cu | 63 | 1084.077 | 0.003 | **0.962928** | 0.08 | 8.8 | ug/L |
| | Cu | 65 | 329.340 | 0.001 | **0.185631** | 0.06 | 31.9 | ug/L |
| | Zn | 66 | 1374.790 | 0.003 | **4.385323** | 0.23 | 5.2 | ug/L |
| | Zn | 67 | 2285.673 | 0.004 | **20.690800** | 0.17 | 0.8 | ug/L |
| | Zn | 68 | 2787.172 | 0.007 | **11.644620** | 0.49 | 4.2 | ug/L |
| | V | 51 | 6169.186 | 0.018 | **3.296649** | 0.28 | 8.4 | ug/L |
| | Cr | 52 | 3622.187 | 0.002 | **0.049449** | 0.12 | 241.5 | ug/L |
| | Cr | 53 | 15984.597 | 0.009 | **4.606102** | 3.15 | 68.4 | ug/L |
| | Mn | 55 | 15220.988 | 0.042 | **4.572940** | 1.27 | 27.8 | ug/L |
| | Fe | 54 | 27887.940 | 0.037 | **90.312578** | 6.25 | 6.9 | ug/L |
| | Fe | 57 | 8306.483 | 0.019 | **115.967325** | 2.94 | 2.5 | ug/L |
| | As | 75 | -385.508 | -0.000 | **-0.553913** | 0.83 | 149.6 | ug/L |
| | Se | 77 | 2790.506 | 0.002 | **32.269774** | 4.68 | 14.5 | ug/L |
| | Se | 82 | 18.076 | 0.000 | **0.439892** | 0.16 | 36.3 | ug/L |
| | Sr | 88 | 1457617.566 | 2.962 | **327.170305** | 12.25 | 3.7 | ug/L |
| > | Y | 89 | 492372.134 | 492372.134 | | | | ug/L |
| | Mo | 95 | 1430.800 | 0.002 | **2.405747** | 0.08 | 3.2 | ug/L |
| | Mo | 97 | 886.718 | 0.002 | **2.493723** | 0.25 | 10.0 | ug/L |
| | Mo | 98 | 2310.347 | 0.004 | **2.760366** | 0.19 | 7.1 | ug/L |
| | Ag | 107 | 10.667 | 0.000 | **-0.445739** | 0.00 | 0.7 | ug/L |
| | Ag | 109 | 5.333 | -0.000 | **-0.469265** | 0.00 | 0.6 | ug/L |
| | Cd | 111 | 15.500 | 0.000 | **-0.067274** | 0.01 | 12.8 | ug/L |
| | Cd | 114 | 35.065 | 0.000 | **-0.056218** | 0.01 | 10.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 228022.014 | 228022.014 | | | | ug/L |
| \| | Sn | 120 | 643.866 | -0.001 | **-0.039973** | 0.00 | 11.9 | ug/L |
| \| | Sb | 121 | 458.014 | 0.000 | **0.293389** | 0.00 | 1.0 | ug/L |
| \| | Sb | 123 | 446.419 | 0.000 | **0.457234** | 0.01 | 1.3 | ug/L |
| \| | Ba | 135 | 173335.310 | 0.436 | **458.345766** | 15.37 | 3.4 | ug/L |
| \| | Ba | 137 | 304337.417 | 0.766 | **455.515143** | 16.36 | 3.6 | ug/L |
| \| | Tb | 159 | 357480.944 | -0.022 | | | | ug/L |
| \|> | Ho | 165 | 397319.935 | 397319.935 | | | | ug/L |
| \| | Tl | 203 | 7.333 | -0.000 | **-0.661615** | 0.00 | 0.3 | ug/L |
| \| | Tl | 205 | 25.333 | -0.000 | **-0.580868** | 0.00 | 0.2 | ug/L |
| \| | Pb | 208 | 2860.210 | 0.007 | **-0.326957** | 0.01 | 3.7 | ug/L |
| | Kr | 83 | 24.400 | 3.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.418 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 91.476 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 88.868 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 94.626 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-27A**
Sample Date/Time: Tuesday, February 16, 2010 13:06:57
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-27A.054
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30210.656 | 0.013 | | | | ug/L |
| | Li | 7 | 19744.643 | 0.048 | **18.741923** | 0.14 | 0.8 | ug/L |
| | Be | 9 | 671.363 | 0.002 | **3.648791** | 0.23 | 6.3 | ug/L |
| | B | 11 | 11231.541 | 0.031 | **42.314540** | 2.05 | 4.9 | ug/L |
| | Na | 23 | 33916062.640 | 96.670 | **59951.407128** | 1483.03 | 2.5 | ug/L |
| | Mg | 24 | 3013595.112 | 8.582 | **7384.515310** | 272.41 | 3.7 | ug/L |
| | Al | 27 | 9396300.815 | 26.750 | **7115.390244** | 218.36 | 3.1 | ug/L |
| | K | 39 | 1043049.543 | 2.790 | **968.756852** | 53.67 | 5.5 | ug/L |
| | Ca | 43 | 256852.082 | 0.732 | **48917.274705** | 1600.76 | 3.3 | ug/L |
| > | Sc | 45 | 350655.684 | 350655.684 | | | | ug/L |
| | Ti | 49 | 932.057 | 0.001 | **4.355391** | 0.40 | 9.1 | ug/L |
| | Co | 59 | 138153.826 | 0.394 | **66.951921** | 0.93 | 1.4 | ug/L |
| | Ni | 60 | 7849.337 | 0.022 | **19.209478** | 0.34 | 1.8 | ug/L |
| | Ni | 62 | 1258.770 | 0.003 | **19.721736** | 1.11 | 5.6 | ug/L |
| | Cu | 63 | 62985.675 | 0.179 | **63.330367** | 2.05 | 3.2 | ug/L |
| | Cu | 65 | 30259.410 | 0.086 | **63.862057** | 1.24 | 1.9 | ug/L |
| | Zn | 66 | 31927.504 | 0.091 | **101.770252** | 3.24 | 3.2 | ug/L |
| | Zn | 67 | 6318.594 | 0.015 | **102.911533** | 1.08 | 1.1 | ug/L |
| | Zn | 68 | 22844.551 | 0.065 | **100.472664** | 2.66 | 2.6 | ug/L |
| | V | 51 | 1641.048 | 0.005 | **1.098070** | 0.30 | 27.5 | ug/L |
| | Cr | 52 | 5748.147 | 0.008 | **1.353087** | 0.02 | 1.7 | ug/L |
| | Cr | 53 | 15189.651 | 0.007 | **2.031486** | 1.01 | 49.7 | ug/L |
| | Mn | 55 | 16606689.370 | 47.360 | **5467.440264** | 71.99 | 1.3 | ug/L |
| | Fe | 54 | 123134.167 | 0.310 | **730.875365** | 15.76 | 2.2 | ug/L |
| | Fe | 57 | 48974.747 | 0.135 | **766.150256** | 2.02 | 0.3 | ug/L |
| | As | 75 | 25769.798 | 0.043 | **64.834300** | 0.48 | 0.7 | ug/L |
| | Se | 77 | 2437.053 | 0.000 | **0.654016** | 0.54 | 82.8 | ug/L |
| | Se | 82 | 23.298 | 0.000 | **0.470952** | 0.27 | 58.0 | ug/L |
| | Sr | 88 | 959548.973 | 1.585 | **175.166028** | 3.07 | 1.8 | ug/L |
| > | Y | 89 | 605148.721 | 605148.721 | | | | ug/L |
| | Mo | 95 | 267.338 | 0.000 | **0.107461** | 0.06 | 51.5 | ug/L |
| | Mo | 97 | 170.669 | 0.000 | **0.221572** | 0.04 | 16.5 | ug/L |
| | Mo | 98 | 359.935 | -0.000 | **0.359296** | 0.04 | 10.9 | ug/L |
| | Ag | 107 | 14.667 | 0.000 | **-0.443073** | 0.00 | 0.2 | ug/L |
| | Ag | 109 | 4.000 | -0.000 | **-0.470165** | 0.00 | 0.3 | ug/L |
| | Cd | 111 | 10778.715 | 0.047 | **29.931994** | 0.73 | 2.4 | ug/L |
| | Cd | 114 | 24957.745 | 0.110 | **29.893611** | 0.14 | 0.5 | ug/L |

00742

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 227837.858 | 227837.858 | | | | ug/L |
| \| | Sn | 120 | 646.448 | -0.001 | **-0.038016** | 0.01 | 16.4 | ug/L |
| \| | Sb | 121 | 552.687 | 0.001 | **0.374684** | 0.04 | 11.5 | ug/L |
| L | Sb | 123 | 496.249 | 0.001 | **0.512112** | 0.04 | 8.8 | ug/L |
| ⌈ | Ba | 135 | 8825.727 | 0.022 | **23.316797** | 0.17 | 0.7 | ug/L |
| \| | Ba | 137 | 15932.507 | 0.039 | **23.838406** | 0.74 | 3.1 | ug/L |
| \| | Tb | 159 | 364439.769 | -0.020 | | | | ug/L |
| \|> | Ho | 165 | 404048.233 | 404048.233 | | | | ug/L |
| \| | Tl | 203 | 762.705 | 0.002 | **-0.254569** | 0.02 | 8.4 | ug/L |
| \| | Tl | 205 | 1752.200 | 0.004 | **-0.188861** | 0.01 | 4.2 | ug/L |
| L | Pb | 208 | 26222.738 | 0.065 | **3.571393** | 0.08 | 2.3 | ug/L |
| | Kr | 83 | 30.067 | 9.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.600 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 112.429 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 88.796 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 96.228 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-28A**
Sample Date/Time: Tuesday, February 16, 2010 13:09:38
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-28A.055
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31231.666 | 0.017 | | | | ug/L |
| | Li | 7 | 10027.882 | 0.021 | **8.485408** | 0.92 | 10.8 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **0.601032** | 0.02 | 4.1 | ug/L |
| | B | 11 | 19913.755 | 0.056 | **77.303896** | 3.99 | 5.2 | ug/L |
| | Na | 23 | 32946698.591 | 95.740 | **59374.813311** | 4286.93 | 7.2 | ug/L |
| | Mg | 24 | 160571.881 | 0.454 | **400.896703** | 55.93 | 14.0 | ug/L |
| | Al | 27 | 106097.762 | 0.261 | **83.294155** | 10.18 | 12.2 | ug/L |
| | K | 39 | 606398.589 | 1.579 | **552.166564** | 59.23 | 10.7 | ug/L |
| | Ca | 43 | 7316.819 | 0.021 | **1384.693813** | 115.05 | 8.3 | ug/L |
| > | Sc | 45 | 344347.067 | 344347.067 | | | | ug/L |
| | Ti | 49 | 828.045 | 0.001 | **3.673944** | 0.60 | 16.3 | ug/L |
| | Co | 59 | 236.004 | 0.001 | **0.546025** | 0.02 | 4.2 | ug/L |
| | Ni | 60 | 188.669 | 0.001 | **0.428778** | 0.02 | 4.9 | ug/L |
| | Ni | 62 | 41.333 | -0.000 | **0.145522** | 0.14 | 96.4 | ug/L |
| | Cu | 63 | 1162.088 | 0.003 | **1.083645** | 0.07 | 6.0 | ug/L |
| | Cu | 65 | 389.343 | 0.001 | **0.342518** | 0.05 | 13.2 | ug/L |
| | Zn | 66 | 693.365 | 0.002 | **2.337185** | 0.09 | 4.1 | ug/L |
| | Zn | 67 | 1453.471 | 0.002 | **5.303590** | 1.07 | 20.2 | ug/L |
| | Zn | 68 | 662.695 | 0.001 | **2.552415** | 0.26 | 10.1 | ug/L |
| | V | 51 | 1553.198 | 0.005 | **1.069633** | 0.25 | 23.5 | ug/L |
| | Cr | 52 | 3218.006 | 0.001 | **-0.115774** | 0.06 | 52.3 | ug/L |
| | Cr | 53 | 13652.105 | 0.003 | **-4.528294** | 1.99 | 44.0 | ug/L |
| | Mn | 55 | 76068.352 | 0.220 | **25.168626** | 1.13 | 4.5 | ug/L |
| | Fe | 54 | 23824.293 | 0.028 | **69.588167** | 6.62 | 9.5 | ug/L |
| | Fe | 57 | 4350.564 | 0.008 | **56.721921** | 2.91 | 5.1 | ug/L |
| | As | 75 | -204.485 | 0.000 | **-0.011108** | 0.09 | 810.4 | ug/L |
| | Se | 77 | 1943.579 | 0.000 | **2.001706** | 1.70 | 84.7 | ug/L |
| | Se | 82 | 7.187 | 0.000 | **0.113512** | 0.21 | 184.0 | ug/L |
| | Sr | 88 | 47733.038 | 0.100 | **11.231419** | 0.14 | 1.2 | ug/L |
| > | Y | 89 | 474346.664 | 474346.664 | | | | ug/L |
| | Mo | 95 | 562.021 | 0.001 | **0.800456** | 0.02 | 2.7 | ug/L |
| | Mo | 97 | 398.677 | 0.001 | **1.056901** | 0.10 | 9.4 | ug/L |
| | Mo | 98 | 969.102 | 0.001 | **1.206027** | 0.06 | 4.9 | ug/L |
| | Ag | 107 | 8.000 | 0.000 | **-0.447435** | 0.00 | 0.3 | ug/L |
| | Ag | 109 | 6.000 | -0.000 | **-0.468772** | 0.00 | 0.5 | ug/L |
| | Cd | 111 | 15.333 | 0.000 | **-0.067516** | 0.00 | 5.8 | ug/L |
| | Cd | 114 | 23.221 | 0.000 | **-0.070057** | 0.01 | 14.0 | ug/L |

00745

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 226059.066 | 226059.066 | | | | ug/L |
| \| | Sn | 120 | 656.601 | -0.001 | **-0.028543** | 0.01 | 43.7 | ug/L |
| \| | Sb | 121 | 364.675 | -0.000 | **0.216562** | 0.02 | 7.0 | ug/L |
| L | Sb | 123 | 305.750 | -0.000 | **0.305363** | 0.01 | 4.5 | ug/L |
| ⌈ | Ba | 135 | 4266.517 | 0.011 | **11.583399** | 0.50 | 4.3 | ug/L |
| \| | Ba | 137 | 7541.029 | 0.019 | **11.619377** | 0.41 | 3.5 | ug/L |
| \| | Tb | 159 | 358744.709 | -0.026 | | | | ug/L |
| \|> | Ho | 165 | 400429.445 | 400429.445 | | | | ug/L |
| \| | Tl | 203 | 10.000 | -0.000 | **-0.660170** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 24.000 | -0.000 | **-0.581209** | 0.00 | 0.3 | ug/L |
| L | Pb | 208 | 5252.706 | 0.013 | **0.073186** | 0.05 | 71.1 | ug/L |
| | Kr | 83 | 18.667 | -2.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.880 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 88.127 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 88.103 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.367 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-29A**
Sample Date/Time: Tuesday, February 16, 2010 13:12:19
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-29A.056
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 29396.088 | 0.005 | | | | ug/L |
| \| | Li | 7 | 59311.115 | 0.150 | **57.291668** | 2.04 | 3.6 | ug/L |
| \| | Be | 9 | 1087.410 | 0.003 | **5.240789** | 0.19 | 3.7 | ug/L |
| \| | B | 11 | 46879.807 | 0.124 | **168.384915** | 8.12 | 4.8 | ug/L |
| \| | Na | 23 | 93456037.619 | 249.239 | **154541.112325** | 2071.12 | 1.3 | ug/L |
| \| | Mg | 24 | 9914268.396 | 26.432 | **22721.843215** | 308.70 | 1.4 | ug/L |
| \| | Al | 27 | 41334189.548 | 110.281 | **29289.792687** | 1028.22 | 3.5 | ug/L |
| \| | K | 39 | 3960934.777 | 10.377 | **3578.633484** | 99.26 | 2.8 | ug/L |
| \| | Ca | 43 | 271882.670 | 0.725 | **48482.941652** | 2569.04 | 5.3 | ug/L |
| \|> | Sc | 45 | 374830.772 | 374830.772 | | | | ug/L |
| \| | Ti | 49 | 1236.766 | 0.002 | **6.102165** | 0.08 | 1.4 | ug/L |
| \| | Co | 59 | 114544.007 | 0.306 | **52.063897** | 1.93 | 3.7 | ug/L |
| \| | Ni | 60 | 37758.482 | 0.101 | **86.673527** | 4.29 | 5.0 | ug/L |
| \| | Ni | 62 | 6163.808 | 0.016 | **92.238114** | 4.03 | 4.4 | ug/L |
| \| | Cu | 63 | 105858.686 | 0.282 | **99.734599** | 5.67 | 5.7 | ug/L |
| \| | Cu | 65 | 50414.169 | 0.134 | **99.905494** | 5.89 | 5.9 | ug/L |
| \| | Zn | 66 | 135924.151 | 0.363 | **405.403710** | 18.58 | 4.6 | ug/L |
| \| | Zn | 67 | 21808.208 | 0.056 | **387.366532** | 16.64 | 4.3 | ug/L |
| \| | Zn | 68 | 97298.417 | 0.259 | **402.039558** | 21.80 | 5.4 | ug/L |
| \| | V | 51 | 2495.545 | 0.007 | **1.443812** | 0.44 | 30.4 | ug/L |
| \| | Cr | 52 | 24983.199 | 0.058 | **11.845760** | 0.65 | 5.5 | ug/L |
| \| | Cr | 53 | 16488.992 | 0.008 | **3.266511** | 1.76 | 53.9 | ug/L |
| \| | Mn | 55 | 7204420.068 | 19.232 | **2220.128561** | 83.29 | 3.8 | ug/L |
| \| | Fe | 54 | 94367.501 | 0.211 | **498.039303** | 18.62 | 3.7 | ug/L |
| ⌊ | Fe | 57 | 36588.840 | 0.093 | **531.590398** | 18.65 | 3.5 | ug/L |
| ⌈ | As | 75 | -173.024 | 0.000 | **0.348352** | 0.12 | 35.1 | ug/L |
| \| | Se | 77 | 2686.469 | -0.001 | **-18.846333** | 1.68 | 8.9 | ug/L |
| \| | Se | 82 | 79.992 | 0.000 | **1.248700** | 0.06 | 4.4 | ug/L |
| \| | Sr | 88 | 1298129.562 | 1.457 | **160.965713** | 4.57 | 2.8 | ug/L |
| \|> | Y | 89 | 891426.052 | 891426.052 | | | | ug/L |
| \| | Mo | 95 | 47.333 | -0.000 | **-0.254517** | 0.01 | 3.4 | ug/L |
| \| | Mo | 97 | 22.667 | -0.000 | **-0.161960** | 0.01 | 5.7 | ug/L |
| ⌊ | Mo | 98 | 61.562 | -0.001 | **0.051477** | 0.00 | 4.2 | ug/L |
| ⌈ | Ag | 107 | 16.000 | 0.000 | **-0.441921** | 0.00 | 0.7 | ug/L |
| \| | Ag | 109 | 12.000 | 0.000 | **-0.464463** | 0.00 | 1.0 | ug/L |
| \| | Cd | 111 | 54227.328 | 0.246 | **156.268880** | 6.97 | 4.5 | ug/L |
| \| | Cd | 114 | 127864.069 | 0.581 | **158.852621** | 5.14 | 3.2 | ug/L |

00748

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 220399.571 | 220399.571 | | | | ug/L |
| \| | Sn | 120 | 592.545 | -0.001 | **-0.059834** | 0.02 | 41.7 | ug/L |
| \| | Sb | 121 | 1468.140 | 0.005 | **1.199035** | 0.02 | 1.3 | ug/L |
| \| | Sb | 123 | 1181.331 | 0.004 | **1.312636** | 0.11 | 8.3 | ug/L |
| \| | Ba | 135 | 7364.190 | 0.018 | **19.094236** | 0.47 | 2.5 | ug/L |
| \| | Ba | 137 | 12958.246 | 0.031 | **19.054134** | 0.88 | 4.6 | ug/L |
| \| | Tb | 159 | 376818.676 | -0.010 | | | | ug/L |
| \|> | Ho | 165 | 413438.134 | 413438.134 | | | | ug/L |
| \| | Tl | 203 | 667.362 | 0.002 | **-0.313617** | 0.02 | 7.7 | ug/L |
| \| | Tl | 205 | 1660.847 | 0.004 | **-0.218417** | 0.02 | 11.4 | ug/L |
| \| | Pb | 208 | 897543.479 | 2.171 | **145.858027** | 1.68 | 1.1 | ug/L |
| | Kr | 83 | 52.267 | 31.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 102.191 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 165.615 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 85.897 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 98.465 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-29A**
Sample Date/Time: Tuesday, February 16, 2010 13:15:01
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-29A.057
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 33325.183 | 0.018 | | | | ug/L |
| \| | Li | 7 | 18409.336 | 0.043 | **82.698010** | 2.46 | 3.0 | ug/L |
| \| | Be | 9 | 294.006 | 0.001 | **9.324258** | 0.91 | 9.8 | ug/L |
| \| | B | 11 | 14486.296 | 0.038 | **263.590346** | 4.64 | 1.8 | ug/L |
| \| | Na | 23 | 25331935.216 | 69.416 | **215272.550078** | 9454.68 | 4.4 | ug/L |
| \| | Mg | 24 | 2661884.644 | 7.288 | **31363.676963** | 1631.46 | 5.2 | ug/L |
| \| | Al | 27 | 10908295.142 | 29.860 | **39704.307863** | 940.78 | 2.4 | ug/L |
| \| | K | 39 | 1138488.090 | 2.937 | **5097.492248** | 299.09 | 5.9 | ug/L |
| \| | Ca | 43 | 71251.345 | 0.195 | **65082.827312** | 1691.92 | 2.6 | ug/L |
| \|> | Sc | 45 | 364825.265 | 364825.265 | | | | ug/L |
| \| | Ti | 49 | 603.357 | 0.000 | **8.067756** | 2.22 | 27.6 | ug/L |
| \| | Co | 59 | 30363.830 | 0.083 | **72.423740** | 1.64 | 2.3 | ug/L |
| \| | Ni | 60 | 10389.681 | 0.028 | **122.258013** | 2.79 | 2.3 | ug/L |
| \| | Ni | 62 | 1688.185 | 0.004 | **127.870401** | 3.72 | 2.9 | ug/L |
| \| | Cu | 63 | 29404.786 | 0.080 | **141.796504** | 3.04 | 2.1 | ug/L |
| \| | Cu | 65 | 13896.552 | 0.038 | **139.552291** | 5.01 | 3.6 | ug/L |
| \| | Zn | 66 | 39835.020 | 0.109 | **610.058877** | 21.86 | 3.6 | ug/L |
| \| | Zn | 67 | 7380.873 | 0.018 | **593.008356** | 16.95 | 2.9 | ug/L |
| \| | Zn | 68 | 28238.444 | 0.077 | **597.245961** | 17.81 | 3.0 | ug/L |
| \| | V | 51 | -87.462 | 0.001 | **1.205567** | 0.94 | 77.7 | ug/L |
| \| | Cr | 52 | 8716.273 | 0.015 | **14.580457** | 0.47 | 3.3 | ug/L |
| \| | Cr | 53 | 16227.104 | 0.008 | **20.559455** | 2.26 | 11.0 | ug/L |
| \| | Mn | 55 | 1888827.717 | 5.177 | **2987.265055** | 61.19 | 2.0 | ug/L |
| \| | Fe | 54 | 34189.551 | 0.053 | **635.180216** | 12.82 | 2.0 | ug/L |
| ⌊ | Fe | 57 | 10247.489 | 0.024 | **715.064564** | 14.09 | 2.0 | ug/L |
| ⌈ | As | 75 | -378.220 | 0.000 | **-1.598937** | 1.42 | 88.7 | ug/L |
| \| | Se | 77 | 2270.335 | 0.000 | **-18.390983** | 5.26 | 28.6 | ug/L |
| \| | Se | 82 | 28.798 | 0.000 | **3.094021** | 0.61 | 19.7 | ug/L |
| \| | Sr | 88 | 327814.457 | 0.549 | **303.698692** | 7.48 | 2.5 | ug/L |
| \|> | Y | 89 | 597285.262 | 597285.262 | | | | ug/L |
| \| | Mo | 95 | 18.000 | -0.000 | **-1.378533** | 0.06 | 4.3 | ug/L |
| \| | Mo | 97 | 7.333 | -0.000 | **-0.907965** | 0.05 | 6.0 | ug/L |
| ⌊ | Mo | 98 | 23.489 | -0.001 | **0.169866** | 0.03 | 15.0 | ug/L |
| ⌈ | Ag | 107 | 7.333 | 0.000 | **-2.240559** | 0.01 | 0.4 | ug/L |
| \| | Ag | 109 | 5.333 | -0.000 | **-2.347004** | 0.01 | 0.3 | ug/L |
| \| | Cd | 111 | 15592.792 | 0.066 | **209.134490** | 5.52 | 2.6 | ug/L |
| \| | Cd | 114 | 36266.867 | 0.154 | **209.809267** | 5.01 | 2.4 | ug/L |

00751

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 236194.639 | 236194.639 | | | | ug/L |
| \| | Sn | 120 | 645.874 | -0.001 | **-0.261417** | 0.09 | 34.1 | ug/L |
| \| | Sb | 121 | 638.027 | 0.001 | **2.144621** | 0.21 | 9.7 | ug/L |
| \| | Sb | 123 | 491.172 | 0.000 | **2.440315** | 0.07 | 3.0 | ug/L |
| \| | Ba | 135 | 1949.581 | 0.005 | **26.614183** | 2.50 | 9.4 | ug/L |
| \| | Ba | 137 | 3331.388 | 0.008 | **25.928104** | 0.42 | 1.6 | ug/L |
| \| | Tb | 159 | 375946.710 | -0.018 | | | | ug/L |
| \|> | Ho | 165 | 416262.004 | 416262.004 | | | | ug/L |
| \| | Tl | 203 | 182.002 | 0.000 | **-2.851620** | 0.03 | 1.0 | ug/L |
| \| | Tl | 205 | 427.345 | 0.001 | **-2.462141** | 0.03 | 1.0 | ug/L |
| \| | Pb | 208 | 249075.177 | 0.599 | **198.162612** | 7.32 | 3.7 | ug/L |
| | Kr | 83 | 25.800 | 5.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 99.463 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 110.968 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 92.053 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 99.137 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-30A**
Sample Date/Time: Tuesday, February 16, 2010 13:17:42
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-30A.058
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29236.626 | 0.007 | | | | ug/L |
| | Li | 7 | 61739.477 | 0.163 | **61.900570** | 0.62 | 1.0 | ug/L |
| | Be | 9 | 2008.930 | 0.006 | **9.498584** | 0.68 | 7.1 | ug/L |
| | B | 11 | 31639.607 | 0.086 | **117.278068** | 2.82 | 2.4 | ug/L |
| | Na | 23 | 92183017.361 | 254.646 | **157893.237070** | 7411.48 | 4.7 | ug/L |
| | Mg | 24 | 10060176.201 | 27.786 | **23885.182453** | 1007.96 | 4.2 | ug/L |
| | Al | 27 | 20416617.715 | 56.359 | **14975.437695** | 588.54 | 3.9 | ug/L |
| | K | 39 | 3836302.912 | 10.411 | **3590.459619** | 70.75 | 2.0 | ug/L |
| | Ca | 43 | 66289.927 | 0.183 | **12206.264110** | 542.53 | 4.4 | ug/L |
| > | Sc | 45 | 362013.924 | 362013.924 | | | | ug/L |
| | Ti | 49 | 921.389 | 0.001 | **4.050814** | 0.39 | 9.6 | ug/L |
| | Co | 59 | 128549.364 | 0.355 | **60.399307** | 1.53 | 2.5 | ug/L |
| | Ni | 60 | 32448.977 | 0.090 | **77.064774** | 2.24 | 2.9 | ug/L |
| | Ni | 62 | 5215.103 | 0.014 | **80.787650** | 4.49 | 5.6 | ug/L |
| | Cu | 63 | 10957.805 | 0.030 | **10.585653** | 0.50 | 4.7 | ug/L |
| | Cu | 65 | 4918.909 | 0.013 | **9.638708** | 0.70 | 7.3 | ug/L |
| | Zn | 66 | 73643.253 | 0.203 | **227.368532** | 12.29 | 5.4 | ug/L |
| | Zn | 67 | 13008.339 | 0.033 | **229.776451** | 15.36 | 6.7 | ug/L |
| | Zn | 68 | 53572.890 | 0.148 | **228.877853** | 14.33 | 6.3 | ug/L |
| | V | 51 | 4831.632 | 0.014 | **2.613313** | 0.30 | 11.4 | ug/L |
| | Cr | 52 | 9852.308 | 0.019 | **3.612061** | 0.20 | 5.6 | ug/L |
| | Cr | 53 | 15887.727 | 0.008 | **3.074567** | 2.42 | 78.6 | ug/L |
| | Mn | 55 | 2438293.483 | 6.736 | **777.478709** | 28.41 | 3.7 | ug/L |
| | Fe | 54 | 2820912.618 | 7.754 | **18190.605769** | 784.82 | 4.3 | ug/L |
| | Fe | 57 | 1142684.367 | 3.153 | **17619.089299** | 481.80 | 2.7 | ug/L |
| | As | 75 | -355.026 | 0.000 | **-0.095135** | 0.20 | 213.0 | ug/L |
| | Se | 77 | 2505.741 | -0.000 | **-10.673280** | 0.80 | 7.5 | ug/L |
| | Se | 82 | 39.583 | 0.000 | **0.709635** | 0.04 | 6.1 | ug/L |
| | Sr | 88 | 554471.119 | 0.760 | **84.087238** | 2.75 | 3.3 | ug/L |
| > | Y | 89 | 728797.752 | 728797.752 | | | | ug/L |
| | Mo | 95 | 23.333 | -0.000 | **-0.274198** | 0.00 | 1.8 | ug/L |
| | Mo | 97 | 20.667 | -0.000 | **-0.157660** | 0.01 | 3.4 | ug/L |
| | Mo | 98 | 45.187 | -0.001 | **0.047240** | 0.02 | 37.2 | ug/L |
| | Ag | 107 | 26.000 | 0.000 | **-0.434888** | 0.00 | 0.8 | ug/L |
| | Ag | 109 | 12.667 | 0.000 | **-0.463771** | 0.00 | 0.7 | ug/L |
| | Cd | 111 | 28791.314 | 0.132 | **83.689822** | 3.47 | 4.1 | ug/L |
| | Cd | 114 | 66792.977 | 0.306 | **83.724575** | 2.92 | 3.5 | ug/L |

00754

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 218214.435 | 218214.435 | | | | ug/L |
| \| | Sn | 120 | 553.277 | -0.001 | **-0.081204** | 0.02 | 26.4 | ug/L |
| \| | Sb | 121 | 423.345 | 0.000 | **0.280233** | 0.03 | 11.7 | ug/L |
| \| | Sb | 123 | 319.918 | -0.000 | **0.333902** | 0.02 | 7.4 | ug/L |
| \| | Ba | 135 | 3722.902 | 0.009 | **10.134611** | 0.53 | 5.3 | ug/L |
| \| | Ba | 137 | 6504.749 | 0.016 | **10.057632** | 0.18 | 1.8 | ug/L |
| \| | Tb | 159 | 364033.522 | -0.014 | | | | ug/L |
| \|> | Ho | 165 | 401296.456 | 401296.456 | | | | ug/L |
| \| | Tl | 203 | 638.027 | 0.002 | **-0.319132** | 0.03 | 10.1 | ug/L |
| \| | Tl | 205 | 1529.486 | 0.004 | **-0.237014** | 0.02 | 9.7 | ug/L |
| \| | Pb | 208 | 13765.464 | 0.034 | **1.504065** | 0.06 | 3.7 | ug/L |
| | Kr | 83 | 36.267 | 15.600 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.696 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 135.401 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 85.045 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.573 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Tuesday, February 16, 2010 13:20:25
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 4.059
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27013.903 | 0.006 | | | | ug/L |
| | Li | 7 | 113448.813 | 0.323 | **122.616384** | 9.53 | 7.8 | ug/L |
| | Be | 9 | 23957.292 | 0.070 | **113.194297** | 7.16 | 6.3 | ug/L |
| | B | 11 | 30525.170 | 0.088 | **119.540152** | 6.38 | 5.3 | ug/L |
| | Na | 23 | 3230909.355 | 9.373 | **5828.541594** | 369.47 | 6.3 | ug/L |
| | Mg | 24 | 2293285.789 | 6.681 | **5751.122538** | 400.39 | 7.0 | ug/L |
| | Al | 27 | 7407796.982 | 21.571 | **5740.394751** | 223.71 | 3.9 | ug/L |
| | K | 39 | 6204770.800 | 17.918 | **6172.893727** | 175.91 | 2.8 | ug/L |
| | Ca | 43 | 26805.303 | 0.078 | **5191.598918** | 224.36 | 4.3 | ug/L |
| > | Sc | 45 | 342852.108 | 342852.108 | | | | ug/L |
| | Ti | 49 | 12869.424 | 0.036 | **99.458681** | 2.41 | 2.4 | ug/L |
| | Co | 59 | 196598.190 | 0.574 | **97.294286** | 3.06 | 3.1 | ug/L |
| | Ni | 60 | 37907.882 | 0.111 | **95.108363** | 4.27 | 4.5 | ug/L |
| | Ni | 62 | 5731.469 | 0.017 | **93.860212** | 4.65 | 5.0 | ug/L |
| | Cu | 63 | 92418.012 | 0.269 | **95.146586** | 3.72 | 3.9 | ug/L |
| | Cu | 65 | 44052.494 | 0.128 | **95.383630** | 4.01 | 4.2 | ug/L |
| | Zn | 66 | 29558.027 | 0.086 | **96.401353** | 2.84 | 2.9 | ug/L |
| | Zn | 67 | 6101.087 | 0.015 | **101.422384** | 6.37 | 6.3 | ug/L |
| | Zn | 68 | 21370.994 | 0.062 | **96.164796** | 4.38 | 4.6 | ug/L |
| | V | 51 | 197287.621 | 0.576 | **100.810691** | 2.92 | 2.9 | ug/L |
| | Cr | 52 | 167274.000 | 0.480 | **99.731253** | 2.61 | 2.6 | ug/L |
| | Cr | 53 | 32805.137 | 0.059 | **96.098930** | 3.05 | 3.2 | ug/L |
| | Mn | 55 | 298535.373 | 0.870 | **100.219034** | 3.26 | 3.3 | ug/L |
| | Fe | 54 | 743677.577 | 2.129 | **4996.973451** | 152.62 | 3.1 | ug/L |
| | Fe | 57 | 302988.284 | 0.880 | **4924.394344** | 182.72 | 3.7 | ug/L |
| | As | 75 | 31441.019 | 0.066 | **98.739375** | 2.70 | 2.7 | ug/L |
| | Se | 77 | 14648.610 | 0.027 | **506.733059** | 26.19 | 5.2 | ug/L |
| | Se | 82 | 15991.018 | 0.033 | **502.884232** | 15.22 | 3.0 | ug/L |
| | Sr | 88 | 438218.115 | 0.907 | **100.247263** | 2.26 | 2.3 | ug/L |
| > | Y | 89 | 483299.538 | 483299.538 | | | | ug/L |
| | Mo | 95 | 52421.358 | 0.108 | **100.826097** | 2.88 | 2.9 | ug/L |
| | Mo | 97 | 32219.343 | 0.066 | **99.489375** | 3.30 | 3.3 | ug/L |
| | Mo | 98 | 82947.091 | 0.171 | **100.502106** | 4.50 | 4.5 | ug/L |
| | Ag | 107 | 150424.795 | 0.652 | **97.198522** | 3.30 | 3.4 | ug/L |
| | Ag | 109 | 143883.894 | 0.623 | **97.619876** | 2.58 | 2.6 | ug/L |
| | Cd | 111 | 36274.501 | 0.157 | **99.665563** | 1.96 | 2.0 | ug/L |
| | Cd | 114 | 84759.933 | 0.367 | **100.422495** | 1.16 | 1.2 | ug/L |

**00757**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 230893.941 | 230893.941 | | | | ug/L |
| \| | Sn | 120 | 160940.268 | 0.694 | **98.923148** | 2.91 | 2.9 | ug/L |
| \| | Sb | 121 | 116888.779 | 0.505 | **98.494080** | 2.94 | 3.0 | ug/L |
| L | Sb | 123 | 90608.889 | 0.391 | **98.508508** | 2.25 | 2.3 | ug/L |
| ⌈ | Ba | 135 | 36278.699 | 0.092 | **97.331673** | 4.07 | 4.2 | ug/L |
| \| | Ba | 137 | 64301.666 | 0.164 | **97.660371** | 3.57 | 3.7 | ug/L |
| \| | Tb | 159 | 357348.843 | -0.012 | | | | ug/L |
| \|> | Ho | 165 | 392922.268 | 392922.268 | | | | ug/L |
| \| | Tl | 203 | 178337.982 | 0.454 | **98.282974** | 3.48 | 3.5 | ug/L |
| \| | Tl | 205 | 424476.527 | 1.081 | **98.575146** | 2.61 | 2.6 | ug/L |
| L | Pb | 208 | 575904.951 | 1.466 | **98.246168** | 3.31 | 3.4 | ug/L |
| | Kr | 83 | 21.067 | 0.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 122.616 | | |
| Be | 9 | 113.194 | | |
| B | 11 | 119.540 | | |
| Na | 23 | 116.571 | | |
| Mg | 24 | 115.022 | | |
| Al | 27 | 112.557 | | |
| K | 39 | 123.458 | | |
| Ca | 43 | 103.832 | | |
| Sc | 45 | | 93.472 | |
| Ti | 49 | 99.459 | | |
| Co | 59 | 97.294 | | |
| Ni | 60 | 95.108 | | |
| Ni | 62 | 93.860 | | |
| Cu | 63 | 95.147 | | |
| Cu | 65 | 95.384 | | |
| Zn | 66 | 96.401 | | |
| Zn | 67 | 101.422 | | |
| Zn | 68 | 96.165 | | |
| V | 51 | 100.811 | | |
| Cr | 52 | 99.731 | | |
| Cr | 53 | 96.099 | | |
| Mn | 55 | 100.219 | | |
| Fe | 54 | 99.939 | | |
| Fe | 57 | 98.488 | | |
| As | 75 | 98.739 | | |
| Se | 77 | 101.347 | | |
| Se | 82 | 100.577 | | |
| Sr | 88 | 100.247 | | |
| Y | 89 | | 89.791 | |
| Mo | 95 | 100.826 | | |
| Mo | 97 | 99.489 | | |
| Mo | 98 | 100.502 | | |
| Ag | 107 | 97.199 | | |
| Ag | 109 | 97.620 | | |
| Cd | 111 | 99.666 | | |
| Cd | 114 | 100.422 | | |
| In | 115 | | 89.987 | |
| Sn | 120 | 98.923 | | |
| Sb | 121 | 98.494 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 98.509 | |
| Ba | 135 | 97.332 | |
| Ba | 137 | 97.660 | |
| Tb | 159 | | |
| Ho | 165 | | 93.579 |
| Tl | 203 | 98.283 | |
| Tl | 205 | 98.575 | |
| Pb | 208 | 98.246 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Tuesday, February 16, 2010 13:23:06
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 6.060
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30596.874 | 0.015 | | | | ug/L |
| | Li | 7 | 3354.065 | 0.002 | **1.106848** | 0.06 | 5.8 | ug/L |
| | Be | 9 | 8.000 | 0.000 | **0.603662** | 0.02 | 4.1 | ug/L |
| | B | 11 | 1318.113 | 0.002 | **4.092062** | 0.18 | 4.4 | ug/L |
| | Na | 23 | 19825.601 | -0.002 | **16.613103** | 2.41 | 14.5 | ug/L |
| | Mg | 24 | 1566.833 | -0.008 | **3.097553** | 1.00 | 32.2 | ug/L |
| | Al | 27 | 6706.289 | -0.029 | **6.433354** | 0.67 | 10.4 | ug/L |
| | K | 39 | 48284.415 | -0.046 | **-6.961047** | 1.51 | 21.7 | ug/L |
| | Ca | 43 | 164.002 | -0.000 | **-5.982382** | 5.97 | 99.8 | ug/L |
| > | Sc | 45 | 348332.128 | 348332.128 | | | | ug/L |
| | Ti | 49 | 375.342 | -0.000 | **0.046807** | 0.09 | 185.5 | ug/L |
| | Co | 59 | 69.334 | 0.000 | **0.463669** | 0.01 | 2.8 | ug/L |
| | Ni | 60 | 22.000 | 0.000 | **0.011579** | 0.01 | 76.9 | ug/L |
| | Ni | 62 | 22.667 | -0.000 | **-0.165020** | 0.16 | 96.3 | ug/L |
| | Cu | 63 | 199.336 | 0.000 | **0.092836** | 0.01 | 8.7 | ug/L |
| | Cu | 65 | 94.667 | 0.000 | **-0.298810** | 0.02 | 8.0 | ug/L |
| | Zn | 66 | 85.334 | -0.000 | **0.362596** | 0.04 | 9.7 | ug/L |
| | Zn | 67 | 1406.796 | 0.001 | **4.039315** | 2.51 | 62.2 | ug/L |
| | Zn | 68 | 88.001 | -0.000 | **-0.041307** | 0.01 | 19.0 | ug/L |
| | V | 51 | -33.810 | 0.001 | **0.260068** | 0.55 | 210.5 | ug/L |
| | Cr | 52 | 3006.588 | 0.000 | **-0.264475** | 0.10 | 36.8 | ug/L |
| | Cr | 53 | 14405.483 | 0.005 | **-1.460279** | 3.00 | 205.3 | ug/L |
| | Mn | 55 | 1239.433 | 0.003 | **0.056299** | 0.02 | 28.5 | ug/L |
| | Fe | 54 | 12391.919 | -0.006 | **-9.313907** | 3.95 | 42.4 | ug/L |
| | Fe | 57 | 922.722 | -0.002 | **0.910591** | 0.48 | 52.6 | ug/L |
| | As | 75 | -393.707 | -0.000 | **-0.580994** | 0.13 | 21.7 | ug/L |
| | Se | 77 | 1825.550 | 0.000 | **-4.643391** | 3.22 | 69.4 | ug/L |
| | Se | 82 | 3.502 | -0.000 | **-0.006505** | 0.09 | 1357.9 | ug/L |
| | Sr | 88 | 267.338 | 0.000 | **0.183281** | 0.00 | 2.0 | ug/L |
| > | Y | 89 | 486614.896 | 486614.896 | | | | ug/L |
| | Mo | 95 | 101.334 | -0.000 | **-0.110105** | 0.06 | 51.4 | ug/L |
| | Mo | 97 | 64.667 | -0.000 | **-0.001668** | 0.02 | 1327.0 | ug/L |
| | Mo | 98 | 143.262 | -0.000 | **0.183178** | 0.02 | 10.8 | ug/L |
| | Ag | 107 | 28.667 | 0.000 | **-0.434344** | 0.00 | 0.3 | ug/L |
| | Ag | 109 | 20.000 | 0.000 | **-0.459430** | 0.00 | 0.4 | ug/L |
| | Cd | 111 | 7.333 | 0.000 | **-0.090559** | 0.00 | 4.2 | ug/L |
| | Cd | 114 | 17.951 | 0.000 | **-0.077065** | 0.02 | 23.1 | ug/L |

