# REMEDIAL ACTION REPORT AND CONFIRMATORY SAMPLING WORK PLAN

STUDY AREA 5 NJDEP SITE 079 ROUTE 440 VEHICLE CORP. JERSEY CITY, NEW JERSEY

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# **EXECUTIVE SUMMARY**

This Remedial Action Report documents the completion of the remedial action for hexavalent chromium impacted soils completed at Study Area 5 (SA-5), NJDEP Site 079 (Route 440 Vehicle Corporation), located in Jersey City, New Jersey. Work completed included the following main activities:

- In-situ chemical reduction treatment of soils impacted by hexavalent chromium in the area between Route 440 and the dealership building;
- Restoration of injection area;
- Excavation and off-site disposal of soils containing hexavalent chromium above the NJDEP most stringent soil cleanup criteria of 20 mg/kg at the corner of Fisk Street and Martorano Way; and
- Backfilling and restoration of areas.

The work was completed in accordance with the NJDEP approved Remedial Action Work Plan (RAWP) dated July 2009 and the NJDEP approved "Discharge to Groundwater Permit Request and In-Situ Chemical Reduction Injection Treatment Program Field Implementation Work Plan" (DWG WP) dated July 2010.

Post-remediation sampling of the treated area will be conducted in approximately three years. The asphalt pavement serves as an engineering control and a deed notice has been recorded for the affected portion of the property. Groundwater at the site has not been impacted.

Based on completion of the remedial actions outlined above, and meeting the RAWP objectives, Honeywell requests a No Further Action letter for chromium impacted soils at this Site, conditional on maintenance of institutional and engineering controls. Honeywell notes that it will be implementing post treatment sampling in accordance with the Post Remediation Sampling Plan. Since the objective of this sampling is to document post treatment conditions and not to demonstrate compliance with the 20 mg/kg hexavalent chromium criterion, it should have no effect on the issuance of a NFA at this time.

# 1.0 INTRODUCTION

# 1.1 PURPOSE AND SCOPE

This Remedial Action Report (RAR) was prepared by AMEC E&I, Inc. (Amec), formerly MACTEC Engineering and Consulting, Inc. (Mactec), on behalf of Honeywell to document the remedial actions (RAs) completed at Study Area 5 (SA-5), New Jersey Department of Environmental Protection (NJDEP) Site 079 (Route 440 Vehicle Corporation), located in Jersey City, New Jersey (referred to herein as the Site). A Site location map is included as **Figure 1**.

This work was conducted in accordance with the Administrative Consent Order (ACO) between Honeywell (formerly Allied Signal, Inc.) and the NJDEP dated June 17, 1993, the New Jersey Technical Requirements for Site Remediation (TRSR) (N.J.A.C. 7:26E), the NJDEP's Chromium Policy Directive, and the Consent Decree Regarding Sites 79 and 153 South between the Bayonne Municipal Utilities Authority (BMUA), Hackensack Riverkeeper Inc., Robert G. Ciasulli and Honeywell dated January 21, 2010 (Consent Decree or CD).

The NJDEP approved the Remedial Action Work Plan (RAWP) dated July 2009 in their letter dated September 30, 2010. Subsequently, Honeywell submitted a "Discharge to Groundwater Permit Request and In-Situ Chemical Reduction (ISCR) Injection Treatment Program (ITP) Field Implementation Work Plan" (DWG WP) dated July 2010 which was approved by the NJDEP on July 28, 2010. NJDEP approvals of these documents are included in **Appendix A**.

# 1.2 DOCUMENT ORGANIZATION

This document was prepared in accordance with the requirements of TRSR, and contains the following sections:

*Section 1 Introduction.* This section describes the purpose, scope, general site history, site setting, areas and contaminants of concern, and the report organization.

**Section 2** Remedial Action. This section identified the Remedial Action Objectives and the Remediation Criteria.

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Section 3 Implementation of Remedial Action. This section describes the remedial action implemented at the Site.

**Section 4** Post Remediation Monitoring Plan. This section describes the post treatment sampling and analysis program and other monitoring activities following completion of the remedial action.

**Section 5** Remedial Action Costs. This section provides the cost information required by the regulations.

**Section 6** Conclusions and Recommendations. This section summarizes the site activities and requests a No Further Action determination.

**Section 7** References. This section lists references used in preparing this document.

**Section 8** List of Acronyms/Abbreviations. This section includes a list of commonly referenced acronyms found throughout this document.

# 1.3 GENERAL SITE HISTORY

Site historical information was presented in the November 1999 RIR (TetraTech, 1999). The Site was formerly occupied by a trucking terminal known as the 10 Water Street terminal. Deposition of chromium ore processing residue (COPR) allegedly occurred around 1965 during the expansion of the trucking terminal. The trucking terminal building was subsequently renovated into the existing car dealership building.

Historical information and maps indicate that during the 1800s and early 1900s, the former Morris Canal was located along the area now occupied by Route 440 (formerly Route 9W). The canal ran in a north-south orientation along the western perimeter of Site 079. The portion of the canal through Jersey City was filled with salt water and was equipped with tide locks at both ends to maintain water levels within the canal. The canal was closed during the 1920s and was subsequently filled in. Historical maps indicate that a railroad line (Lehigh Valley Railroad) was also located along the former canal during the early to mid-1900s. The portion of the

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former Morris Canal between Danforth Avenue and Carbon Place (south of Site 079) is part of SA-5 and designated as NJDEP Site 153 (Former Morris Canal). Additional remedial investigation (RI) activities for Site 153 are planned, including soil delineation sampling along the northwest perimeter of Site 079.

Previous RI/RA work include soil sampling conducted by Honeywell (formerly Allied-Signal, Inc.) and the NJDEP in 1990, IRM activities by AlliedSignal in 1994, an initial RI (Tetra Tech, 1999), and Supplemental RI (Mactec, 2006). Details of the previously completed remedial investigations/actions can be found in the following documents:

- Tetra Tech, Inc., Draft Remedial Investigation Report, Study Area 5, NJDEP Site No. 079, 090, 117, 153 and 184, Jersey City, New Jersey. November 1999.
- HydroQual, Inc., Preliminary Deep Overburden Groundwater Report, Honeywell Study Area 7. March 31, 2005;
- HydroQual, Inc., Deep Overburden Groundwater Remedial Alternatives
   Report Honeywell Study Area 7. June 26, 2006;
- HydroQual, Inc., Final Groundwater Investigation Report, Honeywell Study Area 7. February 2, 2007;
- Mactec, Supplemental Remedial Investigation Report for Study Area 5,
   NJDEP Site 079 Route 440 Vehicle Corp., Jersey City, New Jersey. July 2006;
- Mactec, Remedial Investigation Work Plan Addendum, Study Area 5, Route 440 Vehicle Corp (Site 079), Jersey City, New Jersey. June 2005;
- Mactec, Master Quality Assurance Project Plan, Jersey City, New Jersey.
   May 2005;
- Mactec, Remedial Action Selection Report/Remedial Action Work Plan, Study Area 5, Route 440 Vehicle Corp, Jersey City, New Jersey. November 2008; and

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 Mactec, Remedial Action Selection Report/Remedial Action Work Plan, Study Area 5, Route 440 Vehicle Corp, Jersey City, New Jersey. July 2009.

# 1.4 SITE SETTING

Site 079 (Route 440 Vehicle Corp.) is located at 540 Route 440 North in Jersey City, New Jersey. A Site location map is included as **Figure 1.** A map showing Site features and boundaries is included as **Figure 2**.

The Site is currently occupied by a Honda automobile dealership facility. The Site property encompasses approximately 3.0 acres and consists of two separate lots:

- Block 1291, Lot 76 (2.23 acres): the main car dealership facility including one building approximately 290 feet long by 75 feet wide, a vehicle parking area between Route 440 and the dealership building (front parking lot) and a vehicle parking area between the dealership building and Martorano Way (rear parking lot) and
- Block 1291, Lot 1F (0.77 acres): a vehicle storage lot.

Most of the ground surface is covered with building structures and asphalt pavement. A few small grassy areas are present near the Site perimeter along the sidewalk and curb. The current use of the property as a car dealership is expected to continue for the foreseeable future.

#### 1.5 AREAS AND CONTAMINANTS OF CONCERN

#### 1.5.1 Soil

Site-specific RI results indicate that shallow fill soils on portions of the Site contain low-levels of Cr(VI) above the current NJDEP soil cleanup criteria of 20 milligrams per kilogram (mg/kg). Previous investigations have shown that the targeted soils contain zones of low concentrations of hexavalent chromium (Cr(VI)), generally less than 240 mg/kg, with some areas ranging from several hundred mg/kg with the highest concentration up to about 1770 mg/kg. Cr(VI) analytical data are presented on **Figure 2**.

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Site data also indicate that low-levels of non-chromium contaminants typically associated with historic fill are present in shallow fill soils, including poly aromatic hydrocarbons (PAHs) and metals (i.e., arsenic, lead, mercury). Some of these historic fill contaminants are above the NJDEP soil cleanup criteria.

For the purposes of this remedial action, and as provided in the NJDEP ACO, the contaminant of concern is Cr(VI).

#### 1.5.2 Groundwater

Recent 2009 and historic data confirms that groundwater is not impacted above the NJDEP groundwater quality standard (GWQS) for total chromium (i.e., 70 micrograms per liter [µg/L]). Historic sampling indicates that volatile and/or semi-volatile contaminants are not present in the groundwater above the GWQS (Mactec 2010).

# 2.0 REMEDIAL ACTION

This section presents a discussion of the Remedial Action Objectives (RAOs) and the Remediation Criteria for this project.

#### 2.1 REMEDIAL ACTION OBJECTIVES

RAOs are defined as the goals of the RA to protect human health and the environment, are established considering Site location and the present and future land use (Mactec 2009). For the subject Site, the RAOs include the protection of human health and the environment, mitigation of impacts to the local community, and compliance with NJDEP Policy and regulatory requirements.

Specific RAOs for soils include:

- Prevent exposure to chromium-impacted soils (containing hexavalent chromium above the NJDEP soil criteria of 20 mg/kg).
- Minimize impacts to the current Site operations (active car dealership business) and the local community.
- Coordinate RA for chromium soils with RA for non-chromium contaminants, to the extent feasible and practicable.
- Obtain a No Further Action (NFA) determination from NJDEP.

## 2.2 REMEDIATION CRITERIA

Remediation standards for soils will be the current NJDEP soil cleanup criteria for Cr(VI) (20 mg/kg), as specified in the NJDEP Chromium Policy Memorandum dated February 8, 2007. The NJDEP Chromium Policy addresses RA requirements for chromium based on future land use and sets forth requirements for obtaining conditional or unconditional NFA approval from the NJDEP. The objective of in-situ treatment is to reduce Cr(VI)concentrations in soils to achieve levels less than 20 mg/kg. Pursuant to the Consent Decree, the Site will be subject to engineering and institutional controls. The extent of engineering/institutional controls may be modified following completion of RA and post-treatment soil sampling (Mactec 2009).

# 3.0 IMPLEMENTATION OF REMEDIAL ACTION

This section details the activities of the ISCR treatment and the soil removal programs.

# 3.1 INJECTION TREATMENT PROGRAM

#### 3.1.1 Mobilization

# 3.1.1.1 Groundwater Sampling

On June 13, 2010 groundwater monitoring well 079-MW-001 was installed, in accordance with the DGW WP. On July 8, 2010 groundwater samples were collected from the newly installed groundwater well 079-MW-001 and existing well 079-MW-A02. The samples were collected using NJDEP-recommended low-flow methods and were analyzed for filtered and unfiltered total Cr and Cr(VI). The analytical data are summarized on **Table 1**. Analytical Laboratory data reports are included in **Appendix B**.

# 3.1.1.2 Slug Testing

On July 12, 2010 slug testing was performed on monitoring wells 079-MW-001 and 079-MW-A02. In addition, recovery tests of both wells were done, to obtain data from a somewhat larger radius of aquifer materials around the wells. The rising head data were analyzed using the computer application program Aqtesolv™ using the Bouwer and Rice (1976 and 1989) methods for slug tests in unconfined aquifers. Generally, the testing showed that the site soils should be expected to exhibit moderately low hydraulic conductivity, on the order of 1E-3 to 1E-4 cm/sec. The slug test data are summarized on **Table 2**.

# 3.1.1.3 Base Line Sulfide Testing

In accordance with the DGW WP, 10 soil samples were collected and analyzed for sulfide by USEPA method 9030B/9034. The purpose of these samples was to establish background sulfide concentrations in the soils, prior to the ISCR program. Generally, sulfide was not detected in samples collected. The results are summarized on **Table 3**.

# 3.1.1.4 Utility Clearance

Prior to initiating work, utility mark outs were conducted by the remediation contractor, through the NJ One-Call system. Mactec also contacted Public Service Electric and Gas (PSE&G) and discussed requirement for working in proximity to the subsurface high voltage (138 KV) power line and PSE&G approval of the injection work was obtained. Finally, notification was given to the Jersey City Municipal Utilities Authority.

# 3.1.2 Treatment Program

# 3.1.2.1 Work Cycles

The Site is an active car dealership that maintains a sales office with a vehicle display area and a repair shop. To avoid interrupting business at the Site, work was conducted from Saturday night, after the sales office closed, through Monday morning, before the sales office opened. Each Saturday night through Monday morning interval is referred to as a work cycle. Two work cycles were necessary to complete the injection program:

- Work cycle #1: October 9, (starting 17:00) through October 11 (ending 09:00)
- Work cycle #2: October 16, (starting 17:00) through October 17 (ending 20:00)

# 3.1.2.2 Site Preparation

Before equipment was brought on site, the work zone was cleared of vehicles and a work area perimeter control was established using caution tape, safety cones and barriers. City of Jersey City Police was also available to assist with traffic control and site security.



Photograph 1 - Site Security

Portable chemical containment systems were laid out and were used to place the bulk reagent tanker, the mixing tanks and the pump and manifold system. This equipment, as well as a water tanker and support vehicles were positioned outside the injection areas.

A carbon canister system was connected to the mixing tanks to control odors from the mixing of calcium polysulfide and water.



Photograph 2 - Portable Containment



Photograph 3 - Odor Control System

# 3.1.2.3 Site Cleanup

At the end of each work cycle, all equipment was removed from the site. Remaining amounts of reagent and/or supplies from the first work cycle were secured off-site and brought back for use during the second cycle. All rinse water generated was used as dilution water for the final injection batch.

After the equipment was removed from the site, remaining potable water was used to wash down the work area, to remove residual traces of reagent or contaminants that might have been present as a result of injection program. At the conclusion of Work Cycle #2, the remaining water (after the work area was washed down) was used to flush the sewer, at the request of the MUA.



No hazardous wastes were generated as part of the site activities.

# 3.1.2.4 Equipment Set up

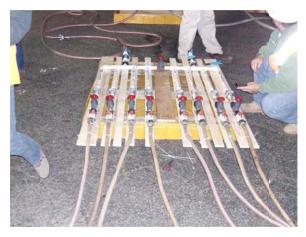
The injection point locations were marked out based on the DGW WP and field-verified for interference with subsurface utilities. If points were deemed to be too close to features such as the existing combined sewer line or monitoring wells they were moved by 2 to 3 feet to minimize the potential for reductant infiltration.

Direct push equipment was used to drive injection screens at the predetermined locations. Fully penetrating, 7-ft long, 0.5-inch outside diameter, 0.010 laser cut,



vertically slotted stainless steel injection screens were advanced to achieve the predetermined depth interval. The annular space around the stem was sealed with bentonite. An adaptor with a pressure gauge, shut-off valves and hose connectors was secured onto each injection well point. Each adaptor was labeled with a number that corresponded to a port on the injection manifold. Absorbent socks were placed around each injection point prior to

initiating injection. Sand bags were placed around each storm water grate to prevent any instances of accidental overland release of injection solution to the sewer.



The injection solution was prepared by mixing potable water and application grade calcium polysulfide (CAPS) (see **Appendix C** for certificate) and water in two (2) 1,000 gallon mixing tanks, so that one tank was being filled while the contents of the other were being injected into the subsurface. An 8-port manifold, consisting of two (2) 4-port sub-assemblies coupled via an isolation valve was utilized to supply reagent to the injection points. Each port was

equipped with a totalizing meter, shut off valves and hose couplings, and was marked "1" though "8". Each sub-assembly was attached to a diaphragm pump, which, in turn was connected to the tank with the injection solution.

# 3.1.2.5 Sentinel Well Point Installation and Abandonment

To satisfy PSE&G's requirements for protecting the 138 KV subsurface line, the injection points closest to the power line were not installed. Instead, temporary sentinel well points were installed at those locations, to monitor for potential migration of reagent towards the power line. Nine sentinel points were installed; three during the first work cycle and six during the second work cycle.

At each location, a boring was advanced to the approximate top of meadow mat (estimated from RI data to be at 9 feet below grade surface) and a 10-ft long section of 1-inch diameter PVC screen was installed.

At the end of each work cycle, the well points were removed and the borehole was properly abandoned with hydrated bentonite and sealed with cold asphalt patch in accordance with NJDEP requirements.

# 3.1.2.6 Groundwater Elevation Monitoring

During the CAPS application, continuous 10-minute-interval electronic water level measurements (via dedicated mini trolls) were recorded at wells 079-MW-001 and 079-MW-A02 to evaluate changes in water elevations during the injection activities.

Additionally, manual groundwater elevations were measured in the sentinel points and the measurements recorded in the field book.

# 3.1.2.7 Groundwater Field Parameter Monitoring

Continuous 10-minute-interval electronic pH, dissolved oxygen (DO), oxidation reduction potential (ORP), and specific conductivity (SC) groundwater field parameters measurements (via dedicated mini trolls) were also collected at 079-MW-001 and 079-MW-A02. Data logger readings were periodically inspected to evaluate changes in subsurface conditions. Manual groundwater field parameters were also measured in the sentinel points and the measurements recorded in the field book.

# 3.1.2.8 Breathing Zone and Storm Sewer Monitoring

Mactec conducted periodic field screening of the breathing zone within the injection work zone and storm sewers proximate to the treatment area throughout the injection activities. Field monitoring consisted of field screening for organic vapor concentrations using a photoionization detector (PID), and Lower Explosive Limits, hydrogen sulfide, oxygen, and carbon monoxide concentrations using a multi-RAE combination meter in accordance with Mactec's Health and Safety Plan (HASP).

Mactec monitored the storm sewer visually and by periodically retrieving samples of the sewer effluent and by measuring ORP conditions. The measurements were recorded in the field log book. Data logger records and data plots, and tabulated field measurements are included **in Appendix D**.

# 3.1.2.9 Conformance to Work Plan

Work was carried out in accordance with the provisions of the approved DGW WP, with the following modifications:

• Injection points IP-5, -10, -17, -21, -24. -32, -37, -42 and -47 that were proposed to be installed within 10 ft of the PSE&G 138KV subsurface power

transmission line were not installed. Instead, as directed by PSE&G, these locations were utilized as sentinel well points, to directly monitor the groundwater for reagent migration towards the transmission line. This is a major transmission line, supplying power to the western one-half of Jersey City and Bayonne. The locations of the sentinel well points are shown on **Figure 3.** No treatment occurred in the vicinity of the PSE&G 138KV subsurface power transmission line. The approximate limits of treatment are shown on **Figure 3.** 

- Injection point IP-3 could not be installed due to repeated refusals and constraints due to the presence of water utilities, the sewer line and adjacent injection points proximate to this injection point.
- To control mounding, daylighting and incursion into the sewer, it was
  necessary to reduce the total volume of solution injected in the subsurface.
  This was achieved by reducing CAPS dilution to 1:1 so that all
  stoichiometrically necessary for treatment CAPS was delivered to the
  subsurface, but the amount of water was reduced.
- These field modifications are consistent with the provisions of Section 3.0 of the NJDEP approved DGW WP.

# 3.1.2.10 Injection Program Implementation

In-Situ Oxidative Technologies, Inc. (ISOTEC) of West Windsor, New Jersey was the remediation contractor retained to implement the ITP, under the oversight of Mactec. ISOTEC provided all necessary labor and materials, including lower tier subcontractors, to implement the ITP.

Representatives of Honeywell and Carpenter Environmental, Inc. (representing the settlement parties in the Consent Decree) were also at the Site observing portions of the activities.

# Work Cycle #1

During Work Cycle #1, vehicles were evacuated from the northern portion of the site, making it available for ITP work. **Figure 4** depicts the locations and installation dates of the injection points.

The following points were treated during Work Cycle#1:

IP-6	IP-29	IP-40	IP-50	IP-57	IP-64
IP-14	IP-30	IP-41	IP-51	IP-58	IP-65
IP-18	IP-33	IP-44	IP-52	IP-59	
IP-25	IP-34	IP-45	IP-53	IP-60	
IP-26	IP-36	IP-46	IP-54	IP-61	
IP-27	IP-38	IP-48	IP-55	IP-62	
IP-28	IP-39	IP-49	IP-56	IP-63	

Injections were initiated at the planned dilution rate of 2:1 and a target injection volume of 730 gallons per injection point. Work was sequenced so that, to the extent possible, eight injection points would be simultaneously active at any time. Injection point locations were selected to maintain as much horizontal separation as possible, to avoid interference and excessive reagent mounding, considering that depth to water at the site is approximately 5 feet bgs. The injection log is included in **Appendix E.** 

While this approach overall was effective at controlling mounding and "daylighting," a steady increase in water levels in monitoring well 079-MW-001 (approx. 0.4 ft over 3 hours) was noted and daylight occurred at IP-54. Injection to IP-54 was immediately terminated and the released reagent (estimated at a few ounces) was collected with absorbent powder. This procedure was used whenever daylighting was observed. Due to additional daylighting (IP-28 and -29) and the continued rise of the water level in the area of the injections, the reagent dilution was modified to 1:1 ratio, so that while all the stoichiometrically necessary reductant amount was injected, less water was used. This modification was necessary to reduce the overall volume of reagent and to allow the injection work to continue by decreasing the potential for and/or reagent surfacing in these areas.

The target injection volume under this dilution was 420 gallons. **Figure 5** shows the volumes of CAPS and total reagent delivered to each injection location. At the

end of the last set of injections, approximately 1.75 ft increase in water level in monitoring well 079-MW-001 was observed (see graphs in **Appendix D**).

Physical and chemical parameters (DO, pH, ORP and SC) measured in monitoring well 079-MW-001 showed that reductive conditions were beginning to be established at the site, concurrently with the injections, as evidenced by drop in DO and ORP and increase in pH. Conversely, water levels and physical and chemical parameters remained unchanged in well 079-MW-A02, in the portion of the site where injections were not being conducted during this work cycle.

Monitoring at the sentinel points showed a slight increase in water level and pH, but not enough to suggest that reagent was reaching the 138 kV power line (see **Appendix D**).

Monitoring at the storm sewer did not indicate incursion of CAPS into the sewer.

Monitoring in the breathing zone and periodic screening in the sewer man-ways and sentinel points did not indicate the presence of hydrogen sulfide or other targeted gases.

# Work Cycle #2

During Work Cycle #2, vehicles were evacuated from the southern portion of the site, making it available for ITP work. The following points were treated in Work Cycle #2:

IP-1	IP-8	IP-13	IP-20	IP-43	IP-28/29	IP-38A
IP-2	IP-9	IP-15	IP-22	IP-57A	IP-7A	IP-39A
IP-4	IP-11	IP-16	IP-23	IP-58A	IP-35A	
IP-7	IP-12	IP-19	IP-31	IP-62A	IP-36A	

Injections were initiated at the planned dilution rate of 2:1 and target injection volume of 730 gallons. Similar sequencing schemes as before were utilized, to minimize groundwater mounding. Since CAPS was observed infiltrating into the sewer, the dilution was reduced to 1:1, so that the calculated stoichiometric amount of reagent could be delivered using a smaller volume of reagent and to minimize the potential for additional infiltration into the sewer.

Infiltration into the sewer was observed while injecting at points IP-8, 11, 13 and 19. Similarly, injection at points IP-12 and IP-20 were terminated, when a considerable change in pH, ORP measurements and visual and olfactory observations were indicated at sentinel well points 6 and 7. The injections were terminated to avoid damage to the power line. Based on water level data from well 079-MW-A02, water level mounding in this area was approximately 1.2 ft.