00760

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 233621.852 | 233621.852 | | | | ug/L |
| \| | Sn | 120 | 801.256 | -0.000 | **0.046073** | 0.02 | 44.5 | ug/L |
| \| | Sb | 121 | 2052.942 | 0.007 | **1.612767** | 0.11 | 7.1 | ug/L |
| \| | Sb | 123 | 1645.002 | 0.005 | **1.732934** | 0.10 | 6.0 | ug/L |
| \| | Ba | 135 | 14.000 | -0.000 | **0.436340** | 0.01 | 1.4 | ug/L |
| \| | Ba | 137 | 32.000 | 0.000 | **0.480690** | 0.01 | 2.1 | ug/L |
| \| | Tb | 159 | 363137.646 | 0.000 | | | | ug/L |
| \|> | Ho | 165 | 393917.303 | 393917.303 | | | | ug/L |
| \| | Tl | 203 | 146.668 | 0.000 | **-0.584751** | 0.02 | 3.1 | ug/L |
| \| | Tl | 205 | 352.675 | 0.001 | **-0.504700** | 0.01 | 1.7 | ug/L |
| \| | Pb | 208 | 186.001 | 0.000 | **-0.781410** | 0.01 | 0.9 | ug/L |
| | Kr | 83 | 21.000 | 0.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.966 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 90.407 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.050 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 93.816 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-30A**
Sample Date/Time: Tuesday, February 16, 2010 13:25:48
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-30A.061
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 31198.831 | 0.016 | | | | ug/L |
| | Li | 7 | 17308.790 | 0.042 | **80.959111** | 1.50 | 1.8 | ug/L |
| | Be | 9 | 508.017 | 0.001 | **14.545516** | 0.68 | 4.7 | ug/L |
| | B | 11 | 8736.293 | 0.024 | **164.130752** | 3.91 | 2.4 | ug/L |
| | Na | 23 | 23147946.334 | 66.223 | **205373.527743** | 6301.31 | 3.1 | ug/L |
| | Mg | 24 | 2478272.534 | 7.083 | **30482.166022** | 1102.63 | 3.6 | ug/L |
| | Al | 27 | 4980134.922 | 14.211 | **18933.419727** | 261.72 | 1.4 | ug/L |
| | K | 39 | 961747.950 | 2.569 | **4463.123379** | 206.25 | 4.6 | ug/L |
| | Ca | 43 | 16160.975 | 0.046 | **15278.105579** | 637.31 | 4.2 | ug/L |
| > | Sc | 45 | 349260.338 | 349260.338 | | | | ug/L |
| | Ti | 49 | 540.686 | 0.000 | **6.645201** | 1.22 | 18.3 | ug/L |
| | Co | 59 | 32248.818 | 0.092 | **80.101473** | 1.81 | 2.3 | ug/L |
| | Ni | 60 | 8236.410 | 0.024 | **101.200521** | 3.43 | 3.4 | ug/L |
| | Ni | 62 | 1260.103 | 0.003 | **99.123031** | 4.32 | 4.4 | ug/L |
| | Cu | 63 | 2786.505 | 0.008 | **13.543202** | 0.36 | 2.7 | ug/L |
| | Cu | 65 | 1252.102 | 0.003 | **10.863747** | 0.24 | 2.2 | ug/L |
| | Zn | 66 | 20774.723 | 0.059 | **332.627689** | 16.65 | 5.0 | ug/L |
| | Zn | 67 | 4672.087 | 0.011 | **350.344308** | 18.37 | 5.2 | ug/L |
| | Zn | 68 | 14969.221 | 0.042 | **329.724656** | 4.67 | 1.4 | ug/L |
| | V | 51 | 1976.473 | 0.006 | **6.344443** | 1.53 | 24.0 | ug/L |
| | Cr | 52 | 4660.079 | 0.005 | **3.583986** | 0.38 | 10.5 | ug/L |
| | Cr | 53 | 15076.766 | 0.007 | **8.816828** | 9.63 | 109.2 | ug/L |
| | Mn | 55 | 588546.033 | 1.684 | **970.953429** | 23.33 | 2.4 | ug/L |
| | Fe | 54 | 695269.298 | 1.949 | **22880.917946** | 505.86 | 2.2 | ug/L |
| | Fe | 57 | 283108.998 | 0.806 | **22566.804007** | 456.38 | 2.0 | ug/L |
| | As | 75 | -449.225 | -0.000 | **-2.966644** | 2.74 | 92.5 | ug/L |
| | Se | 77 | 2088.950 | 0.000 | **-19.098285** | 11.99 | 62.8 | ug/L |
| | Se | 82 | 11.889 | 0.000 | **1.057287** | 0.61 | 57.2 | ug/L |
| | Sr | 88 | 136526.344 | 0.248 | **137.512439** | 4.18 | 3.0 | ug/L |
| > | Y | 89 | 550726.131 | 550726.131 | | | | ug/L |
| | Mo | 95 | 30.000 | -0.000 | **-1.265437** | 0.06 | 5.1 | ug/L |
| | Mo | 97 | 15.333 | -0.000 | **-0.792425** | 0.10 | 13.0 | ug/L |
| | Mo | 98 | 42.521 | -0.001 | **0.281365** | 0.03 | 10.3 | ug/L |
| | Ag | 107 | 18.667 | 0.000 | **-2.202263** | 0.02 | 1.0 | ug/L |
| | Ag | 109 | 9.333 | 0.000 | **-2.332466** | 0.01 | 0.5 | ug/L |
| | Cd | 111 | 7673.827 | 0.034 | **106.164354** | 3.95 | 3.7 | ug/L |
| | Cd | 114 | 17916.608 | 0.078 | **106.937207** | 3.00 | 2.8 | ug/L |

00763

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 228377.043 | 228377.043 | | | | ug/L |
| \| | Sn | 120 | 635.941 | -0.001 | **-0.226423** | 0.12 | 53.0 | ug/L |
| \| | Sb | 121 | 622.692 | 0.001 | **2.163749** | 0.19 | 8.7 | ug/L |
| \| | Sb | 123 | 515.845 | 0.001 | **2.664444** | 0.09 | 3.2 | ug/L |
| \| | Ba | 135 | 934.724 | 0.002 | **14.201093** | 0.52 | 3.7 | ug/L |
| \| | Ba | 137 | 1513.482 | 0.004 | **13.343182** | 0.26 | 2.0 | ug/L |
| \| | Tb | 159 | 363800.995 | -0.016 | | | | ug/L |
| \|> | Ho | 165 | 401784.143 | 401784.143 | | | | ug/L |
| \| | Tl | 203 | 192.002 | 0.000 | **-2.807851** | 0.06 | 2.2 | ug/L |
| \| | Tl | 205 | 454.680 | 0.001 | **-2.414421** | 0.02 | 1.0 | ug/L |
| \| | Pb | 208 | 3696.347 | 0.009 | **-0.958854** | 0.07 | 6.8 | ug/L |
| | Kr | 83 | 22.733 | 2.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.219 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 102.318 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 89.006 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.689 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-31A**
Sample Date/Time: Tuesday, February 16, 2010 13:28:30
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-31A.062
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 20281.426 | -0.017 | | | | ug/L |
| | Li | 7 | 200920.438 | 0.549 | **207.841075** | 5.88 | 2.8 | ug/L |
| | Be | 9 | 4354.566 | 0.012 | **19.999795** | 0.22 | 1.1 | ug/L |
| | B | 11 | 80344.368 | 0.221 | **300.292317** | 9.24 | 3.1 | ug/L |
| | Na | 23 | 196897692.854 | 545.594 | **338275.795659** | 3055.93 | 0.9 | ug/L |
| | Mg | 24 | 29095155.204 | 80.616 | **69279.704370** | 836.05 | 1.2 | ug/L |
| | Al | 27 | 149717528.944 | 414.917 | **110160.367138** | 3044.72 | 2.8 | ug/L |
| | K | 39 | 6665839.332 | 18.286 | **6299.565648** | 143.50 | 2.3 | ug/L |
| | Ca | 43 | 387296.152 | 1.073 | **71701.165023** | 568.88 | 0.8 | ug/L |
| > | Sc | 45 | 360854.603 | 360854.603 | | | | ug/L |
| | Ti | 49 | 5749.481 | 0.015 | **40.546566** | 0.82 | 2.0 | ug/L |
| | Co | 59 | 276208.824 | 0.765 | **129.679392** | 1.23 | 0.9 | ug/L |
| | Ni | 60 | 62265.661 | 0.173 | **148.365547** | 1.44 | 1.0 | ug/L |
| | Ni | 62 | 10273.529 | 0.028 | **160.118761** | 6.30 | 3.9 | ug/L |
| | Cu | 63 | 3955.684 | 0.011 | **3.762566** | 0.06 | 1.6 | ug/L |
| | Cu | 65 | 2429.718 | 0.007 | **4.520428** | 0.27 | 6.1 | ug/L |
| | Zn | 66 | 69227.447 | 0.191 | **214.352867** | 2.53 | 1.2 | ug/L |
| | Zn | 67 | 12196.332 | 0.031 | **214.579676** | 7.64 | 3.6 | ug/L |
| | Zn | 68 | 48304.546 | 0.133 | **206.897227** | 2.98 | 1.4 | ug/L |
| | V | 51 | 168103.619 | 0.467 | **81.651871** | 1.29 | 1.6 | ug/L |
| | Cr | 52 | 73354.105 | 0.195 | **40.338051** | 0.72 | 1.8 | ug/L |
| | Cr | 53 | 20284.711 | 0.020 | **25.189401** | 0.68 | 2.7 | ug/L |
| | Mn | 55 | 11306489.108 | 31.334 | **3617.299467** | 46.47 | 1.3 | ug/L |
| | Fe | 54 | 23557724.094 | 65.249 | **153046.244291** | 2543.14 | 1.7 | ug/L |
| | Fe | 57 | 9850651.848 | 27.295 | **152456.209503** | 1337.73 | 0.9 | ug/L |
| | As | 75 | 10069.636 | 0.005 | **7.671323** | 0.14 | 1.9 | ug/L |
| | Se | 77 | 2903.214 | -0.002 | **-50.961697** | 0.36 | 0.7 | ug/L |
| | Se | 82 | 100.625 | 0.000 | **0.593513** | 0.06 | 9.3 | ug/L |
| | Sr | 88 | 3510953.264 | 1.626 | **179.690223** | 1.87 | 1.0 | ug/L |
| > | Y | 89 | 2158591.543 | 2158591.543 | | | | ug/L |
| | Mo | 95 | 644.694 | -0.000 | **-0.025546** | 0.01 | 48.8 | ug/L |
| | Mo | 97 | 378.009 | -0.000 | **0.061677** | 0.01 | 12.6 | ug/L |
| | Mo | 98 | 937.619 | -0.000 | **0.265257** | 0.02 | 5.7 | ug/L |
| | Ag | 107 | 89.334 | 0.000 | **-0.387854** | 0.02 | 4.7 | ug/L |
| | Ag | 109 | 24.000 | 0.000 | **-0.454798** | 0.01 | 1.6 | ug/L |
| | Cd | 111 | 1036.903 | 0.005 | **3.068816** | 0.12 | 4.0 | ug/L |
| | Cd | 114 | 2430.592 | 0.012 | **3.112747** | 0.03 | 0.9 | ug/L |

00766

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 207218.493 | 207218.493 | | | | ug/L |
| \| | Sn | 120 | 676.467 | -0.000 | **0.023158** | 0.03 | 127.7 | ug/L |
| \| | Sb | 121 | 614.691 | 0.001 | **0.479807** | 0.01 | 1.7 | ug/L |
| L | Sb | 123 | 539.087 | 0.001 | **0.618752** | 0.04 | 6.2 | ug/L |
| Γ | Ba | 135 | 4565.356 | 0.010 | **11.037525** | 0.37 | 3.3 | ug/L |
| \| | Ba | 137 | 7940.098 | 0.018 | **10.905737** | 0.34 | 3.1 | ug/L |
| \| | Tb | 159 | 397847.586 | -0.038 | | | | ug/L |
| \|> | Ho | 165 | 450268.968 | 450268.968 | | | | ug/L |
| \| | Tl | 203 | 227.337 | 0.000 | **-0.555548** | 0.01 | 1.5 | ug/L |
| \| | Tl | 205 | 492.016 | 0.001 | **-0.486530** | 0.00 | 1.0 | ug/L |
| L | Pb | 208 | 36426.392 | 0.081 | **4.654346** | 0.22 | 4.7 | ug/L |
| | Kr | 83 | 124.801 | 104.134 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.380 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 401.037 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.760 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 107.236 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-31A**
Sample Date/Time: Tuesday, February 16, 2010 13:31:12
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-31A.063
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29242.836 | 0.008 | | | | ug/L |
| | Li | 7 | 55133.213 | 0.145 | **277.171666** | 22.06 | 8.0 | ug/L |
| | Be | 9 | 1286.108 | 0.004 | **31.639981** | 2.19 | 6.9 | ug/L |
| | B | 11 | 24613.317 | 0.067 | **458.025103** | 15.43 | 3.4 | ug/L |
| | Na | 23 | 53805544.278 | 149.693 | **464122.575188** | 39995.43 | 8.6 | ug/L |
| | Mg | 24 | 7727615.095 | 21.498 | **92412.259423** | 8405.00 | 9.1 | ug/L |
| | Al | 27 | 40083857.346 | 111.438 | **147984.875808** | 6270.78 | 4.2 | ug/L |
| | K | 39 | 2133498.761 | 5.755 | **9944.354497** | 1078.48 | 10.8 | ug/L |
| | Ca | 43 | 101473.347 | 0.282 | **94153.289990** | 5318.11 | 5.6 | ug/L |
| > | Sc | 45 | 359803.000 | 359803.000 | | | | ug/L |
| | Ti | 49 | 1857.558 | 0.004 | **55.974028** | 3.52 | 6.3 | ug/L |
| | Co | 59 | 71961.728 | 0.200 | **171.105161** | 6.11 | 3.6 | ug/L |
| | Ni | 60 | 16837.747 | 0.047 | **201.146313** | 8.20 | 4.1 | ug/L |
| | Ni | 62 | 2797.842 | 0.008 | **216.865313** | 7.77 | 3.6 | ug/L |
| | Cu | 63 | 1086.744 | 0.003 | **4.786708** | 0.17 | 3.5 | ug/L |
| | Cu | 65 | 637.360 | 0.002 | **4.104687** | 0.33 | 8.0 | ug/L |
| | Zn | 66 | 18488.875 | 0.051 | **287.509837** | 11.94 | 4.2 | ug/L |
| | Zn | 67 | 4430.613 | 0.010 | **313.427070** | 39.75 | 12.7 | ug/L |
| | Zn | 68 | 14206.441 | 0.039 | **303.753629** | 9.65 | 3.2 | ug/L |
| | V | 51 | 43443.828 | 0.122 | **106.897618** | 3.11 | 2.9 | ug/L |
| | Cr | 52 | 21221.243 | 0.051 | **51.229402** | 2.96 | 5.8 | ug/L |
| | Cr | 53 | 15772.825 | 0.008 | **15.127941** | 17.65 | 116.7 | ug/L |
| | Mn | 55 | 3013934.897 | 8.383 | **4837.663886** | 238.01 | 4.9 | ug/L |
| | Fe | 54 | 6228664.914 | 17.285 | **202724.755714** | 10342.17 | 5.1 | ug/L |
| | Fe | 57 | 2588057.281 | 7.193 | **200928.908742** | 8142.56 | 4.1 | ug/L |
| | As | 75 | 2465.444 | 0.003 | **23.597148** | 1.20 | 5.1 | ug/L |
| | Se | 77 | 2140.966 | -0.001 | **-158.095898** | 15.67 | 9.9 | ug/L |
| | Se | 82 | 28.650 | 0.000 | **1.813756** | 0.57 | 31.5 | ug/L |
| | Sr | 88 | 886409.127 | 0.973 | **537.865800** | 9.40 | 1.7 | ug/L |
| > | Y | 89 | 910688.841 | 910688.841 | | | | ug/L |
| | Mo | 95 | 182.002 | -0.000 | **-0.588198** | 0.07 | 11.9 | ug/L |
| | Mo | 97 | 109.334 | -0.000 | **-0.103452** | 0.04 | 38.2 | ug/L |
| | Mo | 98 | 261.858 | -0.000 | **0.896351** | 0.07 | 8.1 | ug/L |
| | Ag | 107 | 27.333 | 0.000 | **-2.173579** | 0.03 | 1.2 | ug/L |
| | Ag | 109 | 7.333 | 0.000 | **-2.339054** | 0.01 | 0.6 | ug/L |
| | Cd | 111 | 309.006 | 0.001 | **3.776765** | 0.25 | 6.5 | ug/L |
| | Cd | 114 | 740.199 | 0.003 | **3.985999** | 0.57 | 14.4 | ug/L |

00769

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 226593.197 | 226593.197 | | | | ug/L |
| \| | Sn | 120 | 643.925 | -0.001 | **-0.186006** | 0.12 | 65.4 | ug/L |
| \| | Sb | 121 | 412.011 | -0.000 | **1.282347** | 0.04 | 3.3 | ug/L |
| \| | Sb | 123 | 347.668 | -0.000 | **1.755651** | 0.10 | 5.5 | ug/L |
| \| | Ba | 135 | 1165.422 | 0.003 | **16.626833** | 0.43 | 2.6 | ug/L |
| \| | Ba | 137 | 2044.272 | 0.005 | **16.693562** | 0.75 | 4.5 | ug/L |
| \| | Tb | 159 | 375461.170 | -0.023 | | | | ug/L |
| \|> | Ho | 165 | 417842.501 | 417842.501 | | | | ug/L |
| \| | Tl | 203 | 71.334 | 0.000 | **-3.142452** | 0.01 | 0.4 | ug/L |
| \| | Tl | 205 | 139.335 | 0.000 | **-2.780668** | 0.02 | 0.7 | ug/L |
| \| | Pb | 208 | 9833.757 | 0.023 | **3.885999** | 0.33 | 8.6 | ug/L |
| | Kr | 83 | 44.733 | 24.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.094 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 169.194 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 88.311 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 99.514 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-31A**
Sample Date/Time: Tuesday, February 16, 2010 13:33:53
Sample Type: Sample
Sample Description: 25
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-31A.064
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 0.4000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 32200.345 | 0.016 | | | | ug/L |
| \| | Li | 7 | 12699.146 | 0.027 | **270.258419** | 17.89 | 6.6 | ug/L |
| \| | Be | 9 | 250.671 | 0.001 | **42.253774** | 3.22 | 7.6 | ug/L |
| \| | B | 11 | 5404.567 | 0.014 | **482.384664** | 21.27 | 4.4 | ug/L |
| \| | Na | 23 | 9538892.618 | 26.481 | **410876.056213** | 32324.33 | 7.9 | ug/L |
| \| | Mg | 24 | 1337528.067 | 3.709 | **79925.700197** | 6600.60 | 8.3 | ug/L |
| \| | Al | 27 | 7235604.698 | 20.069 | **133544.220562** | 5883.12 | 4.4 | ug/L |
| \| | K | 39 | 427298.932 | 1.004 | **8857.669830** | 802.70 | 9.1 | ug/L |
| \| | Ca | 43 | 18355.229 | 0.051 | **84363.401980** | 5423.79 | 6.4 | ug/L |
| \| > | Sc | 45 | 359981.518 | 359981.518 | | | | ug/L |
| \| | Ti | 49 | 596.023 | 0.000 | **40.686690** | 9.89 | 24.3 | ug/L |
| \| | Co | 59 | 13091.134 | 0.036 | **164.396220** | 7.55 | 4.6 | ug/L |
| \| | Ni | 60 | 3123.968 | 0.009 | **185.572160** | 7.82 | 4.2 | ug/L |
| \| | Ni | 62 | 549.353 | 0.001 | **202.516456** | 40.35 | 19.9 | ug/L |
| \| | Cu | 63 | 228.003 | 0.000 | **2.867116** | 0.63 | 21.9 | ug/L |
| \| | Cu | 65 | 181.336 | 0.000 | **-3.119108** | 1.70 | 54.4 | ug/L |
| \| | Zn | 66 | 4065.074 | 0.011 | **317.613537** | 6.07 | 1.9 | ug/L |
| \| | Zn | 67 | 2022.933 | 0.003 | **380.804539** | 73.31 | 19.3 | ug/L |
| \| | Zn | 68 | 2773.833 | 0.007 | **287.812182** | 14.13 | 4.9 | ug/L |
| \| | V | 51 | 8024.630 | 0.023 | **104.054657** | 16.33 | 15.7 | ug/L |
| \| | Cr | 52 | 6067.726 | 0.008 | **36.308141** | 3.51 | 9.7 | ug/L |
| \| | Cr | 53 | 14112.938 | 0.003 | **-132.242586** | 83.09 | 62.8 | ug/L |
| \| | Mn | 55 | 526751.655 | 1.464 | **4218.548608** | 203.54 | 4.8 | ug/L |
| \| | Fe | 54 | 1122602.126 | 3.080 | **180720.446785** | 9108.70 | 5.0 | ug/L |
| ⌊ | Fe | 57 | 457738.114 | 1.269 | **177376.635166** | 9351.70 | 5.3 | ug/L |
| ⌈ | As | 75 | 237.468 | 0.001 | **31.560863** | 6.16 | 19.5 | ug/L |
| \| | Se | 77 | 1866.894 | -0.000 | **-341.557404** | 131.40 | 38.5 | ug/L |
| \| | Se | 82 | 6.229 | -0.000 | **1.332798** | 3.36 | 251.9 | ug/L |
| \| | Sr | 88 | 157776.345 | 0.277 | **768.045416** | 22.05 | 2.9 | ug/L |
| \| > | Y | 89 | 569634.206 | 569634.206 | | | | ug/L |
| \| | Mo | 95 | 34.667 | -0.000 | **-6.187685** | 0.27 | 4.3 | ug/L |
| \| | Mo | 97 | 28.667 | -0.000 | **-3.095454** | 1.19 | 38.4 | ug/L |
| ⌊ | Mo | 98 | 53.708 | -0.001 | **1.648132** | 0.46 | 28.2 | ug/L |
| ⌈ | Ag | 107 | 12.000 | 0.000 | **-11.128194** | 0.08 | 0.7 | ug/L |
| \| | Ag | 109 | 5.333 | -0.000 | **-11.735158** | 0.07 | 0.6 | ug/L |
| \| | Cd | 111 | 60.667 | 0.000 | **1.340939** | 0.47 | 35.0 | ug/L |
| \| | Cd | 114 | 139.163 | 0.001 | **1.594209** | 0.23 | 14.2 | ug/L |

00772

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 234774.662 | 234774.662 | | | | ug/L |
| \| | Sn | 120 | 666.602 | -0.001 | **-0.933400** | 0.95 | 101.6 | ug/L |
| \| | Sb | 121 | 357.342 | -0.000 | **4.971960** | 0.43 | 8.6 | ug/L |
| \| | Sb | 123 | 277.749 | -0.000 | **6.570693** | 0.51 | 7.7 | ug/L |
| \| | Ba | 135 | 203.336 | 0.000 | **22.987936** | 1.10 | 4.8 | ug/L |
| \| | Ba | 137 | 363.342 | 0.001 | **23.969600** | 0.39 | 1.6 | ug/L |
| \| | Tb | 159 | 370007.902 | -0.019 | | | | ug/L |
| \|> | Ho | 165 | 409874.857 | 409874.857 | | | | ug/L |
| \| | Tl | 203 | 18.000 | 0.000 | **-16.402533** | 0.02 | 0.1 | ug/L |
| \| | Tl | 205 | 44.000 | 0.000 | **-14.422015** | 0.03 | 0.2 | ug/L |
| \| | Pb | 208 | 1858.757 | 0.004 | **-12.670143** | 0.42 | 3.3 | ug/L |
| | Kr | 83 | 21.867 | 1.200 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.142 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 105.830 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.499 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 97.616 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-32A**
Sample Date/Time: Tuesday, February 16, 2010 13:36:34
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-32A.065
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30444.588 | 0.013 | | | | ug/L |
| | Li | 7 | 31005.891 | 0.080 | **30.555366** | 3.11 | 10.2 | ug/L |
| | Be | 9 | 10.667 | 0.000 | **0.614952** | 0.01 | 2.3 | ug/L |
| | B | 11 | 12640.394 | 0.034 | **47.268131** | 3.49 | 7.4 | ug/L |
| | Na | 23 | 107470939.536 | 303.324 | **188072.935366** | 11384.72 | 6.1 | ug/L |
| | Mg | 24 | 32111499.588 | 90.629 | **77882.737735** | 5005.32 | 6.4 | ug/L |
| | Al | 27 | 26248.195 | 0.026 | **21.007831** | 2.00 | 9.5 | ug/L |
| | K | 39 | 1349638.909 | 3.623 | **1255.321230** | 84.77 | 6.8 | ug/L |
| | Ca | 43 | 549791.331 | 1.552 | **103708.992830** | 6843.33 | 6.6 | ug/L |
| > | Sc | 45 | 354661.242 | 354661.242 | | | | ug/L |
| | Ti | 49 | 602.024 | 0.000 | **1.736639** | 0.01 | 0.8 | ug/L |
| | Co | 59 | 1366.788 | 0.004 | **1.080931** | 0.03 | 2.7 | ug/L |
| | Ni | 60 | 744.703 | 0.002 | **1.765056** | 0.10 | 5.7 | ug/L |
| | Ni | 62 | 90.667 | 0.000 | **0.913423** | 0.15 | 16.1 | ug/L |
| | Cu | 63 | 1555.491 | 0.004 | **1.441517** | 0.09 | 6.5 | ug/L |
| | Cu | 65 | 245.337 | 0.001 | **0.016038** | 0.07 | 456.2 | ug/L |
| | Zn | 66 | 1248.101 | 0.003 | **4.022786** | 0.26 | 6.3 | ug/L |
| | Zn | 67 | 2206.983 | 0.004 | **19.501892** | 2.57 | 13.2 | ug/L |
| | Zn | 68 | 3013.924 | 0.008 | **12.742384** | 0.68 | 5.3 | ug/L |
| | V | 51 | 1070.262 | 0.004 | **0.811330** | 0.42 | 52.0 | ug/L |
| | Cr | 52 | 3078.616 | 0.000 | **-0.254380** | 0.06 | 22.6 | ug/L |
| | Cr | 53 | 14610.538 | 0.005 | **-1.704934** | 4.15 | 243.2 | ug/L |
| | Mn | 55 | 238898.550 | 0.674 | **77.516716** | 5.32 | 6.9 | ug/L |
| | Fe | 54 | 21352.960 | 0.019 | **48.583700** | 8.74 | 18.0 | ug/L |
| | Fe | 57 | 10412.400 | 0.025 | **150.396151** | 16.33 | 10.9 | ug/L |
| | As | 75 | -72.392 | 0.000 | **0.401050** | 0.53 | 131.3 | ug/L |
| | Se | 77 | 3082.620 | 0.003 | **44.228691** | 15.15 | 34.3 | ug/L |
| | Se | 82 | 191.073 | 0.000 | **5.802033** | 0.50 | 8.6 | ug/L |
| | Sr | 88 | 4393311.430 | 8.956 | **988.891094** | 84.68 | 8.6 | ug/L |
| > | Y | 89 | 491984.514 | 491984.514 | | | | ug/L |
| | Mo | 95 | 646.694 | 0.001 | **0.924724** | 0.11 | 12.0 | ug/L |
| | Mo | 97 | 391.343 | 0.001 | **0.993920** | 0.15 | 14.7 | ug/L |
| | Mo | 98 | 1025.109 | 0.001 | **1.233332** | 0.09 | 7.3 | ug/L |
| | Ag | 107 | 13.333 | 0.000 | **-0.443680** | 0.00 | 0.8 | ug/L |
| | Ag | 109 | 6.667 | 0.000 | **-0.468188** | 0.00 | 0.5 | ug/L |
| | Cd | 111 | 217.670 | 0.001 | **0.509448** | 0.04 | 7.6 | ug/L |
| | Cd | 114 | 518.270 | 0.002 | **0.537835** | 0.03 | 5.0 | ug/L |

00775

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 223283.926 | 223283.926 | | | | ug/L |
| \| | Sn | 120 | 654.448 | -0.001 | **-0.024479** | 0.01 | 53.4 | ug/L |
| \| | Sb | 121 | 1775.539 | 0.006 | **1.453204** | 0.13 | 8.8 | ug/L |
| \| | Sb | 123 | 1347.018 | 0.004 | **1.482222** | 0.09 | 6.1 | ug/L |
| \| | Ba | 135 | 215011.076 | 0.557 | **584.482518** | 41.64 | 7.1 | ug/L |
| \| | Ba | 137 | 378046.624 | 0.979 | **581.497331** | 36.90 | 6.3 | ug/L |
| \| | Tb | 159 | 345804.182 | -0.028 | | | | ug/L |
| \|> | Ho | 165 | 387015.188 | 387015.188 | | | | ug/L |
| \| | Tl | 203 | 45.333 | 0.000 | **-0.640029** | 0.01 | 0.8 | ug/L |
| \| | Tl | 205 | 122.001 | 0.000 | **-0.557804** | 0.00 | 0.2 | ug/L |
| \| | Pb | 208 | 92029.218 | 0.238 | **15.280208** | 1.06 | 7.0 | ug/L |
| | Kr | 83 | 25.133 | 4.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.692 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 91.404 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 87.021 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 92.172 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-33A**
Sample Date/Time: Tuesday, February 16, 2010 13:39:15
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-33A.066
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 29349.155 | 0.008 | | | | ug/L |
| \| | Li | 7 | 83153.121 | 0.223 | **84.688113** | 1.01 | 1.2 | ug/L |
| \| | Be | 9 | 2283.005 | 0.006 | **10.774250** | 0.11 | 1.0 | ug/L |
| \| | B | 11 | 10037.214 | 0.026 | **36.683405** | 0.49 | 1.3 | ug/L |
| \| | Na | 23 | 43971754.766 | 122.030 | **75673.866136** | 365.36 | 0.5 | ug/L |
| \| | Mg | 24 | 12636637.029 | 35.076 | **30149.607804** | 680.28 | 2.3 | ug/L |
| \| | Al | 27 | 9701559.037 | 26.894 | **7153.675621** | 218.89 | 3.1 | ug/L |
| \| | K | 39 | 2478994.848 | 6.699 | **2313.602534** | 65.95 | 2.9 | ug/L |
| \| | Ca | 43 | 304863.006 | 0.846 | **56538.895105** | 577.04 | 1.0 | ug/L |
| \|> | Sc | 45 | 360176.956 | 360176.956 | | | | ug/L |
| \| | Ti | 49 | 1128.750 | 0.002 | **5.650268** | 0.38 | 6.7 | ug/L |
| \| | Co | 59 | 74306.573 | 0.206 | **35.268201** | 0.75 | 2.1 | ug/L |
| \| | Ni | 60 | 14504.331 | 0.040 | **34.591210** | 0.37 | 1.1 | ug/L |
| \| | Ni | 62 | 2272.336 | 0.006 | **35.072076** | 2.30 | 6.6 | ug/L |
| \| | Cu | 63 | 940.057 | 0.002 | **0.812409** | 0.01 | 1.0 | ug/L |
| \| | Cu | 65 | 537.352 | 0.001 | **0.610289** | 0.15 | 24.3 | ug/L |
| \| | Zn | 66 | 24207.367 | 0.067 | **75.158344** | 1.48 | 2.0 | ug/L |
| \| | Zn | 67 | 5620.721 | 0.013 | **85.860990** | 4.26 | 5.0 | ug/L |
| \| | Zn | 68 | 18065.194 | 0.050 | **77.255889** | 1.79 | 2.3 | ug/L |
| \| | V | 51 | 53267.709 | 0.149 | **26.112985** | 0.34 | 1.3 | ug/L |
| \| | Cr | 52 | 43253.962 | 0.112 | **22.985450** | 0.60 | 2.6 | ug/L |
| \| | Cr | 53 | 20546.747 | 0.021 | **26.694711** | 2.75 | 10.3 | ug/L |
| \| | Mn | 55 | 4737720.636 | 13.155 | **1518.490152** | 40.93 | 2.7 | ug/L |
| \| | Fe | 54 | 3010183.910 | 8.318 | **19512.858534** | 570.63 | 2.9 | ug/L |
| ⌊ | Fe | 57 | 1236392.766 | 3.429 | **19158.353983** | 438.45 | 2.3 | ug/L |
| ⌈ | As | 75 | -220.926 | 0.000 | **0.167204** | 0.35 | 208.3 | ug/L |
| \| | Se | 77 | 2781.172 | 0.000 | **-1.737963** | 5.35 | 308.0 | ug/L |
| \| | Se | 82 | 30.528 | 0.000 | **0.535570** | 0.10 | 18.3 | ug/L |
| \| | Sr | 88 | 1742559.626 | 2.447 | **270.347434** | 6.63 | 2.5 | ug/L |
| \|> | Y | 89 | 712215.856 | 712215.856 | | | | ug/L |
| \| | Mo | 95 | 49.334 | -0.000 | **-0.239682** | 0.02 | 9.1 | ug/L |
| \| | Mo | 97 | 16.667 | -0.000 | **-0.165074** | 0.02 | 9.1 | ug/L |
| ⌊ | Mo | 98 | 39.635 | -0.001 | **0.043650** | 0.01 | 13.9 | ug/L |
| ⌈ | Ag | 107 | 22.667 | 0.000 | **-0.437509** | 0.00 | 0.7 | ug/L |
| \| | Ag | 109 | 7.333 | 0.000 | **-0.467781** | 0.00 | 0.3 | ug/L |
| \| | Cd | 111 | 935.557 | 0.004 | **2.546557** | 0.08 | 3.2 | ug/L |
| \| | Cd | 114 | 2225.038 | 0.010 | **2.626391** | 0.06 | 2.1 | ug/L |

00778

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 223632.143 | 223632.143 | | | | ug/L |
| \| | Sn | 120 | 621.830 | -0.001 | **-0.046417** | 0.03 | 56.2 | ug/L |
| \| | Sb | 121 | 389.343 | -0.000 | **0.241566** | 0.02 | 10.1 | ug/L |
| \| | Sb | 123 | 336.744 | -0.000 | **0.343658** | 0.00 | 1.1 | ug/L |
| \| | Ba | 135 | 4390.587 | 0.011 | **11.558870** | 0.26 | 2.3 | ug/L |
| \| | Ba | 137 | 7729.885 | 0.019 | **11.552307** | 0.29 | 2.6 | ug/L |
| \| | Tb | 159 | 370823.284 | -0.023 | | | | ug/L |
| \|> | Ho | 165 | 412697.434 | 412697.434 | | | | ug/L |
| \| | Tl | 203 | 41.333 | 0.000 | **-0.643816** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 141.335 | 0.000 | **-0.555285** | 0.01 | 0.9 | ug/L |
| \| | Pb | 208 | 8072.997 | 0.019 | **0.508177** | 0.02 | 4.6 | ug/L |
| | Kr | 83 | 34.800 | 14.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 98.196 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 132.320 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 87.157 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 98.288 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-34A**
Sample Date/Time: Tuesday, February 16, 2010 13:41:55
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-34A.067
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 30828.071 | 0.013 | | | | ug/L |
| | Li | 7 | 42256.497 | 0.110 | **42.107387** | 1.79 | 4.3 | ug/L |
| | Be | 9 | 10.000 | 0.000 | **0.611213** | 0.01 | 2.4 | ug/L |
| | B | 11 | 18611.154 | 0.051 | **69.400060** | 1.68 | 2.4 | ug/L |
| | Na | 23 | 43726493.982 | 122.214 | **75788.125529** | 3202.78 | 4.2 | ug/L |
| | Mg | 24 | 9083399.055 | 25.391 | **21827.619971** | 1785.66 | 8.2 | ug/L |
| | Al | 27 | 88535.006 | 0.199 | **67.046121** | 2.18 | 3.3 | ug/L |
| | K | 39 | 2696811.577 | 7.359 | **2540.403434** | 243.45 | 9.6 | ug/L |
| | Ca | 43 | 219314.468 | 0.613 | **40963.041985** | 1874.91 | 4.6 | ug/L |
| > | Sc | 45 | 357751.722 | 357751.722 | | | | ug/L |
| | Ti | 49 | 699.365 | 0.001 | **2.442939** | 0.52 | 21.3 | ug/L |
| | Co | 59 | 226.670 | 0.000 | **0.537036** | 0.01 | 2.6 | ug/L |
| | Ni | 60 | 269.338 | 0.001 | **0.605177** | 0.09 | 14.8 | ug/L |
| | Ni | 62 | 48.000 | -0.000 | **0.227284** | 0.20 | 86.0 | ug/L |
| | Cu | 63 | 893.385 | 0.002 | **0.773336** | 0.07 | 8.5 | ug/L |
| | Cu | 65 | 294.672 | 0.001 | **0.113112** | 0.02 | 20.3 | ug/L |
| | Zn | 66 | 686.697 | 0.002 | **2.235228** | 0.18 | 7.8 | ug/L |
| | Zn | 67 | 2205.650 | 0.003 | **19.036425** | 2.20 | 11.6 | ug/L |
| | Zn | 68 | 2276.338 | 0.006 | **9.420578** | 0.52 | 5.5 | ug/L |
| | V | 51 | 5081.144 | 0.015 | **2.757949** | 0.39 | 14.3 | ug/L |
| | Cr | 52 | 3331.388 | 0.001 | **-0.123110** | 0.08 | 66.2 | ug/L |
| | Cr | 53 | 15501.614 | 0.007 | **2.106989** | 3.87 | 183.9 | ug/L |
| | Mn | 55 | 5321.845 | 0.014 | **1.364801** | 0.14 | 10.1 | ug/L |
| | Fe | 54 | 24476.488 | 0.027 | **67.755734** | 6.08 | 9.0 | ug/L |
| | Fe | 57 | 6764.974 | 0.015 | **91.773241** | 3.86 | 4.2 | ug/L |
| | As | 75 | -327.367 | -0.000 | **-0.370049** | 0.13 | 34.6 | ug/L |
| | Se | 77 | 2611.110 | 0.002 | **25.766994** | 2.72 | 10.6 | ug/L |
| | Se | 82 | 17.964 | 0.000 | **0.442026** | 0.03 | 6.4 | ug/L |
| | Sr | 88 | 1369070.237 | 2.797 | **308.901580** | 15.30 | 5.0 | ug/L |
| > | Y | 89 | 489820.785 | 489820.785 | | | | ug/L |
| | Mo | 95 | 1392.126 | 0.002 | **2.347622** | 0.24 | 10.4 | ug/L |
| | Mo | 97 | 859.382 | 0.001 | **2.426716** | 0.34 | 13.9 | ug/L |
| | Mo | 98 | 2204.097 | 0.004 | **2.644305** | 0.08 | 3.2 | ug/L |
| | Ag | 107 | 8.000 | 0.000 | **-0.447437** | 0.00 | 0.6 | ug/L |
| | Ag | 109 | 9.333 | 0.000 | **-0.466461** | 0.00 | 0.6 | ug/L |
| | Cd | 111 | 12.333 | 0.000 | **-0.076170** | 0.01 | 17.9 | ug/L |
| | Cd | 114 | 22.980 | 0.000 | **-0.070581** | 0.01 | 14.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 228217.918 | 228217.918 | | | | ug/L |
| \| | Sn | 120 | 634.600 | -0.001 | **-0.046568** | 0.03 | 55.8 | ug/L |
| \| | Sb | 121 | 499.350 | 0.000 | **0.328929** | 0.06 | 17.6 | ug/L |
| \| | Sb | 123 | 393.087 | 0.000 | **0.397847** | 0.01 | 3.3 | ug/L |
| \| | Ba | 135 | 162636.657 | 0.408 | **428.539459** | 13.66 | 3.2 | ug/L |
| \| | Ba | 137 | 288178.688 | 0.723 | **429.755067** | 13.07 | 3.0 | ug/L |
| \| | Tb | 159 | 358691.197 | -0.022 | | | | ug/L |
| \|> | Ho | 165 | 398617.425 | 398617.425 | | | | ug/L |
| \| | Tl | 203 | 11.333 | -0.000 | **-0.659498** | 0.00 | 0.6 | ug/L |
| \| | Tl | 205 | 29.333 | -0.000 | **-0.579958** | 0.00 | 0.3 | ug/L |
| \| | Pb | 208 | 1980.100 | 0.005 | **-0.477672** | 0.01 | 2.8 | ug/L |
| | Kr | 83 | 21.600 | 0.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.534 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 91.002 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 88.944 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 94.935 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-35A**
Sample Date/Time: Tuesday, February 16, 2010 13:44:36
Sample Type: Sample
Sample Description: 1
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\10020428-35A.068
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 36230.442 | 0.023 | | | | ug/L |
| | Li | 7 | 12317.866 | 0.025 | **9.795868** | 0.44 | 4.4 | ug/L |
| | Be | 9 | 7.333 | 0.000 | **0.597938** | 0.02 | 3.6 | ug/L |
| | B | 11 | 24268.277 | 0.063 | **85.917423** | 0.54 | 0.6 | ug/L |
| | Na | 23 | 41063662.618 | 108.708 | **67414.396495** | 2501.94 | 3.7 | ug/L |
| | Mg | 24 | 201474.121 | 0.521 | **457.773431** | 16.80 | 3.7 | ug/L |
| | Al | 27 | 111602.925 | 0.248 | **79.877416** | 5.05 | 6.3 | ug/L |
| | K | 39 | 770946.827 | 1.858 | **648.202012** | 32.98 | 5.1 | ug/L |
| | Ca | 43 | 8961.222 | 0.023 | **1548.570980** | 24.11 | 1.6 | ug/L |
| > | Sc | 45 | 377713.239 | 377713.239 | | | | ug/L |
| | Ti | 49 | 928.056 | 0.001 | **3.800298** | 0.51 | 13.4 | ug/L |
| | Co | 59 | 224.003 | 0.000 | **0.529560** | 0.02 | 3.5 | ug/L |
| | Ni | 60 | 171.335 | 0.000 | **0.348688** | 0.05 | 13.5 | ug/L |
| | Ni | 62 | 76.000 | 0.000 | **0.598679** | 0.22 | 36.3 | ug/L |
| | Cu | 63 | 1312.779 | 0.003 | **1.119578** | 0.05 | 4.4 | ug/L |
| | Cu | 65 | 497.350 | 0.001 | **0.477804** | 0.16 | 34.2 | ug/L |
| | Zn | 66 | 461.347 | 0.001 | **1.450738** | 0.13 | 8.8 | ug/L |
| | Zn | 67 | 1712.191 | 0.002 | **7.578929** | 2.55 | 33.7 | ug/L |
| | Zn | 68 | 522.685 | 0.001 | **1.713937** | 0.25 | 14.8 | ug/L |
| | V | 51 | 2222.694 | 0.007 | **1.315805** | 0.23 | 17.7 | ug/L |
| | Cr | 52 | 3706.893 | 0.001 | **-0.015475** | 0.13 | 815.6 | ug/L |
| | Cr | 53 | 16241.142 | 0.007 | **1.500428** | 2.44 | 162.4 | ug/L |
| | Mn | 55 | 86782.369 | 0.229 | **26.204599** | 1.37 | 5.2 | ug/L |
| | Fe | 54 | 26441.811 | 0.029 | **71.661810** | 11.02 | 15.4 | ug/L |
| | Fe | 57 | 4755.471 | 0.008 | **56.568000** | 5.40 | 9.5 | ug/L |
| | As | 75 | -307.801 | 0.000 | **-0.248229** | 0.44 | 176.8 | ug/L |
| | Se | 77 | 2315.015 | 0.001 | **8.824971** | 1.62 | 18.4 | ug/L |
| | Se | 82 | 9.230 | 0.000 | **0.153065** | 0.12 | 80.7 | ug/L |
| | Sr | 88 | 57827.465 | 0.111 | **12.400054** | 0.20 | 1.6 | ug/L |
| > | Y | 89 | 519862.993 | 519862.993 | | | | ug/L |
| | Mo | 95 | 707.366 | 0.001 | **0.964301** | 0.03 | 3.5 | ug/L |
| | Mo | 97 | 423.345 | 0.001 | **1.015783** | 0.14 | 13.6 | ug/L |
| | Mo | 98 | 1106.600 | 0.002 | **1.256487** | 0.02 | 1.9 | ug/L |
| | Ag | 107 | 12.667 | 0.000 | **-0.445043** | 0.00 | 0.5 | ug/L |
| | Ag | 109 | 2.667 | -0.000 | **-0.471203** | 0.00 | 0.3 | ug/L |
| | Cd | 111 | 11.667 | 0.000 | **-0.080891** | 0.01 | 7.9 | ug/L |
| | Cd | 114 | 33.036 | 0.000 | **-0.061822** | 0.01 | 12.0 | ug/L |