Because nine injection points were converted to sentinel well points, there was excess reagent available. Therefore, locations from the previous work cycle, where less than 730 gallons of solution were injected, were reoccupied and additional volume was injected. These points are listed with the suffix "A" in the list above.

Physical and chemical parameters (DO, pH, ORP, SC) measured in monitoring well 079-MW-A02 showed that reductive conditions were beginning to be established at the site, concurrently with the injections, as evidenced by drop in DO and ORP and increase in pH. Conversely, water levels and physical/chemical parameters remained unchanged in well 079-MW-001, in the portion of the site where injections were not being conducted during this work cycle.

Monitoring in the breathing zone did not at any time indicate the presence of hydrogen sulfide or other targeted gases.

The Jersey City MUA was notified of the CAPS incursion into the sewer. An MUA representative inspected the site and later requested to flush the sewer with water to remove the CAPS residue from the line.

#### 3.1.3 Site Restoration

Immediately upon completion of the injections, the individual injection locations were repaired by placing and tamping down "cold patch" asphalt. On October 31, 2010 the existing pavement was milled to a depth of 2 inches, removed and replaced with a new 3-inch layer of hot-rolled asphalt. The entire property between Route 440 and the dealership building was milled and resurfaced.



Photograph 7 - Pavement Milling



Photograph 8 - Pavement Striping

# 3.2 SOIL EXCAVATION

Arecon Ltd. (Arecon) of Bordentown, New Jersey was contracted to conduct the soil excavation program at the rear parking lot area (i.e., at the corner of Fisk Street and Martorano Way). Arecon provided all necessary labor and materials, including lower tier subcontractors, to implement the injection treatment program.

Representatives of Honeywell and Carpenter Environmental, Inc. (representing the settlement parties in the Consent Decree) were also at the Site observing portions of the activities.

#### 3.2.1 Mobilization

Prior to site mobilization, utility mark outs were conducted by Arocon, and building permits were received from Jersey City. Waste classification and clean fill samples were conducted prior to mobilization as detailed below. On August 18, 2010 the existing fencing was removed to accommodate equipment and vehicles, and saw cutting of the asphalt was performed.

#### 3.2.2 Field Activities

On August 19, 2010, 53.8 tons of non-hazardous Cr and Cr(VI) impacted soil were excavated, placed directly into trucks, and removed off-site to minimize soil



handling. The 900 ft<sup>2</sup> area delineated by soil borings 079-SB-016 through 079-SB-019 was excavated to a depth of 2 ft. Groundwater was not encountered.

Real-time dust air monitoring was performed during the excavation and backfill activities for the protection of the site workers and neighboring properties in accordance with the Mactec HASP. Readings were below the permissible exposure limit of 200 micrograms/per meter cubed (ug/m<sup>3)</sup> in

accordance with OSHA 1910.120 throughout the completion of the excavation work.

The limits of the excavation were defined based on the results of the 2005 and 2008 RI soil sample data, the NJDEP soil cleanup criteria of 20 mg/kg, and bottom and sidewall sampling frequency as specified in the NJDEP TRSR (i.e., 1 bottom sample per 900 square feet and sidewall sampling every 30 linear feet). Based on the RI data, no post-excavation sampling was required.

# 3.2.3 Transportation and Disposal

Two truckloads of impacted soil, totaling 53.8 tons, were transported to New Jersey Meadowlands Commission Keegan Landfill (manifests are included in **Appendix F**). Waste characterization soil sampling was completed prior to the excavation on April 23, 2010. The soil borings were completed to 2 feet bgs and analytical parameters included RCRA characteristics, Cr and Cr(VI), polychlorinated biphenyls, and diesel range and gasoline range total petroleum hydrocarbons. The Accutest Laboratory report is included in **Appendix G**.

#### 3.2.4 Site Restoration

Site restoration activities were completed on August 23, 2010. The excavation was



backfilled with 40.05 tons of certified clean fill from Tilcon New York (see **Appendix H**). The fill had been sampled on July 22, 2010 and analyzed by Accutest Laboratories to certify as clean. The fill was compacted into two 8-inch lifts. Asphalt restoration consisted of 6-inches of base and 2 inches of top coat. The permanent fence was replaced to its original location.

The excavated area was surveyed by Zimmer Surveying on September 3, 2010.

# 4.0 POST-REMEDIATION MONITORING PLAN

#### 4.1 POST-INJECTION SAMPLING

#### 4.1.1 Soils

The post-injection sampling and performance evaluation will be conducted approximately three years after completion of the injection treatment program.

The proposed scope of work for this task is indicated below:

- Advancing approximately 22 Geoprobe post-injection soil borings. Twelve of these points are in accordance with Exhibit C of the Consent Decree (Outline for In-Situ Treatment of Chromium Impacted Soils) as shown on **Figure 6.**
- At the request of the plaintiffs (October 19, November 2, 2010 and February 9, 2011) an additional 10 points were added to the program to provide additional confirmation at areas where a lower dilution rate was used and in the area along the 138kV underground transmission line.
- Each boring will be advanced to the meadow mat, but will not penetrate the meadow mat. Discreet 6-inch post-injection samples will be collected at 1-foot intervals, corresponding to the treatment interval, generally from 3 to 9 feet bgs. The samples will be selected based on soil classification variability, which would be the governing factor in injectant propagation. To the extent possible, all soil types within the boring will be sampled.
- Soil samples will be analyzed for Cr(VI) and sulfide in accordance with the NJDEP TRSR (**Table 4**). The sulfide data will used to evaluate potential Cr(VI) data qualification or rejection due to reducing conditions. The analyses are expected to provide insight as to whether any reducing conditions would be due to naturally occurring conditions or to persistence of the injected CAPS.

 Samples will be collected and handled in accordance with the NJDEP August 2005 Field Sampling Procedures Manual.

# 4.1.2 Groundwater

Post-injection groundwater samples will be collected from groundwater monitoring wells 079-MW-001 and 079-MW-A02, approximately three years after completion of the ITP. The samples will be collected using NJDEP-recommended low-flow purging methods and will be analyzed for filtered and unfiltered total Cr and Cr(VI). The sampling and analysis program is summarized on **Table 4**.

#### 4.1.3 Data Validation

Laboratory analytical data will be subject to data validation to ensure laboratory compliance with quality assurance/quality control (QA/QC) requirements for the selected analytical methods.

Data validation will be conducted for 100% of the samples analyzed for Cr and Cr(VI) using the data validation guidance documents below:

- NJDEP. 2002. Standard Operating Procedure (SOP) entitled Quality Assurance Data Validation of Analytical Deliverables for Inorganics (based on EPA SW-846 Methods), SOP No. 5.A.16. Trenton, New Jersey
- NJDEP. 2001. Standard Operating Procedure for the Completion of the Data Validation Report Forms and the Preparation of the Final Data Validation Report, SOP No. 5.A.15, Trenton, New Jersey
- NJDEP. 2005. Standard Operating Procedure for Analytical Data Validation of Hexavalent Chromium, SOP No. 5.A.10, Revision 2, Trenton, New Jersey
- NJDEP. 2001. Standard Operating Procedure for the Completion of the Hexavalent Chromium Data Validation Report Forms and the Preparation of the Final Data Validation Report, SOP No. 5.A.09 Trenton, New Jersey

The data validation will include a signed document provided to the NJDEP attesting that the data was validated according to the aforementioned protocols.

# 4.1.4 Reporting

After the data has been validated, a report will be prepared documenting the sampling activities and presenting the results. The remedial action will be recapped to provide the necessary background and context. The report will include tabulated data, boring logs and maps with boring locations and posted data. Laboratory reports and data validation reports will be included as appendices. In accordance with the schedule presented on Figure 6 of the July 2010 Work Plan, the report will be submitted to the Parties for review, on or about 2/4/2015.

# 4.2 ANNUAL ENGINEERING CONTROLS INSPECTIONS

In accordance with approved RAWP, the asphalt pavement within the front parking lot area will serve as an engineering control to isolate site users and the environment from the underlying Cr(VI)-impacted soils. A final deed notice has been recorded for the site (**Appendix I**). The deed notice requires annual inspections of the engineering controls and filing of a Biennial Certification report.

# 4.2.1 Asphalt Cap Visual Inspections

Annual visual inspections of the asphalt cap will be conducted to verify the integrity of the cap. Evidence of deterioration (cracking, spalling, fracturing/ pot-holing) will be recorded and evaluated. Any evidence of disruption (such as excavation) will also be recorded. The observations will be recorded in a memorandum and will be photodocumented.

#### 4.2.2 Elevation Monument Surveys

Four semi-permanent survey points (PK nails with shiners) were installed across the asphalt cover and the initial elevations were measured and recorded by a State of New Jersey Licensed. The survey map is included in **Appendix** J. Survey measurements will be taken three years after completion of the field treatment activities as part of the post-treatment monitoring requirements, as indicated in the in-situ treatment plan in Exhibit C of the Consent Decree. The survey work will be completed by a New Jersey Licensed Surveyor.

#### 4.2.3 Biennial Certification Reports

A Biennial Certification report will be prepared and submitted summarizing the observations of the annual inspections and documenting any changes or alternation

to the engineering controls. As required by the TRSR, the Report will also compare New Jersey laws, remediation standards, and other regulations applicable at the time the engineering and/or institutional control was established with relevant subsequently promulgated or modified laws, regulations or remediation standards to determine whether any changes in applicable laws, regulations, or remediation standards have occurred; and whether the institutional controls comply with the requirements of any new laws and regulations.

# **5.0 REMEDIAL ACTION COSTS**

In accordance with the requirements of N.J.A.C. 7:26E-8, the costs associated with the RA, including monitoring, maintenance, and certification of the protectiveness of the engineering and/or institutional control, are presented below.

The total cost incurred by Honeywell for the Remedial Action activities at the Site was \$605,515, not including Honeywell-provided services.

Activity	Amount
Injection Treatment Cost	\$ 464,290
Soil Excavation Cost	\$ 36,125
Transportation and Disposal Cost	\$ 23,400
Oversight Cost	\$ 81,700
Total Estimated Cost	\$ 605,515

The cost to monitor, maintain, and certify the protectiveness of the institutional controls pursuant to N.J.A.C. 7:26E-8 is estimated at approximately \$2,000 per year. This assumes quarterly inspections and biennial reports.

# 6.0 CONCLUSIONS AND RECOMMENDATIONS

The RA conducted at the site, consisting of soil removal, in-situ treatment and front lot resurfacing for added engineering control, have successfully addressed concerns from Cr(VI)-impacted soils at the site. Approximately 54 tons of soil were excavated, transported, and disposed of off- site. 33,000 gallons of CAPS solution (or 16,000 gallons of undiluted 29% CAPS) were injected at the site.

Based on the results of the RA, Honeywell recommends the issuance of a NFA finding by NJDEP with respect to chromium, conditional on maintenance of institutional and engineering controls. Post-remediation sampling will be performed in 2013 in accordance with approved RAWP and the terms of the Consent Decree. Honeywell will submit an addendum to this report summarizing the soil sampling results of post-remediation sampling. A Declaration of Environmental Restrictions (deed notice) has been recorded for the site and annual inspections and biennial certification reporting for the front parking lot has been stipulated.

# 7.0 REFERENCES

- Bouwer, H. and R.C. Rice, 1976. A slug test method for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells, Water Resources Research, vol. 12, no. 3, pp. 423-428
- Bouwer, H, 1989, The Bower and Rice slug test, an update, GROUND WATER, vol. 27, no.3, pp 304-309, 1989
- HydroQual, Inc., 2005. Preliminary Deep Overburden Groundwater Report, Honeywell Study Area 7. March 31, 2005, HWEL.002.001.11
- HydroQual, Inc., 2006. Deep Overburden Groundwater Remedial Alternatives (DORAA) Report Honeywell Study Area 7. June 26, 2006. HWEL.002.001.11.
- HydroQual, Inc., 2007. Final
  Groundwater Investigation Report,
  Honeywell Study Area 7.
  February 2, 2007. HWEL
  002.001.11.
- Mactec Engineering and Consulting, Inc.,
  July 2009. Remedial Action
  Selection Report/Remedial Action
  Work Plan for Study Area 5,
  NJDEP Site 079 Route 440 Vehicle
  Corp., Jersey City, New Jersey.
  July 2009.
- Mactec Engineering and Consulting, Inc., July 2007, Final Supplemental

- Remedial Investigation
  Report/Remedial Action Selection
  Report/Remedial Action Work
  Plan; Study Area 5 New Jersey
  City University Redevelopment
  Former Baldwin Steel Site (Site
  090) Former MI Holdings Site (Site
  184) Former Morris Canal Site
  (Site 153) Abutting Sites 090 and
  184 Jersey City, NJ
- Mactec Engineering and Consulting, Inc.,
  August 2006. Supplemental
  Remedial Investigation Report for
  Study Area 5, NJDEP Site 079
  Route 440 Vehicle Corp., Jersey
  City, New Jersey. July 2006.
- Mactec Engineering and Consulting, Inc., 2005. Remedial Investigation Work Plan Addendum, Study Area 5, Route 440 Vehicle Corp (Site 079), Jersey City, New Jersey. June 2005.
- New Jersey Department of
  Environmental Protection, 2008.
  Technical Requirements for Site
  Remediation: N.J.A.C. 7:26E.
  Most recent amendments dated
  September 2, 2008.
- TetraTech, Inc., November 1999. Draft Remedial Investigation Report, Study Area 5, NJDEP Site No. 079, 090, 117, 153 and 184, Jersey City, New Jersey. November 1999.

# 8.0 LIST OF COMMON ACRONYMS AND ABBREVIATIONS

Amec	Amec E&I, Inc.	IPs	Injection Points
ACO	Administrative Consent		
	Order	μg/L	micrograms per liter
AOC	Area of Concern	Mactec	Mactec Engineering and
ASTM	American Standard Testing		Consulting, Inc.
	Materials	mg/kg	milligrams per kilogram
		MSL	mean sea level
bgs	below ground surface	MW	Monitoring Well
CAPS	Calcium Polysulfide	NAVD	North American Vertical
CFR	Code of Federal Regulations		Datum
COPR	Chromite Ore Processing	NFA	No Further Action
	Residue	NJAC	New Jersey Administrative
Cr(VI)	Hexavalent Chromium		Code
		NJDEP	New Jersey Department of
DGW	Discharge to Groundwater		<b>Environmental Protection</b>
	Permit Request	NJPDES	New Jersey Pollutant
DOT	Department of		Discharge Elimination
	Transportation		System
DPT	Direct Push Technology		
		OSHA	Occupational Safety and
EPA	<b>Environmental Protection</b>		Health Administration
	Agency		
		PAHs	Polycyclic Aromatic
gpm	Gallon per Minute		Hydrocarbons
GWQS	Groundwater Quality	PID	Photoionization Detector
	Standards	POTW	Publicly Owned Treatment
			Works
HASP	Health and Safety Plan	PPE	Personal Protective
			Equipment
ISCR	In-Situ Chemical Reduction	PVC	Polyvinyl Chloride
ITP	Injection Treatment		
	Program		

QAPP Quality Assurance Project

Plan

QA/QC Quality Assurance/Quality

Control

RA Remedial Action

RAR Remedial Action Report
RASR Remedial Action Selection

Report

RAWP Remedial Action Work Plan RI Remedial Investigation

SA Study Area

SCC Soil Cleanup Criteria SOP Standard Operating

Procedures

TRSR Technical Requirements for

Site Remediation

USGS U.S. Geological Survey

WP Work Plan



Table 1
Summary of Groundwater Analytical Data - July 2010
Study Area 5, NJDEP Site 079, Route 440 Vehicle Corp.
Jersey City, New Jersey

Location ID	Field Sample ID	Lab Sample ID	Chromium (Total)	Hexavalent Chromium
079-MW-001	079-MW-1	JA50921-2	20.5	10UJ
079-MW-001	079-MW-1DP	JA50921-3	14.9	10UJ
079-MW-001	079-MW-1F	JA50921-2F	10U	10U
079-MW-001	079-MW-1DP-F	JA50921-3F	10U	10U
079-MW-A02	079-MW-2A-070810	JA50921-1F	10U	10U
079-MW-A02	079-MW-2A-070810	JA50921-1	10U	10UJ

# Notes:

Samples collected on 7/8/2010
Samples analyzed by Accutest Laboratories, Inc.
All results in ug/l
Suffix "F" indicated Filtered sample
Suffix "DP" indicates Duplicate sample
Suffix "DP-F" indicated Duplicate Filtered sample

Prepared by: TT 11/30/10

Checked by: VHL

Table 2
Results of Slug Tests Performed on Wells 079-MW-001 and 079-MW-A2

#### Study Area 5, NJDEP Site 079, Route 440 Vehicle Corp.

Well	Screened Interval (ft	Lithology of screened	Falling Head (F)	Horizontal Hyd	Iraulic Conducti	vity - K <sub>h</sub> (ft/day)	Assumption	Estimated Mean	Overall Mean	Overall Mean K <sub>h</sub> (cm/sec)
Well	below ground)	interval	or Rising Head	С	В	L	Assumption	K <sub>h</sub> (ft/day)	K <sub>h</sub> (ft/day)	
			F**	13.4	5.0	8.0	Water-Table Case			
			R	30.1	8.8	14.0	water-rable case	11.4		
079-MW-001	4 - 9	Fill material-		Water-Table Case						
079-IVIVV-001	4-9	sand, slag and cinders	R	30.3	10.0	15.9	water-rable case	13.0	12.5	4.4E-03
			F**	13.2	5.1	8.8	Water-Table Case	13.3		
			R	28.5	10.2	16.3				
		R 1.02 1.67 1.19  F** 0.48 0.39 0.28  R 0.82 0.85 0.61  F** 0.12 0.39 0.28	F**	0.14	0.38	0.28	Water-Table Case	1.43		
			R	1.02	1.67	1.19	water-rable case			
079-MW-A2	2 12		-	0.48	0.39	0.28	Water Table Case	0.72		
	3-13		0.61	Water-Table Case 0.73		1.2	4.1E-04			
				1 24						
			R	1.24	1.56	1.11	Water-Table Case	1.34		

B' = Bouwer and Rice Method, 1976 (for water-table conditions)

Notes: (1) Depth to water level data were collected using electric water-level indicators.

(2) Tests conducted on July 12, 2010

Prepared by:	acm 7/22/2010
Checked by:	

C' = Cooper, Bredehoeft and Papadopulos Method, 1967 (for confined conditions)

<sup>&#</sup>x27;L' = Lambe & Whitman, 1969 (for water-table and confined conditions)

<sup>\*\*</sup> Falling-head results not included in mean K<sub>h</sub> values as static water level was below top of screen

Table 3
Summary of Suflide Soil Analytical Results
Study Area 5, NJDEP Site 079, Route 440 Vehicle Corp.
Jersey City, New Jersey

Location ID	Field Sample ID	Lab Sample	Start	<b>End Depth</b>	Date Sampled	Result
		ID	Depth			
079-SB-029	079-SB-029-0506A	JA48997-1	5	6	6/13/2010	11.4
079-SB-029	079-SB-029-0809A	JA48997-2	8	9	6/13/2010	4.9U
079-SB-030	079-SB-030-0001A	JA48997-3	0	1	6/13/2010	4.4U
079-SB-030	079-SB-030-0405A	JA48997-4	4	5	6/13/2010	4.5U
079-SB-034	079-SB-034-0203A	JA48997-5	2	3	6/13/2010	4.5U
079-SB-034	079-SB-034-0405A	JA48997-6	4	5	6/13/2010	6.6U
079-SB-034	079-SB-034-0506A	JA48997-7	5	6	6/13/2010	4.6U
079-SB-035	079-SB-035-0405A	JA48997-8	4	5	6/13/2010	5.4U
079-SB-035	079-SB-035-0506A	JA48997-9	5	6	5/17/2009	6.1U
079-SB-035	079-SB-035-0607A	JA48997-10	6	7	6/13/2010	10U

# Notes:

Samples analyzed by Accutest Laboratories, Inc. All results in mg/kg Analyses by USEPA method 9030B/9034

Prepared by: TT 11/30/10

Checked by: VHL

### Table 4

### **Soil Sampling and Analysis Program**

#### Study Area 5 NJDEP Site 079 Route 440 Vehicle Corp.

#### Jersey City, New Jersey

Activity	Number of Borings or Wells	Number of Samples	Sampling Method	Matrix	Sampling Interval	Analytical Parameters
Post-Treatment Soil Sampling	22	132	Geoprobe Macro-Core	Soil	Six 1-foot samples per boring from 3 to 9 ft below grade	Hexavalent Chromium, pH, Eh, sulfide
Post-Treatment Groundwater Sampling	2	2	Low-flow	Groundwater	Mid-screen	Filtered and unfiltered Cr (total), Cr(VI), pH, Eh

#### Notes:

- 1. Borings will not be advanced below the existing meadow mat or organic clay stratum.
- 2. Quality assurance/quality control (QA/QC) samples will be collected at a rate of 5% of the total number of soil; and field blank samples at a rate of one per sample event.
- 3. Laboratory analytical results will be reported using NJDEP Regulatory Format II. Full Laboratory Data Deliverables Non-USEPA/CLP Methods.
- 4. Laboratory analytical methods, preservation, and holding times are listed on the next page.