00784

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 248656.611 | 248656.611 | | | | ug/L |
| \| | Sn | 120 | 687.954 | -0.001 | **-0.048192** | 0.00 | 7.8 | ug/L |
| \| | Sb | 121 | 362.009 | -0.000 | **0.185980** | 0.01 | 4.4 | ug/L |
| \| | Sb | 123 | 311.251 | -0.000 | **0.280014** | 0.01 | 4.9 | ug/L |
| \| | Ba | 135 | 5073.007 | 0.012 | **12.566323** | 0.16 | 1.3 | ug/L |
| \| | Ba | 137 | 9094.717 | 0.021 | **12.770608** | 0.21 | 1.7 | ug/L |
| \| | Tb | 159 | 390267.729 | -0.030 | | | | ug/L |
| \|> | Ho | 165 | 437519.959 | 437519.959 | | | | ug/L |
| \| | Tl | 203 | 7.333 | -0.000 | **-0.662026** | 0.00 | 0.3 | ug/L |
| \| | Tl | 205 | 22.667 | -0.000 | **-0.581990** | 0.00 | 0.2 | ug/L |
| \| | Pb | 208 | 6453.070 | 0.015 | **0.183651** | 0.05 | 29.4 | ug/L |
| | Kr | 83 | 21.667 | 1.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 102.977 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 96.584 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 96.910 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 104.200 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Tuesday, February 16, 2010 13:47:18
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 4.069
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 27954.934 | 0.006 | | | | ug/L |
| \| | Li | 7 | 114879.462 | 0.317 | **120.194377** | 3.56 | 3.0 | ug/L |
| \| | Be | 9 | 25178.672 | 0.071 | **115.246907** | 2.76 | 2.4 | ug/L |
| \| | B | 11 | 30607.352 | 0.085 | **115.977369** | 6.83 | 5.9 | ug/L |
| \| | Na | 23 | 3115760.877 | 8.755 | **5445.626488** | 108.53 | 2.0 | ug/L |
| \| | Mg | 24 | 2311156.058 | 6.528 | **5619.696724** | 39.17 | 0.7 | ug/L |
| \| | Al | 27 | 7119070.418 | 20.122 | **5355.719765** | 128.47 | 2.4 | ug/L |
| \| | K | 39 | 6434380.154 | 18.014 | **6205.882441** | 162.11 | 2.6 | ug/L |
| \| | Ca | 43 | 26394.635 | 0.074 | **4958.166388** | 29.23 | 0.6 | ug/L |
| \|> | Sc | 45 | 353225.966 | 353225.966 | | | | ug/L |
| \| | Ti | 49 | 12706.497 | 0.035 | **95.263825** | 2.77 | 2.9 | ug/L |
| \| | Co | 59 | 191721.561 | 0.543 | **92.179360** | 2.50 | 2.7 | ug/L |
| \| | Ni | 60 | 37552.834 | 0.106 | **91.504249** | 2.77 | 3.0 | ug/L |
| \| | Ni | 62 | 5614.056 | 0.016 | **89.093526** | 1.39 | 1.6 | ug/L |
| \| | Cu | 63 | 90702.689 | 0.257 | **90.698516** | 3.09 | 3.4 | ug/L |
| \| | Cu | 65 | 43705.249 | 0.124 | **91.881311** | 2.58 | 2.8 | ug/L |
| \| | Zn | 66 | 29400.102 | 0.083 | **93.175753** | 3.23 | 3.5 | ug/L |
| \| | Zn | 67 | 6107.760 | 0.015 | **97.874961** | 2.89 | 3.0 | ug/L |
| \| | Zn | 68 | 21348.281 | 0.060 | **93.259184** | 2.26 | 2.4 | ug/L |
| \| | V | 51 | 193662.107 | 0.550 | **96.129083** | 2.63 | 2.7 | ug/L |
| \| | Cr | 52 | 166795.802 | 0.464 | **96.528731** | 2.54 | 2.6 | ug/L |
| \| | Cr | 53 | 32735.585 | 0.057 | **90.793790** | 3.44 | 3.8 | ug/L |
| \| | Mn | 55 | 294185.536 | 0.833 | **95.902403** | 2.52 | 2.6 | ug/L |
| \| | Fe | 54 | 730329.045 | 2.029 | **4763.852762** | 175.85 | 3.7 | ug/L |
| ⌊ | Fe | 57 | 298063.983 | 0.841 | **4704.645816** | 137.75 | 2.9 | ug/L |
| ⌈ | As | 75 | 32048.111 | 0.066 | **99.215972** | 1.76 | 1.8 | ug/L |
| \| | Se | 77 | 14187.747 | 0.025 | **480.418700** | 7.55 | 1.6 | ug/L |
| \| | Se | 82 | 16311.581 | 0.033 | **505.702555** | 12.75 | 2.5 | ug/L |
| \| | Sr | 88 | 436633.938 | 0.891 | **98.493773** | 4.27 | 4.3 | ug/L |
| \|> | Y | 89 | 490080.505 | 490080.505 | | | | ug/L |
| \| | Mo | 95 | 51752.627 | 0.105 | **98.092568** | 3.79 | 3.9 | ug/L |
| \| | Mo | 97 | 32145.172 | 0.065 | **97.801264** | 2.02 | 2.1 | ug/L |
| ⌊ | Mo | 98 | 82198.425 | 0.167 | **98.147538** | 1.83 | 1.9 | ug/L |
| ⌈ | Ag | 107 | 151127.354 | 0.645 | **96.214081** | 3.60 | 3.7 | ug/L |
| \| | Ag | 109 | 143805.003 | 0.614 | **96.203800** | 3.19 | 3.3 | ug/L |
| \| | Cd | 111 | 36964.028 | 0.158 | **100.091748** | 3.43 | 3.4 | ug/L |
| \| | Cd | 114 | 85782.511 | 0.366 | **100.150857** | 2.79 | 2.8 | ug/L |

00787

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 234341.260 | 234341.260 | | | | ug/L |
| \| | Sn | 120 | 161384.224 | 0.686 | **97.760349** | 2.43 | 2.5 | ug/L |
| \| | Sb | 121 | 115420.170 | 0.491 | **95.881495** | 2.68 | 2.8 | ug/L |
| \| | Sb | 123 | 90714.220 | 0.386 | **97.247355** | 3.10 | 3.2 | ug/L |
| \| | Ba | 135 | 36976.174 | 0.090 | **94.980430** | 1.63 | 1.7 | ug/L |
| \| | Ba | 137 | 64413.350 | 0.157 | **93.634458** | 0.70 | 0.7 | ug/L |
| \| | Tb | 159 | 371910.859 | -0.015 | | | | ug/L |
| \|> | Ho | 165 | 410500.928 | 410500.928 | | | | ug/L |
| \| | Tl | 203 | 181169.054 | 0.442 | **95.576976** | 1.60 | 1.7 | ug/L |
| \| | Tl | 205 | 432182.093 | 1.054 | **96.111084** | 2.20 | 2.3 | ug/L |
| \| | Pb | 208 | 583530.573 | 1.424 | **95.361805** | 3.30 | 3.5 | ug/L |
| | Kr | 83 | 20.800 | 0.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 120.194 | | |
| Be | 9 | 115.247 | | |
| B | 11 | 115.977 | | |
| Na | 23 | 108.913 | | |
| Mg | 24 | 112.394 | | |
| Al | 27 | 105.014 | | |
| K | 39 | 124.118 | | |
| Ca | 43 | 99.163 | | |
| Sc | 45 | | 96.301 | |
| Ti | 49 | 95.264 | | |
| Co | 59 | 92.179 | | |
| Ni | 60 | 91.504 | | |
| Ni | 62 | 89.094 | | |
| Cu | 63 | 90.699 | | |
| Cu | 65 | 91.881 | | |
| Zn | 66 | 93.176 | | |
| Zn | 67 | 97.875 | | |
| Zn | 68 | 93.259 | | |
| V | 51 | 96.129 | | |
| Cr | 52 | 96.529 | | |
| Cr | 53 | 90.794 | | |
| Mn | 55 | 95.902 | | |
| Fe | 54 | 95.277 | | |
| Fe | 57 | 94.093 | | |
| As | 75 | 99.216 | | |
| Se | 77 | 96.084 | | |
| Se | 82 | 101.141 | | |
| Sr | 88 | 98.494 | | |
| Y | 89 | | 91.050 | |
| Mo | 95 | 98.093 | | |
| Mo | 97 | 97.801 | | |
| Mo | 98 | 98.148 | | |
| Ag | 107 | 96.214 | | |
| Ag | 109 | 96.204 | | |
| Cd | 111 | 100.092 | | |
| Cd | 114 | 100.151 | | |
| In | 115 | | 91.330 | |
| Sn | 120 | 97.760 | | |
| Sb | 121 | 95.881 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 97.247 | |
| Ba | 135 | 94.980 | |
| Ba | 137 | 93.634 | |
| Tb | 159 | | |
| Ho | 165 | | 97.765 |
| Tl | 203 | 95.577 | |
| Tl | 205 | 96.111 | |
| Pb | 208 | 95.362 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Tuesday, February 16, 2010 13:49:58
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\QC Std 6.070
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 29543.808 | 0.014 | | | | ug/L |
| | Li | 7 | 3206.002 | 0.002 | **1.065857** | 0.13 | 11.9 | ug/L |
| | Be | 9 | 8.667 | 0.000 | **0.607786** | 0.01 | 1.8 | ug/L |
| | B | 11 | 1191.426 | 0.002 | **3.758986** | 0.45 | 12.0 | ug/L |
| | Na | 23 | 13712.237 | -0.018 | **6.562042** | 1.28 | 19.5 | ug/L |
| | Mg | 24 | 833.383 | -0.011 | **1.362148** | 0.80 | 58.7 | ug/L |
| | Al | 27 | 3350.745 | -0.038 | **3.964410** | 0.48 | 12.1 | ug/L |
| | K | 39 | 47781.320 | -0.043 | **-5.861731** | 0.81 | 13.8 | ug/L |
| | Ca | 43 | 168.002 | -0.000 | **-4.094317** | 3.27 | 79.9 | ug/L |
| > | Sc | 45 | 336788.643 | 336788.643 | | | | ug/L |
| | Ti | 49 | 342.008 | -0.000 | **-0.120390** | 0.25 | 204.5 | ug/L |
| | Co | 59 | 74.667 | 0.000 | **0.467437** | 0.01 | 3.2 | ug/L |
| | Ni | 60 | 20.000 | 0.000 | **0.008421** | 0.02 | 224.3 | ug/L |
| | Ni | 62 | 33.333 | -0.000 | **0.029588** | 0.26 | 870.5 | ug/L |
| | Cu | 63 | 154.668 | 0.000 | **0.052997** | 0.03 | 60.1 | ug/L |
| | Cu | 65 | 108.001 | 0.000 | **-0.262065** | 0.01 | 2.4 | ug/L |
| | Zn | 66 | 77.334 | -0.000 | **0.345655** | 0.03 | 9.0 | ug/L |
| | Zn | 67 | 1308.112 | 0.001 | **2.936230** | 3.12 | 106.4 | ug/L |
| | Zn | 68 | 141.335 | -0.000 | **0.217098** | 0.12 | 54.7 | ug/L |
| | V | 51 | 487.973 | 0.002 | **0.532760** | 0.24 | 45.0 | ug/L |
| | Cr | 52 | 2859.866 | 0.000 | **-0.294242** | 0.09 | 31.9 | ug/L |
| | Cr | 53 | 13408.347 | 0.004 | **-4.246307** | 2.37 | 55.9 | ug/L |
| | Mn | 55 | 606.691 | 0.001 | **-0.146400** | 0.03 | 17.7 | ug/L |
| | Fe | 54 | 12012.115 | -0.006 | **-9.123520** | 3.53 | 38.7 | ug/L |
| | Fe | 57 | 807.376 | -0.002 | **-0.492268** | 0.94 | 190.1 | ug/L |
| | As | 75 | -393.320 | -0.000 | **-0.629293** | 0.39 | 62.6 | ug/L |
| | Se | 77 | 1824.883 | 0.000 | **-2.128788** | 3.75 | 176.1 | ug/L |
| | Se | 82 | 6.528 | 0.000 | **0.095193** | 0.04 | 39.1 | ug/L |
| | Sr | 88 | 203.336 | 0.000 | **0.170260** | 0.01 | 4.9 | ug/L |
| > | Y | 89 | 470518.659 | 470518.659 | | | | ug/L |
| | Mo | 95 | 84.667 | -0.000 | **-0.136329** | 0.01 | 9.7 | ug/L |
| | Mo | 97 | 49.334 | -0.000 | **-0.042136** | 0.07 | 164.9 | ug/L |
| | Mo | 98 | 133.115 | -0.000 | **0.176357** | 0.02 | 8.9 | ug/L |
| | Ag | 107 | 16.000 | 0.000 | **-0.442028** | 0.01 | 2.3 | ug/L |
| | Ag | 109 | 24.000 | 0.000 | **-0.456180** | 0.01 | 3.1 | ug/L |
| | Cd | 111 | 9.333 | 0.000 | **-0.084070** | 0.01 | 7.3 | ug/L |
| | Cd | 114 | 10.055 | 0.000 | **-0.086136** | 0.01 | 14.3 | ug/L |

**00790**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 224493.848 | 224493.848 | | | | ug/L |
| \| | Sn | 120 | 759.927 | -0.000 | **0.040139** | 0.01 | 18.0 | ug/L |
| \| | Sb | 121 | 1989.591 | 0.007 | **1.626747** | 0.06 | 3.4 | ug/L |
| \| | Sb | 123 | 1507.724 | 0.005 | **1.653206** | 0.09 | 5.5 | ug/L |
| \| | Ba | 135 | 21.333 | -0.000 | **0.456546** | 0.01 | 2.8 | ug/L |
| \| | Ba | 137 | 36.000 | 0.000 | **0.487379** | 0.00 | 0.9 | ug/L |
| \| | Tb | 159 | 350663.053 | -0.017 | | | | ug/L |
| \|> | Ho | 165 | 387740.489 | 387740.489 | | | | ug/L |
| \| | Tl | 203 | 120.668 | 0.000 | **-0.597736** | 0.01 | 1.5 | ug/L |
| \| | Tl | 205 | 330.674 | 0.001 | **-0.508473** | 0.00 | 0.1 | ug/L |
| \| | Pb | 208 | 158.001 | 0.000 | **-0.785816** | 0.00 | 0.4 | ug/L |
| | Kr | 83 | 17.733 | -2.933 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 91.819 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 87.416 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 87.493 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 92.345 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Tuesday, February 16, 2010 13:52:39
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\ICSA.071
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27619.121 | 0.013 | | | | ug/L |
| | Li | 7 | 3174.655 | 0.002 | **1.196078** | 0.14 | 11.6 | ug/L |
| | Be | 9 | 5.333 | 0.000 | **0.592922** | 0.02 | 2.5 | ug/L |
| | B | 11 | 1362.121 | 0.003 | **4.699104** | 0.16 | 3.3 | ug/L |
| | Na | 23 | 54342782.185 | 168.725 | **104623.797829** | 1924.49 | 1.8 | ug/L |
| | Mg | 24 | 39413566.617 | 122.370 | **105155.823027** | 2623.62 | 2.5 | ug/L |
| | Al | 27 | 121811920.927 | 378.302 | **100440.265644** | 2793.73 | 2.8 | ug/L |
| | K | 39 | 92136013.723 | 285.941 | **98374.236340** | 2189.80 | 2.2 | ug/L |
| | Ca | 43 | 470403.881 | 1.461 | **97618.357967** | 1289.99 | 1.3 | ug/L |
| > | Sc | 45 | 322004.967 | 322004.967 | | | | ug/L |
| | Ti | 49 | 241073.462 | 0.747 | **2038.013997** | 29.21 | 1.4 | ug/L |
| | Co | 59 | 3268.695 | 0.010 | **2.144895** | 0.08 | 3.7 | ug/L |
| | Ni | 60 | 1000.065 | 0.003 | **2.628725** | 0.05 | 1.8 | ug/L |
| | Ni | 62 | 628.026 | 0.002 | **10.475370** | 0.08 | 0.7 | ug/L |
| | Cu | 63 | 1883.564 | 0.006 | **1.956623** | 0.09 | 4.4 | ug/L |
| | Cu | 65 | 1085.410 | 0.003 | **2.011442** | 0.18 | 9.0 | ug/L |
| | Zn | 66 | 970.728 | 0.003 | **3.455007** | 0.13 | 3.7 | ug/L |
| | Zn | 67 | 1328.115 | 0.001 | **4.630237** | 1.31 | 28.4 | ug/L |
| | Zn | 68 | 330.674 | 0.001 | **1.159137** | 0.11 | 9.3 | ug/L |
| | V | 51 | 508.434 | 0.002 | **0.556003** | 0.15 | 27.6 | ug/L |
| | Cr | 52 | 5208.430 | 0.008 | **1.308374** | 0.11 | 8.1 | ug/L |
| | Cr | 53 | 11083.314 | -0.002 | **-13.937608** | 1.10 | 7.9 | ug/L |
| | Mn | 55 | 20118.944 | 0.062 | **6.860716** | 0.16 | 2.4 | ug/L |
| | Fe | 54 | 13223046.023 | 41.035 | **96251.920451** | 2488.56 | 2.6 | ug/L |
| | Fe | 57 | 5447558.157 | 16.917 | **94493.999364** | 1819.51 | 1.9 | ug/L |
| | As | 75 | -262.383 | 0.000 | **-0.241508** | 0.38 | 156.2 | ug/L |
| | Se | 77 | 2104.288 | 0.001 | **13.044145** | 0.59 | 4.5 | ug/L |
| | Se | 82 | -15.276 | -0.000 | **-0.632131** | 0.13 | 20.6 | ug/L |
| | Sr | 88 | 10077.267 | 0.022 | **2.593660** | 0.12 | 4.5 | ug/L |
| > | Y | 89 | 450533.766 | 450533.766 | | | | ug/L |
| | Mo | 95 | 1000731.081 | 2.222 | **2071.261738** | 102.44 | 4.9 | ug/L |
| | Mo | 97 | 609202.273 | 1.353 | **2022.338087** | 103.80 | 5.1 | ug/L |
| | Mo | 98 | 1568897.207 | 3.484 | **2039.214139** | 107.51 | 5.3 | ug/L |
| | Ag | 107 | 154.668 | 0.001 | **-0.340789** | 0.01 | 1.7 | ug/L |
| | Ag | 109 | 124.668 | 0.001 | **-0.378237** | 0.00 | 0.8 | ug/L |
| | Cd | 111 | 783.207 | 0.004 | **2.291521** | 0.13 | 5.6 | ug/L |
| | Cd | 114 | 1388.394 | 0.007 | **1.738500** | 0.17 | 9.6 | ug/L |

00793

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 207169.859 | 207169.859 | | | | ug/L |
| \| | Sn | 120 | 729.992 | 0.000 | **0.059630** | 0.01 | 19.3 | ug/L |
| \| | Sb | 121 | 665.362 | 0.001 | **0.527267** | 0.05 | 9.6 | ug/L |
| \| | Sb | 123 | 534.932 | 0.001 | **0.613861** | 0.04 | 6.6 | ug/L |
| \| | Ba | 135 | 510.017 | 0.001 | **1.910280** | 0.02 | 0.9 | ug/L |
| \| | Ba | 137 | 946.058 | 0.003 | **2.018655** | 0.02 | 1.0 | ug/L |
| \| | Tb | 159 | 310638.707 | -0.044 | | | | ug/L |
| \|> | Ho | 165 | 354069.685 | 354069.685 | | | | ug/L |
| \| | Tl | 203 | 273.338 | 0.001 | **-0.497503** | 0.02 | 3.4 | ug/L |
| \| | Tl | 205 | 634.026 | 0.002 | **-0.422416** | 0.01 | 2.5 | ug/L |
| \| | Pb | 208 | 1390.716 | 0.004 | **-0.548040** | 0.01 | 2.4 | ug/L |
| | Kr | 83 | 43.733 | 23.067 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 87.789 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 83.703 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 80.741 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 84.326 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Tuesday, February 16, 2010 13:55:20
Sample Type: Spike - 2 of 47
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002160907MS\ICSAB.072
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27805.706 | 0.012 | | | | ug/L |
| | Li | 7 | 3109.296 | 0.002 | **1.067952** | 0.16 | 14.6 | ug/L |
| | Be | 9 | 6.000 | 0.000 | **0.595933** | 0.02 | 2.8 | ug/L |
| | B | 11 | 1212.096 | 0.002 | **3.998050** | 0.29 | 7.1 | ug/L |
| | Na | 23 | 54389498.524 | 166.528 | **103262.002573** | 1487.30 | 1.4 | ug/L |
| | Mg | 24 | 38948546.858 | 119.287 | **102507.097116** | 885.09 | 0.9 | ug/L |
| | Al | 27 | 122731021.172 | 375.923 | **99808.594669** | 2162.88 | 2.2 | ug/L |
| | K | 39 | 91899236.303 | 281.279 | **96770.388247** | 612.56 | 0.6 | ug/L |
| | Ca | 43 | 483663.961 | 1.481 | **99002.541126** | 3113.69 | 3.1 | ug/L |
| > | Sc | 45 | 326492.519 | 326492.519 | | | | ug/L |
| | Ti | 49 | 243487.465 | 0.745 | **2030.444315** | 56.37 | 2.8 | ug/L |
| | Co | 59 | 148438.631 | 0.455 | **77.200509** | 0.87 | 1.1 | ug/L |
| | Ni | 60 | 28463.906 | 0.087 | **74.935730** | 0.42 | 0.6 | ug/L |
| | Ni | 62 | 4854.865 | 0.015 | **83.383418** | 1.28 | 1.5 | ug/L |
| | Cu | 63 | 66202.328 | 0.202 | **71.513187** | 0.81 | 1.1 | ug/L |
| | Cu | 65 | 32181.853 | 0.098 | **73.017930** | 0.97 | 1.3 | ug/L |
| | Zn | 66 | 10999.873 | 0.033 | **37.702782** | 1.46 | 3.9 | ug/L |
| | Zn | 67 | 2971.241 | 0.006 | **39.833222** | 1.97 | 4.9 | ug/L |
| | Zn | 68 | 7627.785 | 0.023 | **35.753397** | 1.63 | 4.6 | ug/L |
| | V | 51 | 151058.314 | 0.464 | **81.101844** | 1.80 | 2.2 | ug/L |
| | Cr | 52 | 129794.578 | 0.389 | **80.865018** | 1.60 | 2.0 | ug/L |
| | Cr | 53 | 26351.733 | 0.045 | **69.198992** | 3.66 | 5.3 | ug/L |
| | Mn | 55 | 240554.693 | 0.736 | **84.717956** | 1.85 | 2.2 | ug/L |
| | Fe | 54 | 13331541.528 | 40.796 | **95690.900344** | 1426.58 | 1.5 | ug/L |
| | Fe | 57 | 5482879.013 | 16.790 | **93785.328776** | 1559.65 | 1.7 | ug/L |
| | As | 75 | 10429.088 | 0.024 | **35.946778** | 1.15 | 3.2 | ug/L |
| | Se | 77 | 3088.621 | 0.003 | **56.680891** | 7.95 | 14.0 | ug/L |
| | Se | 82 | 1163.415 | 0.003 | **39.588172** | 0.97 | 2.5 | ug/L |
| | Sr | 88 | 10296.888 | 0.023 | **2.675078** | 0.03 | 1.2 | ug/L |
| > | Y | 89 | 445410.501 | 445410.501 | | | | ug/L |
| | Mo | 95 | 1016505.949 | 2.283 | **2127.475633** | 71.47 | 3.4 | ug/L |
| | Mo | 97 | 614860.862 | 1.381 | **2063.912953** | 70.83 | 3.4 | ug/L |
| | Mo | 98 | 1584644.417 | 3.558 | **2082.757932** | 79.90 | 3.8 | ug/L |
| | Ag | 107 | 27131.122 | 0.130 | **19.074652** | 0.57 | 3.0 | ug/L |
| | Ag | 109 | 25484.146 | 0.122 | **18.791113** | 0.18 | 0.9 | ug/L |
| | Cd | 111 | 13546.754 | 0.065 | **41.211029** | 0.88 | 2.1 | ug/L |
| | Cd | 114 | 31280.368 | 0.150 | **41.043939** | 0.87 | 2.1 | ug/L |

00796

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 208165.783 | 208165.783 | | | | ug/L |
| \| | Sn | 120 | 746.652 | 0.000 | **0.068743** | 0.04 | 62.4 | ug/L |
| \| | Sb | 121 | 467.348 | 0.000 | **0.339415** | 0.00 | 1.4 | ug/L |
| \| | Sb | 123 | 346.171 | 0.000 | **0.383150** | 0.02 | 4.1 | ug/L |
| \| | Ba | 135 | 546.019 | 0.001 | **2.002764** | 0.08 | 4.2 | ug/L |
| \| | Ba | 137 | 919.388 | 0.003 | **1.960868** | 0.05 | 2.8 | ug/L |
| \| | Tb | 159 | 314308.509 | -0.042 | | | | ug/L |
| \|> | Ho | 165 | 357215.783 | 357215.783 | | | | ug/L |
| \| | Tl | 203 | 250.004 | 0.001 | **-0.513158** | 0.00 | 0.7 | ug/L |
| \| | Tl | 205 | 588.022 | 0.002 | **-0.435671** | 0.00 | 0.5 | ug/L |
| \| | Pb | 208 | 1379.383 | 0.004 | **-0.552502** | 0.01 | 1.2 | ug/L |
| | Kr | 83 | 44.200 | 23.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 89.012 | |
| Ti | 49 | | | |
| Co | 59 | | | 93.820 |
| Ni | 60 | | | 90.384 |
| Ni | 62 | | | 91.135 |
| Cu | 63 | | | 86.946 |
| Cu | 65 | | | 88.758 |
| Zn | 66 | | | 85.619 |
| Zn | 67 | | | 88.007 |
| Zn | 68 | | | 86.486 |
| V | 51 | | | 100.682 |
| Cr | 52 | | | 99.446 |
| Cr | 53 | | | 103.921 |
| Mn | 55 | | | 97.322 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 90.471 |
| Se | 77 | | | 109.092 |
| Se | 82 | | | 100.551 |
| Sr | 88 | | | |
| Y | 89 | | 82.751 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 97.077 |
| Ag | 109 | | | 95.847 |
| Cd | 111 | | | 97.299 |
| Cd | 114 | | | 98.264 |
| In | 115 | | 81.129 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 85.075 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

1002170918MS
2-17-10
RD

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 1 | Cal Blank | | Blank |
| 2 | Std 1 | | Standard |
| 3 | Std 2 | | Standard |
| 4 | Std 3 | | Standard |
| 5 | Std 4 | | Standard |
| 6 | Std 5 | | Standard |
| 7 | QC Std 1 | | QC Std |
| 1 | QC Std 2 | | QC Std |
| 8 | QC Std 3 | | QC Std |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 2 | Sample |
| 10 | ICSAB | 3 | Spike - 2 of 2 |

00799

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 149 | 10020428-20A As 6020-W-ALL Batch # 87095 | 4 | Sample |
| 247 | 10020428-33A As 6020-W-ALL Batch # 87096 | 5 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 ICPMS_100217A | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 6 | Sample |
| 10 | ICSAB | 7 | Spike - 2 of 6 |

00800

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 101 | MBLK-87178 6020-W-ALL (North Carolina) * changed to 200.8 | 8 | Sample |
| 102 | LCS-87178 | 9 | Sample |
| 103 | 10020546-01C Ba, Cd, Cr, Fe, Na, Ag, Pb Rep 1 | 10 | Sample |
| 104 | 10020546-01CSD | 11 | Sample |
| 105 | 10020546-01CMS | 12 | Sample |
| 106 | 10020546-01CMSD | 13 | Sample |
| 107 | 10020546-01CPDS | 14 | Sample |
| 108 | 10020546-01CPDSD | 15 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 109 | 10020546-01CDUP | 16 | Sample |
| 110 | 10020546-02C As, Ba, Cd, Cr, Fe, Se, Na Ag, Pb Rep 1 | 17 | Sample |
| 111 | 10020546-03C | 18 | Sample |
| 112 | 10020546-04C | 19 | Sample |
| 113 | 10020546-05C | 20 | Sample |
| x5 114 | 10020546-01C As, Se ICPMS_100217B | 21 | Sample |
| 7 | QC Std 4 ICPMS_100217C | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 JP 2-17-10 | | QC Std |
| 9 | ICSA | 22 | Sample |
| 10 | ICSAB ICPMS_100217F JP 2-19-10 | 23 | Spike - 2 of 22 |

00801

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 212 | MBLK-87141 6020A-W-ALL | 24 | Sample |
| 213 | LCS-87141 | 25 | Sample |
| 214 | LCSD-87141 | 26 | Sample |
| 215 | 10020321-04D Fe | 27 | Sample |
| 216 | 10020321-04DDUP ↓ | 28 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 ICPMS_100217D | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA P2-1870 | 29 | Sample |
| 10 | ICSAB | 30 | Spike - 2 of 29 |

00802

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 201 | MBLK-87170 6020-W-ALL | 31 | Sample |
| 202 | LCS-87170 | 32 | Sample |
| 203 | 10010814-01C QC | 33 | Sample |
| 204 | 10010814-01CSD | 34 | Sample |
| 205 | 10010814-01CMS | 35 | Sample |
| 206 | 10010814-01CMSD | 36 | Sample |
| 207 | 10010814-01CPDS | 37 | Sample |
| 208 | 10010814-01CPDSD ICPMS_100217E | 38 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 JOP 2-18 10 | | QC Std |
| 209 | 10020533-01A B,Sr | 39 | Sample |
| 210 | 10020533-02A | 40 | Sample |
| 211 | 10020533-03A | 41 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 42 | Sample |
| 10 | ICSAB | 43 | Spike - 2 of 42 |
| 229 | MBLK-87102 6020-D | 44 | Sample |
| 230 | LCS-87102 | 45 | Sample |
| 231 | 10020427-02D As,Ba,Cd,Cr,Pb,Se,Ag | 46 | Sample |
| 232 | 10020427-02DSD | 47 | Sample |
| 233 | 10020427-02DMS | 48 | Sample |
| 234 | 10020427-02DMSD | 49 | Sample |
| 235 | 10020427-02DPDS | 50 | Sample |
| 236 | 10020427-02DPDSD | 51 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 237 | 10020427-01D | 52 | Sample |
| 238 | 10020427-03D | 53 | Sample |
| 239 | 10020427-04D | 54 | Sample |
| 240 | 10020427-05D | 55 | Sample |
| 241 | 10020427-06D | 56 | Sample |
| 242 | 10020427-07D | 57 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 58 | Sample |
| 10 | ICSAB | 59 | Spike - 2 of 58 |
| N/R 217 | MBLK-87140 | 60 | Sample |
| 218 | LCS-87140 | 61 | Sample |
| 219 | 10020444-01B | 62 | Sample |
| 220 | 10020444-01BSD | 63 | Sample |
| 221 | 10020444-01BMS | 64 | Sample |
| 222 | 10020444-01BMSD | 65 | Sample |
| 223 | 10020444-01BPDS | 66 | Sample |
| | | | 00803 |

N/R

| | | | |
|---|---|---|---|
| 224 | 10020444-01BPDSD | 67 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 225 | 10020471-01C | 68 | Sample |
| 226 | 10020484-01A | 69 | Sample |
| 227 | 10020484-02A | 70 | Sample |
| 228 | 10020484-03A | 71 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 72 | Sample |
| 10 | ICSAB | 73 | Spike - 2 of 72 |

00804

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 1 | Cal Blank | | Blank |
| 2 | Std 1 | | Standard |
| 3 | Std 2 | | Standard |
| 4 | Std 3 | | Standard |
| 5 | Std 4 | | Standard |
| 6 | Std 5 | | Standard |
| 7 | QC Std 1 | | QC Std |
| 1 | QC Std 2 | | QC Std |
| 8 | QC Std 3 | | QC Std |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 2 | Sample |
| 10 | ICSAB | 3 | Spike - 2 of 2 |

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 149 | 10020428-20A | 4 | Sample |
| 247 | 10020428-33A | 5 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 6 | Sample |
| 10 | ICSAB | 7 | Spike - 2 of 6 |

00806

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 101 | MBLK-87178 | 8 | Sample |
| 102 | LCS-87178 | 9 | Sample |
| 103 | 10020546-01C | 10 | Sample |
| 104 | 10020546-01CSD | 11 | Sample |
| 105 | 10020546-01CMS | 12 | Sample |
| 106 | 10020546-01CMSD | 13 | Sample |
| 107 | 10020546-01CPDS | 14 | Sample |
| 108 | 10020546-01CPDSD | 15 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 109 | 10020546-01CDUP | 16 | Sample |
| 110 | 10020546-02C | 17 | Sample |
| 111 | 10020546-03C | 18 | Sample |
| 112 | 10020546-04C | 19 | Sample |
| 113 | 10020546-05C | 20 | Sample |
| 114 | 10020546-01C | 21 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 22 | Sample |
| 10 | ICSAB | 23 | Spike - 2 of 22 |

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 212 | MBLK-87141 | 24 | Sample |
| 213 | LCS-87141 | 25 | Sample |
| 214 | LCSD-87141 | 26 | Sample |
| 215 | 10020321-04D | 27 | Sample |
| 216 | 10020321-04DDUP | 28 | Sample |
| 7 | QC Std 4 | | QC Std |
| 1 | QC Std 5 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 29 | Sample |
| 10 | ICSAB | 30 | Spike - 2 of 29 |

00808

# Run List

## Sample File Name: 11.18.08.sam

| AS Loc. | Sample ID | Batch Index | Sample Type |
|---|---|---|---|
| 201 | MBLK-87170 | 31 | Sample |
| 202 | LCS-87170 | 32 | Sample |
| 203 | 10010814-01C | 33 | Sample |
| 204 | 10010814-01CSD | 34 | Sample |
| 205 | 10010814-01CMS | 35 | Sample |
| 206 | 10010814-01CMSD | 36 | Sample |
| 207 | 10010814-01CPDS | 37 | Sample |
| 208 | 10010814-01CPDSD | 38 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 209 | 10020533-01A | 39 | Sample |
| 210 | 10020533-02A | 40 | Sample |
| 211 | 10020533-03A | 41 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 42 | Sample |
| 10 | ICSAB | 43 | Spike - 2 of 42 |
| 229 | MBLK-87102 | 44 | Sample |
| 230 | LCS-87102 | 45 | Sample |
| 231 | 10020427-02D | 46 | Sample |
| 232 | 10020427-02DSD | 47 | Sample |
| 233 | 10020427-02DMS | 48 | Sample |
| 234 | 10020427-02DMSD | 49 | Sample |
| 235 | 10020427-02DPDS | 50 | Sample |
| 236 | 10020427-02DPDSD | 51 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 237 | 10020427-01D | 52 | Sample |
| 238 | 10020427-03D | 53 | Sample |
| 239 | 10020427-04D | 54 | Sample |
| 240 | 10020427-05D | 55 | Sample |
| 241 | 10020427-06D | 56 | Sample |
| 242 | 10020427-07D | 57 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 58 | Sample |
| 10 | ICSAB | 59 | Spike - 2 of 58 |
| 217 | MBLK-87140 | 60 | Sample |
| 218 | LCS-87140 | 61 | Sample |
| 219 | 10020444-01B | 62 | Sample |
| 220 | 10020444-01BSD | 63 | Sample |
| 221 | 10020444-01BMS | 64 | Sample |
| 222 | 10020444-01BMSD | 65 | Sample |
| 223 | 10020444-01BPDS | 66 | Sample |
| | | | 00809 |

| | | | |
|---|---|---|---|
| 224 | 10020444-01BPDSD | 67 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 225 | 10020471-01C | 68 | Sample |
| 226 | 10020484-01A | 69 | Sample |
| 227 | 10020484-02A | 70 | Sample |
| 228 | 10020484-03A | 71 | Sample |
| 7 | QC Std 4 | | QC Std |
| 8 | QC Std 6 | | QC Std |
| 9 | ICSA | 72 | Sample |
| 10 | ICSAB | 73 | Spike - 2 of 72 |

**00810**

# Instrument Tuning Report

File Name: default.tun
File Path: C:\elandata\Tuning\default.tun

| Analyte | Exact Mass | Meas. Mass | Mass DAC | Res. DAC | Meas. Pk. Width | Custom Res. |
|---|---|---|---|---|---|---|
| Be | 9.012 | 9.026 | 2040 | 2095 | 0.594 | |
| C | 12.000 | 11.978 | 2756 | 2105 | 0.571 | |
| Mg | 23.985 | 23.978 | 5669 | 2100 | 0.568 | |
| Co | 58.933 | 58.929 | 14153 | 2135 | 0.578 | |
| In | 114.904 | 114.928 | 27768 | 2215 | 0.580 | |
| Ce | 139.905 | 139.879 | 33829 | 2240 | 0.608 | |
| Pb | 207.977 | 207.978 | 50399 | 2340 | 0.594 | |
| U | 238.050 | 238.075 | 57709 | 2380 | 0.580 | |