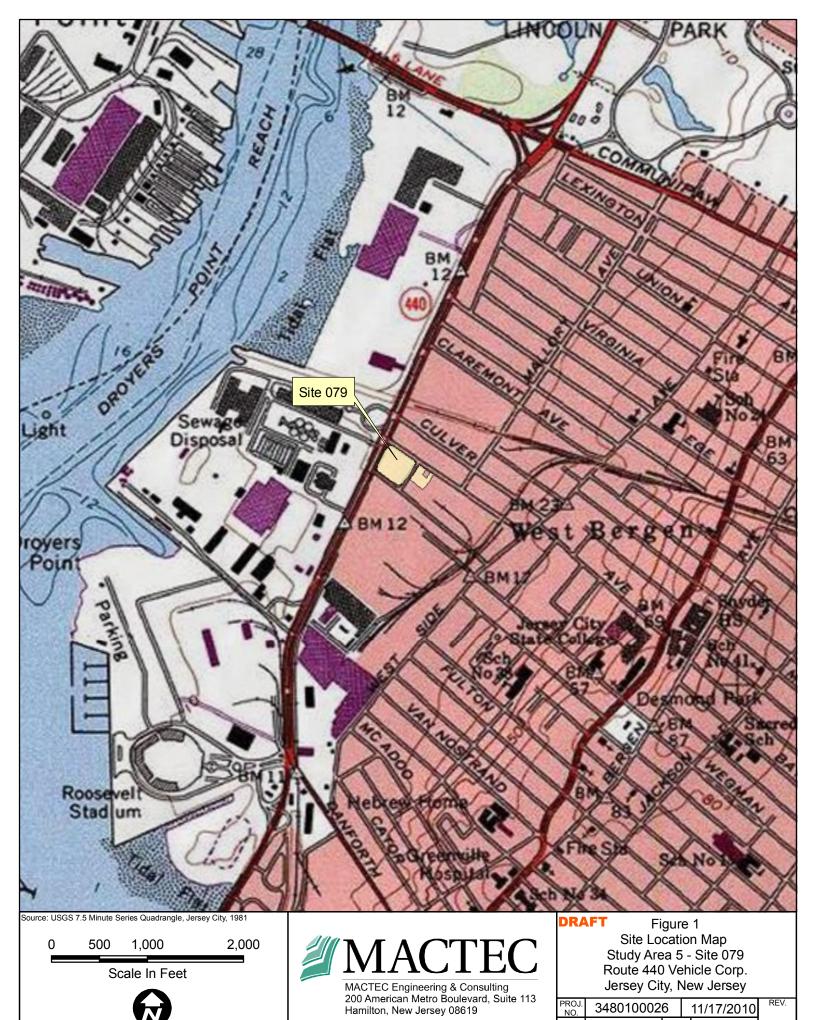
Table 4 (Continued)

Parameter	Methods	Preservation	Holding Times
Groundwater			
Total Chromium (unfiltered)	200.7	HN0 <sub>3</sub> , Cool 4°C	6 months
Total Chromium (filtered)	200.7	Cool 4°C	6 months
Hex.Chromium (filtered)	7196A	Cool 4°C	24 hours
Hex. Chromium (unfiltered)	7196A	Cool 4°C	24 hours
рН	ASTM D149-76M	Cool 4°C	Analyze Immediately
Eh	0945C,D	Cool 4°C	Analyze Immediately
Soil			
Hexavalent Chromium	3060A/7199	Cool 4°C	30 days extraction; 7 days analysis
рН	ASTM D149-76M	Cool 4°C	Analyze Immediately
Eh	0945C,D	Cool 4°C	Analyze Immediately
Sulfide	9030b/3040	Cool 4°C	7 Days

Prepared by : Checked by : TT 11/30/10

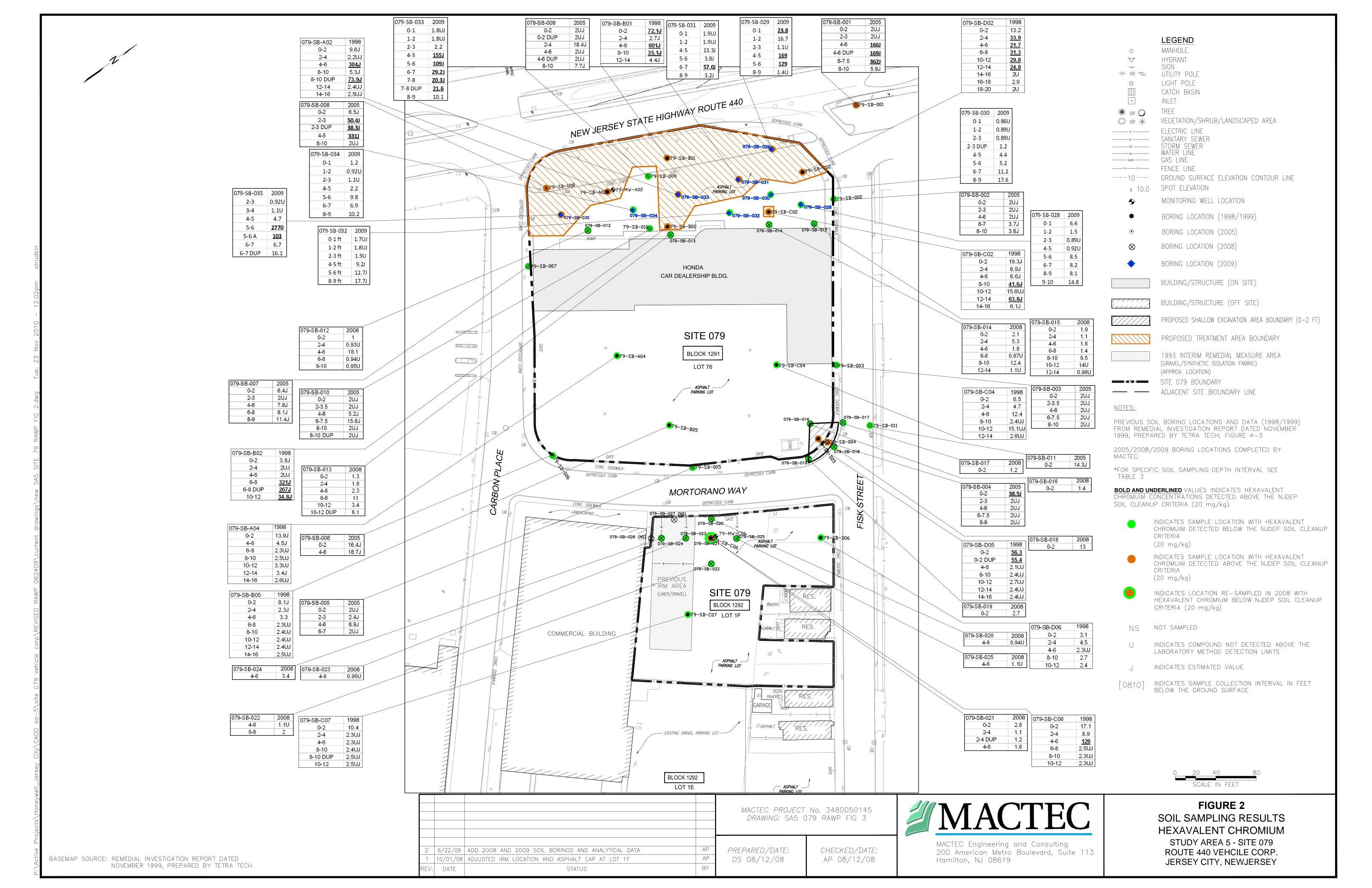
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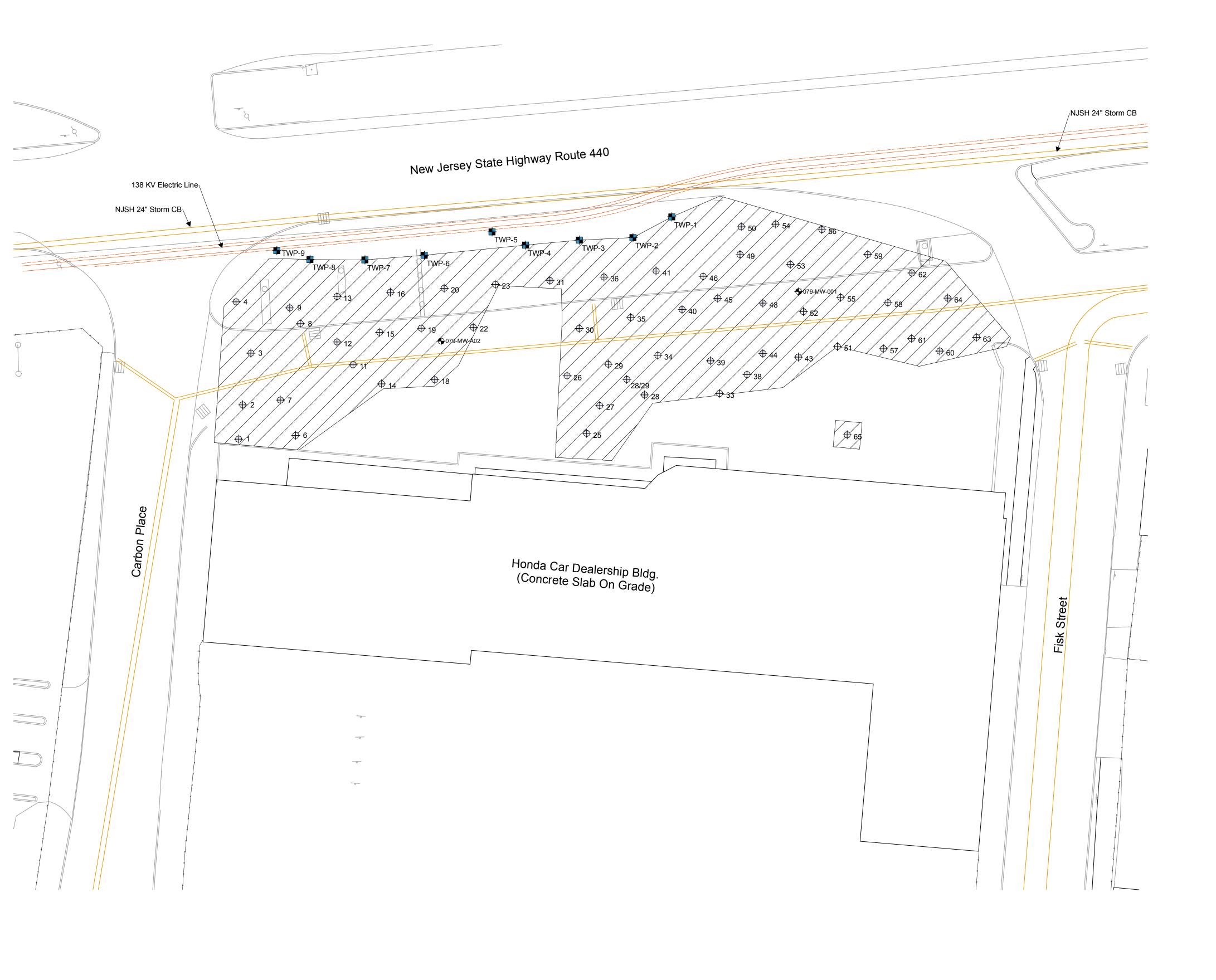




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WSL





STATUS

REV. DATE

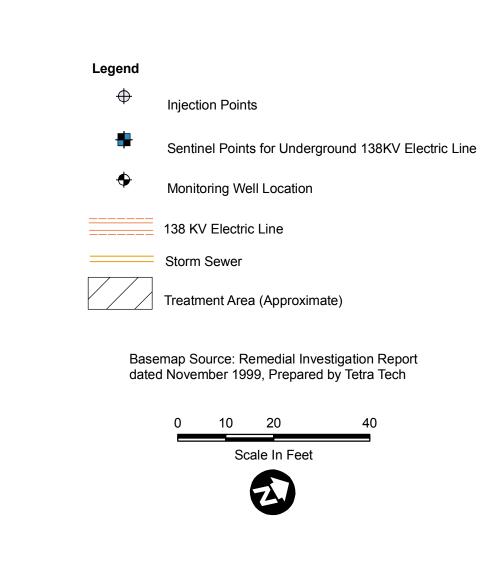
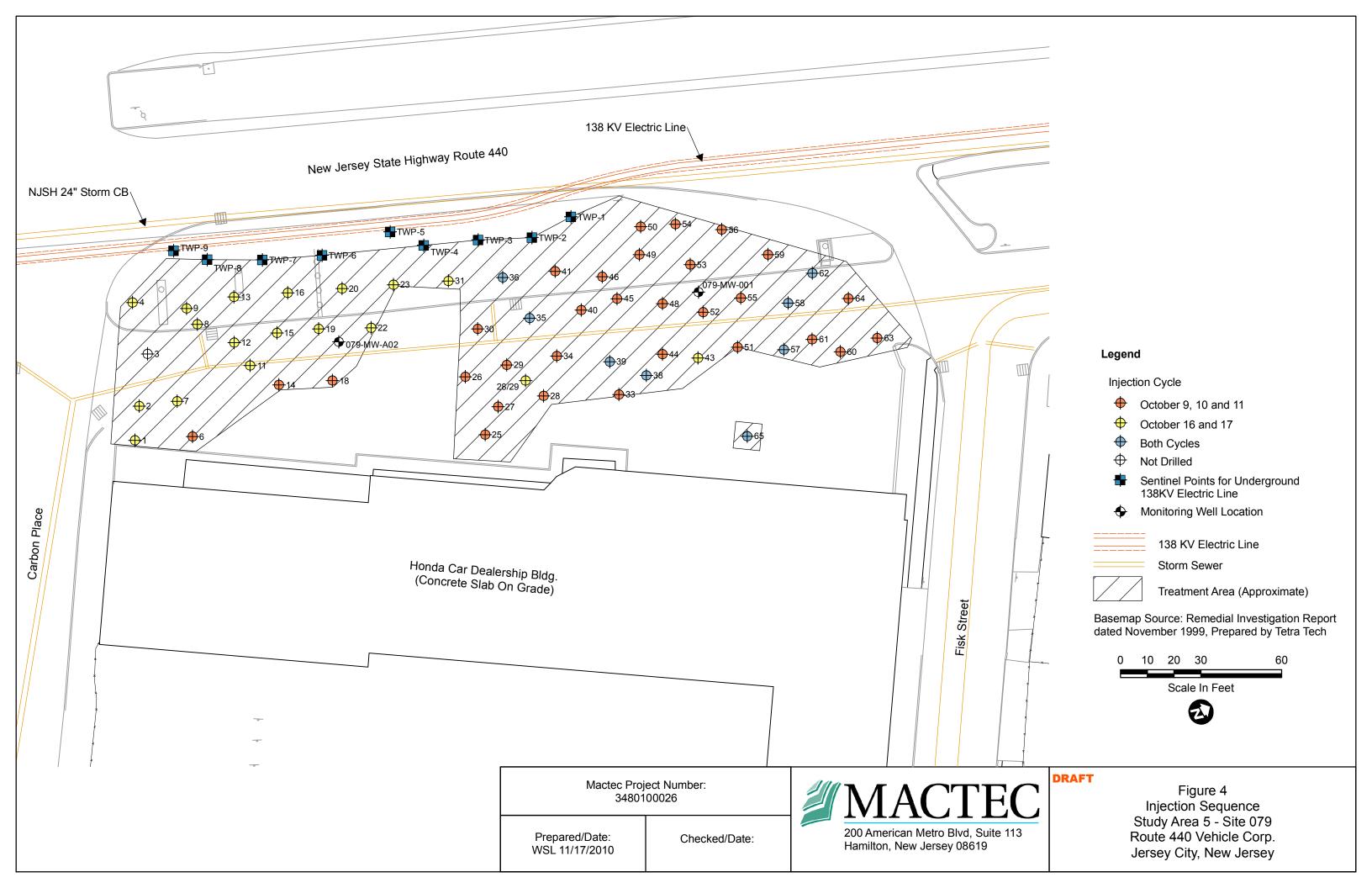
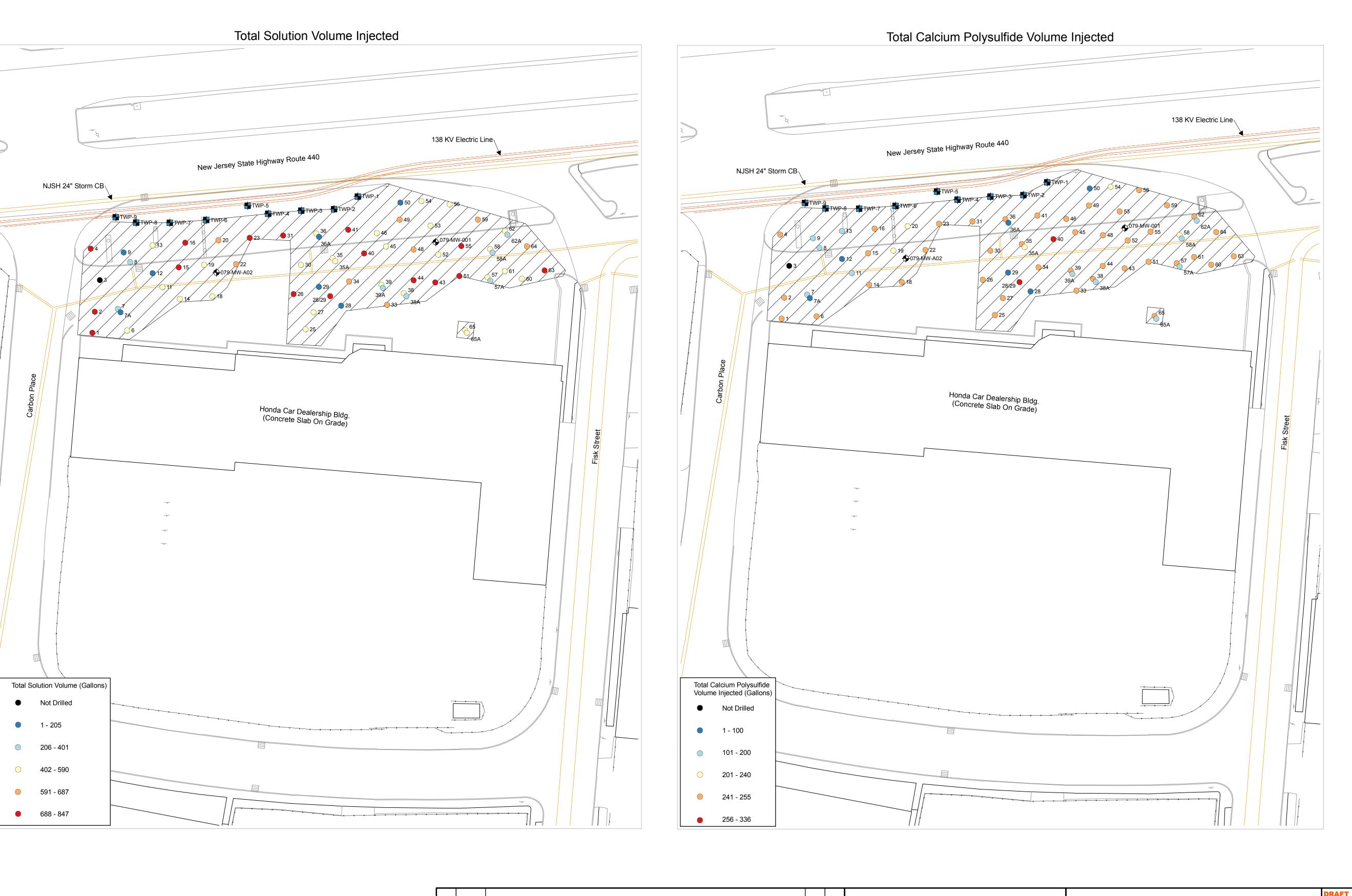




Figure 3
Remediation Areas
Study Area 5 - Site 079
Route 440 Vehicle Corp.
Jersey City, New Jersey





STATUS

REV. DATE

Sentinel Points
for Underground 138KV Electric Line

Monitoring Well Location

138 KV Electric Line

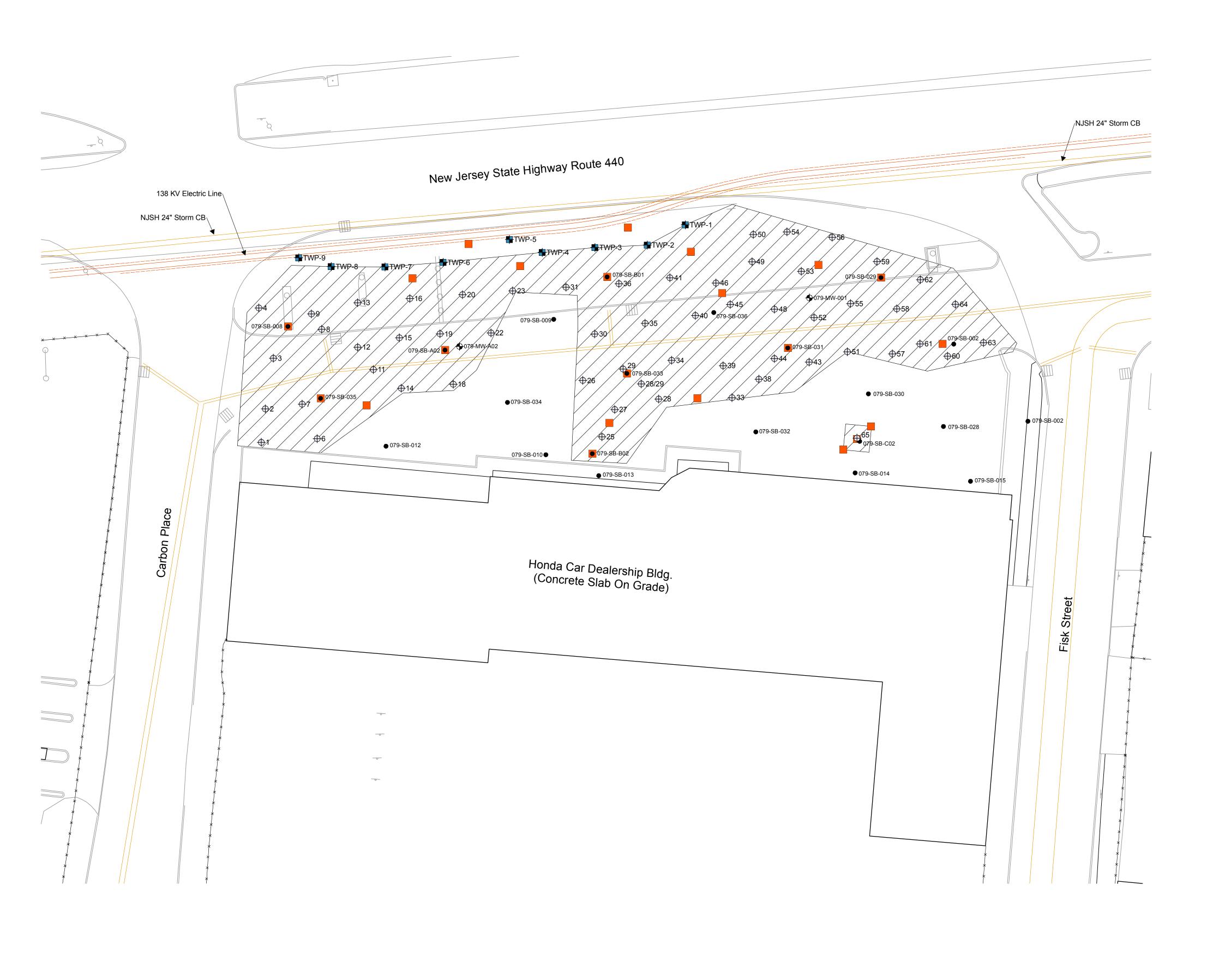
Storm Sewer

Treatment Area (Approximate)

Basemap Source: Remedial Investigation Report dated November 1999, Prepared by Tetra Tech

0 10 20 30 60

Scale In Feet



STATUS

REV. DATE

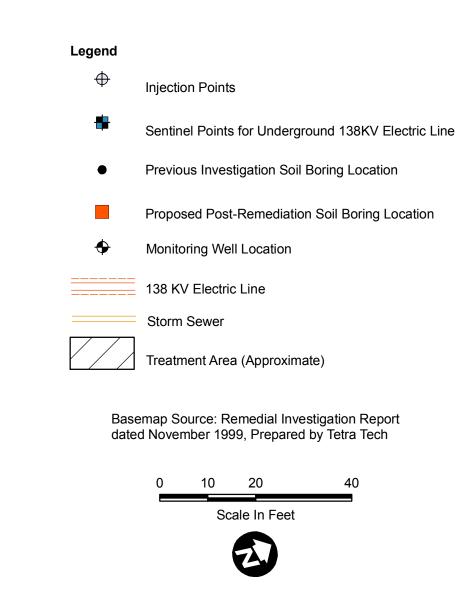


Figure 6
Proposed Post-Remediation
Sampling Locations
Study Area 5 - Site 079
Route 440 Vehicle Corp.
Jersey City, New Jersey

# APPENDIX A RELEVANT REGULATORY CORRESPONDENCE



Jon S. Corzine *Governor* 

Department of Environmental Protection

Lisa P. Jackson Commissioner

Bureau of Case Management 401 East State Street P.O. Box 028 Trenton, NJ 08625-0028 Phone #: 609-633-1455 Fax #: 609-633-1439

April 17, 2008

Honeywell Inc Attn: Mr. John Morris, Remediation Portfolio Director PO Box 1057 Morristown, NJ 07962-1057

#### **Remedial Investigation Approval**

Re: Supplemental Remedial Investigation Report

Hudson County Chromate - Allied

Site 079 – Route 440 Vehicle Corporation Block: 1291, Lot: 76; and Block: 1293, Lot: F

Jersey City, NJ 07032 SRP PI#: G000008789 EA ID #: RPC020001

Dear Mr. Morris:

The New Jersey Department of Environmental Protection (Department) has completed review of the Supplemental Remedial Investigation Report received on July 7, 2006. The Department has determined that the Supplemental Remedial Investigation Report is in compliance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E and other applicable requirements. The Department hereby approves the Supplemental Remedial Investigation Report, effective the date of this letter.

Pursuant to the schedule applicable to the site you shall submit a Remedial Action Work Plan on September 30, 2008. Please submit the document by that date, or submit a written request for an extension at least 2 weeks prior to the due date. Failure to submit the Remedial Action Work Plan in accordance with the schedule may result in the initiation of enforcement action. For your convenience, the regulations concerning the Department's remediation requirements can be found at <a href="http://www.state.nj.us/dep/srp/regs/">http://www.state.nj.us/dep/srp/regs/</a>.

Thank you for your cooperation in this matter. If you have any questions, please call me at (609) 984-4071.

Sincerely,

Frank Faranca, CHMM, Site Remediation Technical Specialist Bureau of Case Management

cc: David Doyle, NJDEP/BEERA
David VanEck, NJDEP/BGWPA
Joseph Castagna, Jersey City Division of Health
Robert Ferraiuolo, Hudson Regional Health Commission
Hudson County Planning Board
Jerramiah T. Healy, Jersey City

Honeywell Inc Attn: Mr. John Morris, Remediation Portfolio Director PO Box 1057 Morristown, NJ 07962-1057

Joseph Castagna Jersey City Division of Health One Journal Square Jersey City, NJ 07306

Robert Ferraiuolo Hudson Regional Health Commission Meadowview Campus 595 County Avenue - Bldg. 1 Secaucus, NJ 07094

Hudson County Planning Board County Administration Building 595 Newark Avenue Jersey City, NJ 07306

Jerramiah T. Healy Jersey City 280 Grove Street Jersey City, NJ 07302



Jon S. Corzine

Mark Mauriello

Department of Environmental Protection

Division of Remediation Management and Response Bureau of Case Management P.O. Box 028 Trenton, New Jersey 08625-0028 Phone: (609) 633-1455 Fax: (609) 633-1439

September 30, 2009

Honeywell, Inc.

Attn: Mr. John Morris, Remediation Portfolio Director

PO Box 1057

Morristown, NJ 07962-1057

#### Remedial Action Selection Report/Remedial Action Work Plan Approval

Re:

Remedial Action Selection Report/Remedial Action Work Plan

**Hudson County Chromate Sites 79** 

Study Area 5

Block: 1291, Lot: 76; Block: 1292, Lot 1F

Jersey City, NJ 07032 SRP PI: G000008789

Dear Mr. Morris:

The New Jersey Department of Environmental Protection (Department) completed its review of the Remedial Action Selection Report/Remedial Action Work Plan (RASR/RAWP) received on November 26, 2008 and revised on August 3, 2009. The Department has determined that the RASR/RAWP is in compliance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E, the Department's Chromium Policy Directive dated February 8, 2007 and other applicable requirements. The Department hereby approves the RASR/RAWP, effective the date of this letter.

Pursuant to the schedule applicable to the site you shall submit a Remedial Action Report on August 27, 2010. Please submit the document by that date, or submit a written request for an extension at least 2 weeks prior to the due date. Failure to submit the Remedial Action Report in accordance with the schedule may result in the initiation of enforcement action. For your convenience, the regulations concerning the Department's remediation requirements can be found at <a href="http://www.state.nj.us/dep/srp/regs/">http://www.state.nj.us/dep/srp/regs/</a>.

Thank you for your cooperation in this matter. If you have any questions, please call me at (609) 984-4071.

Sincerely.

Frank Faranca, CHMM, Site Remediation Technical Specialist

Bureau of Case Management

cc:

Jerramiah T. Healy, Jersey City Hudson County Planning Board

Robert Ferraiuolo, Hudson Regional Health Commission

Joseph Castagna, Jersey City Division of Health

David Doyle, NJDEP, BEERA David VanEck, NJDEP, BGWPA

# ${\bf APPENDIX~B} \\ {\bf LABORATORY~DATA~PACKAGES,~ISCR~PROGRAM}$





08/13/10



### **Technical Report for**

**Honeywell International Inc.** 

HLANJPR: SA-5, Site 079, Jersey City, NJ

Accutest Job Number: JA48997

**Sampling Date: 06/13/10** 

Report to:

Mactec

vhlieu@mactec.com

**ATTN: Vanthuy Lieu** 

Total number of pages in report: 257





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis VP Ops, Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.



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<b>3.2:</b> JA48997-2: 079-SB-029-0809A	11
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Job No:

JA48997

### **Sample Summary**

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample	Collected			Matr	ix	Client
Number	Date	Time By	Received			Sample ID
JA48997-1	06/13/10	11:00 G/S	06/14/10	SO	Soil	079-SB-029-0506A
JA48997-2	06/13/10	11:10 G/S	06/14/10	SO	Soil	079-SB-029-0809A
JA48997-3	06/13/10	08:45 G/S	06/14/10	SO	Soil	079-SB-030-0001A
JA48997-4	06/13/10	08:50 G/S	06/14/10	SO	Soil	079-SB-030-0405A
JA48997-5	06/13/10	09:30 G/S	06/14/10	SO	Soil	079-SB-034-0203A
JA48997-6	06/13/10	09:35 G/S	06/14/10	so	Soil	079-SB-034-0405A
JA48997-7	06/13/10	09:37 G/S	06/14/10	so	Soil	079-SB-034-0506A
JA48997-8	06/13/10	09:40 G/S	06/14/10	so	Soil	079-SB-035-0405A
JA48997-9	06/13/10	09:45 G/S	06/14/10	SO	Soil	079-SB-035-0506A
JA48997-10	06/13/10	09:47 G/S	06/14/10	SO	Soil	079-SB-035-0607A
JA48997-11	06/13/10	08:55 G/S	06/14/10	so	Soil	079-SB-036-0001
JA48997-11 <i>a</i>	A 06/13/10	08:55 G/S	06/14/10	so	Soil	079-SB-036-0001
JA48997-12	06/13/10	09:00 G/S	06/14/10	SO	Soil	079-SB-036-0102

Soil samples reported on a dry weight basis unless otherwise indicated on result page.





## Sample Summary (continued)

Job No:

JA48997

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
JA48997-12A			06/14/10		Soil	079-SB-036-0102
JA48997-13	06/13/10	09:05 G/S	06/14/10	SO	Soil	079-SB-036-0203
JA48997-13A	06/13/10	09:05 G/S	06/14/10	SO	Soil	079-SB-036-0203
JA48997-14	06/13/10	09:07 G/S	06/14/10	SO	Soil	079-SB-036-0304
JA48997-14A	06/13/10	09:07 G/S	06/14/10	SO	Soil	079-SB-036-0304
JA48997-14A	R06/13/10	09:07 G/S	06/14/10	SO	Soil	079-SB-036-0304
JA48997-15	06/13/10	09:10 G/S	06/14/10	SO	Soil	079-SB-036-0405
JA48997-15A	06/13/10	09:10 G/S	06/14/10	SO	Soil	079-SB-036-0405
JA48997-15A	R06/13/10	09:10 G/S	06/14/10	SO	Soil	079-SB-036-0405
JA48997-16	06/13/10	09:12 G/S	06/14/10	SO	Soil	079-SB-036-0506
JA48997-16A	06/13/10	09:12 G/S	06/14/10	SO	Soil	079-SB-036-0506
JA48997-17	06/13/10	09:15 G/S	06/14/10	so	Soil	079-SB-036-0607
JA48997-17A	06/13/10	09:15 G/S	06/14/10	SO	Soil	079-SB-036-0607

Soil samples reported on a dry weight basis unless otherwise indicated on result page.





## Sample Summary (continued)

Job No:

JA48997

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
JA48997-18	06/13/10	09:17 G/S	06/14/10	SO	Soil	079-SB-036-0708
JA48997-18A	06/13/10	09:17 G/S	06/14/10	SO	Soil	079-SB-036-0708
JA48997-19	06/13/10	09:20 G/S	06/14/10	SO	Soil	079-SB-036-0809
JA48997-19A	06/13/10	09:20 G/S	06/14/10	so	Soil	079-SB-036-0809
JA48997-19A	R06/13/10	09·20 G/S	06/14/10	SO	Soil	079-SB-036-0809



#### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Honeywell International Inc. Job No JA48997

Site: HLANJPR: SA-5, Site 079, Jersey City, NJ Report Date 7/21/2010 7:32:10 PM

On 06/14/2010, 19 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.3 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA48997 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

#### Wet Chemistry By Method ASTM D1498-76M

Matrix: SO Batch ID: GN38770

Sample(s) JA48832-1DUP were used as the QC samples for Redox Potential Vs H2.

### Wet Chemistry By Method EPA 376.1M/9034 M

Matrix: SO Batch ID: GP54198

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA48997-4DUP, JA48997-4MS were used as the QC samples for Sulfide, Neutral Extraction.

#### Wet Chemistry By Method SM18 2540G

Matrix: SO Batch ID: GN39031

The data for SM18 2540G meets quality control requirements.

Matrix: SO Batch ID: GN39192

The data for SM18 2540G meets quality control requirements.



#### Wet Chemistry By Method SW846 3060A/7199

Matrix: SO Batch ID: GP54306

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA48997-15APS, JA48997-15AMS, JA48997-15ADUP were used as the QC samples for Chromium, Hexavalent.
- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Insoluble XCR matrix spike recovery indicates possible matrix interference. See additional comments on soluble matrix spike recovery.
- RPD(s) for Duplicate for Chromium, Hexavalent are outside control limits for sample GP54306-D1. RPD acceptable due to low duplicate and sample concentrations.
- GP54306-S1 for Chromium, Hexavalent: Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (101%) on this sample.

Matrix: SO Batch ID: GP54307

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA48997-11ADUP, JA48997-11APS, JA48997-11AMS were used as the QC samples for Chromium, Hexavalent.
- GP54307-S3 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (103 %) on the post-spike.
- GP54307-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (103 %) on the post-spike.
- GP54307-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

Matrix: SO Batch ID: GP54481

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA48997-15ARPS, JA48997-15ARMS, JA48997-15ARDUP were used as the QC samples for Chromium, Hexavalent.
- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (98.8%) on this sample.
- RPD(s) for Duplicate for Chromium, Hexavalent are outside control limits for sample GP54481-D1. High RPD due to possible sample nonhomogeneity.
- GP54481-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

#### Wet Chemistry By Method SW846 9045C,D

Matrix: SO Batch ID: GN38772

Sample(s) JA48832-1DUP were used as the QC samples for pH.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover







### Sample Results

Report of Analysis



**Client Sample ID:** 079-SB-029-0506A

 Lab Sample ID:
 JA48997-1
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 51.5

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	51.5		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	11.4	7.7	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

### Report of Analysis

**Client Sample ID:** 079-SB-029-0809A

 Lab Sample ID:
 JA48997-2
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 81.9

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Solids, Percent	81.9		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 4.9	4.9	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

**Client Sample ID:** 079-SB-030-0001A

 Lab Sample ID:
 JA48997-3
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 89.3

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	89.3		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 4.4	4.4	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

**Client Sample ID:** 079-SB-030-0405A

 Lab Sample ID:
 JA48997-4
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 89.1

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	89.1		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 4.5	4.5	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

### Report of Analysis

**Client Sample ID:** 079-SB-034-0203A

 Lab Sample ID:
 JA48997-5
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 86.2

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	86.2		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 4.5	4.5	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

**Client Sample ID:** 079-SB-034-0405A

 Lab Sample ID:
 JA48997-6
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 59.2

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Percent	59.2		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 6.6	6.6	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

### Report of Analysis

**Client Sample ID:** 079-SB-034-0506A

 Lab Sample ID:
 JA48997-7
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 84.1

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Solids, Percent	84.1		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 4.6	4.6	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

**Client Sample ID:** 079-SB-035-0405A

 Lab Sample ID:
 JA48997-8
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 72.7

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Solids, Percent	72.7		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 5.4	5.4	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

### Report of Analysis Page 1 of 1

**Client Sample ID:** 079-SB-035-0506A

 Lab Sample ID:
 JA48997-9
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 64.9

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Solids, Percent	64.9		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 6.1	6.1	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

### Report of Analysis

**Client Sample ID:** 079-SB-035-0607A

Lab Sample ID: JA48997-10 **Date Sampled:** 06/13/10 **Date Received:** 06/14/10 Matrix: SO - Soil **Percent Solids:** 38.2

HLANJPR: SA-5, Site 079, Jersey City, NJ **Project:** 

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Solids, Percent	38.2		%	1	06/24/10	WR	SM18 2540G
Sulfide, Neutral Extraction	< 10	10	mg/kg	1	06/18/10	ST	EPA 376.1M/9034 M

Page 1 of 1

Client Sample ID: 079-SB-036-0001

 Lab Sample ID:
 JA48997-11
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 87.7

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	459		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	87.7		%	1	06/21/10	WR	SM18 2540G
pH	8.07		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

Client Sample ID: 079-SB-036-0001

 Lab Sample ID:
 JA48997-11A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 87.7

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.74	0.45	mg/kg	1	06/29/10 15:57	BD	SW846 3060A/7199

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Client Sample ID: 079-SB-036-0102

 Lab Sample ID:
 JA48997-12
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 72.5

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	426		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	72.5		%	1	06/21/10	WR	SM18 2540G
pH	7.89		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

## Report of Analysis

**Client Sample ID:** 079-SB-036-0102

 Lab Sample ID:
 JA48997-12A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 72.5

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	$\mathbf{RL}$	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.54	0.54	mg/kg	1	06/30/10 11:28	BD	SW846 3060A/7199

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**Client Sample ID:** 079-SB-036-0203

 Lab Sample ID:
 JA48997-13
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 87.0

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	396		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	87		%	1	06/21/10	WR	SM18 2540G
pH	8.02		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

Client Sample ID: 079-SB-036-0203

 Lab Sample ID:
 JA48997-13A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 87.0

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.46	0.46	mg/kg	1	06/30/10 11:43	BD	SW846 3060A/7199

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**Client Sample ID:** 079-SB-036-0304

 Lab Sample ID:
 JA48997-14
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 86.2

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	$\mathbf{B}\mathbf{y}$	Method
Redox Potential Vs H2	398		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	86.2		%	1	06/21/10	WR	SM18 2540G
pH	7.44		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

**Client Sample ID:** 079-SB-036-0304

 Lab Sample ID:
 JA48997-14A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 86.2

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.1	0.47	mg/kg	1	06/29/10 12:13	BD	SW846 3060A/7199

Page 1 of 1

Client Sample ID: 079-SB-036-0304

 Lab Sample ID:
 JA48997-14AR
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 86.2

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.79	0.45	mg/kg	1	07/12/10 11:18	BD	SW846 3060A/7199

Page 1 of 1

**Client Sample ID:** 079-SB-036-0405

 Lab Sample ID:
 JA48997-15
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 80.8

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	400		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	80.8		%	1	06/21/10	WR	SM18 2540G
pH	7.26		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

**Client Sample ID:** 079-SB-036-0405

 Lab Sample ID:
 JA48997-15A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 80.8

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.81	0.49	mg/kg	1	06/29/10 12:06	BD	SW846 3060A/7199

Page 1 of 1

Client Sample ID: 079-SB-036-0405

 Lab Sample ID:
 JA48997-15AR
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 80.8

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium Hexavalent	66.5	2.4	mo/ko	5	07/12/10 12:0	12 BD	SW846 3060 A / 7199

Page 1 of 1

**Client Sample ID:** 079-SB-036-0506

 Lab Sample ID:
 JA48997-16
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 82.1

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	421		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	82.1		%	1	06/21/10	WR	SM18 2540G
pН	7.73		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

**Client Sample ID:** 079-SB-036-0506

 Lab Sample ID:
 JA48997-16A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 82.1

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	13.5	0.48	mg/kg	1	06/30/10 11:57	BD	SW846 3060A/7199

### Page 1 of 1

## Report of Analysis

**Client Sample ID:** 079-SB-036-0607

 Lab Sample ID:
 JA48997-17
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 83.0

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	421		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	83		%	1	06/21/10	WR	SM18 2540G
pН	7.65		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

Client Sample ID: 079-SB-036-0607

 Lab Sample ID:
 JA48997-17A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 83.0

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	65.8	2.5	mg/kg	5	06/30/10 13:34	BD	SW846 3060A/7199

Page 1 of 1

**Client Sample ID:** 079-SB-036-0708

 Lab Sample ID:
 JA48997-18
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 81.0

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	418		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	81		%	1	06/21/10	WR	SM18 2540G
pH	7.56		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

**Client Sample ID:** 079-SB-036-0708

 Lab Sample ID:
 JA48997-18A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 81.0

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	57.1	2.5	mg/kg	5	06/30/10 13:48	BD	SW846 3060A/7199

Page 1 of 1

Client Sample ID: 079-SB-036-0809

 Lab Sample ID:
 JA48997-19
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 79.5

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Redox Potential Vs H2	416		mv	1	06/16/10	JOO	ASTM D1498-76M
Solids, Percent	79.5		%	1	06/21/10	WR	SM18 2540G
pH	7.39		su	1	06/16/10	JOO	SW846 9045C,D

Page 1 of 1

Client Sample ID: 079-SB-036-0809

 Lab Sample ID:
 JA48997-19A
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 79.5

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	10.9	0.49	mg/kg	1	06/29/10 12:58	BD	SW846 3060A/7199

Page 1 of 1

Client Sample ID: 079-SB-036-0809

 Lab Sample ID:
 JA48997-19AR
 Date Sampled:
 06/13/10

 Matrix:
 SO - Soil
 Date Received:
 06/14/10

 Percent Solids:
 79.5

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	16.2	0.50	mg/kg	1	07/12/10 12:10	BD	SW846 3060A/7199



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



ACCUTEST resh Ponds Corporate 235 Route 130,Dayto					Hor	neyv	veli	Ch	ain O	f Cus	tody	/ Ana	lysis F	Reque	st						AESI Re COC#: Lab Use	3746	9.43925 i3-061310
32-329-0200 Phone,	732-329-34	99 Fax		Privileged &	& Confiden	tial	Y			Site N	ame:	HUDS	ONCO								Lab Pro		
				EDD To:		Andrew S	hust (MA	CTEC)		T	ion of S		SA 5, S	070							Lab ID	ACT	D
lient Contact: (nam	e, co., addr	ess)	·	Sampler:	Giouzelis/S	Shust				Locat		rvative	3A 3, 3	ites 079							PAGE 1	of 2	
MACTEC Engineeri	ng and Co	nsulting, I	<u>Inc</u>	PO#							0			1		1. 1	T	1	Т.		Job No.	01.2	
00 American Met	ro Bivd., 9	Suite 113		Analysis Turns	round Time:																- 1	A48	197
Iamilton, NJ 0861				Standard -										1									
gshust@mactec.co	m			Rush Charges A	uthorized for -											1 1						7.36	
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	Sample	e Identific	ation	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose		Grab/Composite	Sulfide SW9034M										by AES (Ver 3	<u>,</u>	
	Start	End				(2)				Sale			$\vdash$	+	+	+-+	+	+		+-+	02-01-0	5 ran	ecuroi@aol o
Location ID	Depth (ft)	Depth (ft)	Field Sample ID						- 1	Units	mg/kg										Lab Sam	ie Numbe	ers
079-SB-029	5	6	079-SB-029-0506A	6/13/2010	11:00	SOIL	Seil	REG	1	grab	X						4/	'				C5	-
079-SB-029	8	9	079-SB-029-0809A	6/13/2010	11:10	SOIL	Sail	REG	1	grab	x						- 2						
079-SB-030	0	1	079-SB-030-0001A	6/13/2010	8;45	SOIL	Soil	REG	1	dE V	x						13						
4 079-SB-030	4	5	079-SB-030-0405A	6/13/2010	8:50	SOIL	Soil	REG	1	å v	x						-4						
5 079-SB-034	2	3	079-SB-034-0203A	6/13/2010	9:30	SOIL	Soil	REG	1	å V	x						-5						
6 079-SB-034	4	5	079-SB-034-0405A	6/13/2010	9:35	SOIL	Soil	REG	1	grab	x						-6		L.				
7 079-SB-034	5	6	079-SB-034-0506A	6/13/2010	9:37	SOIL	Soil	REG	1	de l	x				Ш.		-7						
079-SB-035	4	5	079-SB-035-0405A	6/13/2010	9:40	SOIL	Soil	REG	1	٠ ق	x						-8						
9 079-SB-035	5	6	079-SB-035-0506A	6/13/2010	9:45	SOIL	Soil	REG	1	å v	x			$\perp$			- 9						
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eljniguished by	<u> </u>	. <i>y</i>	Date/Time 6	14/10/	5 m		11	<del>Y</del> W	WY!		Date/		14/10		ov	Cooler							
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T / VOV	one: [] = 13	ICI I: 12 =	6-14-16 Date/Time 6:08 HNO3]; [3 = H2SO4]; [4 = N	-OW-15-2		V	/ /			<u> </u>		. mic				Cooler	remp.	30	3°C				
	one, [1 - II	CLJ, [4 =	18103j; [3 - 12504j; [4 = N	aorij; [5 = Z	n. Acetate	;  6 = MeO	лы; [7 <del>[</del> ]	NaHSU4]	; 8 = O								<u>. "</u>	12					
											TA	ne	Ser	<del>-</del> /									M

JA48997: Chain of Custody Page 1 of 3



ACCUTEST Fresh Ponds Corporate					Hoi	neyv	vell	Ch	ain O	f Cus	tody	/ Analy	sis Re	quest						AFSI Ref: COC # :	38439,43925 37463-061310
235 Route 130,Dayte 32-329-0200 Phone,				Privileged a	& Cantiden	offs)	Ιv			Site N		HUDSO	VCO.							Lab Use O	
32 329 0200 Thone,	132-323-34	// I dx		EDD To:	e , continues	Andrew S	1 -	CTEC		1										Lab ID	ACTD
Client Contact: (nam	e, co., addr	ess)			Giouzelis/		uusi (iiii	CIEC,		Locati	on of S	rvative	A 5, Site	s 079						PAGE 2	of 2
MACTEC Engineer			nc	PO#	CAGALCIA	- CALLEST	•				0	0	Т	T	$\overline{}$		1			Job No.	ot Z
200 American Met		Suite 113		Analysis Turns	round Time:									+			1 1			- 1	H4844+
Hamilton, NJ 0861				Standard -								Ę									
gshust@mactec.co	<u>m</u>			Rush Charges A 2 weeks -	uthorized for							- iii									30
lardcopy Report To	See above	,		7	7					aple ?		lent Ch									the Text File? Mo
nvoice To:			neywell PM 101 ristown, NJ 07962	Next Day -		,				omposite tered San	Sulfide SW9034M	EPA 7199 Hexavalent Chromium								Written an maintained	
		Identific	ation	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose		Grab/Cor Field Filts	Sulfide	EPA 719								by AESI (Ver 3_7) 02-01-05	
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Ŧ					12.	Units	mg/kg	ng/kg								Gr Lab Samole	Numbers
079-SB-036	0.5	1	079-SB-036-0001	6/13/2010	8:55	SOIL	Soil	REG	1	de N		x				+1	/				
2 079-SB-036	1.5	2	079-SB-036-0102	6/13/2010	9:00	SOIL	Soil	REG	1	grab N		х				1/2	2	7			
3 079-SB-036	2.5	3	079-SB-036-0203	6/13/2010	9:05	SOIL	Soil	REG	1	grab N		х				1/3					
4 079-SB-036	3	3.5	079-SB-036-0304	6/13/2010	9:07	SOIL	Soil	REG	1	grab		х				- 14					
5 079-SB-036	4	4.5	079-SB-036-0405	6/13/2010	9:10	SOIL	Seil	REG	ī	grab N		х				-15					
6 079-SB-036	5	5.5	079-SB-036-0506	6/13/2010	9:12	SOIL	Soil	REG	1	grab		x				1/4					
7 079-SB-036	6	6.5	079-SB-036-0607	6/13/2010	9:15	SOIL	Soil	REG	1	grab N		х				1-				1	
8 079-SB-036	7	7.5	079-SB-036-0708	6/13/2010	9:17	SOIL	Soil	REG	1	grab		х				- 15	}	7			
9 079-SB-036	8	8.5	079-SB-036-0809	6/13/2010	9:20	SOIL	Soil	REG	1	grab		х				- /				T -	
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14			Date/Time 6	7 77	ŚŚ	NX.	YEN!	W	4	1	(Dayly	4710	- 1/2	600	Coole	Temp.	<b>—</b>	_			<u> </u>
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reservatives: 0 = No	one; [1 = H	CL]; [2 =	HNO3]; [3 = H2SO4]; [4 =	NaOH]; [5 = Z	n. Acetate	; [6 = MeO	H   7 = 1	NaHSO41	; 8 = Or	her (sn	ecify).		12,00				17	R			

JA48997: Chain of Custody Page 2 of 3





## ACCUTEST.

### **Accutest Laboratories Sample Receipt Summary**

Accutest Job Number: JA489	97	CI	ient:			Immediate Client Service	ces Actio	n Re	quired:	: No
Date / Time Received: 6/14/2	010		Delive	ry Method:		Client Service Actio	n Requir	ed at	Login:	: No
Project:			No. Co	olers:	•	1 Airbill #'s:				
1. Custody Seals Present:	or N		OC Present:	Y or N	]	Sample Integrity - Documentation  1. Sample labels present on bottles:	<u>Y</u>	or		
2. Custody Seals Intact:  Cooler Temperature	Y or		Dates/Time OK		1	Container labeling complete:     Sample container label / COC agree:	<b>y</b>			
Temp criteria achieved:     Cooler temp verification:     Cooler media:	Infare	bag)				Sample Integrity - Condition  1. Sample recvd within HT:  2. All containers accounted for:	Y	or		
Quality Control Preservatio  1. Trip Blank present / cooler:	<u>Y or</u>	N	N/A ☑			3. Condition of sample:		Intac		N1/A
Trip Blank listed on COC:     Samples preserved properly:     VOCs headspace free:						Sample Integrity - Instructions  1. Analysis requested is clear: 2. Bottles received for unspecified tests 3. Sufficient volume recyd for analysis:	<u>Y</u>	or	N	N/A
·						Compositing instructions clear:     Filtering instructions clear:				y y
Comments										
Accutest Laboratories V:732.329.0200						dighway 130 329.3499				ayton, New Jewwww.