# Daily Performance Report

**Sample ID: Sample**
Sample Date/Time: Wednesday, February 17, 2010 09:13:55
Sample Description:
Method File: C:\Elandata\Method\Daily.mth
Dataset File: C:\Elandata\DataSet\Daily Performance\Sample.1477
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Dual Detector Mode: Dual

Acq. Dead Time(ns): 65
Current Dead Time (ns): 65

## Summary

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | Net Intens. SD | Net Intens. RSD |
|---|---|---|---|---|---|---|
| | Be | 9.0 | 3704.0 | 3703.958 | 57.381 | 1.5 |
| | C | 12.0 | 704610.2 | 704610.190 | 6321.855 | 0.9 |
| | Mg | 24.0 | 38793.8 | 38793.778 | 195.234 | 0.5 |
| | Co | 58.9 | 58611.4 | 58611.381 | 165.825 | 0.3 |
| | In | 114.9 | 154034.5 | 154034.452 | 930.855 | 0.6 |
| | Pb | 208.0 | 101085.1 | 101085.078 | 782.955 | 0.8 |
| | U | 238.1 | 212465.4 | 212465.432 | 1159.682 | 0.5 |
| ⌈> | Ce | 139.9 | 167219.4 | 167219.428 | 617.788 | 0.4 |
| ⌊ | CeO | 155.9 | 1618.9 | 0.010 | 0.000 | 1.9 |
| ⌈> | Ba | 137.9 | 138204.1 | 138204.127 | 431.043 | 0.3 |
| ⌊ | Ba++ | 69.0 | 1666.4 | 0.012 | 0.000 | 2.5 |
| | 220 | 220.0 | 0.7 | 0.700 | 0.462 | 66.1 |

## Current Optimization File Data

| Current Value | Description |
|---|---|
| 1.00 | Nebulizer Gas Flow [NEB] |
| 1.20 | Auxiliary Gas Flow |
| 16.00 | Plasma Gas Flow |
| 7.60 | Lens Voltage |
| 1450.00 | ICP RF Power |
| -1725.00 | Analog Stage Voltage |
| 900.00 | Pulse Stage Voltage |
| 0.00 | Quadrupole Rod Offset Std [QRO] |
| -17.00 | Cell Rod Offset Std [CRO] |
| 20.00 | Discriminator Threshold |
| -9.00 | Cell Path Voltage Std [CPV] |
| 0.00 | RPa |
| 0.25 | RPq |
| 1.00 | DRC Mode NEB |
| -6.00 | DRC Mode QRO |
| -1.00 | DRC Mode CRO |
| -15.00 | DRC Mode CPV |
| 0.00 | Cell Gas A |
| 0.00 | Cell Gas B |

## Current Autolens Data

| Analyte | Mass | Num of Pts | DAC Value | Maximum Intensity |
|---|---|---|---|---|
| Be | 9 | 36 | 5.8 | 7713.1 |
| Co | 59 | 36 | 6.2 | 67450.4 |

| | | | | |
|---|---|---|---|---|
| In | 115 | 36 | 7.8 | 154351.2 |

# Quantitative Analysis - Summary Report

**Sample ID: Cal Blank**
Sample Date/Time: Wednesday, February 17, 2010 09:26:57
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\Cal Blank.001
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23706.885 | | | | | ug/L |
| | Li | 7 | 2887.208 | | | | | ug/L |
| | Be | 9 | 4.667 | | | | | ug/L |
| | B | 11 | 661.362 | | | | | ug/L |
| | Na | 23 | 14012.778 | | | | | ug/L |
| | Mg | 24 | 966.730 | | | | | ug/L |
| | Al | 27 | 4393.005 | | | | | ug/L |
| | K | 39 | 56642.183 | | | | | ug/L |
| | Ca | 43 | 148.001 | | | | | ug/L |
| > | Sc | 45 | 345688.689 | | | | | ug/L |
| | Ti | 49 | 422.012 | | | | | ug/L |
| | Co | 59 | 54.667 | | | | | ug/L |
| | Ni | 60 | 13.333 | | | | | ug/L |
| | Ni | 62 | 29.333 | | | | | ug/L |
| | Cu | 63 | 60.667 | | | | | ug/L |
| | Cu | 65 | 50.667 | | | | | ug/L |
| | Zn | 66 | 206.670 | | | | | ug/L |
| | Zn | 67 | 916.055 | | | | | ug/L |
| | Zn | 68 | 174.669 | | | | | ug/L |
| | V | 51 | -394.863 | | | | | ug/L |
| | Cr | 52 | 2701.141 | | | | | ug/L |
| | Cr | 53 | 11707.584 | | | | | ug/L |
| | Mn | 55 | 378.676 | | | | | ug/L |
| | Fe | 54 | 12671.648 | | | | | ug/L |
| | Fe | 57 | 962.727 | | | | | ug/L |
| | As | 75 | -282.898 | | | | | ug/L |
| | Se | 77 | 1772.204 | | | | | ug/L |
| | Se | 82 | 0.981 | | | | | ug/L |
| | Sr | 88 | 94.667 | | | | | ug/L |
| > | Y | 89 | 496825.146 | | | | | ug/L |
| | Mo | 95 | 107.334 | | | | | ug/L |
| | Mo | 97 | 72.667 | | | | | ug/L |
| | Mo | 98 | 181.189 | | | | | ug/L |
| | Ag | 107 | 4.667 | | | | | ug/L |
| | Ag | 109 | 1.333 | | | | | ug/L |
| | Cd | 111 | 4.500 | | | | | ug/L |
| | Cd | 114 | 4.358 | | | | | ug/L |

| | | | | |
|---|---|---|---|---|
| \|> | In | 115 | 227548.157 | ug/L |
| \| | Sn | 120 | 778.613 | ug/L |
| \| | Sb | 121 | 464.014 | ug/L |
| \| | Sb | 123 | 411.088 | ug/L |
| ⌈ | Ba | 135 | 30.667 | ug/L |
| \| | Ba | 137 | 72.667 | ug/L |
| \| | Tb | 159 | 361463.216 | ug/L |
| \|> | Ho | 165 | 406141.992 | ug/L |
| \| | Tl | 203 | 7.333 | ug/L |
| \| | Tl | 205 | 16.000 | ug/L |
| ⌊ | Pb | 208 | 69.333 | ug/L |
| | Kr | 83 | 19.400 | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 1**
Sample Date/Time: Wednesday, February 17, 2010 09:29:38
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\Std 1.002
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24960.648 | 0.003 | | | | ug/L |
| | Li | 7 | 3952.350 | 0.003 | | | | ug/L |
| | Be | 9 | 248.671 | 0.001 | | | | ug/L |
| | B | 11 | 1060.073 | 0.001 | | | | ug/L |
| | Na | 23 | 19792.340 | 0.017 | | | | ug/L |
| | Mg | 24 | 4467.968 | 0.010 | | | | ug/L |
| | Al | 27 | 17610.202 | 0.038 | | | | ug/L |
| | K | 39 | 65175.668 | 0.024 | | | | ug/L |
| | Ca | 43 | 173.335 | 0.000 | | | | ug/L |
| > | Sc | 45 | 347069.776 | 347069.776 | | | | ug/L |
| | Ti | 49 | 595.356 | 0.000 | | | | ug/L |
| | Co | 59 | 2249.663 | 0.006 | | | | ug/L |
| | Ni | 60 | 420.011 | 0.001 | | | | ug/L |
| | Ni | 62 | 106.667 | 0.000 | | | | ug/L |
| | Cu | 63 | 1146.752 | 0.003 | | | | ug/L |
| | Cu | 65 | 608.024 | 0.002 | | | | ug/L |
| | Zn | 66 | 568.021 | 0.001 | | | | ug/L |
| | Zn | 67 | 1185.425 | 0.001 | | | | ug/L |
| | Zn | 68 | 456.014 | 0.001 | | | | ug/L |
| | V | 51 | 1774.371 | 0.006 | | | | ug/L |
| | Cr | 52 | 4641.402 | 0.006 | | | | ug/L |
| | Cr | 53 | 13005.664 | 0.004 | | | | ug/L |
| | Mn | 55 | 3744.245 | 0.010 | | | | ug/L |
| | Fe | 54 | 14367.312 | 0.005 | | | | ug/L |
| | Fe | 57 | 1494.812 | 0.002 | | | | ug/L |
| | As | 75 | -94.793 | 0.000 | | | | ug/L |
| | Se | 77 | 1977.588 | 0.000 | | | | ug/L |
| | Se | 82 | 181.917 | 0.000 | | | | ug/L |
| | Sr | 88 | 4965.602 | 0.010 | | | | ug/L |
| > | Y | 89 | 499477.176 | 499477.176 | | | | ug/L |
| | Mo | 95 | 598.023 | 0.001 | | | | ug/L |
| | Mo | 97 | 376.009 | 0.001 | | | | ug/L |
| | Mo | 98 | 995.918 | 0.002 | | | | ug/L |
| | Ag | 107 | 1638.174 | 0.007 | | | | ug/L |
| | Ag | 109 | 1579.496 | 0.007 | | | | ug/L |
| | Cd | 111 | 395.510 | 0.002 | | | | ug/L |
| | Cd | 114 | 891.915 | 0.004 | | | | ug/L |

| | | | | | |
|---|---|---|---|---|---|
| \|> | In | 115 | 227040.349 | 227040.349 | ug/L |
| \| | Sn | 120 | 2943.120 | 0.010 | ug/L |
| \| | Sb | 121 | 1752.200 | 0.006 | ug/L |
| \| | Sb | 123 | 1382.367 | 0.004 | ug/L |
| \| | Ba | 135 | 438.679 | 0.001 | ug/L |
| \| | Ba | 137 | 753.370 | 0.002 | ug/L |
| \| | Tb | 159 | 365972.122 | 0.023 | ug/L |
| \|> | Ho | 165 | 400712.406 | 400712.406 | ug/L |
| \| | Tl | 203 | 1938.911 | 0.005 | ug/L |
| \| | Tl | 205 | 4622.055 | 0.012 | ug/L |
| \| | Pb | 208 | 6385.035 | 0.016 | ug/L |
| | Kr | 83 | 19.400 | 0.000 | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 2**
Sample Date/Time: Wednesday, February 17, 2010 09:32:19
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\Std 2.003
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24237.822 | 0.002 | | | | ug/L |
| | Li | 7 | 7586.408 | 0.014 | **5.000000** | 0.23 | 4.6 | ug/L |
| | Be | 9 | 1130.750 | 0.003 | **5.000000** | 0.26 | 5.2 | ug/L |
| | B | 11 | 2034.937 | 0.004 | **5.000000** | 0.51 | 10.1 | ug/L |
| | Na | 23 | 39534.730 | 0.074 | **50.000000** | 2.42 | 4.8 | ug/L |
| | Mg | 24 | 20661.271 | 0.057 | **50.000000** | 5.25 | 10.5 | ug/L |
| | Al | 27 | 71265.662 | 0.195 | **55.000000** | 2.29 | 4.2 | ug/L |
| | K | 39 | 110895.313 | 0.159 | **50.000000** | 4.86 | 9.7 | ug/L |
| | Ca | 43 | 432.012 | 0.001 | **50.000000** | 8.24 | 16.5 | ug/L |
| > | Sc | 45 | 343709.680 | 343709.680 | | | | ug/L |
| | Ti | 49 | 1034.070 | 0.002 | **5.000000** | 0.42 | 8.4 | ug/L |
| | Co | 59 | 10463.116 | 0.030 | **5.000000** | 0.18 | 3.6 | ug/L |
| | Ni | 60 | 2102.954 | 0.006 | **5.000000** | 0.13 | 2.6 | ug/L |
| | Ni | 62 | 321.340 | 0.001 | **5.000000** | 0.26 | 5.3 | ug/L |
| | Cu | 63 | 4988.284 | 0.014 | **5.000000** | 0.08 | 1.7 | ug/L |
| | Cu | 65 | 2425.717 | 0.007 | **5.000000** | 0.34 | 6.9 | ug/L |
| | Zn | 66 | 1748.199 | 0.004 | **5.000000** | 0.20 | 4.0 | ug/L |
| | Zn | 67 | 1440.135 | 0.002 | **5.000000** | 1.07 | 21.5 | ug/L |
| | Zn | 68 | 1386.792 | 0.004 | **5.000000** | 0.62 | 12.4 | ug/L |
| | V | 51 | 9384.897 | 0.028 | **5.000000** | 0.24 | 4.8 | ug/L |
| | Cr | 52 | 11375.075 | 0.025 | **5.000000** | 0.22 | 4.5 | ug/L |
| | Cr | 53 | 14376.758 | 0.008 | **5.000000** | 0.95 | 19.0 | ug/L |
| | Mn | 55 | 15486.244 | 0.044 | **5.000000** | 0.07 | 1.4 | ug/L |
| | Fe | 54 | 20254.410 | 0.022 | **50.000000** | 2.23 | 4.5 | ug/L |
| | Fe | 57 | 3891.652 | 0.009 | **50.000000** | 2.14 | 4.3 | ug/L |
| | As | 75 | 1350.624 | 0.003 | **5.000000** | 0.45 | 8.9 | ug/L |
| | Se | 77 | 2413.712 | 0.001 | **25.000000** | 0.81 | 3.2 | ug/L |
| | Se | 82 | 826.705 | 0.002 | **25.000000** | 1.11 | 4.4 | ug/L |
| | Sr | 88 | 22801.079 | 0.047 | **5.000000** | 0.12 | 2.3 | ug/L |
| > | Y | 89 | 484098.305 | 484098.305 | | | | ug/L |
| | Mo | 95 | 2767.832 | 0.006 | **5.000000** | 0.32 | 6.4 | ug/L |
| | Mo | 97 | 1648.843 | 0.003 | **5.000000** | 0.22 | 4.3 | ug/L |
| | Mo | 98 | 4352.418 | 0.009 | **5.000000** | 0.24 | 4.8 | ug/L |
| | Ag | 107 | 7913.402 | 0.036 | **5.000000** | 0.17 | 3.5 | ug/L |
| | Ag | 109 | 7456.282 | 0.034 | **5.000000** | 0.35 | 7.0 | ug/L |
| | Cd | 111 | 1871.061 | 0.008 | **5.000000** | 0.35 | 6.9 | ug/L |
| | Cd | 114 | 4189.687 | 0.019 | **5.000000** | 0.29 | 5.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 221223.177 | 221223.177 | | | | ug/L |
| \| | Sn | 120 | 9031.248 | 0.037 | **5.000000** | 0.23 | 4.6 | ug/L |
| \| | Sb | 121 | 6537.447 | 0.028 | **5.000000** | 0.35 | 7.0 | ug/L |
| \| | Sb | 123 | 5188.580 | 0.022 | **5.000000** | 0.27 | 5.5 | ug/L |
| \| | Ba | 135 | 2159.637 | 0.005 | **5.000000** | 0.17 | 3.5 | ug/L |
| \| | Ba | 137 | 3652.868 | 0.009 | **5.000000** | 0.04 | 0.9 | ug/L |
| \| | Tb | 159 | 360065.861 | 0.013 | | | | ug/L |
| \|> | Ho | 165 | 398742.334 | 398742.334 | | | | ug/L |
| \| | Tl | 203 | 9186.149 | 0.023 | **5.000000** | 0.12 | 2.5 | ug/L |
| \| | Tl | 205 | 21852.998 | 0.055 | **5.000000** | 0.10 | 2.0 | ug/L |
| \| | Pb | 208 | 29555.896 | 0.074 | **5.000000** | 0.14 | 2.7 | ug/L |
| | Kr | 83 | 18.000 | -1.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 3**
Sample Date/Time: Wednesday, February 17, 2010 09:35:00
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\Std 3.004
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 22995.274 | -0.002 | | | | ug/L |
| | Li | 7 | 50510.676 | 0.139 | **50.006386** | 1.27 | 2.5 | ug/L |
| | Be | 9 | 11121.370 | 0.032 | **50.000862** | 1.22 | 2.4 | ug/L |
| | B | 11 | 13869.162 | 0.038 | **50.010587** | 1.05 | 2.1 | ug/L |
| | Na | 23 | 69883.101 | 0.163 | **101.286817** | 4.60 | 4.5 | ug/L |
| | Mg | 24 | 42885.883 | 0.122 | **100.618685** | 2.89 | 2.9 | ug/L |
| | Al | 27 | 188651.929 | 0.537 | **150.084009** | 9.11 | 6.1 | ug/L |
| | K | 39 | 175585.441 | 0.348 | **100.760095** | 9.27 | 9.2 | ug/L |
| | Ca | 43 | 796.041 | 0.002 | **100.765721** | 13.63 | 13.5 | ug/L |
| > | Sc | 45 | 343336.325 | 343336.325 | | | | ug/L |
| | Ti | 49 | 6598.830 | 0.018 | **50.016838** | 2.62 | 5.2 | ug/L |
| | Co | 59 | 100188.507 | 0.292 | **49.995050** | 2.10 | 4.2 | ug/L |
| | Ni | 60 | 19783.411 | 0.058 | **49.988465** | 1.81 | 3.6 | ug/L |
| | Ni | 62 | 3025.929 | 0.009 | **50.016965** | 0.42 | 0.8 | ug/L |
| | Cu | 63 | 47566.686 | 0.138 | **49.997428** | 2.01 | 4.0 | ug/L |
| | Cu | 65 | 22992.985 | 0.067 | **50.000698** | 1.64 | 3.3 | ug/L |
| | Zn | 66 | 15300.542 | 0.044 | **50.002961** | 2.26 | 4.5 | ug/L |
| | Zn | 67 | 3700.890 | 0.008 | **49.947699** | 3.10 | 6.2 | ug/L |
| | Zn | 68 | 11313.648 | 0.032 | **49.990574** | 1.90 | 3.8 | ug/L |
| | V | 51 | 96858.966 | 0.283 | **50.003529** | 1.57 | 3.1 | ug/L |
| | Cr | 52 | 86016.752 | 0.243 | **49.996841** | 3.38 | 6.8 | ug/L |
| | Cr | 53 | 23101.342 | 0.033 | **49.856423** | 7.60 | 15.3 | ug/L |
| | Mn | 55 | 148623.893 | 0.432 | **50.001152** | 2.53 | 5.1 | ug/L |
| | Fe | 54 | 26970.872 | 0.042 | **99.302272** | 11.35 | 11.4 | ug/L |
| | Fe | 57 | 6909.771 | 0.017 | **100.040251** | 6.51 | 6.5 | ug/L |
| | As | 75 | 16371.377 | 0.034 | **49.984663** | 1.49 | 3.0 | ug/L |
| | Se | 77 | 7909.399 | 0.013 | **249.968801** | 8.59 | 3.4 | ug/L |
| | Se | 82 | 8029.983 | 0.016 | **249.974307** | 8.09 | 3.2 | ug/L |
| | Sr | 88 | 222042.072 | 0.452 | **49.994816** | 2.20 | 4.4 | ug/L |
| > | Y | 89 | 490837.204 | 490837.204 | | | | ug/L |
| | Mo | 95 | 26264.813 | 0.053 | **49.989369** | 2.13 | 4.3 | ug/L |
| | Mo | 97 | 16301.932 | 0.033 | **49.999618** | 1.88 | 3.8 | ug/L |
| | Mo | 98 | 40705.896 | 0.083 | **49.989341** | 0.98 | 2.0 | ug/L |
| | Ag | 107 | 76895.814 | 0.343 | **49.992522** | 1.55 | 3.1 | ug/L |
| | Ag | 109 | 73047.888 | 0.326 | **49.994826** | 0.47 | 0.9 | ug/L |
| | Cd | 111 | 18242.442 | 0.081 | **49.993866** | 1.58 | 3.2 | ug/L |
| | Cd | 114 | 40922.494 | 0.183 | **49.994633** | 3.05 | 6.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 224176.931 | 224176.931 | | | | ug/L |
| \| | Sn | 120 | 81948.614 | 0.362 | **50.005517** | 2.83 | 5.7 | ug/L |
| \| | Sb | 121 | 60571.025 | 0.268 | **49.996413** | 2.08 | 4.2 | ug/L |
| \| | Sb | 123 | 47248.827 | 0.209 | **49.992793** | 1.81 | 3.6 | ug/L |
| \| | Ba | 135 | 18373.918 | 0.047 | **49.971704** | 1.45 | 2.9 | ug/L |
| \| | Ba | 137 | 32137.006 | 0.082 | **49.979431** | 1.38 | 2.8 | ug/L |
| \| | Tb | 159 | 359593.661 | 0.025 | | | | ug/L |
| \|> | Ho | 165 | 393042.695 | 393042.695 | | | | ug/L |
| \| | Tl | 203 | 90894.669 | 0.231 | **50.002822** | 2.25 | 4.5 | ug/L |
| \| | Tl | 205 | 214588.700 | 0.547 | **50.001634** | 3.35 | 6.7 | ug/L |
| \| | Pb | 208 | 291885.954 | 0.743 | **50.003513** | 2.95 | 5.9 | ug/L |
| | Kr | 83 | 20.867 | 1.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 4**
Sample Date/Time: Wednesday, February 17, 2010 09:37:41
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\Std 4.005
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 21684.961 | -0.006 | | | | ug/L |
| \| | Li | 7 | 101568.421 | 0.286 | **100.541361** | 2.61 | 2.6 | ug/L |
| \| | Be | 9 | 22984.289 | 0.067 | **100.514946** | 1.49 | 1.5 | ug/L |
| \| | B | 11 | 26749.774 | 0.076 | **99.785871** | 2.41 | 2.4 | ug/L |
| \| | Na | 23 | 597764.303 | 1.695 | **1000.168364** | 20.37 | 2.0 | ug/L |
| \| | Mg | 24 | 425996.754 | 1.234 | **999.961255** | 47.47 | 4.7 | ug/L |
| \| | Al | 27 | 1418649.160 | 4.105 | **1100.387122** | 17.29 | 1.6 | ug/L |
| \| | K | 39 | 1304457.244 | 3.622 | **1000.040588** | 51.92 | 5.2 | ug/L |
| \| | Ca | 43 | 5297.825 | 0.015 | **998.421105** | 39.67 | 4.0 | ug/L |
| \| > | Sc | 45 | 344484.715 | 344484.715 | | | | ug/L |
| \| | Ti | 49 | 12872.098 | 0.036 | **100.094641** | 2.66 | 2.7 | ug/L |
| \| | Co | 59 | 199032.745 | 0.578 | **99.842344** | 0.10 | 0.1 | ug/L |
| \| | Ni | 60 | 39769.207 | 0.115 | **100.048158** | 1.03 | 1.0 | ug/L |
| \| | Ni | 62 | 6134.446 | 0.018 | **100.282937** | 3.15 | 3.1 | ug/L |
| \| | Cu | 63 | 95858.985 | 0.278 | **100.103237** | 1.81 | 1.8 | ug/L |
| \| | Cu | 65 | 46214.440 | 0.134 | **100.073484** | 2.32 | 2.3 | ug/L |
| \| | Zn | 66 | 29876.601 | 0.086 | **99.656050** | 2.98 | 3.0 | ug/L |
| \| | Zn | 67 | 6009.013 | 0.015 | **99.030316** | 0.94 | 1.0 | ug/L |
| \| | Zn | 68 | 21982.038 | 0.063 | **99.616614** | 2.38 | 2.4 | ug/L |
| \| | V | 51 | 194926.968 | 0.567 | **100.019520** | 2.49 | 2.5 | ug/L |
| \| | Cr | 52 | 168003.139 | 0.480 | **99.811680** | 2.20 | 2.2 | ug/L |
| \| | Cr | 53 | 32480.433 | 0.060 | **99.154299** | 2.35 | 2.4 | ug/L |
| \| | Mn | 55 | 302575.003 | 0.877 | **100.273027** | 0.34 | 0.3 | ug/L |
| \| | Fe | 54 | 159130.546 | 0.425 | **1000.122087** | 17.36 | 1.7 | ug/L |
| ⌊ | Fe | 57 | 61725.360 | 0.176 | **1000.016456** | 15.38 | 1.5 | ug/L |
| ⌈ | As | 75 | 33320.847 | 0.068 | **99.994935** | 1.89 | 1.9 | ug/L |
| \| | Se | 77 | 14476.276 | 0.026 | **502.713629** | 9.89 | 2.0 | ug/L |
| \| | Se | 82 | 16546.058 | 0.033 | **502.137812** | 8.06 | 1.6 | ug/L |
| \| | Sr | 88 | 453243.481 | 0.918 | **100.269415** | 3.65 | 3.6 | ug/L |
| \| > | Y | 89 | 493996.638 | 493996.638 | | | | ug/L |
| \| | Mo | 95 | 53768.675 | 0.109 | **100.330488** | 3.53 | 3.5 | ug/L |
| \| | Mo | 97 | 33466.043 | 0.068 | **100.359936** | 4.37 | 4.4 | ug/L |
| ⌊ | Mo | 98 | 83473.225 | 0.169 | **100.374594** | 3.31 | 3.3 | ug/L |
| ⌈ | Ag | 107 | 154120.855 | 0.688 | **100.076819** | 1.31 | 1.3 | ug/L |
| \| | Ag | 109 | 146654.231 | 0.655 | **100.109279** | 1.13 | 1.1 | ug/L |
| \| | Cd | 111 | 36728.140 | 0.164 | **100.155620** | 0.81 | 0.8 | ug/L |
| \| | Cd | 114 | 84322.410 | 0.377 | **100.542395** | 0.12 | 0.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 223853.073 | 223853.073 | | | | ug/L |
| \| | Sn | 120 | 167871.558 | 0.746 | **100.550117** | 2.40 | 2.4 | ug/L |
| \| | Sb | 121 | 122731.786 | 0.546 | **100.323281** | 2.36 | 2.4 | ug/L |
| \| | Sb | 123 | 95510.849 | 0.425 | **100.293654** | 1.10 | 1.1 | ug/L |
| \| | Ba | 135 | 37096.568 | 0.093 | **100.061343** | 1.36 | 1.4 | ug/L |
| \| | Ba | 137 | 65094.446 | 0.164 | **100.100379** | 2.75 | 2.7 | ug/L |
| \| | Tb | 159 | 357769.029 | 0.011 | | | | ug/L |
| \|> | Ho | 165 | 396937.501 | 396937.501 | | | | ug/L |
| \| | Tl | 203 | 183365.288 | 0.462 | **99.968296** | 0.45 | 0.4 | ug/L |
| \| | Tl | 205 | 436914.426 | 1.101 | **100.122795** | 0.87 | 0.9 | ug/L |
| \| | Pb | 208 | 590522.148 | 1.488 | **100.019161** | 2.03 | 2.0 | ug/L |
| | Kr | 83 | 20.933 | 1.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

# Quantitative Analysis - Summary Report

**Sample ID: Std 5**
Sample Date/Time: Wednesday, February 17, 2010 09:40:21
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\Std 5.006
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 17379.292 | -0.017 | | | | ug/L |
| | Li | 7 | 193434.304 | 0.566 | **199.697868** | 6.93 | 3.5 | ug/L |
| | Be | 9 | 44630.496 | 0.133 | **199.905818** | 8.21 | 4.1 | ug/L |
| | B | 11 | 52117.449 | 0.153 | **200.380712** | 9.99 | 5.0 | ug/L |
| | Na | 23 | 5920615.320 | 17.545 | **10002.217730** | 276.35 | 2.8 | ug/L |
| | Mg | 24 | 4245661.822 | 12.606 | **10001.375025** | 249.22 | 2.5 | ug/L |
| | Al | 27 | 13330674.771 | 39.606 | **10203.043367** | 595.74 | 5.8 | ug/L |
| | K | 39 | 11343118.297 | 33.511 | **9993.913358** | 268.69 | 2.7 | ug/L |
| | Ca | 43 | 50074.497 | 0.148 | **9999.905560** | 404.69 | 4.0 | ug/L |
| > | Sc | 45 | 336720.518 | 336720.518 | | | | ug/L |
| | Ti | 49 | 25387.860 | 0.074 | **201.051740** | 11.50 | 5.7 | ug/L |
| | Co | 59 | 389271.278 | 1.156 | **200.023147** | 4.94 | 2.5 | ug/L |
| | Ni | 60 | 75893.924 | 0.225 | **199.138834** | 6.33 | 3.2 | ug/L |
| | Ni | 62 | 11838.436 | 0.035 | **199.694363** | 4.56 | 2.3 | ug/L |
| | Cu | 63 | 184364.761 | 0.548 | **199.460890** | 6.42 | 3.2 | ug/L |
| | Cu | 65 | 88436.325 | 0.263 | **199.278376** | 8.65 | 4.3 | ug/L |
| | Zn | 66 | 59303.753 | 0.176 | **200.670028** | 7.37 | 3.7 | ug/L |
| | Zn | 67 | 10603.304 | 0.029 | **199.718474** | 8.71 | 4.4 | ug/L |
| | Zn | 68 | 42424.677 | 0.126 | **199.649787** | 6.61 | 3.3 | ug/L |
| | V | 51 | 384821.881 | 1.145 | **200.378235** | 11.57 | 5.8 | ug/L |
| | Cr | 52 | 326868.139 | 0.964 | **200.141454** | 11.06 | 5.5 | ug/L |
| | Cr | 53 | 50530.872 | 0.116 | **199.596970** | 14.61 | 7.3 | ug/L |
| | Mn | 55 | 583711.085 | 1.734 | **199.636860** | 10.51 | 5.3 | ug/L |
| | Fe | 54 | 1454951.044 | 4.287 | **10000.629381** | 472.78 | 4.7 | ug/L |
| | Fe | 57 | 598410.859 | 1.775 | **10000.353906** | 366.84 | 3.7 | ug/L |
| | As | 75 | 65864.136 | 0.136 | **199.948737** | 7.96 | 4.0 | ug/L |
| | Se | 77 | 26167.768 | 0.050 | **996.685343** | 8.67 | 0.9 | ug/L |
| | Se | 82 | 32228.560 | 0.066 | **998.706760** | 20.63 | 2.1 | ug/L |
| | Sr | 88 | 897400.457 | 1.846 | **200.314706** | 8.15 | 4.1 | ug/L |
| > | Y | 89 | 486117.963 | 486117.963 | | | | ug/L |
| | Mo | 95 | 105886.751 | 0.218 | **200.142505** | 5.63 | 2.8 | ug/L |
| | Mo | 97 | 64744.842 | 0.133 | **199.456157** | 6.81 | 3.4 | ug/L |
| | Mo | 98 | 163968.403 | 0.337 | **200.073096** | 3.32 | 1.7 | ug/L |
| | Ag | 107 | 297919.920 | 1.357 | **199.489789** | 3.13 | 1.6 | ug/L |
| | Ag | 109 | 281673.877 | 1.283 | **199.247925** | 4.70 | 2.4 | ug/L |
| | Cd | 111 | 71844.288 | 0.327 | **199.961926** | 2.66 | 1.3 | ug/L |
| | Cd | 114 | 165221.310 | 0.753 | **200.118990** | 0.65 | 0.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 219546.815 | 219546.815 | | | | ug/L |
| \| | Sn | 120 | 324062.084 | 1.473 | **199.664095** | 1.80 | 0.9 | ug/L |
| \| | Sb | 121 | 243762.828 | 1.108 | **200.640251** | 0.62 | 0.3 | ug/L |
| \| | Sb | 123 | 189049.867 | 0.859 | **200.516995** | 3.33 | 1.7 | ug/L |
| \| | Ba | 135 | 73320.464 | 0.188 | **200.273156** | 4.74 | 2.4 | ug/L |
| \| | Ba | 137 | 128674.814 | 0.329 | **200.275846** | 6.44 | 3.2 | ug/L |
| \| | Tb | 159 | 351446.475 | 0.010 | | | | ug/L |
| \|> | Ho | 165 | 390649.933 | 390649.933 | | | | ug/L |
| \| | Tl | 203 | 356944.184 | 0.914 | **199.593121** | 7.85 | 3.9 | ug/L |
| \| | Tl | 205 | 850404.534 | 2.178 | **199.634548** | 8.85 | 4.4 | ug/L |
| \| | Pb | 208 | 1146863.916 | 2.938 | **199.519860** | 9.84 | 4.9 | ug/L |
| | Kr | 83 | 25.133 | 5.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | |
|---|---|
| Sb | 123 |
| Ba | 135 |
| Ba | 137 |
| Tb | 159 |
| Ho | 165 |
| Tl | 203 |
| Tl | 205 |
| Pb | 208 |
| Kr | 83 |

File Name: 02-17.cal
File Path: C:\Elandata\System\02-17.cal
Calibration Type: External Calibration

| Analyte | Mass | Curve Type | Slope | Intercept | Corr. Coeff. |
|---|---|---|---|---|---|
| Li | 6.015 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Li | 7.016 | Simple Linear | 0.002838124 | -0.000387116 | 0.999959 |
| Be | 9.012 | Simple Linear | 0.000663989 | -0.000142180 | 0.999971 |
| B | 11.009 | Simple Linear | 0.000762347 | 0.000186326 | 0.999981 |
| Na | 22.990 | Simple Linear | 0.001756220 | -0.021167104 | 0.999995 |
| Mg | 23.985 | Simple Linear | 0.001261425 | -0.009572929 | 0.999998 |
| Al | 26.982 | Simple Linear | 0.003887365 | -0.057163978 | 0.999993 |
| K | 38.964 | Simple Linear | 0.003346877 | 0.062596062 | 0.999966 |
| Ca | 42.959 | Simple Linear | 0.000014823 | 0.000137831 | 0.999996 |
| Sc | 44.956 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Ti | 48.948 | Simple Linear | 0.000370433 | -0.000238024 | 0.999890 |
| Co | 58.933 | Simple Linear | 0.005773941 | 0.001362884 | 0.999997 |
| Ni | 59.933 | Simple Linear | 0.001127937 | 0.000837744 | 0.999927 |
| Ni | 61.928 | Simple Linear | 0.000175595 | 0.000019509 | 0.999981 |
| Cu | 62.930 | Simple Linear | 0.002738785 | 0.001323264 | 0.999971 |
| Cu | 64.928 | Simple Linear | 0.001313554 | 0.000883229 | 0.999949 |
| Zn | 65.926 | Simple Linear | 0.000875596 | -0.000086355 | 0.999944 |
| Zn | 66.927 | Simple Linear | 0.000140364 | 0.000824507 | 0.999875 |
| Zn | 67.925 | Simple Linear | 0.000626051 | 0.000558954 | 0.999972 |
| V | 50.944 | Simple Linear | 0.005720273 | -0.001260231 | 0.999986 |
| Cr | 51.941 | Simple Linear | 0.004810081 | 0.001016743 | 0.999994 |
| Cr | 52.941 | Simple Linear | 0.000560446 | 0.004457244 | 0.999789 |
| Mn | 54.938 | Simple Linear | 0.008676659 | 0.001588039 | 0.999979 |
| Fe | 53.940 | Simple Linear | 0.000428768 | -0.000695321 | 1.000000 |
| Fe | 56.935 | Simple Linear | 0.000177582 | -0.000528150 | 1.000000 |
| As | 74.922 | Simple Linear | 0.000681289 | -0.000154880 | 0.999999 |
| Se | 76.920 | Simple Linear | 0.000050245 | 0.000185635 | 0.999925 |
| Se | 81.917 | Simple Linear | 0.000066368 | 0.000018318 | 0.999974 |
| Sr | 87.906 | Simple Linear | 0.009228426 | -0.002553172 | 0.999983 |
| Y | 88.905 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Mo | 94.906 | Simple Linear | 0.001088912 | -0.000316776 | 0.999986 |
| Mo | 96.906 | Simple Linear | 0.000666858 | 0.000041056 | 0.999957 |
| Mo | 97.906 | Simple Linear | 0.001685884 | -0.000346435 | 0.999984 |
| Ag | 106.905 | Simple Linear | 0.006787243 | 0.003070950 | 0.999974 |
| Ag | 108.905 | Simple Linear | 0.006420195 | 0.003834359 | 0.999944 |
| Cd | 110.904 | Simple Linear | 0.001636124 | 0.000079729 | 0.999997 |
| Cd | 113.904 | Simple Linear | 0.003766743 | -0.001248102 | 0.999967 |
| In | 114.904 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Sn | 119.902 | Simple Linear | 0.007371112 | 0.000848802 | 0.999956 |
| Sb | 120.904 | Simple Linear | 0.005539905 | -0.003247543 | 0.999949 |
| Sb | 122.904 | Simple Linear | 0.004295840 | -0.002025773 | 0.999965 |
| Ba | 134.906 | Simple Linear | 0.000936255 | 0.000163575 | 0.999988 |
| Ba | 136.905 | Simple Linear | 0.001644387 | 0.000010173 | 0.999989 |
| Tb | 158.925 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Ho | 164.930 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |
| Tl | 202.972 | Simple Linear | 0.004572814 | 0.001501176 | 0.999984 |
| Tl | 204.975 | Simple Linear | 0.010899380 | 0.002328512 | 0.999985 |
| Pb | 207.977 | Simple Linear | 0.014697345 | 0.005243963 | 0.999978 |