JA48997: Chain of Custody





Job No:

JA48997

## **Internal Sample Tracking Chronicle**

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA48997-1 079-SB-029	Collected: 13-JUN-10 1 -0506A	1:00 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-2 079-SB-029	Collected: 13-JUN-10 1 -0809A	1:10 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-3 079-SB-030	Collected: 13-JUN-10 ( -0001A	08:45 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-4 079-SB-030	Collected: 13-JUN-10 ( -0405A	08:50 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-5 079-SB-034	Collected: 13-JUN-10 ( -0203A	99:30 By: G/S	Receiv	ed: 14-JUN-	10 By:	TH
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-6 079-SB-034	Collected: 13-JUN-10 ( -0405A	99:35 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-7 079-SB-034	Collected: 13-JUN-10 ( -0506A	99:37 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-7	EPA 376.1M/9034 M	18-JUN-10	ST	17-JUN-10	ST	S

Job No:

JA48997

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA48997-7	SM18 2540G	24-JUN-10	WR			% SOL
JA48997-8 079-SB-035	Collected: 13-JUN-10 ( -0405A	09:40 By: G/S	Receiv	ved: 14-JUN-	10 By:	TH
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-9 079-SB-035	Collected: 13-JUN-10 ( -0506A	09:45 By: G/S	Receiv	ved: 14-JUN-	10 By:	TH
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-10 079-SB-035	Collected: 13-JUN-10 ( -0607A	09:47 By: G/S	Receiv	ed: 14-JUN-	10 By:	TH
	EPA 376.1M/9034 M SM18 2540G	18-JUN-10 24-JUN-10	ST WR	17-JUN-10	ST	S % SOL
JA48997-11 079-SB-036	Collected: 13-JUN-10 ( -0001	08:55 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-11	ASTM D1498-76M SW846 9045C,D SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-12 079-SB-036	2 Collected: 13-JUN-10 ( -0102	09:00 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-12	2 ASTM D1498-76M 2 SW846 9045C,D 2 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-13 079-SB-036	3 Collected: 13-JUN-10 ( -0203	09:05 By: G/S	Receiv	ved: 14-JUN-	10 By:	TH
JA48997-13	3 ASTM D1498-76M 3 SW846 9045C,D 3 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104



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Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

**Job No:** JA48997

Sample Number Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA48997-14 Collected: 13-JUN-10 (079-SB-036-0304	09:07 By: G/S	Receiv	ed: 14-JUN-	·10 By:	ТН
JA48997-14 ASTM D1498-76M JA48997-14 SW846 9045C,D JA48997-14 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-15 Collected: 13-JUN-10 (079-SB-036-0405	09:10 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-15 ASTM D1498-76M JA48997-15 SW846 9045C,D JA48997-15 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-16 Collected: 13-JUN-10 (079-SB-036-0506	09:12 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-16 ASTM D1498-76M JA48997-16 SW846 9045C,D JA48997-16 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-17 Collected: 13-JUN-10 (079-SB-036-0607	09:15 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-17 ASTM D1498-76M JA48997-17 SW846 9045C,D JA48997-17 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-18 Collected: 13-JUN-10 (079-SB-036-0708	09:17 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-18 ASTM D1498-76M JA48997-18 SW846 9045C,D JA48997-18 SM18 2540G	16-JUN-10 16-JUN-10 21-JUN-10	JOO JOO WR			EH PH SOL104
JA48997-19 Collected: 13-JUN-10 (079-SB-036-0809	09:20 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-19 ASTM D1498-76M	16-JUN-10	JOO			ЕН



Page 3 of 5

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

**Job No:** JA48997

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
	SW846 9045C,D SM18 2540G	16-JUN-10 21-JUN-10	JOO WR			PH SOL104
JA48997-11 079-SB-036	Collected: 13-JUN-10 (-0001	08:55 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-11	<b>&amp;</b> W846 3060A/7199	29-JUN-10 15:57	BD	25-JUN-10	RI	XCRA7199
JA48997-12 079-SB-036	Collected: 13-JUN-10 ( -0102	99:00 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-12	<b>₷</b> W846 3060A/7199	30-JUN-10 11:28	BD	25-JUN-10	RI	XCRA7199
JA48997-13 079-SB-036	Collected: 13-JUN-10 (-0203	99:05 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-13	<b>&amp;</b> W846 3060A/7199	30-JUN-10 11:43	BD	25-JUN-10	RI	XCRA7199
JA48997-14 079-SB-036	Collected: 13-JUN-10 ( -0304	99:07 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-14	<b>&amp;</b> W846 3060A/7199	29-JUN-10 12:13	BD	25-JUN-10	RI	XCRA7199
JA48997-15 079-SB-036	Collected: 13-JUN-10 ( -0405	99:10 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-15	<b>&amp;</b> W846 3060A/7199	29-JUN-10 12:06	BD	25-JUN-10	RI	XCRA7199
JA48997-16 079-SB-036	Collected: 13-JUN-10 ( -0506	99:12 By: G/S	Receiv	ed: 14-JUN-	10 By:	TH
JA48997-16	<b>&amp;</b> W846 3060A/7199	30-JUN-10 11:57	BD	25-JUN-10	RI	XCRA7199
JA48997-17 079-SB-036	Collected: 13-JUN-10 ( -0607	99:15 By: G/S	Receiv	ed: 14-JUN-	10 By:	ТН
JA48997-17	<b>&amp;</b> W846 3060A/7199	30-JUN-10 13:34	BD	25-JUN-10	RI	XCRA7199



Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

**Job No:** JA48997

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA48997-18 079-SB-036	3ACollected: 13-JUN-10 6-0708	09:17 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-18	8 <b>/8</b> W846 3060A/7199	30-JUN-10 13:48	BD	25-JUN-10	RI	XCRA7199
JA48997-19 079-SB-036	ACollected: 13-JUN-10 5-0809	09:20 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-19	9 <b>/\$</b> W846 3060A/7199	29-JUN-10 12:58	BD	25-JUN-10	RI	XCRA7199
JA48997-14 079-SB-036	4AD01lected: 13-JUN-10 5-0304	09:07 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-14	4. <b>SN</b> V846 3060A/7199	12-JUL-10 11:18	BD	08-JUL-10	NP	XCRA7199
JA48997-15 079-SB-036	5AR llected: 13-JUN-10 5-0405	09:10 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-15	5. <b>SN</b> V846 3060A/7199	12-JUL-10 12:02	BD	08-JUL-10	NP	XCRA7199
JA48997-19 079-SB-036	ARallected: 13-JUN-10 5-0809	09:20 By: G/S	Receiv	ved: 14-JUN-	10 By:	ТН
JA48997-19	9. <b>SR</b> V846 3060A/7199	12-JUL-10 12:10	BD	08-JUL-10	NP	XCRA7199



## **Accutest Internal Chain of Custody**

Job Number: JA48997

**Account:** HWINJM Honeywell International Inc. **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

**Received:** 06/14/10

Sample.Bottle Number	<del>-</del>		Date/Time	Reason
JA48997-1.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-1.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-1.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-1.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-1.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-1.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-1.1	Dave Hunkele		08/10/10 05:24	Disposed
JA48997-2.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-2.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-2.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-2.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-2.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-2.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-2.1	Dave Hunkele	-	08/10/10 05:24	Disposed
JA48997-3.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-3.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-3.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-3.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-3.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-3.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-3.1	Dave Hunkele	-	08/10/10 05:24	Disposed
JA48997-4.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-4.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-4.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-4.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-4.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-4.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-4.1	Dave Hunkele		08/10/10 05:24	Disposed
JA48997-5.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-5.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-5.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-5.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-5.1	John Thomas	Wojciech Rodzik		Custody Transfer
JA48997-5.1	Wojciech Rodzik	Secured Storage		Return to Storage
JA48997-5.1	Dave Hunkele	Ç	08/10/10 05:24	_
JA48997-6.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-6.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-6.1	Sarvadaman Tripathi	Secured Storage		Return to Storage
JA48997-6.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage



# Accutest Internal Chain of Custody Job Number: JA48997

HWINJM Honeywell International Inc. Account: **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Received: 06/14/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA48997-6.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-6.1	Wojciech Rodzik	Secured Storage		Return to Storage
JA48997-6.1	Dave Hunkele	Secured Storage	08/10/10 05:24	
JA48997-7.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-7.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-7.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-7.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-7.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-7.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-7.1	Dave Hunkele		08/10/10 05:24	Disposed
JA48997-8.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-8.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-8.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-8.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-8.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-8.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-8.1	Dave Hunkele		08/10/10 05:24	Disposed
JA48997-9.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-9.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-9.1	Sarvadaman Tripathi	Secured Storage	06/17/10 18:56	Return to Storage
JA48997-9.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
JA48997-9.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-9.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-9.1	Dave Hunkele	-	08/10/10 05:24	Disposed
JA48997-10.1	Secured Storage	Zethan Reyes	06/17/10 09:04	Retrieve from Storage
JA48997-10.1	Zethan Reyes	Sarvadaman Tripathi	06/17/10 09:05	Custody Transfer
JA48997-10.1	Sarvadaman Tripathi	_	06/17/10 18:54	Depleted
JA48997-10.1	Secured Storage	John Thomas	06/24/10 11:53	Retrieve from Storage
sample not deple	ted, volume intact			_
JA48997-10.1	John Thomas	Wojciech Rodzik	06/24/10 11:55	Custody Transfer
JA48997-10.1	Wojciech Rodzik	Secured Storage	06/24/10 16:19	Return to Storage
JA48997-10.1	Dave Hunkele	-	08/10/10 05:24	
JA48997-11.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage
JA48997-11.1	Zethan Reyes	Shuzhen Han	06/16/10 10:25	Custody Transfer
JA48997-11.1	Shuzhen Han	Secured Storage	06/16/10 15:53	Return to Storage
JA48997-11.1	Secured Storage	Wojciech Rodzik	06/21/10 09:26	Retrieve from Storage
JA48997-11.1	Wojciech Rodzik	Secured Storage	06/21/10 14:41	Return to Storage
JA48997-11.1	Secured Storage	Zethan Reyes	06/25/10 09:04	Retrieve from Storage
JA48997-11.1	Zethan Reyes	Rie Iwasaki	06/25/10 09:06	Custody Transfer



# Accutest Internal Chain of Custody Job Number: JA48997

HWINJM Honeywell International Inc. Account: **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Received: 06/14/10

Sample. Bottle Number	Transfer FROM	Transfer TO Date/Time		Reason	
JA48997-11.1	Rie Iwasaki	Secured Storage	06/25/10 17:13	Return to Storage	
JA48997-11.1	Dave Hunkele	Secured Storage	08/10/10 05:24	_	
JA48997-11.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 13:00	Digestate from JA48997-11.	
JA48997-12.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage	
JA48997-12.1	Zethan Reyes	Shuzhen Han	06/16/10 10:25	Custody Transfer	
JA48997-12.1	Shuzhen Han	Secured Storage	06/16/10 15:53	Return to Storage	
JA48997-12.1	Secured Storage	Wojciech Rodzik	06/21/10 09:26	Retrieve from Storage	
JA48997-12.1	Wojciech Rodzik	Secured Storage		Return to Storage	
JA48997-12.1	Secured Storage	Zethan Reyes		Retrieve from Storage	
JA48997-12.1	Zethan Reyes	Rie Iwasaki		Custody Transfer	
JA48997-12.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-12.1	Dave Hunkele		08/10/10 05:24		
JA48997-12.1.1	Rie Iwasaki	GenChem Digestion	GenChem Digestion 06/25/10 13:00		
JA48997-13.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage	
JA48997-13.1	Zethan Reyes	Shuzhen Han		Custody Transfer	
JA48997-13.1	Shuzhen Han	Secured Storage		Return to Storage	
JA48997-13.1	Secured Storage	Wojciech Rodzik		Retrieve from Storage	
JA48997-13.1	Wojciech Rodzik	Secured Storage		Return to Storage	
JA48997-13.1	Secured Storage	Zethan Reyes		Retrieve from Storage	
JA48997-13.1	Zethan Reyes	Rie Iwasaki		Custody Transfer	
JA48997-13.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-13.1	Dave Hunkele	C	08/10/10 05:24		
JA48997-13.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 13:00	Digestate from JA48997-13.	
JA48997-14.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage	
JA48997-14.1	Zethan Reyes	Shuzhen Han	06/16/10 10:25	Custody Transfer	
JA48997-14.1	Shuzhen Han	Secured Storage	06/16/10 15:53	Return to Storage	
JA48997-14.1	Secured Storage	Wojciech Rodzik	06/21/10 09:21	Retrieve from Storage	
JA48997-14.1	Wojciech Rodzik	Secured Storage	06/21/10 14:41	Return to Storage	
JA48997-14.1	Secured Storage	Zethan Reyes	06/25/10 09:04	Retrieve from Storage	
JA48997-14.1	Zethan Reyes	Rie Iwasaki	06/25/10 09:06	Custody Transfer	
JA48997-14.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-14.1	Secured Storage	Zethan Reyes	07/02/10 08:40	Retrieve from Storage	
JA48997-14.1	Zethan Reyes	Rie Iwasaki		Custody Transfer	
JA48997-14.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-14.1	Secured Storage	Zethan Reyes		Retrieve from Storage	
JA48997-14.1	Zethan Reyes	Barbara Dula		Custody Transfer	
JA48997-14.1	Barbara Dula	Secured Storage		Return to Storage	
	Secured Storage	Nirali Patel		Retrieve from Storage	



# Accutest Internal Chain of Custody Job Number: JA48997

HWINJM Honeywell International Inc. Account: **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Received: 06/14/10

Sample. Bottle Number	Transfer FROM			Reason	
X	W. U.D. I	9 19	05/00/40 45 45		
JA48997-14.1	Nirali Patel	Secured Storage		Return to Storage	
JA48997-14.1	Dave Hunkele		08/10/10 05:24	Disposed	
JA48997-14.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 12:59	Digestate from JA48997-14.	
JA48997-14.1.2	Rie Iwasaki	GenChem Digestion	07/02/10 11:10	Digestate from JA48997-14.	
JA48997-15.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage	
JA48997-15.1	Zethan Reyes	Shuzhen Han	06/16/10 10:25	Custody Transfer	
JA48997-15.1	Shuzhen Han	Secured Storage	06/16/10 15:53	Return to Storage	
JA48997-15.1	Secured Storage	Wojciech Rodzik	06/21/10 09:21	Retrieve from Storage	
JA48997-15.1	Wojciech Rodzik	Secured Storage	06/21/10 14:41	Return to Storage	
JA48997-15.1	Secured Storage	Zethan Reyes	06/25/10 09:04	Retrieve from Storage	
JA48997-15.1	Zethan Reyes	Rie Iwasaki		Custody Transfer	
JA48997-15.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-15.1	Secured Storage	Zethan Reyes		Retrieve from Storage	
JA48997-15.1	Zethan Reyes	Rie Iwasaki		2 Custody Transfer	
JA48997-15.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-15.1	Secured Storage	Zethan Reyes		Retrieve from Storage	
JA48997-15.1	Zethan Reyes	Barbara Dula		Custody Transfer	
JA48997-15.1	Barbara Dula	Secured Storage		Return to Storage	
JA48997-15.1	Secured Storage	Nirali Patel		Retrieve from Storage	
JA48997-15.1	Nirali Patel	Secured Storage		Return to Storage	
JA48997-15.1	Dave Hunkele	C	08/10/10 05:24		
JA48997-15.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 12:59	Digestate from JA48997-15	
JA48997-15.1.2	Rie Iwasaki	GenChem Digestion	07/02/10 11:10	Digestate from JA48997-15	
JA48997-16.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage	
JA48997-16.1	Zethan Reyes	Shuzhen Han		Custody Transfer	
JA48997-16.1	Shuzhen Han	Secured Storage		Return to Storage	
JA48997-16.1	Secured Storage	Wojciech Rodzik		Retrieve from Storage	
JA48997-16.1	Wojciech Rodzik	Secured Storage		Return to Storage	
JA48997-16.1	Secured Storage	Zethan Reyes		Retrieve from Storage	
JA48997-16.1	Zethan Reyes	Rie Iwasaki		Custody Transfer	
JA48997-16.1	Rie Iwasaki	Secured Storage		Return to Storage	
JA48997-16.1	Dave Hunkele	200000000000000000000000000000000000000	08/10/10 05:24	_	
JA48997-16.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 13:00	Digestate from JA48997-16.	
JA48997-17.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage	
JA48997-17.1	Zethan Reyes	Shuzhen Han	06/16/10 10:25	Custody Transfer	
JA48997-17.1	Shuzhen Han	Secured Storage		Return to Storage	



### **Accutest Internal Chain of Custody**

**Job Number:** JA48997

**Account:** HWINJM Honeywell International Inc. **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

**Received:** 06/14/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
144007 17 1	C 1 C4	W-1-1-1-D-1-1-	06/21/10 00:21	Dataine from Change
JA48997-17.1	Secured Storage	Wojciech Rodzik		Retrieve from Storage
JA48997-17.1	Wojciech Rodzik	Secured Storage		Return to Storage
JA48997-17.1	Secured Storage	Zethan Reyes		Retrieve from Storage
JA48997-17.1	Zethan Reyes	Rie Iwasaki		Custody Transfer
JA48997-17.1	Rie Iwasaki	Secured Storage		Return to Storage
JA48997-17.1	Dave Hunkele		08/10/10 05:24	Disposed
JA48997-17.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 13:00	Digestate from JA48997-17.
JA48997-18.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage
JA48997-18.1	Zethan Reyes	Shuzhen Han	06/16/10 10:25	Custody Transfer
JA48997-18.1	Shuzhen Han	Secured Storage		Return to Storage
JA48997-18.1	Secured Storage	Wojciech Rodzik		Retrieve from Storage
JA48997-18.1	Wojciech Rodzik	Secured Storage		Return to Storage
JA48997-18.1	Secured Storage	Zethan Reyes		Retrieve from Storage
JA48997-18.1	Zethan Reyes	Rie Iwasaki		Custody Transfer
JA48997-18.1	Rie Iwasaki	Secured Storage		Return to Storage
JA48997-18.1	Dave Hunkele	2000000	08/10/10 05:24	· ·
JA48997-18.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 13:00	Digestate from JA48997-18.
JA48997-19.1	Secured Storage	Zethan Reyes	06/16/10 08:59	Retrieve from Storage
JA48997-19.1	Zethan Reyes	Shuzhen Han		Custody Transfer
JA48997-19.1	Shuzhen Han	Secured Storage		Return to Storage
JA48997-19.1	Secured Storage	Wojciech Rodzik		Retrieve from Storage
JA48997-19.1	Wojciech Rodzik	Secured Storage		Return to Storage
JA48997-19.1	Secured Storage	Zethan Reyes		Retrieve from Storage
JA48997-19.1	Zethan Reyes	Rie Iwasaki		Custody Transfer
JA48997-19.1	Rie Iwasaki	Secured Storage		Return to Storage
JA48997-19.1	Secured Storage	Zethan Reyes		Retrieve from Storage
JA48997-19.1	Zethan Reyes	Rie Iwasaki		Custody Transfer
JA48997-19.1	Rie Iwasaki	Secured Storage		Return to Storage
JA48997-19.1	Secured Storage	Zethan Reyes		Retrieve from Storage
JA48997-19.1	Zethan Reyes	Barbara Dula		Custody Transfer
JA48997-19.1 JA48997-19.1	Barbara Dula	Secured Storage		Return to Storage
JA48997-19.1 JA48997-19.1	Secured Storage	Nirali Patel		Retrieve from Storage
	Nirali Patel			Return to Storage
JA48997-19.1		Secured Storage		
JA48997-19.1	Dave Hunkele		08/10/10 05:24	Disposed
JA48997-19.1.1	Rie Iwasaki	GenChem Digestion	06/25/10 12:59	Digestate from JA48997-19.
JA48997-19.1.2	Rie Iwasaki	GenChem Digestion	07/02/10 11:10	Digestate from JA48997-19.





## General Chemistry

### QC Data Summaries

### Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary



#### METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA48997 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP54306/GN39364	0.40	0.0	mg/kg	40	44.9	112.3	80-120%
Chromium, Hexavalent	GP54306/GN39364			mg/kg	880	869	98.8	80-120%
Chromium, Hexavalent	GP54307/GN39385	0.40	0.0	mg/kg	40	43.9	109.8	80-120%
Chromium, Hexavalent	GP54307/GN39385			mg/kg	856	814	95.1	80-120%
Chromium, Hexavalent	GP54481/GN39774	0.40	0.0	mg/kg	40	39.3	98.3	80-120%
Chromium, Hexavalent	GP54481/GN39774			mg/kg	784	776	99.0	80-120%
Sulfide, Neutral Extraction	GP54198/GN38943	4.0	0.0	mg/kg	40.4	38.5	95.3	80-120%

Associated Samples:

Batch GP54198: JA48997-1, JA48997-10, JA48997-2, JA48997-3, JA48997-4, JA48997-5, JA48997-6, JA48997-7, JA48997-8,

JA48997-9

Batch GP54306: JA48997-14A, JA48997-15A, JA48997-19A

Batch GP54307: JA48997-11A, JA48997-12A, JA48997-13A, JA48997-16A, JA48997-17A, JA48997-18A Batch GP54481: JA48997-14AR, JA48997-15AR, JA48997-19AR

(\*) Outside of QC limits



# 5.2

#### DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: JA48997

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP54306/GN39364	JA48997-15A	mg/kg	0.81	0.62	26.6(a)	0-20%
Chromium, Hexavalent	GP54307/GN39385	JA48997-11A	mg/kg	0.74	0.73	1.4	0-20%
Chromium, Hexavalent	GP54481/GN39774	JA48997-15AR	mg/kg	66.5	52.2	24.1*(b)	0-20%
Redox Potential Vs H2	GN38770	JA48832-1	mv	415	384	7.7	0-17%
Sulfide, Neutral Extraction	GP54198/GN38943	JA48997-4	mg/kg	0.0	0.0	0.0	0-12%
На	GN38772	TA48832-1	SII	6 88	6 58	0 1	0-10%

Associated Samples:

Batch GN38770: JA48997-11, JA48997-12, JA48997-13, JA48997-14, JA48997-15, JA48997-16, JA48997-17, JA48997-18, JA48997-19
Batch GN38772: JA48997-11, JA48997-12, JA48997-13, JA48997-14, JA48997-15, JA48997-16, JA48997-17, JA48997-18, JA48997-19 Batch GP54198: JA48997-1, JA48997-10, JA48997-2, JA48997-3, JA48997-4, JA48997-5, JA48997-6, JA48997-7, JA48997-8,

Batch GP54306: JA48997-14A, JA48997-15A, JA48997-19A

Batch GP54307: JA48997-11A, JA48997-12A, JA48997-13A, JA48997-16A, JA48997-17A, JA48997-18A

Batch GP54481: JA48997-14AR, JA48997-15AR, JA48997-19AR

(\*) Outside of QC limits

- (a) RPD acceptable due to low duplicate and sample concentrations.
- (b) High RPD due to possible sample nonhomogeneity.



### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA48997
Account: HWINJM - Honeywell International Inc.
Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP54306/GN39364	JA48997-15A	mg/kg	0.81	50.1	0.66	-0.3N(a)	75-125%
Chromium, Hexavalent	GP54306/GN39364	JA48997-15A	mg/kg	0.81	1350	409	30.3N(b)	75-125%
Chromium, Hexavalent	GP54307/GN39385	JA48997-11A	mg/kg	0.74	990	942	95.1(c)	75-125%
Chromium, Hexavalent	GP54307/GN39385	JA48997-11A	mg/kg	0.74	166	163	97.9(d)	75-125%
Chromium, Hexavalent	GP54307/GN39385	JA48997-11A	mg/kg	0.74	44.2	38.7	85.9(d)	75-125%
Chromium, Hexavalent	GP54481/GN39774	JA48997-15AR	mg/kg	66.5	49.1	15.7	-103.4N(e)	75-125%
Chromium, Hexavalent	GP54481/GN39774	JA48997-15AR	mg/kg	66.5	793	728	83.4(c)	75-125%
Sulfide, Neutral Extraction	GP54198/GN38943	JA48997-4	mg/kg	0.0	44.2	16.3	36.9	34-112%

### Associated Samples:

Batch GP54198: JA48997-1, JA48997-10, JA48997-2, JA48997-3, JA48997-4, JA48997-5, JA48997-6, JA48997-7, JA48997-8,

JA48997-9

Batch GP54306: JA48997-14A, JA48997-15A, JA48997-19A

Batch GP54307: JA48997-11A, JA48997-12A, JA48997-13A, JA48997-16A, JA48997-17A, JA48997-18A

Batch GP54481: JA48997-14AR, JA48997-15AR, JA48997-19AR

- (\*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (a) Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (101%) on this sample.
- (b) Insoluble XCR matrix spike recovery indicates possible matrix interference. See additional comments on soluble matrix spike recovery.
- (c) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.
- (d) Good recovery on soluble XCR matrix spike. Good recovery (103 %) on the post-spike.
- (e) Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (98.8%) on this sample.



### 4

### Accutest Laboratories Instrument Runlog Inorganics Analyses

### Login Number: JA48997 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: GN39364

File ID: 610062902.TXT Date Analyzed: 06/29/10 Methods: SW846 3060A/7199

Analyst: BD

Parameters: Chromium, Hexavalent

08:44 GN39364-STD1 1 STDA  08:51 GN39364-STD2 1 STDE  08:59 GN39364-STD3 1 STDC  09:06 GN39364-STD4 1 STDD  09:14 GN39364-STD5 1 STDE  10:22 GN39364-CCV1 1  10:29 GN39364-CCV1 1  10:37 GP54306-MB1 1  10:44 GP54306-B1 1  10:51 GP54306-B1 4  10:59 GP54306-B2 90  11:14 GP54306-B2 90  11:14 GP54306-B2 1  11:28 GP54306-B1 1  11:51 GP54306-D1 1  11:51 GP54306-D1 1  11:51 GP54306-D1 1  11:51 GP54306-D1 1  11:52 GP54306-D1 1  11:53 GP54306-D1 1  11:54 GP54306-D1 1  11:55 GP54306-D1 1  11:58 JA48997-15A 1  12:21 JA48997-15A 1  12:22 GP54306-B2 1  12:35 GP54306-B2 1  12:35 GP54306-B2 1  12:35 GP54306-B2 1  13:12 GP54306-B2 1  13:13 JA8997-19A 1  13:15 GP54306-B2 1  13:16 GP54306-B2 1  13:17 GP54306-B2 1  13:18 GP54306-B2 1  13:19 GP54306-B2 1  13:10 GP54306-B2 1  13:11 GP54306-B2 1  13:12 GP54306-B2 35  13:12 GP54306-B2 35			Dilution PS Factor Recov	Comments
08:39         CM39364-STD3         1         STDC           09:06         CM39364-STD4         1         STDD           09:14         CM39364-CTD5         1         STDE           10:22         CM39364-CCD1         1         1           10:37         CP54306-MB1         1         1           10:44         CP54306-MB1         4         1           10:59         CP54306-B1         4         4           11:40         CP54306-B2         90         1           11:41         CP54306-B2         90         1           11:42         CP54306-B2         90         1           11:43         CP54306-B2         1         1           11:44         CP54306-B1         1         1           11:45         CP54306-B1         1         1           11:51         CP54306-B1         1         1           12:21         JA48997-15A         1         1           12:22         JA48997-14A         1         1           12:23         CP54306-B2         1         1           12:43         CM39364-CCV2         1         1           12:45         JA48997-19A         1	44 0	GN39364-STD1	1	STDA
09:10         GN39364-STD5         1         STDD           09:14         GN39364-CCV1         1         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	51 0	GN39364-STD2	1	STDB
09:14     GN39364-CCV1     1       10:22     GN39364-CCV1     1       10:29     GN39364-CCB1     1       10:37     GP54306-MB1     1       10:44     GP54306-MB1     1       10:59     GP54306-B1     4       11:06     GP54306-B2     90       11:14     GP54306-B2     90       11:21     GP54306-B2     1       11:28     GP54306-B1     1       11:44     GP54306-B1     1       11:50     JA48997-15A     1       12:00     JA48997-15A     1       12:21     JA48997-15A     1       12:22     GP54306-B2     1       12:33     GP54306-B2     1       12:34     GP54306-B2     1       12:35     GP54306-B2     1       12:35     GP54306-B2     1       12:35     GN39364-CCB2     1       12:50     GN39364-CCB2     1       13:05     JA48997-19A     1       13:12     GP54306-S2     35       13:12     GP54306-S2     35	59 0	GN39364-STD3	1	STDC
10:22 GN39364-CCV1 1 10:29 GN39364-CCB1 1 10:37 GP54306-MB1 1 10:44 GP54306-MB1 1 10:51 GP54306-B1 4 10:59 GP54306-B2 90 11:14 GP54306-B2 90 11:21 GP54306-B1 1 11:28 GP54306-B1 1 11:51 GP54306-D1 1 11:51 GP54306-D1 1 11:51 GP54306-D1 1 11:52 JA48997-15A 1 12:23 JA48997-15A 1 12:24 GN39364-CCV2 1 12:25 GN39364-CCV2 1 12:35 GN39364-CCV2 1 12:50 GN39364-CCV2 1 12:50 JA48997-19A 1 13:12 GP54306-S2 35 13:12 GP54306-S2 35	06 0	GN39364-STD4	1	STDD
10:29 GN39364-CCB1 1 10:37 GP54306-MB1 1 10:44 GP54306-MB1 1 10:51 GP54306-B1 4 10:59 GP54306-B1 4 11:06 GP54306-B2 90 11:14 GP54306-B2 90 11:14 GP54306-B2 1 11:28 GP54306-B1 1 11:51 GP54306-D1 1 11:51 GP54306-D1 1 11:58 JA48997-15A 1 12:06 JA48997-15A 1 12:21 JA48997-14A 1 12:22 JA48997-14A 1 12:23 GP54306-B2 1 12:35 GP54306-B2 1 12:35 GP54306-B1 1 12:35 GP54306-B2 1 12:35 GP54306-B2 1 13:35 GP54306-B2 1 13:35 GP54306-B2 1 13:35 GP54306-B2 1	14 0	GN39364-STD5	1	STDE
10:37 GP54306-MB1 1 10:48 GP54306-MB1 2 10:59 GP54306-B1 4 11:06 GP54306-B2 90 11:14 GP54306-B2 90 11:21 GP54306-B1 1 11:28 GP54306-B1 1 11:51 GP54306-B1 1 11:51 GP54306-B1 1 11:51 GP54306-B1 1 11:52 GP54306-B1 1 11:53 JA48997-15A 1 12:06 JA48997-15A 1 12:13 JA48997-14A 1 12:21 JA48997-14A 1 12:22 GP54306-B2 1 12:35 GP54306-B2 1 12:35 GP54306-B2 1 12:35 GP54306-B1 1 12:43 GN39364-CCV2 1 12:50 GN39364-CCV2 1 12:50 GN39364-CCV2 1 12:58 JA48997-19A 1 13:10 GP54306-S2 35	22 0	GN39364-CCV1	1	
10:44 GP54306-B1	29 0	GN39364-CCB1	1	
10:51 GP54306-B1 4 10:59 GP54306-B1 4 11:06 GP54306-B2 90 11:14 GP54306-B2 90 11:21 GP54306-S2 1 11:28 GP54306-B1 1 11:48 GP54306-D1 1 11:51 GP54306-D1 1 11:51 GP54306-D1 1 11:53 JA4897-15A 1 12:06 JA4897-15A 1 12:13 JA4897-14A 1 12:21 JA4897-14A 1 12:23 GP54306-B2 1 12:35 GP54306-B2 1 12:36 GP54306-B1 1 12:37 GP54306-B1 1 12:38 GP54306-B1 1 12:39 GP54306-B1 1 12:50 GN39364-CCV2 1 12:50 GN39364-CCV2 1 13:15 JA4897-19A 1 13:12 GP54306-S2 35	37 0	GP54306-MB1	1	
10:59 GP54306-B1 4 11:06 GP54306-B2 90 11:14 GP54306-B2 90 11:21 GP54306-S2 1 11:28 GP54306-S1 1 11:44 GP54306-D1 1 11:51 GP54306-D1 1 11:52 JA48997-15A 1 12:06 JA48997-15A 1 12:21 JA48997-14A 1 12:22 JA48997-14A 1 12:23 GP54306-B2 1 12:35 GP54306-B2 1 12:35 GP54306-B2 1 12:43 GN39364-CCV2 1 12:58 JA48997-19A 1 13:15 JA48997-19A 1 13:15 GP54306-S2 35	44 0	GP54306-MB1	1	
11:06	51 0	GP54306-B1	4	
11:14       GP54306-B2       90         11:21       GP54306-S2       1         11:28       GP54306-S1       1         11:44       GP54306-D1       1         11:51       GP54306-D1       1         12:52       JA48997-15A       1         12:13       JA48997-14A       1         12:21       JA48997-14A       1         12:22       GP54306-B2       1         12:35       GP54306-B1       1         12:43       GN39364-CCB2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	59 0	GP54306-B1	4	
11:21       GP54306-S2       1         11:28       GP54306-S1       1         11:44       GP54306-D1       1         11:51       GP54306-D1       1         11:58       JA48997-15A       1         12:10       JA48997-14A       1         12:21       JA48997-14A       1         12:22       GP54306-B2       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	06 0	GP54306-B2	90	
11:28       GP54306-S1       1         11:44       GP54306-D1       1         11:51       GP54306-D1       1         11:58       JA48997-15A       1         12:06       JA48997-14A       1         12:21       JA48997-14A       1         12:22       GP54306-B2       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	14 0	GP54306-B2	90	
11:44       GP54306-D1       1         11:51       GP54306-D1       1         11:58       JA48997-15A       1         12:06       JA48997-15A       1         12:13       JA48997-14A       1         12:21       JA48997-14A       1         12:28       GP54306-B2       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	21 0	GP54306-S2	1	
11:51       GP54306-D1       1         11:58       JA48997-15A       1         12:06       JA48997-15A       1         12:13       JA48997-14A       1         12:28       GP54306-B2       1         12:35       GP54306-B1       1         12:50       GN39364-CCV2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	28 0	GP54306-S1	1	
11:58 JA48997-15A 1 12:06 JA48997-15A 1 12:13 JA48997-14A 1 12:21 JA48997-14A 1 12:28 GP54306-B2 1 12:35 GP54306-B1 1 12:50 GN39364-CCV2 1 12:50 JA48997-19A 1 13:05 JA48997-19A 1 13:12 GP54306-S2 35 13:20 GP54306-S2 35	44 0	GP54306-D1	1	
12:06       JA48997-15A       1         12:13       JA48997-14A       1         12:21       JA48997-14A       1         12:28       GP54306-B2       1         12:35       GP54306-B1       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	51 0	GP54306-D1	1	
12:13 JA48997-14A 1 12:21 JA48997-14A 1 12:28 GP54306-B2 1 12:35 GP54306-B1 1 12:43 GN39364-CCV2 1 12:50 GN39364-CCB2 1 12:58 JA48997-19A 1 13:12 GP54306-S2 35 13:20 GP54306-S2 35	58 J	JA48997-15A	1	
12:21       JA48997-14A       1         12:28       GP54306-B2       1         12:35       GP54306-B1       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	06 J	JA48997-15A	1	
12:28       GP54306-B2       1         12:35       GP54306-B1       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	13 J	JA48997-14A	1	
12:35       GP54306-B1       1         12:43       GN39364-CCV2       1         12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	21 J	JA48997-14A	1	
12:43 GN39364-CCV2 1 12:50 GN39364-CCB2 1 12:58 JA48997-19A 1 13:05 JA48997-19A 1 13:12 GP54306-S2 35 13:20 GP54306-S2 35	28 0	GP54306-B2	1	
12:50       GN39364-CCB2       1         12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	35 0	GP54306-B1	1	
12:58       JA48997-19A       1         13:05       JA48997-19A       1         13:12       GP54306-S2       35         13:20       GP54306-S2       35	43 0	GN39364-CCV2	1	
13:05 JA48997-19A 1 13:12 GP54306-S2 35 13:20 GP54306-S2 35	50 0	GN39364-CCB2	1	
13:12 GP54306-S2 35 13:20 GP54306-S2 35	58 J	JA48997-19A	1	
13:20 GP54306-S2 35	05 J	JA48997-19A	1	
	12 0	GP54306-S2	35	
13:27 GP54306-S1 1	20 0	GP54306-S2	35	
	27 0	GP54306-S1	1	
13:35 GP54306-PS1 4	35 0	GP54306-PS1	4	
13:42 GP54306-PS1 4	42 0	GP54306-PS1	4	
13:49 GN39364-CCV3 1	49 0	GN39364-CCV3	1	



### 5.4

### Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JA48997
Account: HWINJM - Honeywell International Inc.
Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: 610062902.TXT Date Analyzed: 06/29/10 Methods: SW846 3060A/7199

Analyst: BD Run ID: GN39364

Parameters: Chromium, Hexavalent

13:57 GN39364-CCB3 1

Refer to raw data for calibration curve and standards.

**1** 6

### Instrument QC Summary Inorganics Analyses

### Login Number: JA48997

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 06/29/10 Methods: SW846 3060A/7199 Run ID: GN39364 Units: mg/l File ID: 610062902.TXT

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN39364-CCV1	Chromium, Hexavalent	0.25	0.010	0.0057	.25	100.0	90-110
GN39364-CCB1	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39364-CCV2	Chromium, Hexavalent	0.26	0.010	0.0057	.25	104.0	90-110
GN39364-CCB2	Chromium, Hexavalent	0.0057 บ	0.010	0.0057			
GN39364-CCV3	Chromium, Hexavalent	0.25	0.010	0.0057	.25	100.0	90-110
GN39364-CCB3	Chromium, Hexavalent	0.0057 U	0.010	0.0057			

<sup>(!)</sup> Outside of QC limits

### Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JA48997 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: 610062903.TXT Date Analyzed: 06/29/10 Methods: SW846 3060A/7199 Run ID: GN39385

Analyst: BD

Parameters: Chromium, Hexavalent

Time	_	Dilution PS Factor Recov	Comments
08:44	GN39385-STD1	1	STDA
08:51	GN39385-STD2	1	STDB
08:59	GN39385-STD3	1	STDC
09:06	GN39385-STD4	1	STDD
09:14	GN39385-STD5	1	STDE
14:21	GN39385-CCV1	1	
14:29	GN39385-CCB1	1	
14:36	GP54307-MB1	1	
14:43	GP54307-MB1	1	
14:51	GP54307-B1	4	
14:58	GP54307-B1	4	
15:06	GP54307-B2	90	
15:13	GP54307-B2	90	
15:20	GP54307-S2	1	
15:28	GP54307-S3	1	
15:35	GP54307-S1	1	
15:43	GP54307-D1	1	
15:50	GP54307-D1	1	
15:57	JA48997-11A	1	
16:05	JA48997-11A	1	
16:12	GP54307-B2	1	
16:20	GP54307-B1	1	
16:27	GN39385-CCV2	1	
16:34	GN39385-CCB2	1	
10:14	GN39385-STD6	1	STDA
10:21	GN39385-STD7	1	STDB
10:29	GN39385-STD8	1	STDC
10:36	GN39385-STD9	1	STDD
10:43	GN39385-STD10	1	STDE
10:51	GN39385-CCV3	1	
10:58	GN39385-CCB3	1	
11:06	ZZZZZZ	1	
11:13	ZZZZZZ	4	



### Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JA48997 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: 610062903.TXT Date Analyzed: 06/29/10 Methods: SW846 3060A/7199 Run ID: GN39385

Analyst: BD

Parameters: Chromium, Hexavalent

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:20	JA48997-12A	1		
11:28	JA48997-12A	1		
11:35	JA48997-13A	1		
11:43	JA48997-13A	1		
11:50	JA48997-16A	1		
11:57	JA48997-16A	1		
12:05	JA48997-17A	1		
12:12	JA48997-18A	1		
12:20	GP54307-S2	80		
12:27	GP54307-S2	80		
12:34	GP54307-S3	15		
12:42	GP54307-S3	15		
12:49	GP54307-S1	4		
12:57	GP54307-S1	4		
13:04	GN39385-CCV4	1		
13:11	GN39385-CCB4	1		
13:19	GP54307-PS1	4		
13:26	GP54307-PS1	4		
13:34	JA48997-17A	5		
13:41	JA48997-17A	5		
13:48	JA48997-18A	5		
13:56	JA48997-18A	5		
14:03	GN39385-CCV5	1		
14:11	GN39385-CCB5	1		

Refer to raw data for calibration curve and standards.



### Instrument QC Summary Inorganics Analyses

### Login Number: JA48997

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 06/29/10 Run ID: GN39385 Methods: SW846 3060A/7199 File ID: 610062903.TXT

Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN39385-CCV1	Chromium, Hexavalent	0.26	0.010	0.0057	.25	104.0	90-110
GN39385-CCB1	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39385-CCV2	Chromium, Hexavalent	0.26	0.010	0.0057	.25	104.0	90-110
GN39385-CCB2	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39385-CCV3	Chromium, Hexavalent	0.25	0.010	0.0057	.25	100.0	90-110
GN39385-CCB3	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39385-CCV4	Chromium, Hexavalent	0.26	0.010	0.0057	.25	104.0	90-110
GN39385-CCB4	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39385-CCV5	Chromium, Hexavalent	0.26	0.010	0.0057	.25	104.0	90-110
GN39385-CCB5	Chromium, Hexavalent	0.0057 U	0.010	0.0057			

<sup>(!)</sup> Outside of QC limits

### Accutest Laboratories Instrument Runlog Inorganics Analyses

### Login Number: JA48997

Methods: SW846 3060A/7199

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: 610071201.TXT Analyst: BD

Date Analyzed: 07/12/10 Run ID: GN39774

Parameters: Chromium, Hexavalent

08:05         GN39774-STD1         1         STDB           09:04         GN39774-STD2         1         STDB           09:12         GN39774-STD3         1         STDC           09:17         GN39774-STD5         1         STDD           09:17         GN39774-STD5         1         STDD           09:40         GN39774-CCU1         1         C           09:41         GN39774-CCU1         1         C           09:42         GP54481-MB1         1         C           10:41         GP54481-B1         4         C           10:42         GP54481-B1         4         C           10:43         GP54481-B2         80         C           10:43         GP54481-B2         1         C           10:43         GP54481-B2         1         C           11:10         JA48997-15AR         1         C           11:11         JA48997-15AR         1         C           11:12         GP54481-B1         2         C           11:14         GN39774-CCB2         1         C           11:15         JA48997-15AR         5         C           12:12         JA48997-15AR	Time	Sample Description	Dilution PS Factor Recov	Comments
09:12         0R39774-STD3         1         STDC           09:27         0R39774-STD4         1         STDB           09:34         0R39774-CCV1         1         CARACACACACACACACACACACACACACACACACACAC	08:57	GN39774-STD1	1	STDA
09:19         GN39774-STD4         1         STDD           09:27         GN39774-STD5         1         STDE           09:34         GN39774-CCV1         1	09:04	GN39774-STD2	1	STDB
09:27	09:12	GN39774-STD3	1	STDC
09:34         GN39774-CCR1         1           09:49         GP54481-MB1         1           09:50         GP54481-MB1         1           10:41         GP54481-B1         4           10:11         GP54481-B1         4           10:18         GP54481-B2         80           10:26         GP54481-B2         80           10:33         GP54481-B1         1           10:41         GP54481-B1         1           10:48         GP54481-B1         1           11:03         JA48997-15AR         1           11:10         JA48997-14AR         1           11:25         GP54481-B1         1           11:40         GN39774-CCV2         1           11:47         GN39774-CCB2         1           11:55         JA48997-15AR         5           12:02         JA48997-15AR         5           12:17         JA48997-19AR         1           12:17         JA48997-19AR         1           12:24         GP54481-S2         60           12:39         GP54481-S1         1           12:47         GP54481-S1         6           12:39         GP54481-S1	09:19	GN39774-STD4	1	STDD
09:41 GN39774-CCB1 1 09:56 GP54481-MB1 1 10:04 GP54481-B1 4 10:11 GP54481-B1 4 10:18 GP54481-B2 80 10:26 GP54481-B2 80 10:26 GP54481-B2 1 10:41 GP54481-B1 1 10:41 GP54481-B1 1 10:41 GP54481-B1 1 10:43 GP54481-B1 1 10:44 GP54481-B1 1 10:45 GP54481-B1 1 11:03 JA48997-15AR 1 11:10 JA48997-14AR 1 11:12 GP54481-B1 1 11:47 GN39774-CCV2 1 11:47 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-15AR 5 12:11 JA48997-15AR 5 12:12 GP54481-S2 60 12:23 GP54481-S2 60	09:27	GN39774-STD5	1	STDE
09:49 GP54481-MB1 1 09:56 GP54481-MB1 1 10:04 GP54481-B1 4 10:11 GP54481-B1 4 10:18 GP54481-B2 80 10:26 GP54481-B2 80 10:33 GP54481-S2 1 10:41 GP54481-B1 1 10:48 GP54481-D1 1 10:55 GP54481-D1 1 11:03 JA48997-15AR 1 11:10 JA48997-14AR 1 11:12 GP54481-B1 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCV2 1 11:47 GN39774-CCP2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-15AR 5 12:11 JA48997-15AR 5 12:12 JA48997-15AR 6 12:23 GP54481-B1 1 12:24 GP54481-B2 60 12:32 GP54481-B2 60 12:33 GP54481-B2 60 12:33 GP54481-B2 1	09:34	GN39774-CCV1	1	
09:56       GP54481-MEI       1         10:04       GP54481-B1       4         10:11       GP54481-B2       80         10:26       GP54481-B2       80         10:33       GP54481-S2       1         10:41       GP54481-S1       1         10:55       GP54481-D1       1         11:03       JA48997-15AR       1         11:10       JA48997-14AR       1         11:25       GP54481-B1       1         11:40       GN39774-CCV2       1         11:47       GN39774-CCP2       1         11:52       JA48997-15AR       5         12:02       JA48997-15AR       5         12:10       JA48997-15AR       5         12:17       JA48997-15AR       6         12:24       GP54481-S2       60         12:23       GP54481-S2       60         12:39       GP54481-S1       1         12:47       GP54481-S1       1         12:47       GP54481-S2       60         12:39       GP54481-S1       1         12:47       GP54481-S1       1	09:41	GN39774-CCB1	1	
10:04 GP54481-B1 4 10:11 GP54481-B1 4 10:18 GP54481-B2 80 10:26 GP54481-B2 80 10:33 GP54481-S2 1 10:41 GP54481-D1 1 10:48 GP54481-D1 1 11:03 JA48997-15AR 1 11:18 JA48997-14AR 1 11:25 GP54481-B2 1 11:47 GN39774-CCV2 1 11:47 GN39774-CCV2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-15AR 5 12:24 GP54481-S2 60 12:33 GP54481-S2 60 12:33 GP54481-S2 60 12:33 GP54481-S1 1	09:49	GP54481-MB1	1	
10:11 GP54481-B1 4 10:18 GP54481-B2 80 10:26 GP54481-B2 80 10:33 GP54481-S2 1 10:41 GP54481-S1 1 10:48 GP54481-D1 1 10:55 GP54481-D1 1 11:03 JA48997-15AR 1 11:18 JA48997-14AR 1 11:25 GP54481-B2 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCV2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-15AR 5 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:33 GP54481-S1 1 11:25 GP54481-S2 60 12:33 GP54481-S1 1	09:56	GP54481-MB1	1	
10:18	10:04	GP54481-B1	4	
10:26 GP54481-B2 80  10:33 GP54481-S2 1  10:41 GP54481-S1 1  10:48 GP54481-D1 1  11:03 JA48997-15AR 1  11:10 JA48997-14AR 1  11:12 GP54481-B2 1  11:40 GN39774-CCV2 1  11:47 GN39774-CCB2 1  11:55 JA48997-15AR 5  12:02 JA48997-15AR 5  12:10 JA48997-15AR 5  12:11 JA48997-15AR 5  12:12 GP54481-B2 1  11:42 GN39774-CCB2 1  11:43 GN39774-CCB2 1  11:45 GN39774-CCB2 1  11:47 GN39774-CCB2 1  11:48 GN39774-CCB2 1  11:49 GN39774-CCB2 1  11:40 GN39774-CCB2 1  11:41 GN39774-CCB2 1  11:42 GN39774-CCB2 1  11:43 GN39774-CCB2 1  11:44 GN397-15AR 5  12:10 JA48997-15AR 5  12:10 JA48997-19AR 1  12:24 GP54481-S2 60  12:39 GP54481-S2 60  12:39 GP54481-S1 1	10:11	GP54481-B1	4	
10:33 GP54481-S2 1 10:41 GP54481-S1 1 10:48 GP54481-D1 1 11:03 JA48997-15AR 1 11:10 JA48997-14AR 1 11:25 GP54481-B2 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:32 GP54481-S2 60 12:32 GP54481-S2 60	10:18	GP54481-B2	80	
10:41 GP54481-S1 1 10:48 GP54481-D1 1 10:55 GP54481-D1 1 11:03 JA48997-15AR 1 11:10 JA48997-14AR 1 11:12 GP54481-B1 1 11:40 GN39774-CCV2 1 11:47 GN3977-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:32 GP54481-S1 1 12:47 GP54481-S1 1	10:26	GP54481-B2	80	
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10:55 GP54481-D1 1 11:03 JA48997-15AR 1 11:10 JA48997-14AR 1 11:18 JA48997-14AR 1 11:25 GP54481-B2 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:33 GP54481-S1 1 12:47 GP54481-D1 4	10:41	GP54481-S1	1	
11:03 JA48997-15AR 1 11:10 JA48997-14AR 1 11:18 JA48997-14AR 1 11:25 GP54481-B2 1 11:32 GP54481-B1 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:39 GP54481-S1 1 12:47 GP54481-S1 1	10:48	GP54481-D1	1	
11:10 JA48997-14AR 1 11:18 JA48997-14AR 1 11:25 GP54481-B2 1 11:32 GP54481-B1 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:39 GP54481-S1 1 12:47 GP54481-D1 4	10:55	GP54481-D1	1	
11:18 JA48997-14AR 1 11:25 GP54481-B2 1 11:32 GP54481-B1 1 11:40 GN39774-CCV2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:32 GP54481-S1 1 12:47 GP54481-D1 4	11:03	JA48997-15AR	1	
11:25 GP54481-B2 1 11:32 GP54481-B1 1 11:40 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:39 GP54481-S1 1 12:47 GP54481-D1 4	11:10	JA48997-14AR	1	
11:32       GP54481-B1       1         11:40       GN39774-CCV2       1         11:47       GN39774-CCB2       1         11:55       JA48997-15AR       5         12:10       JA48997-19AR       5         12:17       JA48997-19AR       1         12:24       GP54481-S2       60         12:32       GP54481-S1       60         12:39       GP54481-D1       4	11:18	JA48997-14AR	1	
11:40 GN39774-CCV2 1 11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:17 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:39 GP54481-S1 1 12:47 GP54481-D1 4	11:25	GP54481-B2	1	
11:47 GN39774-CCB2 1 11:55 JA48997-15AR 5 12:02 JA48997-15AR 5 12:10 JA48997-19AR 1 12:17 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:32 GP54481-S1 1 12:47 GP54481-D1 4	11:32	GP54481-B1	1	
11:55 JA48997-15AR 5  12:02 JA48997-15AR 5  12:10 JA48997-19AR 1  12:17 JA48997-19AR 1  12:24 GP54481-S2 60  12:32 GP54481-S2 60  12:39 GP54481-S1 1  12:47 GP54481-D1 4			1	
12:02 JA48997-15AR 5  12:10 JA48997-19AR 1  12:17 JA48997-19AR 1  12:24 GP54481-S2 60  12:32 GP54481-S2 60  12:39 GP54481-S1 1  12:47 GP54481-D1 4				
12:10       JA48997-19AR       1         12:17       JA48997-19AR       1         12:24       GP54481-S2       60         12:32       GP54481-S1       60         12:39       GP54481-S1       1         12:47       GP54481-D1       4				
12:17 JA48997-19AR 1 12:24 GP54481-S2 60 12:32 GP54481-S2 60 12:39 GP54481-S1 1 12:47 GP54481-D1 4				
12:24 GP54481-S2 60  12:32 GP54481-S2 60  12:39 GP54481-S1 1  12:47 GP54481-D1 4				
12:32 GP54481-S2 60 12:39 GP54481-S1 1 12:47 GP54481-D1 4				
12:39 GP54481-S1 1 12:47 GP54481-D1 4				
12:47 GP54481-D1 4				
12:54 GP54481-D1 4				
	12:54	GP54481-D1	4	





### Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JA48997

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: 610071201.TXT Date Analyzed: 07/12/10 Methods: SW846 3060A/7199

Analyst: BD Run ID: GN39774

Parameters: Chromium, Hexavalent

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:01	GP54481-PS1	15		
13:09	GP54481-PS1	15		
13:16	GN39774-CCV3	1		
13:24	GN39774-CCB3	1		

Refer to raw data for calibration curve and standards.

### Instrument QC Summary Inorganics Analyses

### Login Number: JA48997

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/12/10 Methods: SW846 3060A/7199 Run ID: GN39774 Units: mg/l File ID: 610071201.TXT

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN39774-CCV1	Chromium, Hexavalent	0.24	0.010	0.0057	.25	96.0	90-110
GN39774-CCB1	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39774-CCV2	Chromium, Hexavalent	0.24	0.010	0.0057	.25	96.0	90-110
GN39774-CCB2	Chromium, Hexavalent	0.0057 U	0.010	0.0057			
GN39774-CCV3	Chromium, Hexavalent	0.24	0.010	0.0057	.25	96.0	90-110
GN39774-CCB3	Chromium, Hexavalent	0.0057 U	0.010	0.0057			

<sup>(!)</sup> Outside of QC limits

Sample: JA48997-1 ClientID: 079-SB-029-0506A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	31.68 23.97 27.94 51.5	g g g %		
Sample: JA48997-2 ClientID: 079-SB-029-0809A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	33.83 24.53 32.15 81.9	g g g g		
Sample: JA48997-3 ClientID: 079-SB-030-0001A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	30.28 22.24 29.42 89.3	g g g %		
Sample: JA48997-4 ClientID: 079-SB-030-0405A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	31.13 23.05 30.25 89.1	g g g %		
Sample: JA48997-5 ClientID: 079-SB-034-0203A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	31.87 24.34 30.83 86.2	g g g g %		
<b>Sample:</b> JA48997-6 <b>ClientID:</b> 079-SB-034-0405A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	25.81 18.94 23.01 59.2	g g g %		



Sample: JA48997-7 ClientID: 079-SB-034-0506A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	35.61 25.64 34.02 84.1	g g g %		
<b>Sample:</b> JA48997-8 <b>ClientID:</b> 079-SB-035-0405A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	27.72 20.9 25.86 72.7	g g g %		
<b>Sample:</b> JA48997-9 <b>ClientID:</b> 079-SB-035-0506A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	29.37 23.73 27.39 64.9	g g g %		
Sample: JA48997-10 ClientID: 079-SB-035-0607A	Analyzed:	24-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	31.13 24.59 27.09 38.2	g g g %		
Sample: JA48997-11 ClientID: 079-SB-036-0001	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	26.86 20.43 26.07 87.7	g g g %		
Sample: JA48997-12 ClientID: 079-SB-036-0102	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	23.85 17.82 22.19 72.5	g g g %		



Sample: JA48997-13 ClientID: 079-SB-036-0203	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	27.78 18.99 26.64 87	g g g %		
Sample: JA48997-14 ClientID: 079-SB-036-0304	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	25.65 17.88 24.58 86.2	g g g %		
Sample: JA48997-15 ClientID: 079-SB-036-0405	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	28.3 19.58 26.63 80.8	g g g %		
Sample: JA48997-16 ClientID: 079-SB-036-0506	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	29.51 20.74 27.94 82.1	g g g %		
Sample: JA48997-17 ClientID: 079-SB-036-0607	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	29.23 19.24 27.53 83	g g g %		
<b>Sample:</b> JA48997-18 <b>ClientID:</b> 079-SB-036-0708	Analyzed:	21-JUN-10 by WR	Method:	SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	36.46 28.4 34.93	g g g %		



Sample: JA48997-19 ClientID: 079-SB-036-0809	Analyzed: 21	-JUN-10 by WR	<b>Method:</b> SM18 2540G
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	33.19 26.46 31.81 79.5	g g g %	





### General Chemistry

Raw Data



NWD 06/15

Test:	Redox Pot	ential
Matrix:	Aqueous	0

Matrix: Solid

 $\odot$ 

Test Code: REDOX Method: ASTM D1498-76

Method: ASTM D1498-76 Mod.

 Analyst:
 JAREDO

 Date:
 06/15/10

 GN Batch ID:
 GN38770

 Temp (Deg C):
 25

Quality Control Summary		••	
Sample ID: GN38770-D1	 Dup: 384.1	% RPD:✓	
Ferrous-Ferric True: 675	Found <b>671.7</b>	% Rec 99.51%_	
pH 4 Quinhydrone True: 462	Found 472.7	% Rec 102.32%	
pH 4 Quinhydrone True: 462	Found 469.9	% Rec 101.71%	
pH 4 Quinhydrone True: 462	Found	% Rec	
pH 7 Quinhydrone True: 285	Found 296.9	% Rec <u>104.18%</u>	
pH 7 Quinhydrone True: 285	Found 295.1	% Rec <u>103.54%</u>	
pH 7 Quinhydrone True: 285	Found	% Rec	

Sample #:	mv vs. Ag/AgCl #: Electrode	
Ferrous-Ferric Solution	472.6	671.7
oH 4 Quinhydrone	273.4	<u>472.7</u>
bH 7 Quinhydrone	97.7	296.9
Dup GN38770-D1 ,	184.9	384.1
1. JA48587-1 √	161	360.2
2. JA48587-2 J	174.9	373.9
3. JA48832-1 /	215.5	414.7
4.		
5.		
6.		
7.		
8.		
9.		
pH 4 Quinhydrone	270.6	469.9
pH 7 Quinhydrone	95.9	295.1
10.		
11.		
12		
13		
14		
15		
16		
17		
18		
19		
pH 4 Quinhydrone		
pH 7 Quinhydrone	<del></del>	<del></del>

\*\*\* Note: Results vs Ag/AgCl electrode are converted to corrected results automatically at the instrument by changing to the relative mv scale. This conversion is done by adding about 200 mV to the Ag/AgCl reading.

Reagent Numbers:

PH4 FISHER 094895 EXP: 09/2011, PH 7 FISHER 093739 EXP 07/2011

REDOX STANDARD GNE5-25066-ORP EXP 11/24/2010, QUINHYDRONE ACROS A024/1920

Co	m	m	e	n	ts	:

Analyst: AT. O S

Date:

QC Reviewer:

Date:

Rev. Date: 3/27/2007



Balance # 8-14

	Sample Prep Log	and the second of the second o
Sample ID	Sample Size (S)	Final Volume
JA48932-120P	50.1	SUMI DIHZU
JA48832-1	50.0	
JA48587-1	50.2	
JA48587-2	49.9	
	en e	

Form: GN166-02 Rev. Date: 8/5/05

> 74 of 257 74 of 257
> ACCUTEST.
> JA48997
> Laboratories



Test: Redox Potential	Test Code: REDOX		Analyst:	shuzhenh
Matrix: Aqueous O	Method: ASTM D149	8-76	Date:	6/174/10
Matrix: Solid	Method: ASTM D149	8-76 Mod.	GN Batch ID:	GN38770-B
	Therm ID:	112	Temp (Dea C):	25

Quality Control Summary			
Sample ID:	Results:	Dup:	% RPD:
Ferrous-Ferric True: 675		Found <b>675.1</b>	% Rec 100.01
pH 4 Quinhydrone True: 462		Found <b>480.2</b>	% Rec 103.94
pH 4 Quinhydrone True: 462		Found <b>466.9</b>	% Rec 101.06
pH 4 Quinhydrone True: 462		Found	% Rec
pH 7 Quinhydrone True: 285		Found <b>281.2</b>	% Rec 98.679
pH 7 Quinhydrone True: 285		Found <b>279.6</b>	% Rec 98.119
pH 7 Quinhydrone True: 285		Found	% Rec

Sample #:		mv vs. Ag/AgCl Electrode	Corrected results (mv vs. Hydrogen electrode)
Ferrous-Ferric Soluti	ion	478	675.1
pH 4 Quinhydrone		282.9	480.2
pH 7 Quinhydrone		84.5	281.2
Dup			
1. JA	49004-1	9.7	207
2. JA	49004-2	85.4	282.3
3. JA	49004-3	99.7	296.5
4. JA	49004-4	97.7	295.9
5. JA	49004-6	102.8	299.8
6. JA	49004-7	112	309.1
7. 8.			
9. pH 4 Quinhydrone		269.8	466.9
pH 7 Quinhydrone		82.5	279.60 30376
10.	- · · · · · · · · · · · · · · · · · · ·		
11.			
12.			
13.			
14.			
15.	<del>'''</del>		
16.	· · · · · · · · · · · · · · · · · · ·		
17.			
18.			
19.			
20			
pH 4 Quinhydrone	<del> </del>		
		1/	·

TT Note: Results vs Ag/AgCl electrode are converted to corrected results automatically at the instrument by changing to the relative my scale.	I his conversion
is done by adding about 200 mV to the Ag/AgCl reading.	

-			•••	 
D	aaaant	Mumbaras		DLIA

**Reagent Numbers:** PH4 FISHER 094895 EXP: 09/2011, PH 7 FISHER 093739 EXP 07/2011 REDOX STANDARD GNE5-25066-ORP EXP 11/24/2010, QUINHYDRONE ACROS AØ241920

Comment
---------

Date: 6/17/10 Date: Analyst: QC Reviewer: F/N GN141-02



Balance #\_\_\_

Method <u>EH/PH</u> Prep Date 6/17/10

	Sample Prep Log	プライナン - B
Sample ID	Sample Size (in Jus)	Final Volume
1249004-1		Add some DI HAD
-2	48.59	1
- 3	49 83	
-4	44.80	Add tome more
-6	47.57	I WILL MUIL
F- V	51.59	V
	the second secon	Agrama Angeles Services Services Services
Berthaus Berthall in	AND HOLE TO HERE	
	1	· ·

Form: GN166-02 Rev. Date: 8/5/05

76 of 257

**o** 

Test: pH, Corro	osivity	Product:	PH, CORR	
	3 9040B or SW846 9045C	Analyst:	JAREDO	
		GN Batch ID:	GN38772	
	Thermometer ID: 112	Analysis Date:	6/15/2010	
	Correction Factor: 1	pH Meter ID:		
QC Summary				
	Duplicate ID: GN38772-D	Sample ID:	JA48832-1	

6.58 % RPD: 0.05% Dup Result:

Uncorrected/ Wt./Vol. used for Corrected Temp in Sample ID soilds Result Corrosivity Read time Deg C. Buffer Check: 4 25 3.95 Buffer Check: 7 25 6.96 Buffer Check: 10 25 10 GN38772-D1 25 6.58 JA48587-1 25 7.72 JA48587-2 25 7.70 JA48832-1 25 6.88 25 25 25 25 25 25 ph-4 25 4.01 ph-10 25 9.98 **Buffer Check:** Buffer Check: Buffer Check: Buffer Check: QC Reviewer:

Comments:



6.2

**o** 

Balance # 8-14

Sample Prep Log  Sample ID Sample Size (5) Final Volume							
		Final Volume					
JA48832-1DOP	50.1	SUMI DEHZU					
JA48832-1	50.0						
JA48587-1	50.2						
JA48587-2	49.9						
·							

Form: GN166-02 Rev. Date: 8/5/05

QC Review\_







Reagent I	Information	Log
Test Name:_	pH_	

Reagent	Reagent # or Manufacturer/Lot
pH 2 Buffer Solution	FISHER LOT# 090982 EXP. 03/2011
pH 4 Buffer Solution	FISHER LOT# 094895 EXP. 09/2011
pH 7 Buffer Solution	FISHER LOT# 093739 EXP. 07/2011
pH 10 Buffer Solution	FISHER LOT# 093565 EXP. 07/2011
pH 13 Buffer Solution	Aqua Sol'n Lot#0030296 EXP 3/30/11

All standards and stocks were made as described in the SOP for this method (circle one): Y or N If no (N), see attached page for standards prep.

Form: GN087-01 Rev. Date:6/15/2010



MW.	7.1				
<u></u>	AC	CL	JTI	ES	

Sample ID	Wt./Vol. used for soilds	Deg C.	Result	Corrosivity	Read time
Buffer Check: 4	T T	25	4	Correcting	T TOOLS III/IO
Buffer Check: 7		25	7.03		
Buffer Check: 10		25	9.99		
JA48997-11		25	8.07		
JA48997-12	SEE	25	7.89		<u> </u>
JA48997-13	ATTACHED	25	8.02		
JA48997-14	MINONED	25	7.44		
JA48997-15		25	7.26		
JA48997-16		25	7.73		
JA48997-17		25	7.65		
JA48997-18		25	7.56		
JA48997-19		25	7.39	••	
0/140007-10		25	7.00		
oh-4		25	4.01		
ph-10		25	6.96		
<u> </u>		20	0.50		
· · · · · · · · · · · · · · · · · · ·					<del> </del>
				1	
					<del> </del>
Buffer Check:	<del></del>				-
Buffer Check:	<del></del>	ļ			
buller Cileck.	<del></del>				<del> </del>
	<del></del>				-
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	<del></del>		<del> /</del>		<del> </del>
		<u> </u>	<del>                                     </del>		<u>-</u>
		<del>  \                                   </del>	<del>  /                                   </del>		<u> </u>
		<del>  \</del>	/		+
		<del>                                     </del>			
		<del>                                     </del>	1 1		<del> </del>
		<del>                                     </del>	<del>                                     </del>	<del>   .                                  </del>	<del> </del>
Buffer Check:		<del> \/</del>	<del>                                     </del>	$H \rightarrow -$	<b></b>
		<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	
Buffer Check:		L	$1 + \nu + \nu$	444	1



Comments:

CCUTEST

Analyst	
Method ZH , PH	
Prep Date 6/16/10	
ON 38770 -A	(ZH)
38777 - 17	(PH

Sample Prep Log

Sample Prep Log						
Sample ID		Sample Size (in gims)	Final Volume			
JA 48997 -11	づいうう	<u> </u>	Ad some DI HO			
-(2	50.12	•				
-13	49.01					
-14	49.28					
-15	49.43					
-16	49.10					
-17	49.87					
-18	50.56					
1 -19	ろゆうい		V			
	-					
	<u> </u>					

Form: GN166-02 Rev. Date: 8/5/05

QC Review\_\_\_\_





### Reagent Information Log - pH & Corrosivity

Reagent		Reagent # or Manufacturer/Lot
pH 4 Buffer Solution	6/2001	Fisher 100 486
pH 7 Buffer Solution	07 6011	93739
pH 10 Buffer Solution	1106/50	7 093565
pH 2 Buffer Solution	,	
pH 18 Buffer Solution	03/20/2011	Aqua solutions +003496

Form: GN-087 1-54 Rev. Date:11/21/02

Test: pH, Corrosivity Method: SW846 9040B or SW846 9		Analyst:	PH, CORR shuzhenh		
<del>-</del>	440	GN Batch ID:	GN38772-B		
Thermometer ID:	112	Analysis Date: pH Meter ID:	6/17/2010		
Correction Factor:	1	pH Meter ID:	pH-22		
QC Summary					
Duplicate ID:		Sample ID:			
Dup Result:	<del></del>	% RPD:			
Sample ID Buffer Check: 4	Wt./Vol. used for soilds	Deg C.	Result	Corrosivity	Read time
Buffer Check: 7		25	4.01		
Buffer Check: 10		25	6.96		
JA49004-1		25	9.99		<u> </u>
JA49004-1 JA49004-2		25	8.59		ļ
JA49004-2 JA49004-3	Tex	25 25	7.79		
JA49004-3 JA49004-4	Attached	25 25	8.02 7.80		<del> </del>
JA49004-4 JA49004-6	HAMP EVEY	25	8.07		-
JA49004-0		25	7.69		
3/49004-7		25	7.09		
		25			
		25			
		25			-
oh-4		25	4.00		
oh-10		25	10.01		
		20	10.01		
			ļ		<del> </del>
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		<del>                                     </del>	<del>                                     </del>	<del>- 11//</del>	<del>-/</del>
		<del>\</del>		n 1 1//	<del>/</del>
· · · · · · · · · · · · · · · · · · ·		<del>                                     </del>		<del>/   // /</del>	
	<del>                                     </del>	<del>                                     </del>	1 UV 1	<del>                                     </del>	
			<u> </u>		<del> </del>
Buffer Check:					<del>                                     </del>
Buffer Check:					
		L	<u> </u>		<u> </u>
QC Reviewer	w.		_ Date:		_
Comments					
					-



Balance #\_

TH Method &H / PH Prep Date **E/17/10** OR# <u>GN 38770 - B</u> 38772 - B

	San	nple Prep Log		~     <b>/</b>
Sample ID	S	ample Size (in Jus)		Final Volume
DA 49004-1	50.18	()	Add Xoml	DI HO
-2	48.59			1
- 3	49.83			
-4	44.80			Add tome more
-6	47.57			TVIII VIII VIII VIII VIII VIII VIII VII
<u> </u>	51.59			V
-				
		· · · · · · · · · · · · · · · · · · ·		
			_	
			· -	

Form: GN166-02 Rev. Date: 8/5/05

QC Review\_





### Reagent Information Log - pH & Corrosivity

Reagent		
pH 4 Buffer Solution	6/2601	Reagent # or Manufacturer/Lot
pH 7 Buffer Solution	07/2011	+ isher 100 486
pH 10 Buffer Solution	1106/50	7 093565
pH 2 Buffer Solution		
pH 18 Buffer Solution	03/20/2011	Aqua solutions + 003029

Form: GN-087 1-54 Rev. Date:11/21/02



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	N.