| | | | | | |
|---|---|---|---|---|---|
| Kr | 82.914 | Simple Linear | 0.000000000 | 0.000000000 | 0.000000 |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 1**
Sample Date/Time: Wednesday, February 17, 2010 09:43:02
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 1.007
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 20779.846 | -0.008 | | | | ug/L |
| | Li | 7 | 96987.799 | 0.275 | **97.128197** | 3.00 | 3.1 | ug/L |
| | Be | 9 | 22325.021 | 0.065 | **98.521049** | 2.65 | 2.7 | ug/L |
| | B | 11 | 26980.579 | 0.077 | **100.719299** | 0.88 | 0.9 | ug/L |
| | Na | 23 | 2918518.087 | 8.497 | **4850.245020** | 313.29 | 6.5 | ug/L |
| | Mg | 24 | 2152876.529 | 6.294 | **4997.201115** | 223.36 | 4.5 | ug/L |
| | Al | 27 | 6575332.886 | 19.217 | **4958.176532** | 171.25 | 3.5 | ug/L |
| | K | 39 | 6161762.402 | 17.860 | **5317.521042** | 349.31 | 6.6 | ug/L |
| | Ca | 43 | 25182.488 | 0.073 | **4929.230088** | 48.12 | 1.0 | ug/L |
| > | Sc | 45 | 342016.336 | 342016.336 | | | | ug/L |
| | Ti | 49 | 12613.001 | 0.036 | **96.900941** | 1.27 | 1.3 | ug/L |
| | Co | 59 | 194302.267 | 0.568 | **98.131181** | 1.00 | 1.0 | ug/L |
| | Ni | 60 | 37723.629 | 0.110 | **97.007241** | 1.15 | 1.2 | ug/L |
| | Ni | 62 | 5704.783 | 0.017 | **94.397902** | 2.70 | 2.9 | ug/L |
| | Cu | 63 | 91161.230 | 0.266 | **96.770014** | 2.04 | 2.1 | ug/L |
| | Cu | 65 | 43981.521 | 0.128 | **97.110886** | 3.81 | 3.9 | ug/L |
| | Zn | 66 | 29449.614 | 0.086 | **97.750459** | 1.12 | 1.1 | ug/L |
| | Zn | 67 | 5898.261 | 0.015 | **98.135189** | 3.56 | 3.6 | ug/L |
| | Zn | 68 | 21214.572 | 0.062 | **97.369271** | 3.02 | 3.1 | ug/L |
| | V | 51 | 188919.341 | 0.553 | **96.973902** | 3.18 | 3.3 | ug/L |
| | Cr | 52 | 163515.550 | 0.470 | **97.556200** | 1.77 | 1.8 | ug/L |
| | Cr | 53 | 31304.907 | 0.058 | **94.941425** | 1.30 | 1.4 | ug/L |
| | Mn | 55 | 287635.765 | 0.840 | **96.624867** | 1.03 | 1.1 | ug/L |
| | Fe | 54 | 717178.141 | 2.061 | **4807.273550** | 95.50 | 2.0 | ug/L |
| | Fe | 57 | 292269.250 | 0.852 | **4799.673527** | 54.94 | 1.1 | ug/L |
| | As | 75 | 31849.997 | 0.066 | **96.910898** | 3.26 | 3.4 | ug/L |
| | Se | 77 | 13734.251 | 0.025 | **485.670236** | 12.97 | 2.7 | ug/L |
| | Se | 82 | 15877.642 | 0.033 | **490.199208** | 17.85 | 3.6 | ug/L |
| | Sr | 88 | 434931.756 | 0.891 | **96.866535** | 1.55 | 1.6 | ug/L |
| > | Y | 89 | 487904.934 | 487904.934 | | | | ug/L |
| | Mo | 95 | 51824.662 | 0.106 | **97.650416** | 1.43 | 1.5 | ug/L |
| | Mo | 97 | 32108.894 | 0.066 | **98.399621** | 0.79 | 0.8 | ug/L |
| | Mo | 98 | 80658.407 | 0.165 | **98.055533** | 0.79 | 0.8 | ug/L |
| | Ag | 107 | 147599.283 | 0.669 | **98.155836** | 2.91 | 3.0 | ug/L |
| | Ag | 109 | 142449.868 | 0.646 | **100.040687** | 4.54 | 4.5 | ug/L |
| | Cd | 111 | 35833.477 | 0.163 | **99.295779** | 5.37 | 5.4 | ug/L |
| | Cd | 114 | 80992.863 | 0.367 | **97.876618** | 5.62 | 5.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 220643.237 | 220643.237 | | | | ug/L |
| \| | Sn | 120 | 160196.633 | 0.723 | **97.979977** | 3.96 | 4.0 | ug/L |
| \| | Sb | 121 | 118944.007 | 0.537 | **97.567870** | 2.73 | 2.8 | ug/L |
| \| | Sb | 123 | 92959.375 | 0.420 | **98.182501** | 3.38 | 3.4 | ug/L |
| \| | Ba | 135 | 35900.926 | 0.092 | **98.250330** | 2.06 | 2.1 | ug/L |
| \| | Ba | 137 | 62269.051 | 0.160 | **97.159726** | 1.72 | 1.8 | ug/L |
| \| | Tb | 159 | 354612.829 | 0.021 | | | | ug/L |
| \|> | Ho | 165 | 389346.330 | 389346.330 | | | | ug/L |
| \| | Tl | 203 | 175310.549 | 0.450 | **98.157025** | 1.87 | 1.9 | ug/L |
| \| | Tl | 205 | 418388.680 | 1.075 | **98.406974** | 2.58 | 2.6 | ug/L |
| \| | Pb | 208 | 562470.585 | 1.445 | **97.976561** | 4.21 | 4.3 | ug/L |
| | Kr | 83 | 23.133 | 3.733 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 97.128 | | |
| Be | 9 | 98.521 | | |
| B | 11 | 100.719 | | |
| Na | 23 | 97.005 | | |
| Mg | 24 | 99.944 | | |
| Al | 27 | 97.219 | | |
| K | 39 | 106.350 | | |
| Ca | 43 | 98.585 | | |
| Sc | 45 | | 98.938 | |
| Ti | 49 | 96.901 | | |
| Co | 59 | 98.131 | | |
| Ni | 60 | 97.007 | | |
| Ni | 62 | 94.398 | | |
| Cu | 63 | 96.770 | | |
| Cu | 65 | 97.111 | | |
| Zn | 66 | 97.750 | | |
| Zn | 67 | 98.135 | | |
| Zn | 68 | 97.369 | | |
| V | 51 | 96.974 | | |
| Cr | 52 | 97.556 | | |
| Cr | 53 | 94.941 | | |
| Mn | 55 | 96.625 | | |
| Fe | 54 | 96.145 | | |
| Fe | 57 | 95.993 | | |
| As | 75 | 96.911 | | |
| Se | 77 | 97.134 | | |
| Se | 82 | 98.040 | | |
| Sr | 88 | 96.867 | | |
| Y | 89 | | 98.205 | |
| Mo | 95 | 97.650 | | |
| Mo | 97 | 98.400 | | |
| Mo | 98 | 98.056 | | |
| Ag | 107 | 98.156 | | |
| Ag | 109 | 100.041 | | |
| Cd | 111 | 99.296 | | |
| Cd | 114 | 97.877 | | |
| In | 115 | | 96.966 | |
| Sn | 120 | 97.980 | | |
| Sb | 121 | 97.568 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 98.183 | |
| Ba | 135 | 98.250 | |
| Ba | 137 | 97.160 | |
| Tb | 159 | | |
| Ho | 165 | | 95.865 |
| Tl | 203 | 98.157 | |
| Tl | 205 | 98.407 | |
| Pb | 208 | 97.977 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 2**
Sample Date/Time: Wednesday, February 17, 2010 09:48:25
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 2.008
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24681.030 | 0.004 | | | | ug/L |
| | Li | 7 | 4880.884 | 0.006 | **2.254958** | 0.14 | 6.0 | ug/L |
| | Be | 9 | 498.683 | 0.001 | **2.405434** | 0.11 | 4.8 | ug/L |
| | B | 11 | 6366.634 | 0.017 | **21.837844** | 0.28 | 1.3 | ug/L |
| | Na | 23 | 65679.550 | 0.153 | **99.219606** | 7.75 | 7.8 | ug/L |
| | Mg | 24 | 18889.961 | 0.053 | **49.541546** | 5.09 | 10.3 | ug/L |
| | Al | 27 | 65620.387 | 0.181 | **61.163470** | 1.55 | 2.5 | ug/L |
| | K | 39 | 137759.598 | 0.242 | **53.526232** | 7.39 | 13.8 | ug/L |
| | Ca | 43 | 1089.411 | 0.003 | **178.825016** | 35.30 | 19.7 | ug/L |
| > | Sc | 45 | 339643.405 | 339643.405 | | | | ug/L |
| | Ti | 49 | 1020.735 | 0.002 | **5.462840** | 0.53 | 9.7 | ug/L |
| | Co | 59 | 4050.401 | 0.012 | **1.803968** | 0.13 | 7.0 | ug/L |
| | Ni | 60 | 852.047 | 0.002 | **1.449450** | 0.24 | 16.6 | ug/L |
| | Ni | 62 | 161.335 | 0.000 | **2.117649** | 0.38 | 17.8 | ug/L |
| | Cu | 63 | 1938.911 | 0.006 | **1.540264** | 0.17 | 11.2 | ug/L |
| | Cu | 65 | 1045.405 | 0.003 | **1.563038** | 0.23 | 14.6 | ug/L |
| | Zn | 66 | 2029.602 | 0.005 | **6.252113** | 0.72 | 11.5 | ug/L |
| | Zn | 67 | 1398.794 | 0.001 | **4.609142** | 1.18 | 25.5 | ug/L |
| | Zn | 68 | 1488.144 | 0.004 | **5.296997** | 0.34 | 6.4 | ug/L |
| | V | 51 | 19190.178 | 0.058 | **10.296099** | 0.45 | 4.4 | ug/L |
| | Cr | 52 | 9457.816 | 0.020 | **3.959252** | 0.35 | 8.8 | ug/L |
| | Cr | 53 | 12746.573 | 0.004 | **-1.347379** | 4.98 | 369.9 | ug/L |
| | Mn | 55 | 6452.706 | 0.018 | **1.882254** | 0.11 | 5.8 | ug/L |
| | Fe | 54 | 26679.495 | 0.042 | **99.455153** | 6.80 | 6.8 | ug/L |
| | Fe | 57 | 6792.331 | 0.017 | **99.969551** | 3.48 | 3.5 | ug/L |
| | As | 75 | 899.509 | 0.002 | **3.778246** | 0.47 | 12.4 | ug/L |
| | Se | 77 | 1767.536 | 0.000 | **-2.350019** | 1.60 | 68.2 | ug/L |
| | Se | 82 | 163.752 | 0.000 | **4.767170** | 0.30 | 6.2 | ug/L |
| | Sr | 88 | 4680.090 | 0.009 | **1.298754** | 0.01 | 1.1 | ug/L |
| > | Y | 89 | 486339.999 | 486339.999 | | | | ug/L |
| | Mo | 95 | 1197.427 | 0.002 | **2.354161** | 0.18 | 7.7 | ug/L |
| | Mo | 97 | 700.032 | 0.001 | **1.878207** | 0.24 | 12.9 | ug/L |
| | Mo | 98 | 1807.327 | 0.003 | **2.193564** | 0.07 | 3.0 | ug/L |
| | Ag | 107 | 1624.171 | 0.007 | **0.621498** | 0.04 | 6.5 | ug/L |
| | Ag | 109 | 1592.165 | 0.007 | **0.518180** | 0.06 | 11.0 | ug/L |
| | Cd | 111 | 736.535 | 0.003 | **1.965408** | 0.09 | 4.7 | ug/L |
| | Cd | 114 | 1672.530 | 0.008 | **2.324478** | 0.07 | 3.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 222318.702 | 222318.702 | | | | ug/L |
| \| | Sn | 120 | 8836.989 | 0.036 | **4.815235** | 0.14 | 3.0 | ug/L |
| \| | Sb | 121 | 8246.418 | 0.035 | **6.916772** | 0.20 | 3.0 | ug/L |
| L | Sb | 123 | 6333.103 | 0.027 | **6.685758** | 0.31 | 4.7 | ug/L |
| ⌈ | Ba | 135 | 1788.208 | 0.005 | **4.742987** | 0.31 | 6.6 | ug/L |
| \| | Ba | 137 | 3210.670 | 0.008 | **4.993075** | 0.17 | 3.4 | ug/L |
| \| | Tb | 159 | 347387.619 | 0.019 | | | | ug/L |
| \|> | Ho | 165 | 382253.161 | 382253.161 | | | | ug/L |
| \| | Tl | 203 | 3941.010 | 0.010 | **1.922952** | 0.10 | 5.1 | ug/L |
| \| | Tl | 205 | 9177.472 | 0.024 | **1.985721** | 0.04 | 1.8 | ug/L |
| L | Pb | 208 | 6104.953 | 0.016 | **0.718393** | 0.03 | 3.9 | ug/L |
| | Kr | 83 | 23.400 | 4.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 112.748 | | |
| Be | 9 | 120.272 | | |
| B | 11 | 109.189 | | |
| Na | 23 | 99.220 | | |
| Mg | 24 | 99.083 | | |
| Al | 27 | 122.327 | | |
| K | 39 | 71.368 | | |
| Ca | 43 | 89.413 | | |
| Sc | 45 | | 98.251 | |
| Ti | 49 | 109.257 | | |
| Co | 59 | 90.198 | | |
| Ni | 60 | 72.472 | | |
| Ni | 62 | 105.882 | | |
| Cu | 63 | 77.013 | | |
| Cu | 65 | 78.152 | | |
| Zn | 66 | 104.202 | | |
| Zn | 67 | 76.819 | | |
| Zn | 68 | 88.283 | | |
| V | 51 | 102.961 | | |
| Cr | 52 | 98.981 | | |
| Cr | 53 | -33.684 | | |
| Mn | 55 | 94.113 | | |
| Fe | 54 | 99.455 | | |
| Fe | 57 | 99.970 | | |
| As | 75 | 94.456 | | |
| Se | 77 | -47.000 | | |
| Se | 82 | 95.343 | | |
| Sr | 88 | 129.875 | | |
| Y | 89 | | 97.890 | |
| Mo | 95 | 117.708 | | |
| Mo | 97 | 93.910 | | |
| Mo | 98 | 109.678 | | |
| Ag | 107 | 62.150 | | |
| Ag | 109 | 51.818 | | |
| Cd | 111 | 98.270 | | |
| Cd | 114 | 116.224 | | |
| In | 115 | | 97.702 | |
| Sn | 120 | 120.381 | | |
| Sb | 121 | 138.335 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 133.715 | |
| Ba | 135 | 94.860 | |
| Ba | 137 | 99.861 | |
| Tb | 159 | | |
| Ho | 165 | | 94.118 |
| Tl | 203 | 96.148 | |
| Tl | 205 | 99.286 | |
| Pb | 208 | 71.839 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 3**
Sample Date/Time: Wednesday, February 17, 2010 09:53:15
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 3.009
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24507.430 | 0.005 | | | | ug/L |
| | Li | 7 | 2853.864 | 0.000 | **0.221376** | 0.16 | 71.1 | ug/L |
| | Be | 9 | 6.000 | 0.000 | **0.221041** | 0.01 | 4.2 | ug/L |
| | B | 11 | 910.054 | 0.001 | **0.840960** | 0.05 | 5.8 | ug/L |
| | Na | 23 | 10607.330 | -0.009 | **7.162703** | 1.24 | 17.3 | ug/L |
| | Mg | 24 | 166.669 | -0.002 | **5.769726** | 0.14 | 2.4 | ug/L |
| | Al | 27 | 955.059 | -0.010 | **12.176028** | 0.03 | 0.2 | ug/L |
| | K | 39 | 47815.250 | -0.020 | **-24.631699** | 2.92 | 11.9 | ug/L |
| | Ca | 43 | 117.334 | -0.000 | **-14.325327** | 4.59 | 32.1 | ug/L |
| > | Sc | 45 | 332048.381 | 332048.381 | | | | ug/L |
| | Ti | 49 | 354.675 | -0.000 | **0.229257** | 0.33 | 144.2 | ug/L |
| | Co | 59 | 49.334 | -0.000 | **-0.237691** | 0.01 | 4.0 | ug/L |
| | Ni | 60 | 15.333 | 0.000 | **-0.735920** | 0.03 | 3.4 | ug/L |
| | Ni | 62 | 30.667 | 0.000 | **-0.068433** | 0.04 | 56.3 | ug/L |
| | Cu | 63 | 104.001 | 0.000 | **-0.432870** | 0.01 | 1.6 | ug/L |
| | Cu | 65 | 68.000 | 0.000 | **-0.628153** | 0.03 | 4.3 | ug/L |
| | Zn | 66 | 89.334 | -0.000 | **-0.277031** | 0.05 | 18.4 | ug/L |
| | Zn | 67 | 1032.069 | 0.000 | **-2.609019** | 1.13 | 43.4 | ug/L |
| | Zn | 68 | 117.334 | -0.000 | **-1.136231** | 0.22 | 19.2 | ug/L |
| | V | 51 | 819.957 | 0.004 | **0.852516** | 0.22 | 25.9 | ug/L |
| | Cr | 52 | 2676.466 | 0.000 | **-0.160036** | 0.03 | 20.6 | ug/L |
| | Cr | 53 | 11531.305 | 0.001 | **-6.416124** | 1.15 | 17.9 | ug/L |
| | Mn | 55 | 369.342 | 0.000 | **-0.181074** | 0.01 | 2.9 | ug/L |
| | Fe | 54 | 11679.430 | -0.001 | **-1.829585** | 1.65 | 90.0 | ug/L |
| | Fe | 57 | 718.700 | -0.001 | **-0.518681** | 0.38 | 72.4 | ug/L |
| | As | 75 | -309.506 | -0.000 | **0.114605** | 0.21 | 182.4 | ug/L |
| | Se | 77 | 1596.166 | -0.000 | **-8.418587** | 2.21 | 26.3 | ug/L |
| | Se | 82 | 4.058 | 0.000 | **-0.178656** | 0.11 | 61.3 | ug/L |
| | Sr | 88 | 82.667 | -0.000 | **0.274696** | 0.01 | 1.8 | ug/L |
| > | Y | 89 | 479507.954 | 479507.954 | | | | ug/L |
| | Mo | 95 | 23.333 | -0.000 | **0.137145** | 0.01 | 6.7 | ug/L |
| | Mo | 97 | 12.667 | -0.000 | **-0.241302** | 0.01 | 2.9 | ug/L |
| | Mo | 98 | 30.594 | -0.000 | **0.027094** | 0.01 | 39.1 | ug/L |
| | Ag | 107 | 10.000 | 0.000 | **-0.448717** | 0.00 | 0.6 | ug/L |
| | Ag | 109 | 10.000 | 0.000 | **-0.590983** | 0.00 | 0.4 | ug/L |
| | Cd | 111 | 4.000 | -0.000 | **-0.049580** | 0.01 | 10.3 | ug/L |
| | Cd | 114 | 10.097 | 0.000 | **0.338554** | 0.01 | 2.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 217668.122 | 217668.122 | | | | ug/L |
| \| | Sn | 120 | 681.971 | -0.000 | **-0.154343** | 0.01 | 5.0 | ug/L |
| \| | Sb | 121 | 927.389 | 0.002 | **0.987179** | 0.02 | 1.6 | ug/L |
| \| | Sb | 123 | 779.452 | 0.002 | **0.884704** | 0.03 | 3.8 | ug/L |
| \| | Ba | 135 | 21.333 | -0.000 | **-0.195609** | 0.01 | 3.5 | ug/L |
| \| | Ba | 137 | 34.000 | -0.000 | **-0.060679** | 0.03 | 56.4 | ug/L |
| \| | Tb | 159 | 345950.700 | 0.017 | | | | ug/L |
| \|> | Ho | 165 | 381576.359 | 381576.359 | | | | ug/L |
| \| | Tl | 203 | 59.334 | 0.000 | **-0.298248** | 0.00 | 1.0 | ug/L |
| \| | Tl | 205 | 101.334 | 0.000 | **-0.192875** | 0.00 | 1.1 | ug/L |
| \| | Pb | 208 | 90.000 | 0.000 | **-0.352355** | 0.00 | 0.4 | ug/L |
| | Kr | 83 | 18.067 | -1.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.054 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 96.514 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 95.658 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 93.951 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Wednesday, February 17, 2010 09:56:20
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 4.010
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 19893.267 | -0.007 | | | | ug/L |
| | Li | 7 | 96302.665 | 0.293 | **103.385225** | 10.89 | 10.5 | ug/L |
| | Be | 9 | 21786.846 | 0.068 | **102.872126** | 9.30 | 9.0 | ug/L |
| | B | 11 | 25618.657 | 0.078 | **102.374126** | 9.29 | 9.1 | ug/L |
| | Na | 23 | 2860669.639 | 8.911 | **5086.119009** | 456.28 | 9.0 | ug/L |
| | Mg | 24 | 2083948.347 | 6.509 | **5167.497563** | 239.11 | 4.6 | ug/L |
| | Al | 27 | 6417415.997 | 20.057 | **5174.133870** | 374.94 | 7.2 | ug/L |
| | K | 39 | 6062334.384 | 18.790 | **5595.447023** | 392.45 | 7.0 | ug/L |
| | Ca | 43 | 24350.511 | 0.076 | **5099.949389** | 403.89 | 7.9 | ug/L |
| > | Sc | 45 | 320555.213 | 320555.213 | | | | ug/L |
| | Ti | 49 | 12322.531 | 0.037 | **101.382093** | 7.40 | 7.3 | ug/L |
| | Co | 59 | 187544.604 | 0.586 | **101.323722** | 7.36 | 7.3 | ug/L |
| | Ni | 60 | 36943.876 | 0.116 | **101.692145** | 8.26 | 8.1 | ug/L |
| | Ni | 62 | 5711.456 | 0.018 | **101.224435** | 9.98 | 9.9 | ug/L |
| | Cu | 63 | 89766.279 | 0.281 | **101.982020** | 8.06 | 7.9 | ug/L |
| | Cu | 65 | 42541.350 | 0.133 | **100.486872** | 6.96 | 6.9 | ug/L |
| | Zn | 66 | 28535.513 | 0.089 | **101.344325** | 7.52 | 7.4 | ug/L |
| | Zn | 67 | 5473.948 | 0.014 | **97.285241** | 10.76 | 11.1 | ug/L |
| | Zn | 68 | 20250.628 | 0.063 | **99.474300** | 7.53 | 7.6 | ug/L |
| | V | 51 | 185078.697 | 0.580 | **101.568157** | 6.10 | 6.0 | ug/L |
| | Cr | 52 | 158557.136 | 0.488 | **101.257110** | 7.42 | 7.3 | ug/L |
| | Cr | 53 | 28983.194 | 0.057 | **93.415539** | 13.31 | 14.2 | ug/L |
| | Mn | 55 | 280876.354 | 0.878 | **100.968195** | 8.27 | 8.2 | ug/L |
| | Fe | 54 | 697308.326 | 2.145 | **5004.673354** | 428.65 | 8.6 | ug/L |
| | Fe | 57 | 289396.861 | 0.903 | **5086.700242** | 441.07 | 8.7 | ug/L |
| | As | 75 | 30920.480 | 0.069 | **101.849617** | 4.99 | 4.9 | ug/L |
| | Se | 77 | 13489.152 | 0.026 | **522.237296** | 44.28 | 8.5 | ug/L |
| | Se | 82 | 15471.947 | 0.034 | **517.482642** | 25.62 | 5.0 | ug/L |
| | Sr | 88 | 425215.562 | 0.945 | **102.657353** | 6.74 | 6.6 | ug/L |
| > | Y | 89 | 451207.703 | 451207.703 | | | | ug/L |
| | Mo | 95 | 50338.193 | 0.112 | **102.853596** | 7.13 | 6.9 | ug/L |
| | Mo | 97 | 31072.642 | 0.069 | **103.319322** | 7.65 | 7.4 | ug/L |
| | Mo | 98 | 79135.637 | 0.176 | **104.360704** | 7.79 | 7.5 | ug/L |
| | Ag | 107 | 143347.657 | 0.695 | **102.017932** | 6.27 | 6.1 | ug/L |
| | Ag | 109 | 136734.865 | 0.664 | **102.773053** | 7.14 | 6.9 | ug/L |
| | Cd | 111 | 34455.680 | 0.167 | **102.177838** | 7.53 | 7.4 | ug/L |
| | Cd | 114 | 77435.846 | 0.376 | **100.077271** | 6.06 | 6.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 206658.383 | 206658.383 | | | | ug/L |
| \| | Sn | 120 | 154544.970 | 0.747 | **101.252698** | 8.53 | 8.4 | ug/L |
| \| | Sb | 121 | 113778.965 | 0.551 | **99.973128** | 8.36 | 8.4 | ug/L |
| \| | Sb | 123 | 88001.122 | 0.426 | **99.580267** | 8.98 | 9.0 | ug/L |
| \| | Ba | 135 | 34385.431 | 0.094 | **100.365528** | 8.64 | 8.6 | ug/L |
| \| | Ba | 137 | 60482.918 | 0.165 | **100.612502** | 7.05 | 7.0 | ug/L |
| \| | Tb | 159 | 330446.970 | 0.012 | | | | ug/L |
| \|> | Ho | 165 | 366036.721 | 366036.721 | | | | ug/L |
| \| | Tl | 203 | 167880.395 | 0.460 | **100.157804** | 5.64 | 5.6 | ug/L |
| \| | Tl | 205 | 396198.560 | 1.085 | **99.302242** | 6.09 | 6.1 | ug/L |
| \| | Pb | 208 | 542538.171 | 1.485 | **100.688620** | 6.29 | 6.2 | ug/L |
| | Kr | 83 | 22.933 | 3.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 103.385 | | |
| Be | 9 | 102.872 | | |
| B | 11 | 102.374 | | |
| Na | 23 | 101.722 | | |
| Mg | 24 | 103.350 | | |
| Al | 27 | 101.454 | | |
| K | 39 | 111.909 | | |
| Ca | 43 | 101.999 | | |
| Sc | 45 | | 92.729 | |
| Ti | 49 | 101.382 | | |
| Co | 59 | 101.324 | | |
| Ni | 60 | 101.692 | | |
| Ni | 62 | 101.224 | | |
| Cu | 63 | 101.982 | | |
| Cu | 65 | 100.487 | | |
| Zn | 66 | 101.344 | | |
| Zn | 67 | 97.285 | | |
| Zn | 68 | 99.474 | | |
| V | 51 | 101.568 | | |
| Cr | 52 | 101.257 | | |
| Cr | 53 | 93.416 | | |
| Mn | 55 | 100.968 | | |
| Fe | 54 | 100.093 | | |
| Fe | 57 | 101.734 | | |
| As | 75 | 101.850 | | |
| Se | 77 | 104.447 | | |
| Se | 82 | 103.497 | | |
| Sr | 88 | 102.657 | | |
| Y | 89 | | 90.818 | |
| Mo | 95 | 102.854 | | |
| Mo | 97 | 103.319 | | |
| Mo | 98 | 104.361 | | |
| Ag | 107 | 102.018 | | |
| Ag | 109 | 102.773 | | |
| Cd | 111 | 102.178 | | |
| Cd | 114 | 100.077 | | |
| In | 115 | | 90.820 | |
| Sn | 120 | 101.253 | | |
| Sb | 121 | 99.973 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 99.580 | |
| Ba | 135 | 100.366 | |
| Ba | 137 | 100.613 | |
| Tb | 159 | | |
| Ho | 165 | | 90.125 |
| Tl | 203 | 100.158 | |
| Tl | 205 | 99.302 | |
| Pb | 208 | 100.689 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Wednesday, February 17, 2010 09:59:39
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 5.011
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| ⌈ | Li | 6 | 24799.398 | 0.007 | | | | ug/L |
| \| | Li | 7 | 4831.518 | 0.006 | **2.359951** | 0.14 | 6.0 | ug/L |
| \| | Be | 9 | 462.681 | 0.001 | **2.308932** | 0.05 | 2.3 | ug/L |
| \| | B | 11 | 6298.578 | 0.017 | **22.322070** | 0.55 | 2.5 | ug/L |
| \| | Na | 23 | 67158.771 | 0.163 | **105.143841** | 7.45 | 7.1 | ug/L |
| \| | Mg | 24 | 19056.973 | 0.055 | **51.296199** | 4.32 | 8.4 | ug/L |
| \| | Al | 27 | 64097.701 | 0.182 | **61.516102** | 2.68 | 4.3 | ug/L |
| \| | K | 39 | 133856.059 | 0.242 | **53.645831** | 1.84 | 3.4 | ug/L |
| \| | Ca | 43 | 1178.757 | 0.003 | **203.493513** | 20.18 | 9.9 | ug/L |
| \| > | Sc | 45 | 329622.383 | 329622.383 | | | | ug/L |
| \| | Ti | 49 | 981.396 | 0.002 | **5.398385** | 0.73 | 13.5 | ug/L |
| \| | Co | 59 | 4149.119 | 0.012 | **1.917193** | 0.04 | 2.3 | ug/L |
| \| | Ni | 60 | 766.038 | 0.002 | **1.286171** | 0.14 | 10.9 | ug/L |
| \| | Ni | 62 | 134.668 | 0.000 | **1.738555** | 0.29 | 16.8 | ug/L |
| \| | Cu | 63 | 1955.582 | 0.006 | **1.620122** | 0.05 | 3.3 | ug/L |
| \| | Cu | 65 | 941.392 | 0.003 | **1.392188** | 0.32 | 23.1 | ug/L |
| \| | Zn | 66 | 1950.915 | 0.005 | **6.186414** | 0.57 | 9.2 | ug/L |
| \| | Zn | 67 | 1366.789 | 0.002 | **4.821769** | 3.14 | 65.1 | ug/L |
| \| | Zn | 68 | 1434.800 | 0.004 | **5.257362** | 0.21 | 3.9 | ug/L |
| \| | V | 51 | 19880.440 | 0.062 | **10.974186** | 0.49 | 4.5 | ug/L |
| \| | Cr | 52 | 9357.022 | 0.021 | **4.070018** | 0.22 | 5.4 | ug/L |
| \| | Cr | 53 | 12585.622 | 0.004 | **-0.191811** | 3.04 | 1586.9 | ug/L |
| \| | Mn | 55 | 6223.851 | 0.018 | **1.867554** | 0.06 | 3.0 | ug/L |
| \| | Fe | 54 | 25871.558 | 0.042 | **99.368175** | 8.95 | 9.0 | ug/L |
| ⌊ | Fe | 57 | 6708.925 | 0.018 | **102.013073** | 5.09 | 5.0 | ug/L |
| ⌈ | As | 75 | 844.725 | 0.002 | **3.687096** | 0.06 | 1.5 | ug/L |
| \| | Se | 77 | 1718.192 | 0.000 | **-2.308334** | 3.58 | 155.2 | ug/L |
| \| | Se | 82 | 170.865 | 0.000 | **5.145666** | 0.51 | 10.0 | ug/L |
| \| | Sr | 88 | 4582.698 | 0.010 | **1.307000** | 0.03 | 2.5 | ug/L |
| \| > | Y | 89 | 472607.687 | 472607.687 | | | | ug/L |
| \| | Mo | 95 | 1131.417 | 0.002 | **2.290907** | 0.03 | 1.2 | ug/L |
| \| | Mo | 97 | 693.365 | 0.001 | **1.919432** | 0.04 | 1.9 | ug/L |
| ⌊ | Mo | 98 | 1807.180 | 0.003 | **2.258275** | 0.11 | 4.9 | ug/L |
| ⌈ | Ag | 107 | 1507.481 | 0.007 | **0.569937** | 0.02 | 3.0 | ug/L |
| \| | Ag | 109 | 1465.473 | 0.007 | **0.456364** | 0.05 | 11.9 | ug/L |
| \| | Cd | 111 | 736.035 | 0.003 | **2.017925** | 0.08 | 3.9 | ug/L |
| \| | Cd | 114 | 1669.983 | 0.008 | **2.374492** | 0.06 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 216565.120 | 216565.120 | | | | ug/L |
| \| | Sn | 120 | 8632.092 | 0.036 | **4.831712** | 0.24 | 5.0 | ug/L |
| \| | Sb | 121 | 7767.257 | 0.034 | **6.691052** | 0.11 | 1.6 | ug/L |
| \| | Sb | 123 | 6088.238 | 0.026 | **6.595384** | 0.07 | 1.1 | ug/L |
| \| | Ba | 135 | 1795.543 | 0.005 | **4.793841** | 0.36 | 7.5 | ug/L |
| \| | Ba | 137 | 3172.655 | 0.008 | **4.963826** | 0.38 | 7.6 | ug/L |
| \| | Tb | 159 | 346436.433 | 0.021 | | | | ug/L |
| \|> | Ho | 165 | 380479.106 | 380479.106 | | | | ug/L |
| \| | Tl | 203 | 3707.560 | 0.010 | **1.801710** | 0.12 | 6.9 | ug/L |
| \| | Tl | 205 | 9001.266 | 0.024 | **1.955966** | 0.12 | 6.1 | ug/L |
| \| | Pb | 208 | 5785.521 | 0.015 | **0.667682** | 0.07 | 10.0 | ug/L |
| | Kr | 83 | 17.533 | -1.867 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 117.998 | | |
| Be | 9 | 115.447 | | |
| B | 11 | 111.610 | | |
| Na | 23 | 105.144 | | |
| Mg | 24 | 102.592 | | |
| Al | 27 | 123.032 | | |
| K | 39 | 71.528 | | |
| Ca | 43 | 101.747 | | |
| Sc | 45 | | 95.352 | |
| Ti | 49 | 107.968 | | |
| Co | 59 | 95.860 | | |
| Ni | 60 | 64.309 | | |
| Ni | 62 | 86.928 | | |
| Cu | 63 | 81.006 | | |
| Cu | 65 | 69.609 | | |
| Zn | 66 | 103.107 | | |
| Zn | 67 | 80.363 | | |
| Zn | 68 | 87.623 | | |
| V | 51 | 109.742 | | |
| Cr | 52 | 101.750 | | |
| Cr | 53 | -4.795 | | |
| Mn | 55 | 93.378 | | |
| Fe | 54 | 99.368 | | |
| Fe | 57 | 102.013 | | |
| As | 75 | 92.177 | | |
| Se | 77 | -46.167 | | |
| Se | 82 | 102.913 | | |
| Sr | 88 | 130.700 | | |
| Y | 89 | | 95.126 | |
| Mo | 95 | 114.545 | | |
| Mo | 97 | 95.972 | | |
| Mo | 98 | 112.914 | | |
| Ag | 107 | 56.994 | | |
| Ag | 109 | 45.636 | | |
| Cd | 111 | 100.896 | | |
| Cd | 114 | 118.725 | | |
| In | 115 | | 95.173 | |
| Sn | 120 | 120.793 | | |
| Sb | 121 | 133.821 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 131.908 | |
| Ba | 135 | 95.877 | |
| Ba | 137 | 99.277 | |
| Tb | 159 | | |
| Ho | 165 | | 93.681 |
| Tl | 203 | 90.086 | |
| Tl | 205 | 97.798 | |
| Pb | 208 | 66.768 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Wednesday, February 17, 2010 10:02:44
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 6.012
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 25449.422 | 0.007 | | | | ug/L |
| | Li | 7 | 3017.926 | 0.001 | **0.365318** | 0.12 | 32.4 | ug/L |
| | Be | 9 | 4.667 | 0.000 | **0.214814** | 0.01 | 6.4 | ug/L |
| | B | 11 | 917.388 | 0.001 | **0.834605** | 0.06 | 6.9 | ug/L |
| | Na | 23 | 10140.177 | -0.010 | **6.175507** | 3.19 | 51.6 | ug/L |
| | Mg | 24 | 233.337 | -0.002 | **5.925228** | 0.28 | 4.7 | ug/L |
| | Al | 27 | 906.720 | -0.010 | **12.131257** | 0.06 | 0.5 | ug/L |
| | K | 39 | 52042.337 | -0.009 | **-21.291366** | 1.86 | 8.7 | ug/L |
| | Ca | 43 | 117.334 | -0.000 | **-14.580483** | 7.26 | 49.8 | ug/L |
| > | Sc | 45 | 335323.135 | 335323.135 | | | | ug/L |
| | Ti | 49 | 308.673 | -0.000 | **-0.168192** | 0.14 | 82.3 | ug/L |
| | Co | 59 | 68.000 | 0.000 | **-0.228308** | 0.00 | 1.8 | ug/L |
| | Ni | 60 | 15.333 | 0.000 | **-0.736383** | 0.00 | 0.4 | ug/L |
| | Ni | 62 | 36.000 | 0.000 | **0.016811** | 0.12 | 689.2 | ug/L |
| | Cu | 63 | 111.334 | 0.000 | **-0.426049** | 0.01 | 2.1 | ug/L |
| | Cu | 65 | 53.334 | 0.000 | **-0.662833** | 0.01 | 2.2 | ug/L |
| | Zn | 66 | 77.334 | -0.000 | **-0.320870** | 0.02 | 5.8 | ug/L |
| | Zn | 67 | 1138.751 | 0.001 | **-0.556327** | 1.63 | 293.5 | ug/L |
| | Zn | 68 | 129.334 | -0.000 | **-1.082751** | 0.19 | 17.8 | ug/L |
| | V | 51 | -30.281 | 0.001 | **0.403611** | 0.55 | 136.5 | ug/L |
| | Cr | 52 | 2743.823 | 0.000 | **-0.134972** | 0.06 | 45.4 | ug/L |
| | Cr | 53 | 12273.795 | 0.003 | **-3.073668** | 2.58 | 84.0 | ug/L |
| | Mn | 55 | 322.007 | -0.000 | **-0.198659** | 0.01 | 5.3 | ug/L |
| | Fe | 54 | 11883.846 | -0.001 | **-1.209065** | 1.21 | 100.2 | ug/L |
| | Fe | 57 | 799.375 | -0.000 | **0.716527** | 0.51 | 71.3 | ug/L |
| | As | 75 | -385.632 | -0.000 | **-0.127641** | 0.12 | 93.1 | ug/L |
| | Se | 77 | 1746.865 | 0.000 | **-1.526476** | 4.04 | 264.9 | ug/L |
| | Se | 82 | 1.974 | 0.000 | **-0.243629** | 0.13 | 52.1 | ug/L |
| | Sr | 88 | 94.001 | 0.000 | **0.277438** | 0.00 | 0.8 | ug/L |
| > | Y | 89 | 475294.744 | 475294.744 | | | | ug/L |
| | Mo | 95 | 26.000 | -0.000 | **0.142816** | 0.02 | 15.2 | ug/L |
| | Mo | 97 | 9.333 | -0.000 | **-0.251563** | 0.03 | 11.8 | ug/L |
| | Mo | 98 | 37.333 | -0.000 | **0.035711** | 0.01 | 41.4 | ug/L |
| | Ag | 107 | 16.667 | 0.000 | **-0.444234** | 0.00 | 0.4 | ug/L |
| | Ag | 109 | 7.333 | 0.000 | **-0.592899** | 0.00 | 0.7 | ug/L |
| | Cd | 111 | 4.500 | 0.000 | **-0.048244** | 0.01 | 13.2 | ug/L |
| | Cd | 114 | 10.878 | 0.000 | **0.339484** | 0.00 | 0.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 218410.473 | 218410.473 | | | | ug/L |
| \| | Sn | 120 | 653.327 | -0.000 | **-0.173527** | 0.01 | 4.1 | ug/L |
| \| | Sb | 121 | 758.704 | 0.001 | **0.845170** | 0.01 | 1.0 | ug/L |
| \| | Sb | 123 | 622.356 | 0.001 | **0.714411** | 0.05 | 7.4 | ug/L |
| \| | Ba | 135 | 17.333 | -0.000 | **-0.207325** | 0.01 | 4.4 | ug/L |
| \| | Ba | 137 | 25.333 | -0.000 | **-0.075071** | 0.01 | 19.3 | ug/L |
| \| | Tb | 159 | 348942.032 | 0.013 | | | | ug/L |
| \|> | Ho | 165 | 386246.676 | 386246.676 | | | | ug/L |
| \| | Tl | 203 | 45.333 | 0.000 | **-0.306501** | 0.01 | 2.0 | ug/L |
| \| | Tl | 205 | 80.667 | 0.000 | **-0.198078** | 0.00 | 0.7 | ug/L |
| \| | Pb | 208 | 103.334 | 0.000 | **-0.350207** | 0.00 | 0.8 | ug/L |
| | Kr | 83 | 20.400 | 1.000 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 97.001 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 95.666 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 95.984 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 95.101 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Wednesday, February 17, 2010 10:06:17
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\ICSA.013
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23482.984 | 0.006 | | | | ug/L |
| | Li | 7 | 2827.186 | 0.001 | **0.346380** | 0.04 | 12.7 | ug/L |
| | Be | 9 | 4.000 | -0.000 | **0.212832** | 0.02 | 7.7 | ug/L |
| | B | 11 | 918.722 | 0.001 | **1.060126** | 0.25 | 24.0 | ug/L |
| | Na | 23 | 52416168.769 | 165.852 | **94448.862648** | 1315.52 | 1.4 | ug/L |
| | Mg | 24 | 37189012.634 | 117.695 | **93310.410496** | 2147.00 | 2.3 | ug/L |
| | Al | 27 | 113646095.077 | 359.668 | **92536.945730** | 2357.98 | 2.5 | ug/L |
| | K | 39 | 91928833.480 | 290.793 | **86866.110146** | 3653.07 | 4.2 | ug/L |
| | Ca | 43 | 451536.212 | 1.429 | **96364.309689** | 1820.68 | 1.9 | ug/L |
| > | Sc | 45 | 315964.317 | 315964.317 | | | | ug/L |
| | Ti | 49 | 232275.086 | 0.734 | **1981.747815** | 47.80 | 2.4 | ug/L |
| | Co | 59 | 3116.631 | 0.010 | **1.444889** | 0.03 | 1.8 | ug/L |
| | Ni | 60 | 962.060 | 0.003 | **1.922612** | 0.03 | 1.4 | ug/L |
| | Ni | 62 | 637.360 | 0.002 | **10.892544** | 0.52 | 4.7 | ug/L |
| | Cu | 63 | 1834.886 | 0.006 | **1.573267** | 0.08 | 5.2 | ug/L |
| | Cu | 65 | 1020.068 | 0.003 | **1.673392** | 0.21 | 12.5 | ug/L |
| | Zn | 66 | 937.390 | 0.002 | **2.804075** | 0.09 | 3.3 | ug/L |
| | Zn | 67 | 1090.744 | 0.001 | **-0.158357** | 0.57 | 361.5 | ug/L |
| | Zn | 68 | 297.339 | 0.000 | **-0.196781** | 0.03 | 14.4 | ug/L |
| | V | 51 | 512.046 | 0.003 | **0.703597** | 0.19 | 27.6 | ug/L |
| | Cr | 52 | 5653.428 | 0.010 | **1.885133** | 0.44 | 23.6 | ug/L |
| | Cr | 53 | 10119.987 | -0.002 | **-11.234978** | 0.64 | 5.7 | ug/L |
| | Mn | 55 | 19071.613 | 0.059 | **6.647321** | 0.01 | 0.2 | ug/L |
| | Fe | 54 | 12862404.469 | 40.672 | **94859.722005** | 926.67 | 1.0 | ug/L |
| | Fe | 57 | 5333836.465 | 16.878 | **95046.422933** | 830.15 | 0.9 | ug/L |
| | As | 75 | -284.415 | -0.000 | **0.130291** | 0.98 | 750.1 | ug/L |
| | Se | 77 | 1904.903 | 0.001 | **10.132251** | 1.91 | 18.9 | ug/L |
| | Se | 82 | -15.251 | -0.000 | **-0.819320** | 0.17 | 20.5 | ug/L |
| | Sr | 88 | 9963.115 | 0.022 | **2.671711** | 0.05 | 1.8 | ug/L |
| > | Y | 89 | 446947.549 | 446947.549 | | | | ug/L |
| | Mo | 95 | 989235.693 | 2.213 | **2032.802276** | 35.52 | 1.7 | ug/L |
| | Mo | 97 | 606012.410 | 1.356 | **2033.098123** | 33.97 | 1.7 | ug/L |
| | Mo | 98 | 1528806.289 | 3.420 | **2029.034578** | 33.89 | 1.7 | ug/L |
| | Ag | 107 | 143.335 | 0.001 | **-0.349436** | 0.02 | 5.1 | ug/L |
| | Ag | 109 | 132.001 | 0.001 | **-0.494855** | 0.01 | 3.0 | ug/L |
| | Cd | 111 | 751.870 | 0.004 | **2.248182** | 0.08 | 3.5 | ug/L |
| | Cd | 114 | 1396.522 | 0.007 | **2.189250** | 0.05 | 2.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 199020.976 | 199020.976 | | | | ug/L |
| \| | Sn | 120 | 723.975 | 0.000 | **-0.085873** | 0.00 | 4.7 | ug/L |
| \| | Sb | 121 | 632.693 | 0.001 | **0.791845** | 0.08 | 10.1 | ug/L |
| L | Sb | 123 | 492.095 | 0.001 | **0.626484** | 0.07 | 11.0 | ug/L |
| Γ | Ba | 135 | 522.018 | 0.001 | **1.320162** | 0.16 | 12.3 | ug/L |
| \| | Ba | 137 | 904.720 | 0.002 | **1.439433** | 0.13 | 9.4 | ug/L |
| \| | Tb | 159 | 317468.648 | 0.006 | | | | ug/L |
| \|> | Ho | 165 | 354268.876 | 354268.876 | | | | ug/L |
| \| | Tl | 203 | 242.004 | 0.001 | **-0.182767** | 0.01 | 5.2 | ug/L |
| \| | Tl | 205 | 609.357 | 0.002 | **-0.059451** | 0.00 | 2.0 | ug/L |
| L | Pb | 208 | 1325.379 | 0.004 | **-0.113855** | 0.02 | 16.5 | ug/L |
| | Kr | 83 | 40.533 | 21.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 91.401 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 89.961 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 87.463 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.228 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Wednesday, February 17, 2010 10:08:58
Sample Type: Spike - 2 of 19
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\ICSAB.014
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24560.231 | 0.010 | | | | ug/L |
| | Li | 7 | 2887.876 | 0.001 | **0.444680** | 0.11 | 24.5 | ug/L |
| | Be | 9 | 4.667 | 0.000 | **0.216283** | 0.01 | 5.2 | ug/L |
| | B | 11 | 888.718 | 0.001 | **0.969446** | 0.41 | 42.5 | ug/L |
| | Na | 23 | 54681930.075 | 174.655 | **99461.288122** | 112.09 | 0.1 | ug/L |
| | Mg | 24 | 38420686.591 | 122.745 | **97314.223426** | 982.16 | 1.0 | ug/L |
| | Al | 27 | 116901612.473 | 373.473 | **96088.152296** | 1835.56 | 1.9 | ug/L |
| | K | 39 | 94518586.516 | 301.827 | **90162.960352** | 3054.97 | 3.4 | ug/L |
| | Ca | 43 | 462130.352 | 1.476 | **99558.156869** | 1489.07 | 1.5 | ug/L |
| > | Sc | 45 | 313013.986 | 313013.986 | | | | ug/L |
| | Ti | 49 | 233637.310 | 0.745 | **2012.279574** | 13.25 | 0.7 | ug/L |
| | Co | 59 | 145825.499 | 0.466 | **80.422819** | 1.32 | 1.6 | ug/L |
| | Ni | 60 | 27622.842 | 0.088 | **77.464324** | 0.92 | 1.2 | ug/L |
| | Ni | 62 | 4769.478 | 0.015 | **86.177366** | 1.05 | 1.2 | ug/L |
| | Cu | 63 | 63634.848 | 0.203 | **73.679888** | 1.10 | 1.5 | ug/L |
| | Cu | 65 | 31011.749 | 0.099 | **74.636170** | 1.68 | 2.3 | ug/L |
| | Zn | 66 | 10643.363 | 0.033 | **38.247384** | 1.05 | 2.7 | ug/L |
| | Zn | 67 | 2652.458 | 0.006 | **35.616554** | 2.25 | 6.3 | ug/L |
| | Zn | 68 | 7252.751 | 0.023 | **35.313053** | 0.72 | 2.0 | ug/L |
| | V | 51 | 145525.274 | 0.466 | **81.695119** | 0.18 | 0.2 | ug/L |
| | Cr | 52 | 125724.466 | 0.394 | **81.666984** | 0.16 | 0.2 | ug/L |
| | Cr | 53 | 24225.420 | 0.044 | **69.712750** | 0.65 | 0.9 | ug/L |
| | Mn | 55 | 234086.669 | 0.747 | **85.881980** | 0.94 | 1.1 | ug/L |
| | Fe | 54 | 13026915.990 | 41.582 | **96980.903929** | 1244.40 | 1.3 | ug/L |
| | Fe | 57 | 5404593.835 | 17.264 | **97219.789481** | 1194.12 | 1.2 | ug/L |
| | As | 75 | 10261.593 | 0.023 | **34.360180** | 0.49 | 1.4 | ug/L |
| | Se | 77 | 2867.868 | 0.003 | **51.507069** | 3.47 | 6.7 | ug/L |
| | Se | 82 | 1131.378 | 0.002 | **37.382153** | 0.28 | 0.8 | ug/L |
| | Sr | 88 | 9840.958 | 0.022 | **2.613602** | 0.03 | 1.0 | ug/L |
| > | Y | 89 | 452331.642 | 452331.642 | | | | ug/L |
| | Mo | 95 | 964441.735 | 2.132 | **1958.301139** | 40.71 | 2.1 | ug/L |
| | Mo | 97 | 590879.477 | 1.306 | **1958.753717** | 42.02 | 2.1 | ug/L |
| | Mo | 98 | 1508169.090 | 3.334 | **1977.892222** | 51.50 | 2.6 | ug/L |
| | Ag | 107 | 25231.987 | 0.127 | **18.312189** | 0.45 | 2.5 | ug/L |
| | Ag | 109 | 23990.688 | 0.121 | **18.265495** | 0.33 | 1.8 | ug/L |
| | Cd | 111 | 12783.113 | 0.065 | **39.380742** | 0.72 | 1.8 | ug/L |
| | Cd | 114 | 28377.578 | 0.143 | **38.360052** | 0.97 | 2.5 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 198116.648 | 198116.648 | | | | ug/L |
| \| | Sn | 120 | 707.948 | 0.000 | **-0.094525** | 0.04 | 44.4 | ug/L |
| \| | Sb | 121 | 413.344 | 0.000 | **0.594743** | 0.01 | 2.0 | ug/L |
| \| | Sb | 123 | 304.500 | -0.000 | **0.408696** | 0.02 | 4.1 | ug/L |
| \| | Ba | 135 | 502.016 | 0.001 | **1.258921** | 0.14 | 11.0 | ug/L |
| \| | Ba | 137 | 868.716 | 0.002 | **1.376837** | 0.04 | 2.7 | ug/L |
| \| | Tb | 159 | 313154.847 | -0.006 | | | | ug/L |
| \|> | Ho | 165 | 354179.131 | 354179.131 | | | | ug/L |
| \| | Tl | 203 | 254.004 | 0.001 | **-0.175204** | 0.02 | 13.2 | ug/L |
| \| | Tl | 205 | 552.020 | 0.002 | **-0.074158** | 0.02 | 21.1 | ug/L |
| \| | Pb | 208 | 1356.715 | 0.004 | **-0.107705** | 0.01 | 13.1 | ug/L |
| | Kr | 83 | 39.733 | 20.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 90.548 | |
| Ti | 49 | | | |
| Co | 59 | | | 98.722 |
| Ni | 60 | | | 94.427 |
| Ni | 62 | | | 94.106 |
| Cu | 63 | | | 90.133 |
| Cu | 65 | | | 91.203 |
| Zn | 66 | | | 88.608 |
| Zn | 67 | | | 89.437 |
| Zn | 68 | | | 88.775 |
| V | 51 | | | 101.239 |
| Cr | 52 | | | 99.727 |
| Cr | 53 | | | 101.185 |
| Mn | 55 | | | 99.043 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 85.575 |
| Se | 77 | | | 103.437 |
| Se | 82 | | | 95.504 |
| Sr | 88 | | | |
| Y | 89 | | 91.044 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 93.308 |
| Ag | 109 | | | 93.802 |
| Cd | 111 | | | 92.831 |
| Cd | 114 | | | 90.427 |
| In | 115 | | 87.066 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.206 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-20A**
Sample Date/Time: Wednesday, February 17, 2010 10:20:00
Sample Type: Sample
Sample Description: 25
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\10020428-20A.015
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 0.4000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26908.655 | 0.012 | | | | ug/L |
| | Li | 7 | 3734.241 | 0.003 | **28.703368** | 4.05 | 14.1 | ug/L |
| | Be | 9 | 22.000 | 0.000 | **7.332550** | 0.43 | 5.9 | ug/L |
| | B | 11 | 582.022 | -0.000 | **-11.476854** | 1.81 | 15.8 | ug/L |
| | Na | 23 | 1091056.026 | 3.239 | **46413.637436** | 690.21 | 1.5 | ug/L |
| | Mg | 24 | 308713.657 | 0.925 | **18530.693721** | 949.74 | 5.1 | ug/L |
| | Al | 27 | 15487.259 | 0.034 | **585.258063** | 10.52 | 1.8 | ug/L |
| | K | 39 | 86013.632 | 0.095 | **240.283466** | 165.03 | 68.7 | ug/L |
| | Ca | 43 | 5265.802 | 0.015 | **25740.613883** | 496.93 | 1.9 | ug/L |
| > | Sc | 45 | 332673.717 | 332673.717 | | | | ug/L |
| | Ti | 49 | 304.006 | -0.000 | **-4.651509** | 3.51 | 75.5 | ug/L |
| | Co | 59 | 758.705 | 0.002 | **3.281874** | 1.57 | 47.9 | ug/L |
| | Ni | 60 | 172.669 | 0.000 | **-7.920643** | 1.56 | 19.6 | ug/L |
| | Ni | 62 | 73.334 | 0.000 | **16.503083** | 8.67 | 52.6 | ug/L |
| | Cu | 63 | 74.667 | 0.000 | **-11.631944** | 0.07 | 0.6 | ug/L |
| | Cu | 65 | 40.000 | -0.000 | **-17.318009** | 1.26 | 7.3 | ug/L |
| | Zn | 66 | 268.005 | 0.000 | **8.387985** | 1.72 | 20.6 | ug/L |
| | Zn | 67 | 954.726 | 0.000 | **-107.798156** | 20.81 | 19.3 | ug/L |
| | Zn | 68 | 260.004 | 0.000 | **-11.293463** | 1.02 | 9.0 | ug/L |
| | V | 51 | -48.500 | 0.001 | **9.853295** | 10.96 | 111.2 | ug/L |
| | Cr | 52 | 2589.102 | -0.000 | **-5.448817** | 0.52 | 9.5 | ug/L |
| | Cr | 53 | 11349.705 | 0.000 | **-187.847116** | 33.16 | 17.7 | ug/L |
| | Mn | 55 | 33957.468 | 0.101 | **286.385019** | 5.37 | 1.9 | ug/L |
| | Fe | 54 | 48903.679 | 0.110 | **6474.709160** | 69.97 | 1.1 | ug/L |
| | Fe | 57 | 16001.303 | 0.045 | **6454.154214** | 222.89 | 3.5 | ug/L |
| | As | 75 | -408.666 | -0.000 | **-5.462085** | 8.52 | 156.0 | ug/L |
| | Se | 77 | 1577.495 | -0.000 | **-186.125617** | 22.30 | 12.0 | ug/L |
| | Se | 82 | 2.585 | 0.000 | **-5.524020** | 2.77 | 50.1 | ug/L |
| | Sr | 88 | 41597.539 | 0.089 | **247.785118** | 6.63 | 2.7 | ug/L |
| > | Y | 89 | 466943.508 | 466943.508 | | | | ug/L |
| | Mo | 95 | 110.001 | 0.000 | **7.726196** | 0.39 | 5.1 | ug/L |
| | Mo | 97 | 46.000 | -0.000 | **-3.333496** | 0.35 | 10.6 | ug/L |
| | Mo | 98 | 163.709 | -0.000 | **4.929150** | 0.82 | 16.6 | ug/L |
| | Ag | 107 | 6.000 | 0.000 | **-11.284107** | 0.03 | 0.3 | ug/L |
| | Ag | 109 | 6.000 | 0.000 | **-14.845040** | 0.07 | 0.5 | ug/L |
| | Cd | 111 | 4.000 | -0.000 | **-1.235893** | 0.06 | 4.8 | ug/L |
| | Cd | 114 | 0.925 | -0.000 | **8.184521** | 0.10 | 1.2 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 214530.384 | 214530.384 | | | | ug/L |
| \| | Sn | 120 | 641.309 | -0.000 | **-4.345312** | 0.65 | 15.0 | ug/L |
| \| | Sb | 121 | 314.006 | -0.001 | **12.055986** | 0.34 | 2.8 | ug/L |
| \| | Sb | 123 | 263.501 | -0.001 | **8.423286** | 0.33 | 3.9 | ug/L |
| \| | Ba | 135 | 112.001 | 0.000 | **1.689497** | 1.62 | 95.7 | ug/L |
| \| | Ba | 137 | 190.002 | 0.000 | **4.895597** | 0.22 | 4.5 | ug/L |
| \| | Tb | 159 | 339344.179 | 0.023 | | | | ug/L |
| \|> | Ho | 165 | 371771.235 | 371771.235 | | | | ug/L |
| \| | Tl | 203 | 4.000 | -0.000 | **-8.245795** | 0.06 | 0.7 | ug/L |
| \| | Tl | 205 | 20.667 | 0.000 | **-5.303801** | 0.08 | 1.6 | ug/L |
| \| | Pb | 208 | 96.667 | 0.000 | **-8.768919** | 0.06 | 0.6 | ug/L |
| | Kr | 83 | 19.000 | -0.400 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.235 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 93.985 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 94.279 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 91.537 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: 10020428-33A**
Sample Date/Time: Wednesday, February 17, 2010 10:41:14
Sample Type: Sample
Sample Description: 5
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\10020428-33A.017
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL): 2.0000
Diluted to Volume (mL): 10
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 27648.623 | 0.015 | | | | ug/L |
| | Li | 7 | 18741.486 | 0.048 | **85.340189** | 4.59 | 5.4 | ug/L |
| | Be | 9 | 494.683 | 0.001 | **12.183548** | 0.68 | 5.6 | ug/L |
| | B | 11 | 2257.665 | 0.005 | **30.764358** | 0.82 | 2.7 | ug/L |
| | Na | 23 | 8910668.396 | 26.776 | **76291.302917** | 4219.83 | 5.5 | ug/L |
| | Mg | 24 | 2606113.693 | 7.840 | **31114.222416** | 1270.57 | 4.1 | ug/L |
| | Al | 27 | 1989945.572 | 5.978 | **7761.969053** | 409.90 | 5.3 | ug/L |
| | K | 39 | 571095.669 | 1.555 | **2230.216693** | 201.41 | 9.0 | ug/L |
| | Ca | 43 | 63499.702 | 0.191 | **64260.901286** | 1601.64 | 2.5 | ug/L |
| > | Sc | 45 | 332421.518 | 332421.518 | | | | ug/L |
| | Ti | 49 | 494.683 | 0.000 | **6.835666** | 1.81 | 26.5 | ug/L |
| | Co | 59 | 16425.526 | 0.049 | **41.482909** | 1.42 | 3.4 | ug/L |
| | Ni | 60 | 3269.361 | 0.010 | **39.728838** | 1.26 | 3.2 | ug/L |
| | Ni | 62 | 510.684 | 0.001 | **40.797927** | 2.02 | 5.0 | ug/L |
| | Cu | 63 | 232.004 | 0.001 | **-1.461332** | 0.07 | 4.7 | ug/L |
| | Cu | 65 | 130.668 | 0.000 | **-2.422574** | 0.20 | 8.1 | ug/L |
| | Zn | 66 | 6134.446 | 0.018 | **102.488787** | 3.06 | 3.0 | ug/L |
| | Zn | 67 | 1898.902 | 0.003 | **79.878675** | 19.39 | 24.3 | ug/L |
| | Zn | 68 | 4602.711 | 0.013 | **102.068242** | 2.61 | 2.6 | ug/L |
| | V | 51 | 11690.580 | 0.036 | **32.846527** | 0.98 | 3.0 | ug/L |
| | Cr | 52 | 11323.663 | 0.026 | **26.239785** | 0.93 | 3.5 | ug/L |
| | Cr | 53 | 12269.112 | 0.003 | **-12.552294** | 8.46 | 67.4 | ug/L |
| | Mn | 55 | 1025221.914 | 3.084 | **1776.174423** | 37.34 | 2.1 | ug/L |
| | Fe | 54 | 661401.385 | 1.954 | **22790.124284** | 597.89 | 2.6 | ug/L |
| | Fe | 57 | 268029.179 | 0.804 | **22642.583367** | 358.42 | 1.6 | ug/L |
| | As | 75 | -262.045 | 0.000 | **1.517672** | 1.30 | 86.0 | ug/L |
| | Se | 77 | 1759.535 | -0.000 | **-26.352115** | 21.87 | 83.0 | ug/L |
| | Se | 82 | 9.162 | 0.000 | **-0.156269** | 0.66 | 420.9 | ug/L |
| | Sr | 88 | 353177.290 | 0.700 | **380.441835** | 6.80 | 1.8 | ug/L |
| > | Y | 89 | 504754.393 | 504754.393 | | | | ug/L |
| | Mo | 95 | 35.333 | -0.000 | **0.783651** | 0.04 | 5.4 | ug/L |
| | Mo | 97 | 22.000 | -0.000 | **-1.077486** | 0.08 | 7.4 | ug/L |
| | Mo | 98 | 37.781 | -0.000 | **0.168558** | 0.08 | 46.2 | ug/L |
| | Ag | 107 | 12.000 | 0.000 | **-2.234752** | 0.03 | 1.2 | ug/L |
| | Ag | 109 | 4.667 | 0.000 | **-2.973269** | 0.00 | 0.2 | ug/L |
| | Cd | 111 | 208.669 | 0.001 | **2.748271** | 0.11 | 4.1 | ug/L |
| | Cd | 114 | 478.741 | 0.002 | **4.672838** | 0.09 | 2.0 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 208956.016 | 208956.016 | | | | ug/L |
| \| | Sn | 120 | 613.298 | -0.000 | **-0.905047** | 0.08 | 8.6 | ug/L |
| \| | Sb | 121 | 358.675 | -0.000 | **2.641701** | 0.19 | 7.0 | ug/L |
| \| | Sb | 123 | 282.084 | -0.000 | **1.828831** | 0.16 | 8.8 | ug/L |
| \| | Ba | 135 | 894.052 | 0.002 | **11.793538** | 0.61 | 5.1 | ug/L |
| \| | Ba | 137 | 1642.842 | 0.004 | **13.094311** | 0.69 | 5.3 | ug/L |
| \| | Tb | 159 | 333360.922 | 0.022 | | | | ug/L |
| \|> | Ho | 165 | 365613.891 | 365613.891 | | | | ug/L |
| \| | Tl | 203 | 19.333 | 0.000 | **-1.603248** | 0.00 | 0.3 | ug/L |
| \| | Tl | 205 | 34.667 | 0.000 | **-1.042902** | 0.01 | 1.0 | ug/L |
| \| | Pb | 208 | 1754.745 | 0.005 | **-0.206704** | 0.14 | 69.6 | ug/L |
| | Kr | 83 | 21.867 | 2.467 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 96.162 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 101.596 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 91.829 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 90.021 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 4**
Sample Date/Time: Wednesday, February 17, 2010 10:47:20
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 4.018
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 23149.767 | 0.001 | | | | ug/L |
| | Li | 7 | 102508.237 | 0.299 | **105.552712** | 5.71 | 5.4 | ug/L |
| | Be | 9 | 22680.055 | 0.068 | **102.644943** | 3.68 | 3.6 | ug/L |
| | B | 11 | 27238.810 | 0.080 | **104.410574** | 3.53 | 3.4 | ug/L |
| | Na | 23 | 2937679.245 | 8.770 | **5005.881909** | 162.19 | 3.2 | ug/L |
| | Mg | 24 | 2142938.677 | 6.431 | **5105.603859** | 493.18 | 9.7 | ug/L |
| | Al | 27 | 6719626.663 | 20.146 | **5197.113754** | 237.57 | 4.6 | ug/L |
| | K | 39 | 5961750.225 | 17.736 | **5280.491585** | 498.91 | 9.4 | ug/L |
| | Ca | 43 | 24882.851 | 0.074 | **4996.687601** | 181.03 | 3.6 | ug/L |
| > | Sc | 45 | 333609.544 | 333609.544 | | | | ug/L |
| | Ti | 49 | 11959.290 | 0.035 | **94.146305** | 1.54 | 1.6 | ug/L |
| | Co | 59 | 184917.750 | 0.554 | **95.793523** | 3.33 | 3.5 | ug/L |
| | Ni | 60 | 35996.035 | 0.108 | **94.939924** | 3.38 | 3.6 | ug/L |
| | Ni | 62 | 5515.311 | 0.016 | **93.569790** | 2.00 | 2.1 | ug/L |
| | Cu | 63 | 87023.482 | 0.261 | **94.740770** | 2.44 | 2.6 | ug/L |
| | Cu | 65 | 41199.388 | 0.123 | **93.280841** | 3.11 | 3.3 | ug/L |
| | Zn | 66 | 28024.326 | 0.083 | **95.429215** | 5.01 | 5.3 | ug/L |
| | Zn | 67 | 5229.781 | 0.013 | **87.016358** | 7.82 | 9.0 | ug/L |
| | Zn | 68 | 20563.466 | 0.061 | **96.844686** | 5.25 | 5.4 | ug/L |
| | V | 51 | 183437.873 | 0.551 | **96.604994** | 3.51 | 3.6 | ug/L |
| | Cr | 52 | 158165.260 | 0.467 | **96.807885** | 4.49 | 4.6 | ug/L |
| | Cr | 53 | 29285.666 | 0.054 | **88.375894** | 7.59 | 8.6 | ug/L |
| | Mn | 55 | 282014.838 | 0.845 | **97.200305** | 4.66 | 4.8 | ug/L |
| | Fe | 54 | 705112.238 | 2.079 | **4850.025863** | 251.38 | 5.2 | ug/L |
| | Fe | 57 | 287141.741 | 0.859 | **4837.453884** | 189.29 | 3.9 | ug/L |
| | As | 75 | 30662.413 | 0.066 | **97.143503** | 3.49 | 3.6 | ug/L |
| | Se | 77 | 13088.464 | 0.024 | **481.460035** | 24.12 | 5.0 | ug/L |
| | Se | 82 | 15426.608 | 0.033 | **495.850068** | 13.51 | 2.7 | ug/L |
| | Sr | 88 | 416586.861 | 0.889 | **96.611780** | 2.41 | 2.5 | ug/L |
| > | Y | 89 | 468623.235 | 468623.235 | | | | ug/L |
| | Mo | 95 | 49563.163 | 0.106 | **97.245897** | 2.21 | 2.3 | ug/L |
| | Mo | 97 | 30593.387 | 0.065 | **97.641734** | 2.35 | 2.4 | ug/L |
| | Mo | 98 | 76857.780 | 0.164 | **97.287521** | 2.63 | 2.7 | ug/L |
| | Ag | 107 | 139456.355 | 0.650 | **95.252841** | 2.14 | 2.2 | ug/L |
| | Ag | 109 | 133517.010 | 0.622 | **96.273011** | 2.21 | 2.3 | ug/L |
| | Cd | 111 | 33743.182 | 0.157 | **96.005073** | 1.31 | 1.4 | ug/L |
| | Cd | 114 | 75905.984 | 0.354 | **94.186228** | 1.22 | 1.3 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 214700.215 | 214700.215 | | | | ug/L |
| \| | Sn | 120 | 153011.362 | 0.709 | **96.098346** | 1.76 | 1.8 | ug/L |
| \| | Sb | 121 | 111088.429 | 0.515 | **93.615184** | 0.07 | 0.1 | ug/L |
| \| | Sb | 123 | 86091.737 | 0.399 | **93.394751** | 1.20 | 1.3 | ug/L |
| \| | Ba | 135 | 33636.049 | 0.090 | **96.205400** | 0.51 | 0.5 | ug/L |
| \| | Ba | 137 | 59026.978 | 0.158 | **96.258221** | 0.47 | 0.5 | ug/L |
| \| | Tb | 159 | 336916.411 | 0.014 | | | | ug/L |
| \|> | Ho | 165 | 372458.877 | 372458.877 | | | | ug/L |
| \| | Tl | 203 | 161951.222 | 0.435 | **94.755721** | 0.19 | 0.2 | ug/L |
| \| | Tl | 205 | 390056.786 | 1.047 | **95.884835** | 2.62 | 2.7 | ug/L |
| \| | Pb | 208 | 528375.889 | 1.419 | **96.174668** | 2.77 | 2.9 | ug/L |
| | Kr | 83 | 19.533 | 0.133 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 105.553 | | |
| Be | 9 | 102.645 | | |
| B | 11 | 104.411 | | |
| Na | 23 | 100.118 | | |
| Mg | 24 | 102.112 | | |
| Al | 27 | 101.904 | | |
| K | 39 | 105.610 | | |
| Ca | 43 | 99.934 | | |
| Sc | 45 | | 96.506 | |
| Ti | 49 | 94.146 | | |
| Co | 59 | 95.794 | | |
| Ni | 60 | 94.940 | | |
| Ni | 62 | 93.570 | | |
| Cu | 63 | 94.741 | | |
| Cu | 65 | 93.281 | | |
| Zn | 66 | 95.429 | | |
| Zn | 67 | 87.016 | | |
| Zn | 68 | 96.845 | | |
| V | 51 | 96.605 | | |
| Cr | 52 | 96.808 | | |
| Cr | 53 | 88.376 | | |
| Mn | 55 | 97.200 | | |
| Fe | 54 | 97.001 | | |
| Fe | 57 | 96.749 | | |
| As | 75 | 97.144 | | |
| Se | 77 | 96.292 | | |
| Se | 82 | 99.170 | | |
| Sr | 88 | 96.612 | | |
| Y | 89 | | 94.324 | |
| Mo | 95 | 97.246 | | |
| Mo | 97 | 97.642 | | |
| Mo | 98 | 97.288 | | |
| Ag | 107 | 95.253 | | |
| Ag | 109 | 96.273 | | |
| Cd | 111 | 96.005 | | |
| Cd | 114 | 94.186 | | |
| In | 115 | | 94.354 | |
| Sn | 120 | 96.098 | | |
| Sb | 121 | 93.615 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 93.395 | |
| Ba | 135 | 96.205 | |
| Ba | 137 | 96.258 | |
| Tb | 159 | | |
| Ho | 165 | | 91.707 |
| Tl | 203 | 94.756 | |
| Tl | 205 | 95.885 | |
| Pb | 208 | 96.175 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 5**
Sample Date/Time: Wednesday, February 17, 2010 10:50:21
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 5.019
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26643.179 | 0.013 | | | | ug/L |
| | Li | 7 | 5053.660 | 0.007 | **2.662205** | 0.23 | 8.8 | ug/L |
| | Be | 9 | 487.349 | 0.001 | **2.447382** | 0.14 | 5.7 | ug/L |
| | B | 11 | 6124.437 | 0.017 | **21.906645** | 0.35 | 1.6 | ug/L |
| | Na | 23 | 69344.944 | 0.172 | **110.220443** | 6.90 | 6.3 | ug/L |
| | Mg | 24 | 20995.435 | 0.062 | **56.543823** | 5.73 | 10.1 | ug/L |
| | Al | 27 | 65428.856 | 0.188 | **63.130924** | 2.42 | 3.8 | ug/L |
| | K | 39 | 134534.288 | 0.249 | **55.821929** | 7.74 | 13.9 | ug/L |
| | Ca | 43 | 1034.736 | 0.003 | **175.947161** | 10.81 | 6.1 | ug/L |
| > | Sc | 45 | 325820.874 | 325820.874 | | | | ug/L |
| | Ti | 49 | 971.395 | 0.002 | **5.405340** | 0.69 | 12.7 | ug/L |
| | Co | 59 | 3703.559 | 0.011 | **1.705244** | 0.04 | 2.4 | ug/L |
| | Ni | 60 | 789.374 | 0.002 | **1.370890** | 0.05 | 3.6 | ug/L |
| | Ni | 62 | 150.668 | 0.000 | **2.042699** | 0.32 | 15.7 | ug/L |
| | Cu | 63 | 1942.246 | 0.006 | **1.631588** | 0.15 | 9.3 | ug/L |
| | Cu | 65 | 930.723 | 0.003 | **1.394579** | 0.27 | 19.5 | ug/L |
| | Zn | 66 | 1750.866 | 0.005 | **5.556078** | 0.21 | 3.7 | ug/L |
| | Zn | 67 | 1262.771 | 0.001 | **2.834901** | 1.70 | 59.9 | ug/L |
| | Zn | 68 | 1312.112 | 0.004 | **4.733388** | 0.38 | 8.1 | ug/L |
| | V | 51 | 18771.365 | 0.059 | **10.494158** | 0.65 | 6.2 | ug/L |
| | Cr | 52 | 8997.259 | 0.020 | **3.906646** | 0.12 | 3.0 | ug/L |
| | Cr | 53 | 11954.620 | 0.003 | **-2.908136** | 1.63 | 55.9 | ug/L |
| | Mn | 55 | 6067.060 | 0.018 | **1.838732** | 0.12 | 6.8 | ug/L |
| | Fe | 54 | 25485.042 | 0.042 | **98.660990** | 7.06 | 7.2 | ug/L |
| | Fe | 57 | 6442.697 | 0.017 | **98.687971** | 3.15 | 3.2 | ug/L |
| | As | 75 | 849.347 | 0.002 | **3.742748** | 0.53 | 14.2 | ug/L |
| | Se | 77 | 1640.175 | -0.000 | **-4.595044** | 3.80 | 82.7 | ug/L |
| | Se | 82 | 159.648 | 0.000 | **4.859542** | 0.18 | 3.6 | ug/L |
| | Sr | 88 | 4614.051 | 0.010 | **1.329311** | 0.01 | 1.0 | ug/L |
| > | Y | 89 | 465799.416 | 465799.416 | | | | ug/L |
| | Mo | 95 | 1121.415 | 0.002 | **2.304510** | 0.17 | 7.3 | ug/L |
| | Mo | 97 | 676.030 | 0.001 | **1.896045** | 0.08 | 4.5 | ug/L |
| | Mo | 98 | 1647.364 | 0.003 | **2.086825** | 0.02 | 1.1 | ug/L |
| | Ag | 107 | 1486.144 | 0.007 | **0.568147** | 0.05 | 9.1 | ug/L |
| | Ag | 109 | 1370.789 | 0.006 | **0.399889** | 0.05 | 11.9 | ug/L |
| | Cd | 111 | 723.534 | 0.003 | **2.006423** | 0.17 | 8.4 | ug/L |
| | Cd | 114 | 1583.447 | 0.007 | **2.289909** | 0.08 | 3.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 214025.346 | 214025.346 | | | | ug/L |
| \| | Sn | 120 | 8414.550 | 0.036 | **4.755345** | 0.13 | 2.6 | ug/L |
| \| | Sb | 121 | 7316.147 | 0.032 | **6.392512** | 0.33 | 5.1 | ug/L |
| \| | Sb | 123 | 5829.038 | 0.025 | **6.393391** | 0.20 | 3.1 | ug/L |
| \| | Ba | 135 | 1698.854 | 0.005 | **4.633207** | 0.28 | 6.0 | ug/L |
| \| | Ba | 137 | 2958.569 | 0.008 | **4.729596** | 0.18 | 3.8 | ug/L |
| \| | Tb | 159 | 336491.030 | 0.016 | | | | ug/L |
| \|> | Ho | 165 | 371420.605 | 371420.605 | | | | ug/L |
| \| | Tl | 203 | 3774.926 | 0.010 | **1.890868** | 0.05 | 2.6 | ug/L |
| \| | Tl | 205 | 8818.386 | 0.024 | **1.961516** | 0.05 | 2.4 | ug/L |
| \| | Pb | 208 | 5646.150 | 0.015 | **0.666193** | 0.03 | 3.9 | ug/L |
| | Kr | 83 | 19.667 | 0.267 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | 133.110 | | |
| Be | 9 | 122.369 | | |
| B | 11 | 109.533 | | |
| Na | 23 | 110.220 | | |
| Mg | 24 | 113.088 | | |
| Al | 27 | 126.262 | | |
| K | 39 | 74.429 | | |
| Ca | 43 | 87.974 | | |
| Sc | 45 | | 94.253 | |
| Ti | 49 | 108.107 | | |
| Co | 59 | 85.262 | | |
| Ni | 60 | 68.545 | | |
| Ni | 62 | 102.135 | | |
| Cu | 63 | 81.579 | | |
| Cu | 65 | 69.729 | | |
| Zn | 66 | 92.601 | | |
| Zn | 67 | 47.248 | | |
| Zn | 68 | 78.890 | | |
| V | 51 | 104.942 | | |
| Cr | 52 | 97.666 | | |
| Cr | 53 | -72.703 | | |
| Mn | 55 | 91.937 | | |
| Fe | 54 | 98.661 | | |
| Fe | 57 | 98.688 | | |
| As | 75 | 93.569 | | |
| Se | 77 | -91.901 | | |
| Se | 82 | 97.191 | | |
| Sr | 88 | 132.931 | | |
| Y | 89 | | 93.755 | |
| Mo | 95 | 115.226 | | |
| Mo | 97 | 94.802 | | |
| Mo | 98 | 104.341 | | |
| Ag | 107 | 56.815 | | |
| Ag | 109 | 39.989 | | |
| Cd | 111 | 100.321 | | |
| Cd | 114 | 114.495 | | |
| In | 115 | | 94.057 | |
| Sn | 120 | 118.884 | | |
| Sb | 121 | 127.850 | | |

| | | | |
|---|---|---|---|
| Sb | 123 | 127.868 | |
| Ba | 135 | 92.664 | |
| Ba | 137 | 94.592 | |
| Tb | 159 | | |
| Ho | 165 | | 91.451 |
| Tl | 203 | 94.543 | |
| Tl | 205 | 98.076 | |
| Pb | 208 | 66.619 | |
| Kr | 83 | | |

# Quantitative Analysis - Summary Report

**Sample ID: QC Std 6**
Sample Date/Time: Wednesday, February 17, 2010 10:53:57
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\QC Std 6.020
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 26370.894 | 0.011 | | | | ug/L |
| | Li | 7 | 3021.927 | 0.001 | **0.409141** | 0.05 | 13.0 | ug/L |
| | Be | 9 | 9.333 | 0.000 | **0.236206** | 0.02 | 9.6 | ug/L |
| | B | 11 | 702.699 | 0.000 | **0.029597** | 0.08 | 269.0 | ug/L |
| | Na | 23 | 10540.565 | -0.009 | **7.099103** | 1.06 | 14.9 | ug/L |
| | Mg | 24 | 100.001 | -0.002 | **5.611434** | 0.00 | 0.0 | ug/L |
| | Al | 27 | 851.714 | -0.010 | **12.097741** | 0.04 | 0.3 | ug/L |
| | K | 39 | 46540.448 | -0.023 | **-25.663597** | 1.27 | 4.9 | ug/L |
| | Ca | 43 | 106.667 | -0.000 | **-16.444208** | 2.91 | 17.7 | ug/L |
| > | Sc | 45 | 331120.194 | 331120.194 | | | | ug/L |
| | Ti | 49 | 322.007 | -0.000 | **-0.027755** | 0.16 | 579.3 | ug/L |
| | Co | 59 | 42.667 | -0.000 | **-0.241101** | 0.01 | 2.2 | ug/L |
| | Ni | 60 | 12.667 | -0.000 | **-0.743038** | 0.02 | 2.3 | ug/L |
| | Ni | 62 | 24.000 | -0.000 | **-0.181622** | 0.12 | 65.5 | ug/L |
| | Cu | 63 | 105.334 | 0.000 | **-0.431082** | 0.01 | 2.4 | ug/L |
| | Cu | 65 | 50.667 | 0.000 | **-0.667540** | 0.03 | 3.9 | ug/L |
| | Zn | 66 | 73.334 | -0.000 | **-0.331217** | 0.08 | 24.4 | ug/L |
| | Zn | 67 | 1057.406 | 0.001 | **-2.005292** | 1.69 | 84.4 | ug/L |
| | Zn | 68 | 110.667 | -0.000 | **-1.165846** | 0.10 | 8.6 | ug/L |
| | V | 51 | -84.364 | 0.001 | **0.375430** | 0.22 | 59.4 | ug/L |
| | Cr | 52 | 2678.467 | 0.000 | **-0.153949** | 0.10 | 67.1 | ug/L |
| | Cr | 53 | 11424.482 | 0.001 | **-6.817747** | 1.86 | 27.3 | ug/L |
| | Mn | 55 | 352.008 | -0.000 | **-0.186750** | 0.00 | 0.5 | ug/L |
| | Fe | 54 | 11459.040 | -0.002 | **-3.155354** | 1.28 | 40.5 | ug/L |
| | Fe | 57 | 717.367 | -0.001 | **-0.507069** | 0.86 | 168.8 | ug/L |
| | As | 75 | -303.129 | -0.000 | **0.101936** | 0.24 | 232.6 | ug/L |
| | Se | 77 | 1529.485 | -0.000 | **-9.138407** | 1.63 | 17.9 | ug/L |
| | Se | 82 | 5.066 | 0.000 | **-0.140049** | 0.10 | 72.5 | ug/L |
| | Sr | 88 | 90.667 | 0.000 | **0.277146** | 0.00 | 1.0 | ug/L |
| > | Y | 89 | 464475.706 | 464475.706 | | | | ug/L |
| | Mo | 95 | 19.333 | -0.000 | **0.130641** | 0.01 | 5.7 | ug/L |
| | Mo | 97 | 10.000 | -0.000 | **-0.248799** | 0.02 | 6.7 | ug/L |
| | Mo | 98 | 23.927 | -0.000 | **0.019633** | 0.01 | 45.8 | ug/L |
| | Ag | 107 | 6.000 | 0.000 | **-0.451323** | 0.00 | 0.9 | ug/L |
| | Ag | 109 | 6.000 | 0.000 | **-0.593870** | 0.00 | 0.6 | ug/L |
| | Cd | 111 | 3.833 | -0.000 | **-0.049852** | 0.00 | 9.6 | ug/L |
| | Cd | 114 | 5.786 | 0.000 | **0.333277** | 0.01 | 2.4 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 215292.076 | 215292.076 | | | | ug/L |
| \| | Sn | 120 | 611.957 | -0.001 | **-0.193064** | 0.06 | 29.2 | ug/L |
| \| | Sb | 121 | 568.688 | 0.001 | **0.695096** | 0.01 | 1.4 | ug/L |
| \| | Sb | 123 | 430.007 | 0.000 | **0.516539** | 0.03 | 6.4 | ug/L |
| \| | Ba | 135 | 11.333 | -0.000 | **-0.223042** | 0.01 | 6.5 | ug/L |
| \| | Ba | 137 | 20.667 | -0.000 | **-0.081520** | 0.00 | 6.1 | ug/L |
| \| | Tb | 159 | 340520.358 | 0.017 | | | | ug/L |
| \|> | Ho | 165 | 375504.667 | 375504.667 | | | | ug/L |
| \| | Tl | 203 | 25.333 | 0.000 | **-0.317461** | 0.00 | 1.0 | ug/L |
| \| | Tl | 205 | 80.000 | 0.000 | **-0.197682** | 0.00 | 2.0 | ug/L |
| \| | Pb | 208 | 74.667 | 0.000 | **-0.354910** | 0.00 | 1.3 | ug/L |
| | Kr | 83 | 17.067 | -2.333 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 95.786 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 93.489 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 94.614 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 92.456 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSA**
Sample Date/Time: Wednesday, February 17, 2010 11:25:21
Sample Type: Sample
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\ICSA.021
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

**Concentration Results**

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24563.358 | 0.007 | | | | ug/L |
| | Li | 7 | 2873.871 | 0.000 | **0.291911** | 0.10 | 34.9 | ug/L |
| | Be | 9 | 11.333 | 0.000 | **0.246906** | 0.03 | 14.0 | ug/L |
| | B | 11 | 760.038 | 0.000 | **0.299965** | 0.20 | 67.0 | ug/L |
| | Na | 23 | 53537370.240 | 164.031 | **93412.339584** | 6336.15 | 6.8 | ug/L |
| | Mg | 24 | 38533799.505 | 118.110 | **93640.131324** | 7067.63 | 7.5 | ug/L |
| | Al | 27 | 115201653.421 | 353.027 | **90828.603179** | 6149.62 | 6.8 | ug/L |
| | K | 39 | 95376904.665 | 291.984 | **87222.067191** | 5534.01 | 6.3 | ug/L |
| | Ca | 43 | 476279.364 | 1.459 | **98404.688770** | 5856.43 | 6.0 | ug/L |
| > | Sc | 45 | 326929.635 | 326929.635 | | | | ug/L |
| | Ti | 49 | 247186.528 | 0.756 | **2040.393596** | 72.08 | 3.5 | ug/L |
| | Co | 59 | 3228.679 | 0.010 | **1.449318** | 0.13 | 9.0 | ug/L |
| | Ni | 60 | 1030.736 | 0.003 | **2.016772** | 0.05 | 2.7 | ug/L |
| | Ni | 62 | 572.021 | 0.002 | **9.404502** | 1.26 | 13.4 | ug/L |
| | Cu | 63 | 1886.898 | 0.006 | **1.565349** | 0.19 | 11.9 | ug/L |
| | Cu | 65 | 1046.738 | 0.003 | **1.658647** | 0.19 | 11.7 | ug/L |
| | Zn | 66 | 1006.733 | 0.002 | **2.931747** | 0.20 | 6.7 | ug/L |
| | Zn | 67 | 757.371 | -0.000 | **-8.242915** | 2.31 | 28.0 | ug/L |
| | Zn | 68 | 313.340 | 0.000 | **-0.165237** | 0.17 | 103.4 | ug/L |
| | V | 51 | 442.066 | 0.003 | **0.660379** | 0.71 | 107.2 | ug/L |
| | Cr | 52 | 6527.542 | 0.012 | **2.304337** | 0.91 | 39.4 | ug/L |
| | Cr | 53 | 8458.651 | -0.008 | **-22.179018** | 1.85 | 8.3 | ug/L |
| | Mn | 55 | 20539.401 | 0.062 | **6.939701** | 0.36 | 5.1 | ug/L |
| | Fe | 54 | 13679929.477 | 41.849 | **97604.889684** | 3608.00 | 3.7 | ug/L |
| | Fe | 57 | 5683278.608 | 17.398 | **97977.157934** | 3812.26 | 3.9 | ug/L |
| | As | 75 | -333.855 | -0.000 | **-0.021751** | 0.60 | 2777.9 | ug/L |
| | Se | 77 | 1850.890 | 0.000 | **5.892167** | 4.77 | 80.9 | ug/L |
| | Se | 82 | -7.356 | -0.000 | **-0.547279** | 0.14 | 26.0 | ug/L |
| | Sr | 88 | 10143.351 | 0.022 | **2.660450** | 0.12 | 4.5 | ug/L |
| > | Y | 89 | 457689.338 | 457689.338 | | | | ug/L |
| | Mo | 95 | 1026065.843 | 2.244 | **2060.854479** | 80.60 | 3.9 | ug/L |
| | Mo | 97 | 626486.394 | 1.370 | **2054.777356** | 97.00 | 4.7 | ug/L |
| | Mo | 98 | 1591401.776 | 3.481 | **2064.742656** | 91.83 | 4.4 | ug/L |
| | Ag | 107 | 147.335 | 0.001 | **-0.350017** | 0.01 | 1.8 | ug/L |
| | Ag | 109 | 119.334 | 0.001 | **-0.507608** | 0.02 | 4.0 | ug/L |
| | Cd | 111 | 788.374 | 0.004 | **2.277279** | 0.07 | 3.0 | ug/L |
| | Cd | 114 | 1404.391 | 0.007 | **2.136458** | 0.04 | 2.1 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 206074.787 | 206074.787 | | | | ug/L |
| \| | Sn | 120 | 725.291 | 0.000 | **-0.101149** | 0.04 | 41.6 | ug/L |
| \| | Sb | 121 | 579.355 | 0.001 | **0.724670** | 0.05 | 6.3 | ug/L |
| \| | Sb | 123 | 518.596 | 0.001 | **0.636007** | 0.05 | 7.1 | ug/L |
| \| | Ba | 135 | 555.353 | 0.001 | **1.407911** | 0.07 | 5.1 | ug/L |
| \| | Ba | 137 | 914.721 | 0.002 | **1.448820** | 0.10 | 6.6 | ug/L |
| \| | Tb | 159 | 315792.453 | -0.004 | | | | ug/L |
| \|> | Ho | 165 | 356253.143 | 356253.143 | | | | ug/L |
| \| | Tl | 203 | 234.670 | 0.001 | **-0.188161** | 0.00 | 1.5 | ug/L |
| \| | Tl | 205 | 588.689 | 0.002 | **-0.065408** | 0.02 | 25.4 | ug/L |
| \| | Pb | 208 | 1348.712 | 0.004 | **-0.110516** | 0.01 | 10.9 | ug/L |
| | Kr | 83 | 36.933 | 17.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 94.573 | |
| Ti | 49 | | | |
| Co | 59 | | | |
| Ni | 60 | | | |
| Ni | 62 | | | |
| Cu | 63 | | | |
| Cu | 65 | | | |
| Zn | 66 | | | |
| Zn | 67 | | | |
| Zn | 68 | | | |
| V | 51 | | | |
| Cr | 52 | | | |
| Cr | 53 | | | |
| Mn | 55 | | | |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | |
| Se | 77 | | | |
| Se | 82 | | | |
| Sr | 88 | | | |
| Y | 89 | | 92.123 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | |
| Ag | 109 | | | |
| Cd | 111 | | | |
| Cd | 114 | | | |
| In | 115 | | 90.563 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.716 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# Quantitative Analysis - Summary Report

**Sample ID: ICSAB**
Sample Date/Time: Wednesday, February 17, 2010 11:28:02
Sample Type: Spike - 2 of 6
Sample Description:
Method File: C:\Elandata\Method\Short-ESI-TEST.mth
Dataset File: C:\elandata\Dataset\1002170918MS\ICSAB.022
Tuning File: C:\elandata\Tuning\default.tun
Optimization File: C:\elandata\Optimize\Default.dac
Sample Prep Volume (mL):
Initial Sample Quantity (mg):
Aliquot Volume (mL):
Diluted to Volume (mL):
Solids Ratio:

## Concentration Results

| | Analyte | Mass | Meas. Intens. Mean | Net Intens. Mean | **Conc. Mean** | Conc. SD | Conc. RSD | Sample Unit |
|---|---|---|---|---|---|---|---|---|
| | Li | 6 | 24845.626 | 0.008 | | | | ug/L |
| | Li | 7 | 2965.238 | 0.001 | **0.420158** | 0.13 | 31.7 | ug/L |
| | Be | 9 | 4.667 | 0.000 | **0.215619** | 0.01 | 5.1 | ug/L |
| | B | 11 | 739.369 | 0.000 | **0.241385** | 0.13 | 54.6 | ug/L |
| | Na | 23 | 53876066.518 | 166.294 | **94700.621818** | 1960.26 | 2.1 | ug/L |
| | Mg | 24 | 38948546.858 | 120.227 | **95317.899313** | 517.20 | 0.5 | ug/L |
| | Al | 27 | 117171251.711 | 361.842 | **93096.323570** | 4286.59 | 4.6 | ug/L |
| | K | 39 | 97315519.795 | 300.315 | **89711.194574** | 1964.75 | 2.2 | ug/L |
| | Ca | 43 | 479194.219 | 1.479 | **99759.505070** | 1633.89 | 1.6 | ug/L |
| > | Sc | 45 | 323949.292 | 323949.292 | | | | ug/L |
| | Ti | 49 | 245494.152 | 0.757 | **2043.437955** | 59.56 | 2.9 | ug/L |
| | Co | 59 | 151207.914 | 0.467 | **80.589161** | 1.63 | 2.0 | ug/L |
| | Ni | 60 | 28787.781 | 0.089 | **78.021553** | 1.87 | 2.4 | ug/L |
| | Ni | 62 | 5040.318 | 0.015 | **88.029619** | 2.35 | 2.7 | ug/L |
| | Cu | 63 | 66724.158 | 0.206 | **74.665423** | 0.72 | 1.0 | ug/L |
| | Cu | 65 | 32246.126 | 0.099 | **74.999199** | 0.81 | 1.1 | ug/L |
| | Zn | 66 | 11013.217 | 0.033 | **38.241846** | 0.98 | 2.6 | ug/L |
| | Zn | 67 | 2545.755 | 0.005 | **31.244596** | 1.73 | 5.5 | ug/L |
| | Zn | 68 | 7436.927 | 0.022 | **34.982317** | 1.10 | 3.1 | ug/L |
| | V | 51 | 151668.382 | 0.469 | **82.282618** | 1.69 | 2.1 | ug/L |
| | Cr | 52 | 130613.055 | 0.395 | **82.003868** | 2.01 | 2.5 | ug/L |
| | Cr | 53 | 24091.669 | 0.041 | **64.338868** | 2.46 | 3.8 | ug/L |
| | Mn | 55 | 239911.129 | 0.740 | **85.061060** | 1.46 | 1.7 | ug/L |
| | Fe | 54 | 13362744.247 | 41.224 | **96146.354617** | 2309.15 | 2.4 | ug/L |
| | Fe | 57 | 5576918.781 | 17.216 | **96949.971989** | 1844.52 | 1.9 | ug/L |
| | As | 75 | 10630.717 | 0.024 | **35.685280** | 0.62 | 1.7 | ug/L |
| | Se | 77 | 2787.839 | 0.003 | **48.463762** | 4.72 | 9.7 | ug/L |
| | Se | 82 | 1154.795 | 0.003 | **38.308095** | 1.71 | 4.5 | ug/L |
| | Sr | 88 | 9947.096 | 0.022 | **2.648583** | 0.10 | 3.9 | ug/L |
| > | Y | 89 | 450778.270 | 450778.270 | | | | ug/L |
| | Mo | 95 | 997495.674 | 2.213 | **2032.864983** | 58.03 | 2.9 | ug/L |
| | Mo | 97 | 606833.318 | 1.347 | **2019.199801** | 70.99 | 3.5 | ug/L |
| | Mo | 98 | 1546412.650 | 3.431 | **2035.608474** | 67.08 | 3.3 | ug/L |
| | Ag | 107 | 25867.436 | 0.129 | **18.543694** | 0.76 | 4.1 | ug/L |
| | Ag | 109 | 24823.993 | 0.124 | **18.674227** | 0.52 | 2.8 | ug/L |
| | Cd | 111 | 13236.880 | 0.066 | **40.261629** | 0.84 | 2.1 | ug/L |
| | Cd | 114 | 29612.054 | 0.148 | **39.505413** | 0.67 | 1.7 | ug/L |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| \|> | In | 115 | 200685.457 | 200685.457 | | | | ug/L |
| \| | Sn | 120 | 690.672 | 0.000 | **-0.112368** | 0.04 | 32.8 | ug/L |
| \| | Sb | 121 | 397.344 | -0.000 | **0.575911** | 0.05 | 9.5 | ug/L |
| \| | Sb | 123 | 343.756 | -0.000 | **0.449780** | 0.02 | 5.1 | ug/L |
| \| | Ba | 135 | 526.018 | 0.001 | **1.323795** | 0.15 | 11.5 | ug/L |
| \| | Ba | 137 | 913.388 | 0.002 | **1.447268** | 0.13 | 8.6 | ug/L |
| \| | Tb | 159 | 315083.729 | -0.005 | | | | ug/L |
| \|> | Ho | 165 | 355938.386 | 355938.386 | | | | ug/L |
| \| | Tl | 203 | 226.670 | 0.001 | **-0.193187** | 0.02 | 12.7 | ug/L |
| \| | Tl | 205 | 568.021 | 0.002 | **-0.070788** | 0.00 | 5.3 | ug/L |
| \| | Pb | 208 | 1319.377 | 0.004 | **-0.116019** | 0.01 | 10.1 | ug/L |
| | Kr | 83 | 37.933 | 18.533 | | | | ug/L |

**QC Calculated Values**

| Analyte | Mass | QC Std % Recovery | Int Std % Recovery | Spike % Recovery |
|---|---|---|---|---|
| Li | 6 | | | |
| Li | 7 | | | |
| Be | 9 | | | |
| B | 11 | | | |
| Na | 23 | | | |
| Mg | 24 | | | |
| Al | 27 | | | |
| K | 39 | | | |
| Ca | 43 | | | |
| Sc | 45 | | 93.711 | |
| Ti | 49 | | | |
| Co | 59 | | | 98.925 |
| Ni | 60 | | | 95.006 |
| Ni | 62 | | | 98.281 |
| Cu | 63 | | | 91.375 |
| Cu | 65 | | | 91.676 |
| Zn | 66 | | | 88.275 |
| Zn | 67 | | | 98.719 |
| Zn | 68 | | | 87.869 |
| V | 51 | | | 102.028 |
| Cr | 52 | | | 99.624 |
| Cr | 53 | | | 108.147 |
| Mn | 55 | | | 97.652 |
| Fe | 54 | | | |
| Fe | 57 | | | |
| As | 75 | | | 89.268 |
| Se | 77 | | | 106.429 |
| Se | 82 | | | 97.138 |
| Sr | 88 | | | |
| Y | 89 | | 90.732 | |
| Mo | 95 | | | |
| Mo | 97 | | | |
| Mo | 98 | | | |
| Ag | 107 | | | 94.469 |
| Ag | 109 | | | 95.909 |
| Cd | 111 | | | 94.961 |
| Cd | 114 | | | 93.422 |
| In | 115 | | 88.195 | |
| Sn | 120 | | | |
| Sb | 121 | | | |

| | | |
|---|---|---|
| Sb | 123 | |
| Ba | 135 | |
| Ba | 137 | |
| Tb | 159 | |
| Ho | 165 | 87.639 |
| Tl | 203 | |
| Tl | 205 | |
| Pb | 208 | |
| Kr | 83 | |

# METALS PREP AND ANALYTICAL RUN LOGS

SPL, Inc.

# PREP BATCH REPORT

Prep Batch ID: **87095**
Prep Code: **PR3010_6020**
Technician: **Savannah Alfred**


Prep Start Date: **2/12/2010 5:00:00 PM**
Prep End Date: **2/13/2010 5:00:00 AM**

| Sample ID | Matrix | Vial | pH | wt (Kg) | Ini vol (mL) | Surr Added | Spk Added | Homog | Fin Vol (mL) | Factor | SDG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10020428-01A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-02A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-03A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-04A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-05A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-06A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-07A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-08A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-08AMS | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-08AMSD | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-09A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-10A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-11A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-12A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-13A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-14A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-15A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-16A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-17A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-18A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-20A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| LCS-87095 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| MBLK-87095 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |

SPL, Inc.

# PREP BATCH REPORT

Prep Batch ID: **87096**
Prep Code: **PR3010_6020**
Technician: **Savannah Alfred**


Prep Start Date: **2/12/2010 5:00:00 PM**
Prep End Date: **2/13/2010 5:00:00 AM**

| Sample ID | Matrix | Vial | pH | wt (Kg) | Ini vol (mL) | Surr Added | Spk Added | Homog | Fin Vol (mL) | Factor | SDG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10020428-19A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-19AMS | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-19AMSD | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-21A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-22A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-23A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-24A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-25A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-26A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-27A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-28A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-29A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-30A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-31A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-32A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-33A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-34A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| 10020428-35A | Water | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| LCS-87096 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |
| MBLK-87096 | | 1 | | 0 | 50 | 1 | | X | 50 | 1 | |

SPL, Inc.

# PREP BATCH REPORT

Prep Batch ID: **87103**
Prep Code: **PR3005_6010**
Technician: **Savannah Alfred**


Prep Start Date: **2/12/2010 2:00:00 PM**
Prep End Date: **2/12/2010 2:05:00 PM**

| Sample ID | Matrix | Vial | pH | wt (Kg) | Ini vol (mL) | Surr Added | Spk Added | Homog | Fin Vol (mL) | Factor | SDG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10020428-20B | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020428-27B | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-01E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-02E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-03E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| 10020461-04E | Water | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| LCS-87103 | | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |
| MBLK-87103 | | 1 | | 0 | 100 | 1 | | X | 100 | 1 | |

10021509 30ms
2-15-10
RD

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| CAL BLANK | 02/15/10 11:49:34 | Cal Blank | SAMP | 3.0 | 6020_W_ALL | | | 06120-80-13 |
| STD 1 | 02/15/10 11:52:14 | Std 1 | SAMP | 3.0 | 6020_W_ALL | | | 06119-146-17 |
| STD 2 | 02/15/10 11:54:55 | Std 2 | SAMP | 3.0 | 6020_W_ALL | | | -147-17 |
| STD 3 | 02/15/10 11:57:35 | Std 3 | SAMP | 3.0 | 6020_W_ALL | | | -148-17 |
| STD 4 | 02/15/10 12:00:16 | Std 4 | SAMP | 3.0 | 6020_W_ALL | | | -149-17 |
| STD 5 | 02/15/10 12:02:56 | Std 5 | SAMP | 3.0 | 6020_W_ALL | | | -150-17 |
| QC STD 1 | 02/15/10 12:05:37 | ICV | ICV | 1.0 | 6020_W_ALL | ✓ | | -152-17 |
| QC STD 2 | 02/15/10 12:13:03 | LLICV | ICV1 | 1.0 | 6020A_W_ALL | ✓ | | -158-06 |
| QC STD 3 | 02/15/10 12:16:25 | ICB | ICB | 1.0 | 6020_W_ALL | ✓ | | 06120-80-13 |
| QC STD 4 | 02/15/10 12:19:28 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | 06119-151-17 |
| QC STD 5 | 02/15/10 12:25:14 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | -158-06 |
| QC STD 6 | 02/15/10 12:28:12 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | 06120-80-13 |
| ICSA | 02/15/10 12:32:08 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | 06119-155-09 |
| ICSAB | 02/15/10 12:34:48 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | -156-09 |
| MBLK-87071 | 02/15/10 12:41:58 | MBLK-87071 | MBLK | 1.0 | 6020_W_ALL | ✓ | | |
| LCS-87071 | 02/15/10 12:44:39 | LCS-87071 | LCS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020393-05A | 02/15/10 12:47:51 | 10020393-05A | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020393-05ASD | 02/15/10 12:50:32 | 10020393-05ASD | SD | 5.0 | 6020_W_ALL | ✓ | | |
| 10020393-05AMS | 02/15/10 12:53:13 | 10020393-05AMS | MS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020393-05AMS | 02/15/10 12:55:54 | 10020393-05AMSD | MSD | 1.0 | 6020_W_ALL | ✓ | | |
| 10020393-05APDS | 02/15/10 12:58:35 | 10020393-05APDS | PDS | 5.0 | 6020_W_ALL | ✓ | | |
| 10020393-05APDS | 02/15/10 13:01:15 | 10020393-05APDSD | PDSD | 5.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/15/10 13:05:46 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 13:09:21 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 13:12:44 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-01E | 02/15/10 13:15:53 | 10020388-01E | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-02E | 02/15/10 13:18:34 | 10020388-02E | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-03E | 02/15/10 13:21:15 | 10020388-03E | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-04E | 02/15/10 13:23:56 | 10020388-04E | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-05E | 02/15/10 13:26:37 | 10020388-05E | SAMP | 1.0 | 6020_W_ALL | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:27

00883

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10020393-06A | 02/15/10 13:29:18 | 10020393-06A | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020393-07A | 02/15/10 13:31:58 | 10020393-07A | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-04E | 02/15/10 13:40:28 | 10020388-04E | SAMP | 5.0 | 6020_W_ALL | | | |
| 10020388-04E | 02/15/10 13:43:32 | 10020388-04E | SAMP | 25 | 6020_W_ALL | ✓ | | |
| 10020393-07A | 02/15/10 13:46:39 | 10020393-07A | SAMP | 5.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/15/10 13:50:59 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 13:53:58 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 13:57:10 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/15/10 14:00:42 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/15/10 14:03:23 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| MBLK-87074 | 02/15/10 14:23:38 | MBLK-87074 | MBLK | 1.0 | 6020_D | ✓ | | |
| LCS-87074 | 02/15/10 14:26:19 | LCS-87074 | LCS | 1.0 | 6020_D | ✓ | | |
| 10020388-01F | 02/15/10 14:29:18 | 10020388-01F | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020388-01FSD | 02/15/10 14:37:09 | 10020388-01FSD | SD | 5.0 | 6020_D | ✓ | | |
| 10020388-01FMS | 02/15/10 14:39:49 | 10020388-01FMS | MS | 1.0 | 6020_D | ✓ | | |
| 10020388-01FMS | 02/15/10 14:42:30 | 10020388-01FMSD | MSD | 1.0 | 6020_D | ✓ | | |
| 10020388-01FPDS | 02/15/10 14:45:11 | 10020388-01FPDS | PDS | 5.0 | 6020_D | ✓ | | |
| 10020388-01FPDS | 02/15/10 14:47:52 | 10020388-01FPDSD | PDSD | 5.0 | 6020_D | ✓ | | |
| QC STD 4 | 02/15/10 14:50:34 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 14:53:16 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 14:55:57 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020388-02F | 02/15/10 14:58:39 | 10020388-02F | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020388-03F | 02/15/10 15:01:20 | 10020388-03F | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020388-04F | 02/15/10 15:04:01 | 10020388-04F | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020388-05F | 02/15/10 15:06:42 | 10020388-05F | SAMP | 1.0 | 6020_D | ✓ | | |
| QC STD 4 | 02/15/10 15:09:24 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 15:12:05 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 15:14:47 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/15/10 15:17:28 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/15/10 15:20:09 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:27

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| MBLK-87101 | 02/15/10 15:22:51 | MBLK-87101 | MBLK | 1.0 | 6020_W_ALL | ✓ | | |
| LCS-87101 | 02/15/10 15:25:32 | LCS-87101 | LCS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-02C | 02/15/10 15:28:13 | 10020427-02C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-02CSD | 02/15/10 15:30:54 | 10020427-02CSD | SD | 5.0 | 6020_W_ALL | ✓ | | |
| 10020427-02CMS | 02/15/10 15:33:35 | 10020427-02CMS | MS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-02CMS | 02/15/10 15:36:16 | 10020427-02CMSD | MSD | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-02CPDS | 02/15/10 15:38:57 | 10020427-02CPDS | PDS | 5.0 | 6020_W_ALL | ✓ | | |
| 10020427-02CPDS | 02/15/10 15:41:37 | 10020427-02CPDSD | PDSD | 5.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/15/10 15:44:20 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 15:47:01 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 15:49:43 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-01C | 02/15/10 15:52:25 | 10020427-01C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-03C | 02/15/10 15:55:06 | 10020427-03C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-04C | 02/15/10 15:57:47 | 10020427-04C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-05C | 02/15/10 16:00:28 | 10020427-05C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-06C | 02/15/10 16:03:08 | 10020427-06C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-07C | 02/15/10 16:05:49 | 10020427-07C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020461-01D | 02/15/10 16:08:30 | 10020461-01D | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020461-02D | 02/15/10 16:11:10 | 10020461-02D | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020461-03D | 02/15/10 16:13:51 | 10020461-03D | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020461-04D | 02/15/10 16:16:32 | 10020461-04D | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/15/10 16:19:14 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 16:21:56 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 16:24:37 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/15/10 16:27:18 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/15/10 16:30:00 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| MBLK-87086 | 02/15/10 16:32:40 | MBLK-87086 | MBLK | 5.0 | 6020_S_ALL | ✓ | | |
| LCS-87086 | 02/15/10 16:35:22 | LCS-87086 | LCS | 10 | 6020_S_ALL | ✓ | | |
| 10020393-01A | 02/15/10 16:38:03 | 10020393-01A | SAMP | 5.0 | 6020_S_ALL | ✓ | | |
| 10020393-01ASD | 02/15/10 16:40:44 | 10020393-01ASD | SD | 25 | 6020_S_ALL | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:27

00885

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10020393-01AMS | 02/15/10 16:43:25 | 10020393-01AMS | MS | 5.0 | 6020_S_ALL | ✓ | | |
| 10020393-01AMS | 02/15/10 16:46:06 | 10020393-01AMSD | MSD | 5.0 | 6020_S_ALL | ✓ | | |
| 10020393-01APDS | 02/15/10 16:48:46 | 10020393-01APDS | PDS | 25 | 6020_S_ALL | ✓ | | |
| 10020393-01APDS | 02/15/10 16:51:27 | 10020393-01APDSD | PDSD | 25 | 6020_S_ALL | ✓ | | |
| QC STD 4 | 02/15/10 16:54:09 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 16:56:49 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020393-02A | 02/15/10 16:59:31 | 10020393-02A | SAMP | 5.0 | 6020_S_ALL | ✓ | | |
| 10020393-03A | 02/15/10 17:02:12 | 10020393-03A | SAMP | 5.0 | 6020_S_ALL | ✓ | | |
| 10020393-04A | 02/15/10 17:04:52 | 10020393-04A | SAMP | 5.0 | 6020_S_ALL | ✓ | | |
| QC STD 4 | 02/15/10 17:07:34 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 17:10:16 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | | | |
| QC STD 6 | 02/15/10 17:12:57 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/15/10 17:15:38 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/15/10 17:18:19 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| MBLK-87095 | 02/15/10 17:21:01 | MBLK-87095 | MBLK | 1.0 | 6020_W_ALL | ✓ | | |
| LCS-87095 | 02/15/10 17:23:42 | LCS-87095 | LCS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-08A | 02/15/10 17:26:22 | 10020428-08A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BC-07 |
| 10020428-08ASD | 02/15/10 17:29:03 | 10020428-08ASD | SD | 5.0 | 6020_W_ALL | ✓ | | |
| 10020428-08AMS | 02/15/10 17:31:43 | 10020428-08AMS | MS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-08AMS | 02/15/10 17:34:24 | 10020428-08AMSD | MSD | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-08APDS | 02/15/10 17:37:05 | 10020428-08APDS | PDS | 5.0 | 6020_W_ALL | ✓ | | |
| 10020428-08APDS | 02/15/10 17:39:46 | 10020428-08APDSD | PDSD | 5.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/15/10 17:42:29 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 17:45:10 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-01A | 02/15/10 17:47:53 | 10020428-01A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-09A |
| 10020428-02A | 02/15/10 17:50:34 | 10020428-02A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-09 |
| 10020428-03A | 02/15/10 17:53:15 | 10020428-03A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-04 |
| 10020428-04A | 02/15/10 17:55:56 | 10020428-04A | SAMP | 1.0 | 6020_W_ALL | ✓ | | WW-09 |
| 10020428-05A | 02/15/10 17:58:36 | 10020428-05A | SAMP | 1.0 | 6020_W_ALL | ✓ | | WW-04 |
| 10020428-06A | 02/15/10 18:01:17 | 10020428-06A | SAMP | 1.0 | 6020_W_ALL | ✓ | | Reagan well |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:27

00886

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10020428-07A | 02/15/10 18:03:58 | 10020428-07A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BC-03 |
| 10020428-09A | 02/15/10 18:06:38 | 10020428-09A | SAMP | 1.0 | 6020_W_ALL | ✓ | | DW-04 |
| 10020428-10A | 02/15/10 18:09:19 | 10020428-10A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BC-19 |
| 10020428-11A | 02/15/10 18:12:00 | 10020428-11A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BC-25 |
| QC STD 4 | 02/15/10 18:14:42 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 18:17:23 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-12A | 02/15/10 18:20:06 | 10020428-12A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-03 |
| 10020428-13A | 02/15/10 18:22:47 | 10020428-13A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-06 |
| 10020428-14A | 02/15/10 18:25:28 | 10020428-14A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BB-01 |
| 10020428-15A | 02/15/10 18:28:08 | 10020428-15A | SAMP | 1.0 | 6020_W_ALL | ✓ | | South well |
| 10020428-16A | 02/15/10 18:30:49 | 10020428-16A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BC-17 |
| 10020428-17A | 02/15/10 18:33:30 | 10020428-17A | SAMP | 1.0 | 6020_W_ALL | ✓ | | North well |
| 10020428-18A | 02/15/10 18:36:10 | 10020428-18A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BC-21R |
| 10020428-20A | 02/15/10 18:38:51 | 10020428-20A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-01 |
| QC STD 4 | 02/15/10 18:41:33 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 18:44:14 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | | | |
| QC STD 6 | 02/15/10 18:46:56 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/15/10 18:49:37 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/15/10 18:52:18 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| MBLK-87096 | 02/15/10 18:55:00 | MBLK-87096 | MBLK | 1.0 | 6020_W_ALL | ✓ | | |
| LCS-87096 | 02/15/10 18:57:41 | LCS-87096 | LCS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-19A | 02/15/10 19:00:22 | 10020428-19A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-01A |
| 10020428-19ASD | 02/15/10 19:03:03 | 10020428-19ASD | SD | 5.0 | 6020_W_ALL | ✓ | | |
| 10020428-19AMS | 02/15/10 19:05:44 | 10020428-19AMS | MS | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-19AMS | 02/15/10 19:08:24 | 10020428-19AMSD | MSD | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-19APDS | 02/15/10 19:11:05 | 10020428-19APDS | PDS | 5.0 | 6020_W_ALL | ✓ | | |
| 10020428-19APDS | 02/15/10 19:13:46 | 10020428-19APDSD | PDSD | 5.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/15/10 19:16:28 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 19:19:09 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-21A | 02/15/10 19:21:52 | 10020428-21A | SAMP | 1.0 | 6020_W_ALL | ✓ | | DW-03 |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:27

00887

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10020428-22A | 02/15/10 19:24:32 | 10020428-22A | SAMP | 1.0 | 6020_W_ALL | ✓ | | PW-04 |
| 10020428-23A | 02/15/10 19:27:13 | 10020428-23A | SAMP | 1.0 | 6020_W_ALL | ✓ | | DW-02 |
| 10020428-24A | 02/15/10 19:29:53 | 10020428-24A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-05A |
| 10020428-25A | 02/15/10 19:32:34 | 10020428-25A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-05 |
| 10020428-26A | 02/15/10 19:35:14 | 10020428-26A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-A |
| 10020428-27A | 02/15/10 19:37:55 | 10020428-27A | SAMP | 1.0 | 6020_W_ALL | ✓ | | DW-01 |
| 10020428-28A | 02/15/10 19:40:35 | 10020428-28A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-03A |
| 10020428-29A | 02/15/10 19:43:16 | 10020428-29A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-03 |
| 10020428-30A | 02/15/10 19:45:57 | 10020428-30A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-02 |
| QC STD 4 | 02/15/10 19:48:39 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/15/10 19:51:19 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-31A | 02/15/10 19:54:02 | 10020428-31A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-01 |
| 10020428-32A | 02/15/10 19:56:42 | 10020428-32A | SAMP | 1.0 | 6020_W_ALL | ✓ | | Duplicate #1 |
| 10020428-33A | 02/15/10 19:59:23 | 10020428-33A | SAMP | 1.0 | 6020_W_ALL | ✓ | | #2 |
| 10020428-34A | 02/15/10 20:02:04 | 10020428-34A | SAMP | 1.0 | 6020_W_ALL | ✓ | | #3 |
| 10020428-35A | 02/15/10 20:04:44 | 10020428-35A | SAMP | 1.0 | 6020_W_ALL | ✓ | | #4 |
| QC STD 4 | 02/15/10 20:07:26 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/15/10 20:10:08 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | | | |
| QC STD 6 | 02/15/10 20:12:49 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/15/10 20:15:30 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/15/10 20:18:11 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |

00888

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:27

10021609 07MS
2-16-10
RD

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| CAL BLANK | 02/16/10 09:18:04 | Cal Blank | SAMP | 3.0 | 6020_W_ALL | | | 06120-80-13 |
| STD 1 | 02/16/10 09:20:44 | Std 1 | SAMP | 3.0 | 6020_W_ALL | | | 06119-146-17 |
| STD 2 | 02/16/10 09:23:25 | Std 2 | SAMP | 3.0 | 6020_W_ALL | | | -147-17 |
| STD 3 | 02/16/10 09:26:06 | Std 3 | SAMP | 3.0 | 6020_W_ALL | | | -148-17 |
| STD 4 | 02/16/10 09:28:46 | Std 4 | SAMP | 3.0 | 6020_W_ALL | | | -149-17 |
| STD 5 | 02/16/10 09:31:27 | Std 5 | SAMP | 3.0 | 6020_W_ALL | | | -150-17 |
| QC STD 1 | 02/16/10 09:34:07 | ICV | ICV | 1.0 | 6020_W_ALL | ✓ | | -152-17 |
| QC STD 2 | 02/16/10 09:42:24 | LLICV | ICV1 | 1.0 | 6020A_W_ALL | ✓ | | -158-07 |
| QC STD 3 | 02/16/10 09:45:29 | ICB | ICB | 1.0 | 6020_W_ALL | ✓ | | 06120-80-13 |
| QC STD 4 | 02/16/10 09:48:48 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | 06119-151-17 |
| QC STD 5 | 02/16/10 09:51:49 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | -158-07 |
| QC STD 6 | 02/16/10 09:55:39 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | 06120-80-13 |
| ICSA | 02/16/10 09:59:34 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | 06119-155-09 |
| ICSAB | 02/16/10 10:02:14 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | -156-09 |
| 10020461-02D | 02/16/10 10:19:37 | 10020461-02D | SAMP | 5.0 | 6020_W_ALL | ✓ | | |
| MBLK-87103 | 02/16/10 10:33:00 | MBLK-87103 | MBLK | 1.0 | 6020_D | ✓ | | |
| LCS-87103 | 02/16/10 10:35:40 | LCS-87103 | LCS | 1.0 | 6020_D | ✓ | | |
| 10020428-20B | 02/16/10 10:39:49 | 10020428-20B | SAMP | 1.0 | 6020_D | ✓ | | BA-01 |
| 10020428-20BSD | 02/16/10 10:42:29 | 10020428-20BSD | SD | 5.0 | 6020_D | ✓ | | |
| 10020428-20BMS | 02/16/10 10:45:10 | 10020428-20BMS | MS | 1.0 | 6020_D | ✓ | | |
| 10020428-20BMS | 02/16/10 10:47:51 | 10020428-20BMSD | MSD | 1.0 | 6020_D | ✓ | | |
| 10020428-20BPDS | 02/16/10 10:50:31 | 10020428-20BPDS | PDS | 5.0 | 6020_D | ✓ | | |
| QC STD 4 | 02/16/10 10:58:29 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/16/10 11:02:24 | LLCCV | CCV1 | 1.0 | 6020A_W_ALL | ✓ | | |
| QC STD 6 | 02/16/10 11:05:27 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-20BPDS | 02/16/10 11:08:31 | 10020428-20BPDSD | PDSD | 5.0 | 6020_D | ✓ | | |
| 10020428-27B | 02/16/10 11:11:12 | 10020428-27B | SAMP | 1.0 | 6020_D | ✓ | | PW-01 |
| 10020461-01E | 02/16/10 11:13:52 | 10020461-01E | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020461-02E | 02/16/10 11:16:33 | 10020461-02E | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020461-03E | 02/16/10 11:19:14 | 10020461-03E | SAMP | 1.0 | 6020_D | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:49

00889

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10020461-04E | 02/16/10 11:21:55 | 10020461-04E | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020428-20B | 02/16/10 11:27:56 | 10020428-20B | SAMP | 5.0 | 6020_D | ✓ | | BA-01 |
| QC STD 4 | 02/16/10 11:30:55 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/16/10 11:34:17 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | | | |
| QC STD 6 | 02/16/10 11:40:14 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/16/10 12:11:51 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/16/10 12:14:32 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-02A | 02/16/10 12:22:11 | 10020428-02A | SAMP | 5.0 | 6020_W_ALL | ✓ | | BA-09 |
| 10020428-02A | 02/16/10 12:25:05 | 10020428-02A | SAMP | 25 | 6020_W_ALL | ✓ | | ↓ |
| 10020428-13A | 02/16/10 12:32:01 | 10020428-13A | SAMP | 5.0 | 6020_W_ALL | ✓ | | MW-06 |
| 10020428-20A | 02/16/10 12:34:41 | 10020428-20A | SAMP | 5.0 | 6020_W_ALL | | | BA-01 |
| 10020428-21A | 02/16/10 12:37:23 | 10020428-21A | SAMP | 1.0 | 6020_W_ALL | ✓ | | DW-03 |
| 10020428-22A | 02/16/10 12:40:04 | 10020428-22A | SAMP | 1.0 | 6020_W_ALL | ✓ | | PW-04 |
| 10020428-22A | 02/16/10 12:42:46 | 10020428-22A | SAMP | 5.0 | 6020_W_ALL | ✓ | | ↓ |
| 10020428-23A | 02/16/10 12:45:28 | 10020428-23A | SAMP | 1.0 | 6020_W_ALL | | | DW-02 |
| QC STD 4 | 02/16/10 12:48:10 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/16/10 12:50:50 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-23A | 02/16/10 12:53:32 | 10020428-23A | SAMP | 5.0 | 6020_W_ALL | ✓ | | DW-02 |
| 10020428-23A | 02/16/10 12:56:13 | 10020428-23A | SAMP | 25 | 6020_W_ALL | ✓ | | ↓ |
| 10020428-24A | 02/16/10 12:58:54 | 10020428-24A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-05A |
| 10020428-25A | 02/16/10 13:01:35 | 10020428-25A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-05 |
| 10020428-26A | 02/16/10 13:04:16 | 10020428-26A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-A |
| 10020428-27A | 02/16/10 13:06:57 | 10020428-27A | SAMP | 1.0 | 6020_W_ALL | ✓ | | DW-01 |
| 10020428-28A | 02/16/10 13:09:38 | 10020428-28A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-03A |
| 10020428-29A | 02/16/10 13:12:19 | 10020428-29A | SAMP | 1.0 | 6020_W_ALL | ✓ | | BA-03 |
| 10020428-29A | 02/16/10 13:15:01 | 10020428-29A | SAMP | 5.0 | 6020_W_ALL | ✓ | | ↓ |
| 10020428-30A | 02/16/10 13:17:42 | 10020428-30A | SAMP | 1.0 | 6020_W_ALL | ✓ | | MW-07 |
| QC STD 4 | 02/16/10 13:20:25 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/16/10 13:23:06 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020428-30A | 02/16/10 13:25:48 | 10020428-30A | SAMP | 5.0 | 6020_W_ALL | ✓ | | MW-07 |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:49

00890

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10020428-31A | 02/16/10 13:28:30 | 10020428-31A | SAMP | 1.0 | 6020_W_ALL | | | MW-51 |
| 10020428-31A | 02/16/10 13:31:12 | 10020428-31A | SAMP | 5.0 | 6020_W_ALL | ✓ | | ↓ |
| 10020428-31A | 02/16/10 13:33:53 | 10020428-31A | SAMP | 25 | 6020_W_ALL | ✓ | | ↓ |
| 10020428-32A | 02/16/10 13:36:34 | 10020428-32A | SAMP | 1.0 | 6020_W_ALL | ✓ | | Duplicate #1 |
| 10020428-33A | 02/16/10 13:39:15 | 10020428-33A | SAMP | 1.0 | 6020_W_ALL | ✓ | | #2 |
| 10020428-34A | 02/16/10 13:41:55 | 10020428-34A | SAMP | 1.0 | 6020_W_ALL | ✓ | | #3 |
| 10020428-35A | 02/16/10 13:44:36 | 10020428-35A | SAMP | 1.0 | 6020_W_ALL | ✓ | | #4 |
| QC STD 4 | 02/16/10 13:47:18 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/16/10 13:49:58 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/16/10 13:52:39 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/16/10 13:55:20 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |

00891

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:16:49

10021709 18MS
2-17-10
RD

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| CAL BLANK | 02/17/10 09:26:57 | Cal Blank | SAMP | 3.0 | 6020_W_ALL | | | 06120-80-13 |
| STD 1 | 02/17/10 09:29:38 | Std 1 | SAMP | 3.0 | 6020_W_ALL | | | 06119-146-17 |
| STD 2 | 02/17/10 09:32:19 | Std 2 | SAMP | 3.0 | 6020_W_ALL | | | -147-17 |
| STD 3 | 02/17/10 09:35:00 | Std 3 | SAMP | 3.0 | 6020_W_ALL | | | -148-17 |
| STD 4 | 02/17/10 09:37:41 | Std 4 | SAMP | 3.0 | 6020_W_ALL | | | -149-17 |
| STD 5 | 02/17/10 09:40:21 | Std 5 | SAMP | 3.0 | 6020_W_ALL | | | -150-17 |
| QC STD 1 | 02/17/10 09:43:02 | ICV | ICV | 1.0 | 200.8 | ✓ | | -152-17 |
| QC STD 2 | 02/17/10 09:48:25 | LLICV | ICV1 | 1.0 | 6020_W_ALL | ✓ | | -158-08 |
| QC STD 3 | 02/17/10 09:53:15 | ICB | ICB | 1.0 | 200.8 | ✓ | | 06120-80-13 |
| QC STD 4 | 02/17/10 09:56:20 | CCV | CCV | 1.0 | 200.8 | ✓ | | 06119-151-17 |
| QC STD 5 | 02/17/10 09:59:39 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | ✓ | | -158-08 |
| QC STD 6 | 02/17/10 10:02:44 | CCB | CCB | 1.0 | 200.8 | ✓ | | 06120-80-13 |
| ICSA | 02/17/10 10:06:17 | ICSA | ICSA | 1.0 | 200.8 | ✓ | | 06119-155-09 |
| ICSAB | 02/17/10 10:08:58 | ICSAB | ICSAB | 1.0 | 200.8 | ✓ | | -156-09 |
| 10020428-20A | 02/17/10 10:20:00 | 10020428-20A | SAMP | 25 | 6020_W_ALL | ✓ | | BA-01 |
| 10020428-33A | 02/17/10 10:41:14 | 10020428-33A | SAMP | 5.0 | 6020_W_ALL | ✓ | | DUPLICATE #2 |
| QC STD 4 | 02/17/10 10:47:20 | CCV | CCV | 1.0 | 200.8 | ✓ | | |
| QC STD 5 | 02/17/10 10:50:21 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 10:53:57 | CCB | CCB | 1.0 | 200.8 | ✓ | | |
| ICSA | 02/17/10 11:25:21 | ICSA | ICSA | 1.0 | 200.8 | ✓ | | |
| ICSAB | 02/17/10 11:28:02 | ICSAB | ICSAB | 1.0 | 200.8 | ✓ | | |
| MBLK-87178 | 02/17/10 13:13:42 | MBLK-87178 | MBLK | 1.0 | 200.8 | ✓ | | |
| LCS-87178 | 02/17/10 13:16:23 | LCS-87178 | LCS | 10 | 200.8 | ✓ | | |
| 10020546-01C | 02/17/10 13:23:49 | 10020546-01C | SAMP | 1.0 | 200.8 | ✓ | | |
| 10020546-01CSD | 02/17/10 13:26:30 | 10020546-01CSD | SD | 5.0 | 200.8 | ✓ | | |
| 10020546-01CMS | 02/17/10 13:29:10 | 10020546-01CMS | MS | 1.0 | 200.8 | ✓ | | |
| 10020546-01CMS | 02/17/10 13:31:51 | 10020546-01CMSD | MSD | 1.0 | 200.8 | ✓ | | |
| 10020546-01CPDS | 02/17/10 13:34:32 | 10020546-01CPDS | PDS | 5.0 | 200.8 | ✓ | | |
| 10020546-01CPDS | 02/17/10 13:37:13 | 10020546-01CPDSD | PDSD | 5.0 | 200.8 | ✓ | | |
| QC STD 4 | 02/17/10 13:43:47 | CCV | CCV | 1.0 | 200.8 | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:17:11

00892

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| QC STD 5 | 02/17/10 13:47:00 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 13:50:11 | CCB | CCB | 1.0 | 200.8 | ✓ | | |
| 10020546-01CDU | 02/17/10 13:54:21 | 10020546-01CDUP | DUP | 1.0 | 200.8 | ✓ | | |
| 10020546-02C | 02/17/10 13:58:08 | 10020546-02C | SAMP | 1.0 | 200.8 | ✓ | | |
| 10020546-03C | 02/17/10 14:00:49 | 10020546-03C | SAMP | 1.0 | 200.8 | ✓ | | |
| 10020546-04C | 02/17/10 14:03:30 | 10020546-04C | SAMP | 1.0 | 200.8 | ✓ | | |
| 10020546-05C | 02/17/10 14:06:11 | 10020546-05C | SAMP | 1.0 | 200.8 | ✓ | | |
| 10020546-01C | 02/17/10 14:10:55 | 10020546-01C | SAMP | 5.0 | 200.8 | ✓ | | |
| QC STD 4 | 02/17/10 14:15:15 | CCV | CCV | 1.0 | 200.8 | ✓ | | |
| QC STD 5 | 02/17/10 14:18:27 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 14:21:48 | CCB | CCB | 1.0 | 200.8 | ✓ | | |
| ICSA | 02/17/10 14:25:10 | ICSA | ICSA | 1.0 | 200.8 | ✓ | | |
| ICSAB | 02/17/10 14:27:51 | ICSAB | ICSAB | 1.0 | 200.8 | ✓ | | |
| MBLK-87141 | 02/17/10 14:37:14 | MBLK-87141 | MBLK | 1.0 | 6020_W_ALL | ✓ | | |
| LCS-87141 | 02/17/10 14:44:44 | LCS-87141 | LCS | 1.0 | 6020_W_ALL | ✓ | | |
| LCSD-87141 | 02/17/10 14:47:41 | LCSD-87141 | LCSD | 1.0 | 6020_W_ALL | ✓ | | |
| 10020321-04D | 02/17/10 14:51:39 | 10020321-04D | SAMP | 1.0 | 6020_W_ALL | ✓ | | Field Blank #1 |
| 10020321-04DDU | 02/17/10 14:54:34 | 10020321-04DDUP | SAMP | 1.0 | 6020_W_ALL | ✓ | | ↓ |
| QC STD 4 | 02/17/10 14:57:36 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 5 | 02/17/10 15:02:41 | LLCCV | CCV1 | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 15:05:38 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/17/10 15:09:07 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/17/10 15:11:48 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| MBLK-87170 | 02/17/10 15:59:32 | MBLK-87170 | MBLK | 1.0 | 6020_W_ALL | ✓ | | |
| LCS-87170 | 02/17/10 16:02:39 | LCS-87170 | LCS | 10 | 6020_W_ALL | ✓ | | |
| 10010814-01C | 02/17/10 16:05:45 | 10010814-01C | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10010814-01CSD | 02/17/10 16:08:27 | 10010814-01CSD | SD | 5.0 | 6020_W_ALL | ✓ | | |
| 10010814-01CMS | 02/17/10 16:11:08 | 10010814-01CMS | MS | 1.0 | 6020_W_ALL | ✓ | | |
| 10010814-01CMS | 02/17/10 16:13:49 | 10010814-01CMSD | MSD | 1.0 | 6020_W_ALL | ✓ | | |
| 10010814-01CPDS | 02/17/10 16:16:30 | 10010814-01CPDS | PDS | 5.0 | 6020_W_ALL | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:17:11

00863

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| 10010814-01CPDS | 02/17/10 16:19:11 | 10010814-01CPDSD | PDSD | 5.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/17/10 16:34:20 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 16:39:58 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020533-01A | 02/17/10 16:49:27 | 10020533-01A | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020533-02A | 02/17/10 16:52:08 | 10020533-02A | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| 10020533-03A | 02/17/10 16:54:49 | 10020533-03A | SAMP | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 4 | 02/17/10 17:05:53 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 17:08:57 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/17/10 17:13:37 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/17/10 17:16:18 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |
| MBLK-87102 | 02/17/10 17:19:01 | MBLK-87102 | MBLK | 1.0 | 6020_D | ✓ | | |
| LCS-87102 | 02/17/10 17:21:42 | LCS-87102 | LCS | 1.0 | 6020_D | ✓ | | |
| 10020427-02D | 02/17/10 17:24:22 | 10020427-02D | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020427-02DSD | 02/17/10 17:27:03 | 10020427-02DSD | SD | 5.0 | 6020_D | ✓ | | |
| 10020427-02DMS | 02/17/10 17:29:44 | 10020427-02DMS | MS | 1.0 | 6020_D | ✓ | | |
| 10020427-02DMS | 02/17/10 17:32:24 | 10020427-02DMSD | MSD | 1.0 | 6020_D | ✓ | | |
| 10020427-02DPDS | 02/17/10 17:35:05 | 10020427-02DPDS | PDS | 5.0 | 6020_D | ✓ | | |
| 10020427-02DPDS | 02/17/10 17:37:45 | 10020427-02DPDSD | PDSD | 5.0 | 6020_D | ✓ | | |
| QC STD 4 | 02/17/10 17:40:27 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 17:43:07 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| 10020427-01D | 02/17/10 17:45:49 | 10020427-01D | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020427-03D | 02/17/10 17:48:30 | 10020427-03D | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020427-04D | 02/17/10 17:51:10 | 10020427-04D | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020427-05D | 02/17/10 17:53:51 | 10020427-05D | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020427-06D | 02/17/10 17:56:31 | 10020427-06D | SAMP | 1.0 | 6020_D | ✓ | | |
| 10020427-07D | 02/17/10 17:59:12 | 10020427-07D | SAMP | 1.0 | 6020_D | ✓ | | |
| QC STD 4 | 02/17/10 18:01:54 | CCV | CCV | 1.0 | 6020_W_ALL | ✓ | | |
| QC STD 6 | 02/17/10 18:04:35 | CCB | CCB | 1.0 | 6020_W_ALL | ✓ | | |
| ICSA | 02/17/10 18:07:15 | ICSA | ICSA | 1.0 | 6020_W_ALL | ✓ | | |
| ICSAB | 02/17/10 18:09:56 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | ✓ | | |

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:17:11

00894

# METALS RunLog for Instrument ICPMS

| File ID | Acquired / Initials | Sample ID | Sample Type | DF | Test Code | Rpt | Standard ID | Comments |
|---|---|---|---|---|---|---|---|---|
| MBLK-87140 | 02/17/10 18:12:39 | MBLK-87140 | MBLK | 1.0 | 6020_W_ALL | | | |
| LCS-87140 | 02/17/10 18:15:19 | LCS-87140 | LCS | 1.0 | 6020_W_ALL | | | |
| 10020444-01B | 02/17/10 18:18:00 | 10020444-01B | SAMP | 1.0 | 6020_W_ALL | | | |
| 10020444-01BSD | 02/17/10 18:20:41 | 10020444-01BSD | SD | 5.0 | 6020_W_ALL | | | |
| 10020444-01BMS | 02/17/10 18:23:22 | 10020444-01BMS | MS | 1.0 | 6020_W_ALL | | | |
| 10020444-01BMS | 02/17/10 18:26:03 | 10020444-01BMSD | MSD | 1.0 | 6020_W_ALL | | | |
| 10020444-01BPDS | 02/17/10 18:28:44 | 10020444-01BPDS | PDS | 5.0 | 6020_W_ALL | | | |
| 10020444-01BPDS | 02/17/10 18:31:24 | 10020444-01BPDSD | PDSD | 5.0 | 6020_W_ALL | | | |
| QC STD 4 | 02/17/10 18:34:06 | CCV | CCV | 1.0 | 6020_W_ALL | | | |
| QC STD 6 | 02/17/10 18:36:47 | CCB | CCB | 1.0 | 6020_W_ALL | | | |
| 10020471-01C | 02/17/10 18:39:29 | 10020471-01C | SAMP | 1.0 | 6020_W_ALL | | | |
| 10020484-01A | 02/17/10 18:42:10 | 10020484-01A | SAMP | 5.0 | 6020_W_ALL | | | |
| 10020484-02A | 02/17/10 18:44:51 | 10020484-02A | SAMP | 5.0 | 6020_W_ALL | | | |
| 10020484-03A | 02/17/10 18:47:31 | 10020484-03A | SAMP | 5.0 | 6020_W_ALL | | | |
| QC STD 4 | 02/17/10 19:00:59 | CCV | CCV | 1.0 | 6020_W_ALL | | | |
| QC STD 6 | 02/17/10 19:03:40 | CCB | CCB | 1.0 | 6020_W_ALL | | | |
| ICSA | 02/17/10 19:06:20 | ICSA | ICSA | 1.0 | 6020_W_ALL | | | |
| ICSAB | 02/17/10 19:09:02 | ICSAB | ICSAB | 1.0 | 6020_W_ALL | | | |

00895

DF = Dilution Factor, Rpt = Reported

 Runlog generated by: _____ Runlog reviewed by: _____ Printed: 02/25/2010 12:17:11

| Site ID | Project ID | Project Nar | SDG ID | Fraction | Lab Sample | Result ID | Client Sam | EPA Sample |
|---|---|---|---|---|---|---|---|---|
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | BA-09A | BA-09A |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | BA-09A | BA-09A |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | BA-09A | BA-09A |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | BA-09A | BA-09A |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | BA-09A | BA-09A |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | BA-09 | BA-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | BA-09 | BA-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | BA-09 | BA-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | MW-04 | MW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | MW-04 | MW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | MW-04 | MW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | MW-04 | MW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | MW-04 | MW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | WW-09 | WW-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | WW-09 | WW-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | WW-09 | WW-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | WW-09 | WW-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | WW-09 | WW-09 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | WW-04 | WW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | WW-04 | WW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | WW-04 | WW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | WW-04 | WW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | WW-04 | WW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | (b) (6) [redacted] | W |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | (b) (6) [redacted] | W |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | (b) (6) [redacted] | W |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | (b) (6) [redacted] | W |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | (b) (6) [redacted] | W |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | BC-03 | BC-03 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | BC-03 | BC-03 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | BC-03 | BC-03 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | BC-03 | BC-03 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | BC-03 | BC-03 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | DUPLICATE | DUPLICATE |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | DUPLICATE | DUPLICATE |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | DUPLICATE | DUPLICATE |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | BC-07 | BC-07 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | BC-07 | BC-07 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | BC-07 | BC-07 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | BC-07 | BC-07 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | BC-07 | BC-07 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 5 | DW-04 | DW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 1 | DW-04 | DW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 2 | DW-04 | DW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 3 | DW-04 | DW-04 |
| 207 | 207 | | 0020428A | Metals | 10020428- | 4 | DW-04 | DW-04 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BC-19 | BC-19 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BC-19 | BC-19 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BC-19 | BC-19 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BC-19 | BC-19 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BC-19 | BC-19 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BC-25 | BC-25 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BC-25 | BC-25 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BC-25 | BC-25 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BC-25 | BC-25 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BC-25 | BC-25 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | MW-03 | MW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | MW-03 | MW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | MW-03 | MW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | MW-03 | MW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | MW-03 | MW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | MW-06 | MW-06 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | MW-06 | MW-06 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | MW-06 | MW-06 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | MW-06 | MW-06 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | MW-06 | MW-06 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BB-01 | BB-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BB-01 | BB-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BB-01 | BB-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BB-01 | BB-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BB-01 | BB-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | SOUTH WE | SOUTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | SOUTH WE | SOUTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | SOUTH WE | SOUTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | SOUTH WE | SOUTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | SOUTH WE | SOUTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BC-17 | BC-17 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BC-17 | BC-17 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BC-17 | BC-17 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BC-17 | BC-17 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BC-17 | BC-17 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | NORTH WE | NORTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | NORTH WE | NORTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | NORTH WE | NORTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | NORTH WE | NORTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | NORTH WE | NORTH WE |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BC-21R | BC-21R |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BC-21R | BC-21R |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BC-21R | BC-21R |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BC-21R | BC-21R |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BC-21R | BC-21R |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BA-01A | BA-01A |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-01A | BA-01A |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-01A | BA-01A |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-01A | BA-01A |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BA-01A | BA-01A |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | BA-01 | BA-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DUPLICATE | DUPLICATE |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DW-03 | DW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DW-03 | DW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DW-03 | DW-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | PW-04 | PW-04 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | PW-04 | PW-04 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | PW-04 | PW-04 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DW-02 | DW-02 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DW-02 | DW-02 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DW-02 | DW-02 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-05A | BA-05A |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-05A | BA-05A |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-05A | BA-05A |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-05 | BA-05 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-05 | BA-05 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-05 | BA-05 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | MW-A | MW-A |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | MW-A | MW-A |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | MW-A | MW-A |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 5 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 4 | DW-01 | DW-01 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | DW-01 | DW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-03A | BA-03A |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-03A | BA-03A |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-03A | BA-03A |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | BA-03 | BA-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | BA-03 | BA-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | BA-03 | BA-03 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | MW-02 | MW-02 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | MW-02 | MW-02 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | MW-02 | MW-02 |
| 207 | 207 | 0020428A | Metals | 10020428- | 3 | MW-01 | MW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 1 | MW-01 | MW-01 |
| 207 | 207 | 0020428A | Metals | 10020428- | 2 | MW-01 | MW-01 |

| CAS # | Analyte | Analyte Typ | Result | Qualifier | Units | Analytical M | Matrix | Sample Cla |
|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000504 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0234 | | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.0452 | | mg/L | 6010B | Water | |
| 7439-92-1 | Lead | A | 0.000687 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000735 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000524 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0077 | | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000381 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0144 | | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.00297 | | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.00292 | | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0203 | | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000221 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.00138 | J | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.00146 | J | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.0153 | | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000163 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0129 | | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000783 | J | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.00022 | J | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000534 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.000732 | J | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000185 | J | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.00119 | J | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.00104 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000153 | J | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.00641 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.00508 | | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.462 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.00141 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00797 | U | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.000493 | J | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 2.25 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.0191 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00319 | J | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.00591 | | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.00421 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.00104 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000213 | J | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.00364 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.0209 | | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.0709 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.00138 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000732 | J | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.00324 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000162 | J | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 0.00642 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.000979 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00417 | | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000339 | J | mg/L | 6020 | Water |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7439-96-5 | Manganese | A | 0.0066 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.000678 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000237 | J | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.0172 | J | mg/L | 6010B | Water |
| 7440-38-2 | Arsenic | A | 0.00829 | J | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.000806 | J | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 1.59 | | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 1.34 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.0546 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.0465 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00797 | U | mg/L | 6010B | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000508 | J | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000184 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.0018 | J | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.22 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00797 | U | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.000655 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.0915 | | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.046 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000735 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.0648 | | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.0029 | J | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.00357 | | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.00283 | | mg/L | 6020 | Water |
| 7439-96-5 | Manganese | A | 6.21 | | mg/L | 6020 | Water |
| 7440-02-0 | Nickel | A | 0.022 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water |
| 7439-92-1 | Lead | A | 0.000137 | U | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.015 | J | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.146 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.00797 | U | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.0015 | | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water |
| 7440-38-2 | Arsenic | A | 0.0792 | | mg/L | 6010B | Water |
| 7439-92-1 | Lead | A | 0.00389 | J | mg/L | 6020 | Water |
| 7440-28-0 | Thallium | A | 0.000735 | U | mg/L | 6020 | Water |

| Sample Typ | Detection L | Location | Top Depth | Middle Dep | Bottom De | Depth Unit | Location Cl | Lab Name |
|---|---|---|---|---|---|---|---|---|
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.005 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.01 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Field Duplic | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Field Duplic | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Field Duplic | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |

| | | | | | |
|---|---|---|---|---|---|
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |

| | | | | | |
|---|---|---|---|---|---|
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.009 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.02 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.004 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.004 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.001 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.001 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.001 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.002 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.002 | NA | feet | Monitoring | SPLLAF |
| Field Duplic | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.005 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.01 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.009 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |

| | | | | | |
|---|---|---|---|---|---|
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.02 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.005 | NA | feet | Monitoring | SPLLAF |
| Site Sample | 0.01 | NA | feet | Monitoring | SPLLAF |

| Facility Are | Screened L | Easting | Northing | Elevation | Coordinate | Dilution Fa | Retention T | Filtration |
|---|---|---|---|---|---|---|---|---|
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 5 | 0 | |
| | | | | | State Plane | 5 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |

| | | |
|---|---|---|
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |

| | | |
|---|---|---|
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 5 | 0 |
| State Plane | 5 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |

| | | |
|---|---|---|
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 1 | 0 |
| State Plane | 5 | 0 |
| State Plane | 5 | 0 |

| Moisture | Collection I | Extraction I | Analysis Da | Preparatio | Instrument | Data Quality |
|---|---|---|---|---|---|---|
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPDV | Lab Results |
| | ######## | ######## | ######## | ######## | ICPDV | Lab Results |
| | ######## | ######## | ######## | ######## | ICPDV | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |
| | ######## | ######## | ######## | ######## | ICPMS | Lab Results |

| | | | | |
|---|---|---|---|---|
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |

| | | | | |
|---|---|---|---|---|
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |

| | | | | |
|---|---|---|---|---|
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPMS | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |
| ######## | ######## | ######## | ICPDV | Lab Results |

| Site ID | Project ID | Project Nar | SDG ID | Fraction | Lab Sample | Result ID | Client Sam | EPA Sample |
|---|---|---|---|---|---|---|---|---|
| 207 | 207 | | 10020428 | Metals | 10020428- | 5 | BA-09 | BA-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 1 | BA-09 | BA-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 2 | BA-09 | BA-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 3 | BA-09 | BA-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 4 | BA-09 | BA-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 5 | WW-09 | WW-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 1 | WW-09 | WW-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 2 | WW-09 | WW-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 3 | WW-09 | WW-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 4 | WW-09 | WW-09 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 5 | BC-07 | BC-07 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 1 | BC-07 | BC-07 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 20 | BC-07 | BC-07 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 30 | BC-07 | BC-07 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 4 | BC-07 | BC-07 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 5 | MW-03 | MW-03 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 1 | MW-03 | MW-03 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 2 | MW-03 | MW-03 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 3 | MW-03 | MW-03 |
| 207 | 207 | | 10020428 | Metals | 10020428- | 4 | MW-03 | MW-03 |

| CAS # | Analyte | Analyte Typ | Result | Qualifier | Units | Analytical M | Matrix | Sample Cla |
|---|---|---|---|---|---|---|---|---|
| 7440-38-2 | Arsenic | A | 0.0452 | | mg/L | 6010B | Water | |
| 7439-92-1 | Lead | A | 0.000687 | U | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 3.41 | J | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.161 | J | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000735 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000381 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0144 | J | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000678 | UJ | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.000163 | J | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.0129 | J | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.000783 | J | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.00022 | J | mg/L | 6020 | Water | |
| 7440-38-2 | Arsenic | A | 0.00145 | U | mg/L | 6020 | Water | |
| 7439-92-1 | Lead | A | 0.00508 | | mg/L | 6020 | Water | |
| 7439-96-5 | Manganese | A | 0.462 | J | mg/L | 6020 | Water | |
| 7440-02-0 | Nickel | A | 0.00141 | J | mg/L | 6020 | Water | |
| 7440-28-0 | Thallium | A | 0.000147 | U | mg/L | 6020 | Water | |

| Sample Typ | Detection L | Location | Top Depth | Middle Dep | Bottom De | Depth Unit | Location Cl | Lab Name |
|---|---|---|---|---|---|---|---|---|
| Site Sample | 0.02 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.005 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.01 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.004 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.001 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |
| Site Sample | 0.002 | NA | | | | feet | Monitoring | SPLLAF |

| Facility Are | Screened L | Easting | Northing | Elevation | Coordinate | Dilution Fa | Retention T | Filtration |
|---|---|---|---|---|---|---|---|---|
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 5 | 0 | |
| | | | | | State Plane | 1 | | |
| | | | | | State Plane | 1 | | |
| | | | | | State Plane | 5 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |
| | | | | | State Plane | 1 | 0 | |

| Moisture | Collection I | Extraction I | Analysis Da | Preparatio | Instrument | Data Quality |
|---|---|---|---|---|---|---|
| | ######## | ######## | ######## | ICPDV | | Validated Results |
| | ######## | ######## | ######## | ICPDV | | Validated Results |
| | ######## | ######## | ######## | ICPDV | | Validated Results |
| | ######## | ######## | ######## | ICPDV | | Validated Results |
| | ######## | ######## | ######## | ICPDV | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |
| | ######## | ######## | ######## | ICPMS | | Validated Results |

# TABLE 4

## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Total Arsenic/7440-38-2 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.010 | 0.004 | 0.00192 | J | No |
| 2 | Total Lead/7439-92-1 | SW6020 | BA-09A | 10040344-01 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.000828 | J | No |
| 3 | Total Manganese/7439-96-5 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0239 | | No |
| 4 | Total Nickel/7440-02-0 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 5 | Total Thallium/7440-28-0 | SW6020 | BA-09A | 10040344-01 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **6** | **Total Arsenic/7440-38-2** | **SW6010** | **BA-09** | **10040344-02** | **100405** | **RECAP SS** | **0.010** | **0.005** | **0.0222** | | **Yes** |
| 7 | Total Lead/7439-92-1 | SW6020 | BA-09 | 10040344-02 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.000272 | J | No |
| **8** | **Total Manganese/7439-96-5** | **SW6020** | **BA-09** | **10040344-02** | **100405** | **RECAP SS** | **0.510** | **0.002** | **4.08** | | **Yes** |
| **9** | **Total Nickel/7440-02-0** | **SW6020** | **BA-09** | **10040344-02** | **100405** | **RECAP SS** | **0.073** | **0.002** | **0.195** | | **Yes** |
| 10 | Total Thallium/7440-28-0 | SW6020 | BA-09 | 10040344-02 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 11 | Total Arsenic/7440-38-2 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 12 | Total Lead/7439-92-1 | SW6020 | MW-04 | 10040344-03 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 13 | Total Manganese/7439-96-5 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.510 | 0.002 | 0.00843 | | No |
| 14 | Total Nickel/7440-02-0 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 15 | Total Thallium/7440-28-0 | SW6020 | MW-04 | 10040344-03 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 16 | Total Arsenic/7440-38-2 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 17 | Total Lead/7439-92-1 | SW6020 | WW-09 | 10040344-04 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 18 | Total Manganese/7439-96-5 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.510 | 0.002 | 0.017 | | No |
| 19 | Total Nickel/7440-02-0 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 20 | Total Thallium/7440-28-0 | SW6020 | WW-09 | 10040344-04 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 21 | Total Arsenic/7440-38-2 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 22 | Total Lead/7439-92-1 | SW6020 | WW-04 | 10040344-05 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 23 | Total Manganese/7439-96-5 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.510 | 0.002 | 0.00256 | | No |
| 24 | Total Nickel/7440-02-0 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 25 | Total Thallium/7440-28-0 | SW6020 | WW-04 | 10040344-05 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 26 | Total Arsenic/7440-38-2 | SW6020 | (b) (6) WELL | 10040344-06 | 100405 | RECAP SS | 0.010 | 0.004 | 0.00171 | J | No |
| 27 | Total Lead/7439-92-1 | SW6020 | (b) (6) WELL | 10040344-06 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.00177 | J | No |
| 28 | Total Manganese/7439-96-5 | SW6020 | (b) (6) WELL | 10040344-06 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0249 | | No |
| 29 | Total Nickel/7440-02-0 | SW6020 | (b) (6) WELL | 10040344-06 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 30 | Total Thallium/7440-28-0 | SW6020 | (b) (6) WELL | 10040344-06 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | Total Arsenic/7440-38-2 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 32 | Total Lead/7439-92-1 | SW6020 | BC-03 | 10040344-07 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 33 | Total Manganese/7439-96-5 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.510 | 0.002 | 0.000141 | J | No |
| 34 | Total Nickel/7440-02-0 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.073 | 0.002 | 0.000884 | J | No |
| 35 | Total Thallium/7440-28-0 | SW6020 | BC-03 | 10040344-07 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 36 | Total Arsenic/7440-38-2 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.010 | 0.004 | 0.0016 | J | No |
| 37 | Total Lead/7439-92-1 | SW6020 | BC-07 | 10040344-08 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 38 | Total Manganese/7439-96-5 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0314 | | No |
| 39 | Total Nickel/7440-02-0 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.073 | 0.002 | 0.000742 | J | No |
| 40 | Total Thallium/7440-28-0 | SW6020 | BC-07 | 10040344-08 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 41 | Total Arsenic/7440-38-2 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 42 | Total Lead/7439-92-1 | SW6020 | DW-04 | 10040344-09 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 43 | Total Manganese/7439-96-5 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.510 | 0.002 | < 0.002 | | No |
| 44 | Total Nickel/7440-02-0 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 45 | Total Thallium/7440-28-0 | SW6020 | DW-04 | 10040344-09 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 46 | Total Arsenic/7440-38-2 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 47 | Total Lead/7439-92-1 | SW6020 | BC-19 | 10040344-10 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 48 | Total Manganese/7439-96-5 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.510 | 0.002 | 0.000316 | J | No |
| 49 | Total Nickel/7440-02-0 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.073 | 0.002 | 0.00134 | J | No |
| 50 | Total Thallium/7440-28-0 | SW6020 | BC-19 | 10040344-10 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 51 | Total Arsenic/7440-38-2 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 52 | Total Lead/7439-92-1 | SW6020 | BC-25 | 10040344-11 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 53 | Total Manganese/7439-96-5 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.510 | 0.002 | 0.0277 | | No |
| 54 | Total Nickel/7440-02-0 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 55 | Total Thallium/7440-28-0 | SW6020 | BC-25 | 10040344-11 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 56 | Total Arsenic/7440-38-2 | SW6020 | MW-03 | 10040344-12 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 57 | Total Lead/7439-92-1 | SW6020 | MW-03 | 10040344-12 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | 0.0015 | J | No |
| **58** | **Total Manganese/7439-96-5** | **SW6020** | **MW-03** | **10040344-12** | **100405** | **RECAP SS** | **0.510** | **0.002** | **0.677** | | **Yes** |
| 59 | Total Nickel/7440-02-0 | SW6020 | MW-03 | 10040344-12 | 100405 | RECAP SS | 0.073 | 0.002 | 0.00138 | J | No |
| 60 | Total Thallium/7440-28-0 | SW6020 | MW-03 | 10040344-12 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | Total Arsenic/7440-38-2 | SW6020 | MW-06 | 10040344-13 | 100405 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 62 | Total Lead/7439-92-1 | SW6020 | MW-06 | 10040344-13 | 100405 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| **63** | **Total Manganese/7439-96-5** | **SW6020** | **MW-06** | **10040344-13** | **100405** | **RECAP SS** | **0.510** | **0.002** | **1.92** | | **Yes** |
| 64 | Total Nickel/7440-02-0 | SW6020 | MW-06 | 10040344-13 | 100405 | RECAP SS | 0.073 | 0.002 | 0.0179 | | No |
| 65 | Total Thallium/7440-28-0 | SW6020 | MW-06 | 10040344-13 | 100405 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 66 | Total Arsenic/7440-38-2 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00518 | | No |
| 67 | Total Lead/7439-92-1 | SW6020 | BB-01 | 10040344-14 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.00449 | | No |
| 68 | Total Manganese/7439-96-5 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00489 | | No |
| 69 | Total Nickel/7440-02-0 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.073 | 0.002 | 0.000688 | J | No |
| 70 | Total Thallium/7440-28-0 | SW6020 | BB-01 | 10040344-14 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 71 | Total Arsenic/7440-38-2 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 72 | Total Lead/7439-92-1 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 73 | Total Manganese/7439-96-5 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00378 | | No |
| 74 | Total Nickel/7440-02-0 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 75 | Total Thallium/7440-28-0 | SW6020 | SOUTH WELL | 10040344-15 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 76 | Total Arsenic/7440-38-2 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00248 | J | No |
| **77** | **Total Lead/7439-92-1** | **SW6020** | **BC-17** | **10040344-16** | **100406** | **EPA Site Cleanup** | **0.015** | **0.002** | **0.0172** | | **Yes** |
| 78 | Total Manganese/7439-96-5 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.510 | 0.002 | 0.106 | | No |
| 79 | Total Nickel/7440-02-0 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.073 | 0.002 | 0.00169 | J | No |
| 80 | Total Thallium/7440-28-0 | SW6020 | BC-17 | 10040344-16 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 81 | Total Arsenic/7440-38-2 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 82 | Total Lead/7439-92-1 | SW6020 | NORTH WELL | 10040344-17 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.000872 | J | No |
| 83 | Total Manganese/7439-96-5 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00457 | | No |
| 84 | Total Nickel/7440-02-0 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0013 | J | No |
| 85 | Total Thallium/7440-28-0 | SW6020 | NORTH WELL | 10040344-17 | 100406 | RECAP SS | 0.002 | 0.002 | 0.000339 | J | No |
| 86 | Total Arsenic/7440-38-2 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 87 | Total Lead/7439-92-1 | SW6020 | BC-21R | 10040344-18 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 88 | Total Manganese/7439-96-5 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00468 | | No |
| 89 | Total Nickel/7440-02-0 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.073 | 0.002 | 0.00123 | J | No |
| 90 | Total Thallium/7440-28-0 | SW6020 | BC-21R | 10040344-18 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 | Total Arsenic/7440-38-2 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00638 | | No |
| 92 | Total Lead/7439-92-1 | SW6020 | BA-01A | 10040344-19 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | < 0.002 | | No |
| 93 | Total Manganese/7439-96-5 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00523 | | No |
| 94 | Total Nickel/7440-02-0 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.073 | 0.002 | < 0.002 | | No |
| 95 | Total Thallium/7440-28-0 | SW6020 | BA-01A | 10040344-19 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 96 | Dissolved Arsenic/7440-38-2 | SW6010 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.010 | 0.005 | 0.0044 | J | No |
| 97 | Dissolved Lead/7439-92-1 | SW6020 | BA-01 | 10040344-20 | 100406 | EPA Site Cleanup | 0.015 | 0.001 | < 0.001 | | No |
| **98** | **Dissolved Manganese/7439-96-5** | **SW6020** | **BA-01** | **10040344-20** | **100406** | **RECAP SS** | **0.510** | **0.002** | **1.42** | | **Yes** |
| 99 | Dissolved Nickel/7440-02-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0605 | B | No |
| 100 | Dissolved Thallium/7440-28-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **101** | **Total Arsenic/7440-38-2** | **SW6010** | **BA-01** | **10040344-20** | **100406** | **RECAP SS** | **0.010** | **0.005** | **0.015** | | **Yes** |
| 102 | Total Lead/7439-92-1 | SW6020 | BA-01 | 10040344-20 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.00105 | J | No |
| **103** | **Total Manganese/7439-96-5** | **SW6020** | **BA-01** | **10040344-20** | **100406** | **RECAP SS** | **0.510** | **0.002** | **1.51** | | **Yes** |
| 104 | Total Nickel/7440-02-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0612 | | No |
| 105 | Total Thallium/7440-28-0 | SW6020 | BA-01 | 10040344-20 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **106** | **Total Arsenic/7440-38-2** | **SW6010** | **DW-03** | **10040344-21** | **100406** | **RECAP SS** | **0.010** | **0.005** | **0.035** | | **Yes** |
| **107** | **Total Lead/7439-92-1** | **SW6020** | **DW-03** | **10040344-21** | **100406** | **EPA Site Cleanup** | **0.015** | **0.002** | **0.0846** | | **Yes** |
| **108** | **Total Manganese/7439-96-5** | **SW6020** | **DW-03** | **10040344-21** | **100406** | **RECAP SS** | **0.510** | **0.002** | **6.73** | | **Yes** |
| **109** | **Total Nickel/7440-02-0** | **SW6020** | **DW-03** | **10040344-21** | **100406** | **RECAP SS** | **0.073** | **0.002** | **0.178** | | **Yes** |
| 110 | Total Thallium/7440-28-0 | SW6020 | DW-03 | 10040344-21 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 111 | Total Arsenic/7440-38-2 | SW6010 | PW-04 | 10040344-22 | 100406 | RECAP SS | 0.010 | 0.005 | <0.005 | | No |
| 112 | Total Lead/7439-92-1 | SW6020 | PW-04 | 10040344-22 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.00109 | J | No |
| **113** | **Total Manganese/7439-96-5** | **SW6020** | **PW-04** | **10040344-22** | **100406** | **RECAP SS** | **0.510** | **0.002** | **0.931** | | **Yes** |
| 114 | Total Nickel/7440-02-0 | SW6020 | PW-04 | 10040344-22 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0237 | | No |
| 115 | Total Thallium/7440-28-0 | SW6020 | PW-04 | 10040344-22 | 100406 | RECAP SS | 0.002 | 0.002 | 0.000151 | J | No |
| **116** | **Total Arsenic/7440-38-2** | **SW6010** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.010** | **0.005** | **0.0407** | | **Yes** |
| 117 | Total Lead/7439-92-1 | SW6020 | DW-02 | 10040344-23 | 100406 | EPA Site Cleanup | 0.015 | 0.01 | 0.0114 | | No |
| **118** | **Total Manganese/7439-96-5** | **SW6020** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.510** | **0.01** | **16.9** | | **Yes** |
| **119** | **Total Nickel/7440-02-0** | **SW6020** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.073** | **0.01** | **0.824** | | **Yes** |
| **120** | **Total Thallium/7440-28-0** | **SW6020** | **DW-02** | **10040344-23** | **100406** | **RECAP SS** | **0.002** | **0.01** | **< 0.01** | | **Yes** |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | Total Arsenic/7440-38-2 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00238 | J | No |
| 122 | Total Lead/7439-92-1 | SW6020 | BA-05A | 10040344-24 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.000326 | J | No |
| 123 | Total Manganese/7439-96-5 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.510 | 0.002 | 0.00985 | | No |
| 124 | Total Nickel/7440-02-0 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.073 | 0.002 | 0.00176 | J | No |
| 125 | Total Thallium/7440-28-0 | SW6020 | BA-05A | 10040344-24 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 126 | Dissolved Arsenic/7440-38-2 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 127 | Dissolved Lead/7439-92-1 | SW6020 | BA05 | 10040344-25 | 100406 | EPA Site Cleanup | 0.015 | 0.001 | < 0.001 | | No |
| **128** | **Dissolved Manganese/7439-96-5** | **SW6020** | **BA05** | **10040344-25** | **100406** | **RECAP SS** | **0.510** | **0.002** | **14.1** | | **Yes** |
| 129 | Dissolved Nickel/7440-02-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0557 | B | No |
| 130 | Dissolved Thallium/7440-28-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 131 | Total Arsenic/7440-38-2 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.010 | 0.004 | 0.00195 | J | No |
| 132 | Total Lead/7439-92-1 | SW6020 | BA05 | 10040344-25 | 100406 | EPA Site Cleanup | 0.015 | 0.002 | 0.000365 | J | No |
| **133** | **Total Manganese/7439-96-5** | **SW6020** | **BA05** | **10040344-25** | **100406** | **RECAP SS** | **0.510** | **0.002** | **13.5** | | **Yes** |
| 134 | Total Nickel/7440-02-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.073 | 0.002 | 0.0517 | | No |
| 135 | Total Thallium/7440-28-0 | SW6020 | BA05 | 10040344-25 | 100406 | RECAP SS | 0.002 | 0.002 | 0.00015 | J | No |
| 136 | Total Arsenic/7440-38-2 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 137 | Total Lead/7439-92-1 | SW6020 | MW-A | 10040344-26 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.000271 | J | No |
| 138 | Total Manganese/7439-96-5 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.510 | 0.002 | 0.00724 | | No |
| 139 | Total Nickel/7440-02-0 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.073 | 0.002 | 0.00178 | J | No |
| 140 | Total Thallium/7440-28-0 | SW6020 | MW-A | 10040344-26 | 100407 | RECAP SS | 0.002 | 0.002 | 0.00015 | J | No |
| **141** | **Dissolved Arsenic/7440-38-2** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.010** | **0.004** | **0.041** | | **Yes** |
| 142 | Dissolved Lead/7439-92-1 | SW6020 | DW-01 | 10040344-27 | 100407 | EPA Site Cleanup | 0.015 | 0.001 | 0.000628 | J | No |
| **143** | **Dissolved Manganese/7439-96-5** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.510** | **0.002** | **3.82** | | **Yes** |
| 144 | Dissolved Nickel/7440-02-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.073 | 0.002 | 0.0222 | B | No |
| 145 | Dissolved Thallium/7440-28-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| **146** | **Total Arsenic/7440-38-2** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.010** | **0.004** | **0.12** | | **Yes** |
| 147 | Total Lead/7439-92-1 | SW6020 | DW-01 | 10040344-27 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.00254 | | No |
| **148** | **Total Manganese/7439-96-5** | **SW6020** | **DW-01** | **10040344-27** | **100407** | **RECAP SS** | **0.510** | **0.002** | **4.72** | | **Yes** |
| 149 | Total Nickel/7440-02-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.073 | 0.002 | 0.0254 | | No |
| 150 | Total Thallium/7440-28-0 | SW6020 | DW-01 | 10040344-27 | 100407 | RECAP SS | 0.002 | 0.002 | 0.000324 | J | No |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151 | Total Arsenic/7440-38-2 | SW6010 | MW-02 | 10040344-28 | 100407 | RECAP SS | 0.010 | 0.005 | 0.0035 | J | No |
| 152 | Total Lead/7439-92-1 | SW6020 | MW-02 | 10040344-28 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.00418 | | No |
| **153** | **Total Manganese/7439-96-5** | **SW6020** | **MW-02** | **10040344-28** | **100407** | **RECAP SS** | **0.510** | **0.002** | **1.91** | | **Yes** |
| **154** | **Total Nickel/7440-02-0** | **SW6020** | **MW-02** | **10040344-28** | **100407** | **RECAP SS** | **0.073** | **0.002** | **0.0801** | | **Yes** |
| 155 | Total Thallium/7440-28-0 | SW6020 | MW-02 | 10040344-28 | 100407 | RECAP SS | 0.002 | 0.002 | 0.000804 | J | No |
| **156** | **Total Arsenic/7440-38-2** | **SW6010** | **MW-01** | **10040344-29** | **100407** | **RECAP SS** | **0.010** | **0.005** | **0.043** | | **Yes** |
| 157 | Total Lead/7439-92-1 | SW6020 | MW-01 | 10040344-29 | 100407 | EPA Site Cleanup | 0.015 | 0.01 | 0.00261 | J | No |
| **158** | **Total Manganese/7439-96-5** | **SW6020** | **MW-01** | **10040344-29** | **100407** | **RECAP SS** | **0.510** | **0.002** | **5.6** | | **Yes** |
| **159** | **Total Nickel/7440-02-0** | **SW6020** | **MW-01** | **10040344-29** | **100407** | **RECAP SS** | **0.073** | **0.002** | **0.239** | | **Yes** |
| 160 | Total Thallium/7440-28-0 | SW6020 | MW-01 | 10040344-29 | 100407 | RECAP SS | 0.002 | 0.01 | 0.000744 | J | No |
| 161 | Total Arsenic/7440-38-2 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.010 | 0.004 | < 0.004 | | No |
| 162 | Total Lead/7439-92-1 | SW6020 | BA-03A | 10040344-30 | 100407 | EPA Site Cleanup | 0.015 | 0.002 | 0.00119 | J | No |
| 163 | Total Manganese/7439-96-5 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.510 | 0.002 | 0.037 | | No |
| 164 | Total Nickel/7440-02-0 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.073 | 0.002 | 0.00163 | J | No |
| 165 | Total Thallium/7440-28-0 | SW6020 | BA-03A | 10040344-30 | 100407 | RECAP SS | 0.002 | 0.002 | < 0.002 | | No |
| 166 | Total Arsenic/7440-38-2 | SW6010 | BA-03 | 10040344-31 | 100407 | RECAP SS | 0.010 | 0.005 | 0.004 | J | No |
| **167** | **Total Lead/7439-92-1** | **SW6020** | **BA-03** | **10040344-31** | **100407** | **EPA Site Cleanup** | **0.015** | **0.002** | **0.144** | | **Yes** |
| **168** | **Total Manganese/7439-96-5** | **SW6020** | **BA-03** | **10040344-31** | **100407** | **RECAP SS** | **0.510** | **0.002** | **2.23** | | **Yes** |
| **169** | **Total Nickel/7440-02-0** | **SW6020** | **BA-03** | **10040344-31** | **100407** | **RECAP SS** | **0.073** | **0.002** | **0.0899** | | **Yes** |
| 170 | Total Thallium/7440-28-0 | SW6020 | BA-03 | 10040344-31 | 100407 | RECAP SS | 0.002 | 0.002 | 0.000412 | J | No |
| 171 | Total Arsenic/7440-38-2 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.004 | 0.00176 | J | NA |
| 172 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | < 0.002 | | NA |
| 173 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | 0.0024 | | NA |
| 174 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | 0.00276 | | NA |
| 175 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #1 | 10040344-32 | 100405 | NA | NA | 0.002 | < 0.002 | | NA |
| 176 | Total Arsenic/7440-38-2 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.004 | 0.00286 | J | NA |
| 177 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.0137 | | NA |
| 178 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.0976 | | NA |
| 179 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.00326 | | NA |
| 180 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #2 | 10040344-33 | 100406 | NA | NA | 0.002 | 0.000154 | J | NA |

# TABLE 4
## CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
## TOTAL AND DISSOLVED METALS

**Delatte Metals Superfund Site**
**Ponchatoula, Louisiana**
**Agency Interest No. 2328**

| Line # | COC/CAS | Method | Location and Depth | Lab Sample Identification | Sample Date | Option Used | Limiting Standard mg/L | Reporting Limit mg/L | Sample Result mg/L | QA/QC Flag | Exceed Limiting Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 181 | Total Arsenic/7440-38-2 | SW6010 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.005 | 0.0384 | | NA |
| 182 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.01 | 0.0134 | | NA |
| 183 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.002 | 11.7 | | NA |
| 184 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.002 | 0.526 | | NA |
| 185 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #3 | 10040344-34 | 100406 | NA | NA | 0.01 | < 0.01 | | NA |
| 186 | Total Arsenic/7440-38-2 | SW6010 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.005 | 0.0035 | J | NA |
| 187 | Total Lead/7439-92-1 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 0.00325 | | NA |
| 188 | Total Manganese/7439-96-5 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 2.04 | | NA |
| 189 | Total Nickel/7440-02-0 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 0.0826 | | NA |
| 190 | Total Thallium/7440-28-0 | SW6020 | DUPLICATE #4 | 10040344-35 | 100407 | NA | NA | 0.002 | 0.000777 | J | NA |