Units Units 38.50 % Rec: 95.3 Un 45.45 Rec: 36.6 0.023671 Detection Limit (mg/kg) Σ× Average = Final Result 0.0247 Result: 38.50 > gn38943 gp54198 6/18/2010 . م Spike Amt. % RPD: Normality = Note: "solids corrections added in LIMS. 0.0237 Normality 1 = \_\_\_\_\_ Normality 2 = \_\_\_\_ Analyst: GN Batch ID: GP Batch ID: Sodium Thiosulfate total vol in **4**0.04 4 4 4 Amt. Spiked Samp Result **Dup Result:** see attached page Thiosulfate volume (end) ml Sodium 5.75 3.20 3.20 3.80 5.70 5.70 5.45 5.60 5.75 5.75 5.75 5.70 5.70 5.75 Date: 6/18/2010 Date: 6/18/2010 Sodium Thiosulfate 14.50 <u>4</u> mg/kg Normality x vol of sodium thiosulfate MS Result Samp Result: of lodina in mi Units: volume of iodine Sample Vol In mt lab Vol In mt lab Vol In mt lab Vol 200.0 2 • QC Reviewer. gp54198-b1 gp54198-mb1 gp54198-s1 gp54198-d1 Final Vol. (ml) ((Vi)(Ni) - (Vt)(Nt)) × 16000 × final Vol Vol. tiitrated × initial wt or vol 200.0 see attached page Initial Wt (g) Analyst J. R. Mala Date: 6/18/10 Pre-Treat? Yor N (SO) EPA 376.1 Mod/ SW846 9034 Mod. Initial 둅 χ χ 쮰묫 Duplicate ID: Method Blank ID: Spike Blank ID: Matrix Spike ID: Sodium thiosulfate manufacturer and lot: Sulfide by Titration Suffide Stock Std 1CONF Sulfide Stock Std 2CONF odine Standardization 2 odine Standardization 1 Sample 1D gp54198-mb1 gp54198-b1 gp54198-d1 gp54198-s1 ja48997-4 ja48997-9 ja48997-10 lodine reagent number: ja48997-1 ja48997-2 ja48997-3 ja48997-5 ja48997-6 a48997-8 a48997-7 lodine Normality = QC Summary Test: Product: Method: SREAC = Bottle #



	Sample Prep Lo	og
Sample ID	Sample Size	Final Volume
MB)		pasom
B1		1 ml stale
DVPJ48997-4	25.83 gm.	1, 1
MI	25.53pm	1 med steet
JA48983-4	25.22 m	111
JA 48937-1	25.20gm	
- 2	25.038m	
-3	ds-308m	
-5	25.5 CSm	
-6	25.48 gm	
->	25.59 gm	
- 8	25.48 gm	
- 9	25.14 82	
10	25-40 gm.	
	0	

Form: GN166-02 Rev. Date: 8/5/05

QC Review\_



Reagent



### Reagent Information Log - Sulfide

Keagent	Reagent # or Manufacturer/Lot
Hydrochloric Acid, 6N	GNES-24859- SREAC S/1/212
Standard lodine Solution 0.0250N	GNES-24859-SREAC S/1/212 GNES-25165-Sulfixe 12/4/10
Sodium Thiosulfate Solution, 0.025N	VILLE 1 HU AD 2010 8/2/1.
Starch Indicator Solution	frech to 4 100 1407 JAN 2012
Zinc Acetate Solution	6mc6-25243-50fide 12/10/10
Sodium Hydroxide, 6N	Gre, _ 24016 - Salfide 7/14/10
Sulfide Stock Solution, 1000 ug/ml	Greg 25264-Sulfite 6/21/10
	··· · <del>··· ··· ··· ··</del>

If no (N), see attached page for standards prep.

Form: GN-087 1-61 Rev. Date: 2/17/99



6.4

Sequence: Operator:	610062902 Chemistry	902 .ry							Page 1 of 2 Printed: 6/29/2010 2:15:42 PM	Page 1 of 2 2:15:42 PM
Title: Datasource: Location: Timebase:	NJCHMIN Accutest accutest 35	NJCHMIC2_local Accutestt2010\June accutest					Created: Last Update:	6/29/;	6/29/2010 9:42:29 AM by Chemistry 6/29/2010 11:43:58 AM by Chemistry	nemistry Shemistry
		:					-			`
	o N	No. Name	Tvpe	Pos. Program	Method	Status	Ini. Date/Time	Weight D	Dil. Factor	
	-	BLANKCONF	Unknown		hexachrome	Finished	6/29/2010 8:37:01 AM		1.0000	
	2	STDA	Standard	2 hexachrome	hexachrome	Finished	6/29/2010 8:44:26 AM	1.0000	1.0000	
	3	STDB	Standard	3 hexachrome	hexachrome	Finished	6/29/2010 8:51:50 AM	1.0000	1.0000	
	4	STDC	Standard	4 hexachrome	hexachrome	Finished	6/29/2010 8:59:14 AM	1.0000	1.0000	
	5	STDD	Standard	5 hexachrome	hexachrome	Finished	6/29/2010 9:06:38 AM	1.0000	1.0000	
	9	STDE	Standard	6 hexachrome	hexachrome	Finished	6/29/2010 9:14:03 AM	1.0000	1.0000	
	7	200	Unknown	7 hexachrome	hexachrome	Finished	6/29/2010 10:22:11 AM	1.0000	1.0000	
	80	CCB	Unknown	8 hexachrome	hexachrome	Finished	6/29/2010 10:29:36 AM	1.0000	1.0000	
	6	GP54306-MB1	Unknown	9 hexachrome	hexachrome	Finished	6/29/2010 10:37:00 AM	1.0000	1.0000	
	10	GP54306-MB1	Unknown	10 hexachrome	hexachrome	Finished	6/29/2010 10:44:24 AM	1.0000	1.0000	
	11	GP54306-B1	Unknown	11 hexachrome	hexachrome	Finished	6/29/2010 10:51:49 AM	1.0000	4.0000	
	12	GP54306-B1	Unknown	12 hexachrome	hexachrome	Finished	6/29/2010 10:59:13 AM	1.0000	4.0000	
	13	GP54306-B2	Unknown	13 hexachrome	hexachrome	Finished	6/29/2010 11:06:37 AM	1.0000	90.000	
	4	GP54306-B2	Unknown	14 hexachrome	hexachrome	Finished	6/29/2010 11:14:01 AM	1.0000	90.000	
	15	GP54306-S2	Unknown	15 hexachrome	hexachrome	Finished	6/29/2010 11:21:25 AM	1.0000	1.0000	
	16	GP54306-S1	Unknown	16 hexachrome	hexachrome	Finished	6/29/2010 11:28:50 AM	1.0000	1.0000	
	17	GP54306-D1	Unknown	17 hexachrome	hexachrome	Finished	6/29/2010 11:44:01 AM	1.0000	1.0000	
	18	GP54306-D1	Unknown	18 hexachrome	hexachrome	Finished	6/29/2010 11:51:26 AM	1.0000	1.0000	
	19	JA48997-15A	Unknown	19 hexachrome	hexachrome	Finished	6/29/2010 11:58:50 AM	1.0000	1.0000	
	20	JA48997-15A	Unknown	20 hexachrome	hexachrome	Finished	6/29/2010 12:06:14 PM	1.0000	1.0000	
	2	JA48997-14A	Unknown	21 hexachrome	hexachrome	Finished	6/29/2010 12:13:38 PM	1.0000	1.0000	
	22	JA48997-14A	Unknown	22 hexachrome	hexachrome	Finished	6/29/2010 12:21:02 PM	1.0000	1.0000	
	23	GP54306-B2	Unknown	23 hexachrome	hexachrome	Finished	6/29/2010 12:28:27 PM	1.0000	1.0000	
	24	GP54306-B1	Unknown	24 hexachrome	hexachrome	Finished	6/29/2010 12:35:51 PM	1.0000	1.0000	t
	25	CCV	Unknown	25 hexachrome	hexachrome	Finished	6/29/2010 12:43:15 PM	1.0000	1.0000	3~
	56	SCB	Unknown	26 hexachrome	hexachrome	Finished	6/29/2010 12:50:39 PM	1.0000	1.0000	>
	27	JA48997-19A	Unknown	27 hexachrome	hexachrome	Finished	6/29/2010 12:58:04 PM	1.0000	1.0000	1

Chromeleon @ Dionex Corporation, Version 6.70 SP2a Build 1871



GP54306-S2 GP54306-S2 GP54306-S1 GP54306-PS1
GP54 GP54 CCV CCB



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# ACCUTEST LABS DAYTON, NJ

# 3060A/7199 POST-DIGEST SPIKE LEVEL CALCULATION SPREADSHEET

	Actual ml	of 100
mount.		Suggested
d the spike a		
spike and ad		
then take a 20 ml aliquot of the diluted post-spike an		
diquot of the		
ce a 20 ml al		
ğ		
e post-spike fi		
Nways dilut		
NOTE: 4		

								fv = 20  m/s	sample	in 5 mi	10 ppm abs	0.50 ml
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!   #VALUE!   #VALUE!	#VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!	:	#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE! #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
default spike?	mg/kg	∥/gш	sample.	sample.	pe nsed	asn	ререеи	solution	mg/kg.	Ē	100 ml	Sample ID
Use calculated or	Amount in	curve in	dilution of	Dilution to on dilution of dilution of	Dilution to	Dilution to	Dilution	of 100 ppm Dilution	Results in	Digested in   Weight in 20   Results in	Digested in	
	Spike	back on	spike on	ppm to spike spike on	Actual	Suggested		ml to add			Weight in g	
	Calculated	ppm to Est. Read- Calculated	ppm to	ml of 100				Amount in			PS Aliquot	
			of 100	Suggested								
			Actual ml									

## 3060A/7196A INSOLUBLE SPIKE

=	
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5	×
)	VI IQ
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11001001	CALCULATI
ζ	ĭ
3	ប៊
2	

			To enter
Weight of	Weight of	Amount	for 7199
PbCr04	Sample	Spiked	l/bm ui
0.0169	2.5	1087.624	27.19059
0.0137	2.5	881.683	22.04208
		#DIN/0;	i0/AIQ#
		#DIN/0i	i0/ΛIG#
		#VALUE!	#VALUE!
		#VALUE!	i∃NTV∧#

82

5 5 5 5	for 7199	l/bm ui	27.19059	22.04208	#DIV/0i	#DIA/0i	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	Amount	Spiked	1087.624	881.683	#DIN/0i	#DIV/0i	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	Weight of	Sample	2.5	2.5							
	Weight of	PbCr04	0.0169	0.0137							

ACCUTEST. Hexavalent Chromium pH Adjustment Log

Method: SW846 3060A/7199

Digestion Date:

10:10 pH adj. Date: pH adj. start time:

pH adj. end time:		10:49		GN Batch ID:	- 4 ~ 39364
6054306	Sample	pH after	Final Volume		
Sample ID	Weight in g	HNO3	(ml)	Amounts	Comments
ccv		934	(00)	5 h!	5 psh Ultra
ccv				V	, ,
ccv					
ccv					
ССВ		9.44	$ \varnothing\rangle$		
ССВ		•			
ССВ					
ССВ					
MS (SOI), JA48997-15A	2,47	9.31	(0)		100pph Abrolute
MS (Insol.)	2.50	9.39		0,0(69	D) Croy
DUP 🗸	2.47	9.45			1
SB (Sol)		9.30		141	100mm Abrolute
SB (Insol)		9.39		0.0(34	Ph Cr Oy
МВ		9,44		1	(
1JA48997-15A	2.54	9.30 9.49 9.38			
2 14A	2.46	9.42			
3 V 19A	2.56	9.38			
4 PSI (15A)	8.54	9.30		0.50ml à	TO PAN HOSOWH
5				IN 5	mc Sanole & Jon
6					
7					
8					
9					
10					
11					
12					
13					
14					
15			<u> </u>		
16					
17					
18					
19					
20					
SB (Insol)					dilution
MS (Insol.)					dilution

Reagent Reference Information - refer to attached reagent reference information page(s).

Form: GN-067A



### 

## Hexavalent Chromium Digestion Temperature Log Method: SW846 3060A

Record the temperature at the beginning, during, and at the end of each digestion.

Digestion			Temp, in deg. C	Temp. in deg. C	Temp. In deg. C   Temp. In deg. C	H
Batch ID	Description	Time	Hot Plate #1	Hot Plate #4-	Hot Plate # 1	Hot Plate # 1
Chesta	3 1943 of Starting Time	11-42	Sib	95		
	Time 1	3)22	36	. 95		
<del>                                    </del>	Time	43-2	36	95		
	Starting Time					
	Time 1					
	Fndion Time					
	Starting Time					
	Time 1					
	Ending Time		-			
The state of the s	<u>,                                     </u>					

6-5-9

Date:

Analyst

Form: GN-074 Rev. Date:5/8/06

# Sample Homogenization Log

GN39241

				んとり				G	N393	864						
Comments				rd bout any work						012 VA (4PC		$\rightarrow$				
Homog. Device (blender, wand)	SATAR.			d/20/9 8						/ 5To44)	Jahar i					
	waich bout we stock	brown wet crendy	ped brown for al starco	dry bout the post a	Tak bow W stoles	gry brass sady		7		they have my host, or	Srx7 w/	-			ji	
三	3		·	3					·			ر ـ				
_l≌ l_	7 7 7		AN WY 100. An				1.00					->				
from bottle #	_		_							}						
Accutest Sample ID	151-171-5741	19%	JA489991-11A	7	(3	<u>_</u> e	F	<u>4</u> )		JA4BOY-14	3	5				

Form: GN195-01 Rev. Date: 5/5/06





TEST.

GN/GP Batch ID: 6754306, 54307, 5430 A

## Reagent Information Log - XCRA7199 (soil 3060A/7199)

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium,		
1000 mg/L Stock	1/1/2013	Absolute Grade Lot # 012010
Calibration Checks: Hexavalent Chromium,		
1000 mg/L Stock	7/31/2015	Ultra lot # J00509
	"	
Spiking Solution Source	1/1/2013	Absolute Grade Lot # 012010
Lead Chromate (Insoluble Hexavalent		
Chromium Spike)	NA	Sigma Aldrich Lot # 09921LC
Digestion Solution	7-17-	0 GNE 1-25331 xck
Magnesium Chloride, Anhydrous	NA	Alfa Aesar Lot # I02T070
Phosphate Buffer Solution	12-8-15	GNE 1-25218XCMA
5.0 M Nitric Acid	12/03/201	0 ANEW-25864-KCRA
Post-Column	المام	N. 7 25 222 1000
Reagent (Diphenylcarbazide Solution)	<u> 73/2010</u>	GNEG-25398-1CKCC
Eluent	12/16/20	0 GNE 6-25291-10XOR
Buffer Solution	12/20/20	10 GNE 6-25350 KKCR
XCR7199 Dilution Water	13/3/200	flet 25297-1CKCR
Filter	NA	F-0 CAP4 P66
Teflon Chips	NK	0919120
Digestate Dilution Soln.	7/11/200	GNE 6035294-1CKOR

Form: GN087A-21 Rev. Date: 2/18/10





## Hexa valent Chromium pH Adjustment Log Meth od: SW846 3060A/7199

pH adj. start time: 800 pH adj. erd time: 800

pH adjustment Date:	6/39/3010
GN Batch ID:	6~39364

	Sample		Final		
	Weight in	pH after	Volume		_
Sample ID	g	HNO3	(ml)	Comments	Spike Info.
Calibration Bank	NA	999	188.		
0.005 mg/l standard	NA	9.43		I FOM Appolate	0.50 ml of 1.00 mg/l
0.050 mg/l standard	NA	923		<u>T</u>	5.00 ml of 1.00 mg/l
0.100 mg/l standard	NA	9.35		10 four Absolute	1.00 ml of 10.0 mg/l
0.500 mg/l standard	NA	933	V	1	5.0 ml of 10.0 mg/l
-					
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Reagent Reference Information - refer to attached reagent reference information page(s).  $\frac{1000000 \text{ ug/g} \times \text{Insoluble spike wt(g)} \times 52/323.2}{\text{Insoluble spike wt(g)} \times 52/323.2}$ 

Form: GN-068A Rev. Date: 05/08/06





## GENERAL CHEMISTRY STANDARD PREPARATION LOG Product;XCRA 749(3xi)

GN or GP Number: 000

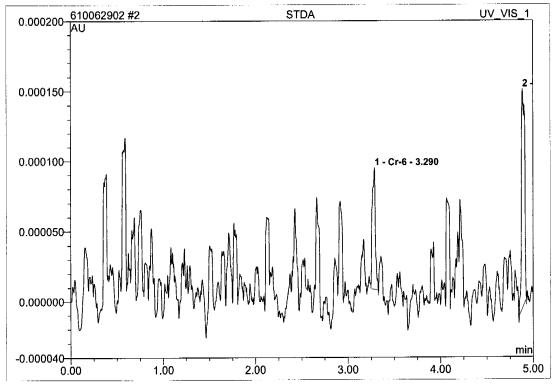
							Final Conc.			
Intermediate	Stock used to	Stock	Stock volume or weight used with	Balance or		Final	of Intermediate	Expiration		
Standard Description	prepare standard	concentration	units	Autopipet ID (*)	Diluent	Volume		Date	Analyst	Date
10.0 mg/L Absolute	Absolute 012010	1000 mg/L	1.0 mL	A	Dilution	100 m.L	10.0 mg/L	1/20/2013	Ą	
1.0 mg/L Absolute	10.0 mg/L Absolute	10.0 mg/L	10.0 mL	A	Water	100 mL	1.0 mg/L	1/20/2013	-	
5.0 mg/L Ultra	Ultra J00509	1000 mg/L	1.0 mL	A	DI H20	200 mL	5.0 mg/L	7/31/2015	->	->
***************************************	Intermediate or Stock Intermediate	Intermediate	Intermediate or							
· vinago y v	used to prepare	or Stock	Stock volume	Balance or		Final	of Standard	Expiration		
Standard Description	standard	concentration	used in m	Autopipet ID (*)	Diluent	Volume		Date	Analyst	Date
0.005 mg/L	1.0 mg/L Absolute	1.0 mg/L	0.50 mL	A	Digestion	100 mL	0.005	21.60	T	C11.6(1)
0.050 mg/L	1.0 mg/L Absolute	1.0 mg/L	5.0 mL	A	solution	100 mL	0.05			
0.100 mg/L	10 mg/L Absolute	10.0 mg/L	1.0 mL	А	and Di	100 mL	0.1			
0.500 mg/L	10 mg/L Absolute	10.0 mg/L	5.0 mL	A	Water	100 mL	0.5		,	
									,	
		-								

\* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01 Rev, Date: 1/13/09



2 STDA			
Sample Name:	STDA	Injection Volume:	25.0
Vial Number:	2	Channel:	UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 8:44	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

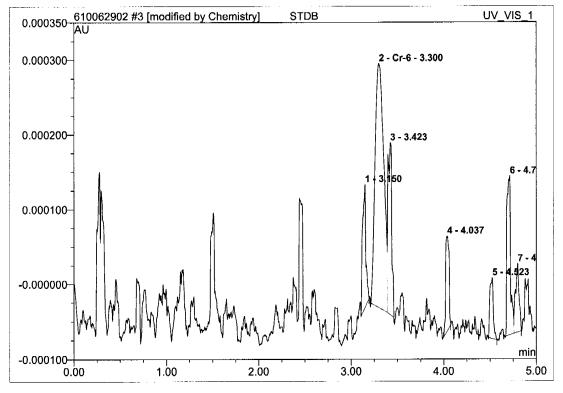


No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	3.29	Cr-6	0.000	0.000	34.65	0.0012	вмв
2	4.89	n.a	0.000	0.000	65.35	n.a.	BMB
Total:			0.000	0.000	100.00	0.001	



3	STDB	

Injection Volume: 25.0 **STDB** Sample Name: UV\_VIS\_1 Channel: Vial Number: 3 Sample Type: standard Wavelength: n.a. Control Program: hexachrome Bandwidth: n.a. Dilution Factor: 1.0000 Quantif. Method: hexachrome Recording Time: 6/29/2010 8:51 Sample Weight: 1.0000 Sample Amount: 1.0000 Run Time (min): 5.00

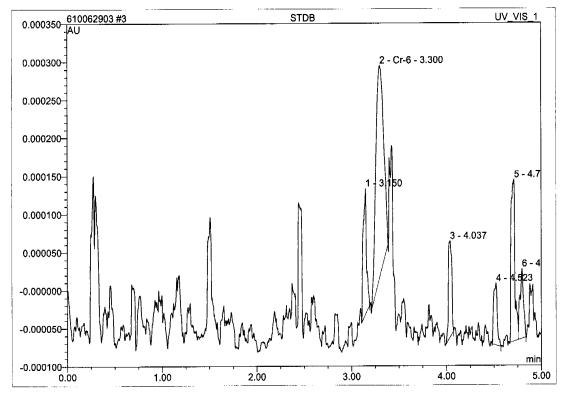


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.15	n.a.	0.000	0.000	9.10	n.a.	BMB
2	3.30	Cr-6	0.000	0.000	46.82	0.0049	BM *
3	3.42	n.a.	0.000	0.000	14.12	n.a.	MB*
4	4.04	n.a.	0.000	0.000	6.95	n.a.	BMB
5	4.52	n.a.	0.000	0.000	4.68	n.a.	BMB
6	4.71	n.a.	0.000	0.000	13.00	n.a.	ВМ
7	4.80	n.a.	0.000	0.000	5.33	n.a.	MB
Total:			0.001	0.000	100.00	0.005	

hexachrome/Integration



3 STDB			
Sample Name: Vial Number:	STDB 3	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 8:51	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



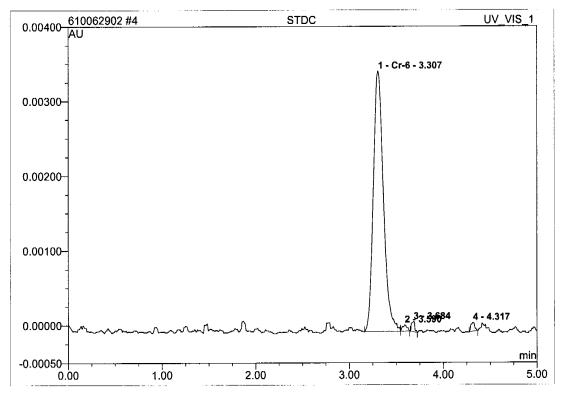
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.15	n.a.	0.000	0.000	12.26	n.a.	BMB
2	3.30	Cr-6	0.000	0.000	47.39	0.0041	BMB
3	4.04	n.a.	0.000	0.000	9.36	n.a.	BMB
4	4.52	n.a.	0.000	0.000	6.30	n.a.	BMB
5	4.71	n.a.	0.000	0.000	17.51	n.a.	ВМ
6	4.80	n.a.	0.000	0.000	7.17	n.a.	MB
Total:		31 20 18 1	0.001	0.000	100.00	0.004	

OP BO 6/29/2010

hexachrome/Integration



Injection Volume: 25.0 **STDC** Sample Name: Channel: UV\_VIS\_1 Vial Number: Sample Type: standard Wavelength: n.a. Control Program: hexachrome Bandwidth: n.a. 1.0000 Dilution Factor: Quantif. Method: hexachrome Recording Time: 6/29/2010 8:59 Sample Weight: 1.0000 Sample Amount: 1.0000 Run Time (min): 5.00

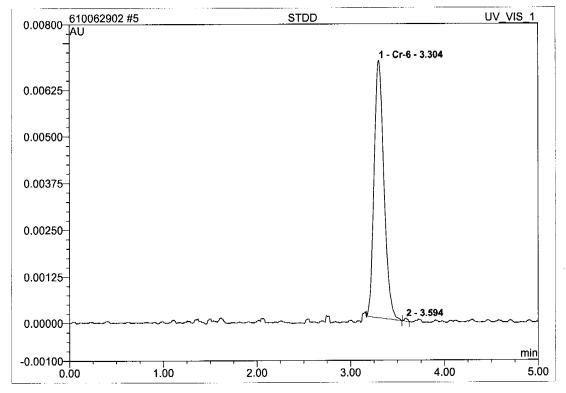


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.31	Cr-6	0.003	0.000	96.40	0.0510	ВМ
2	3.59	n.a.	0.000	0.000	1.10	n.a.	MB
3	3.68	n.a.	0.000	0.000	1.27	n.a.	BMB
4	4.32	n.a.	0.000	0.000	1.23	n.a.	BMB
Total:			0.004	0.000	100.00	0.051	

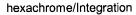
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



5 STDD			
Sample Name: Vial Number:	STDD 5	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 9:06	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

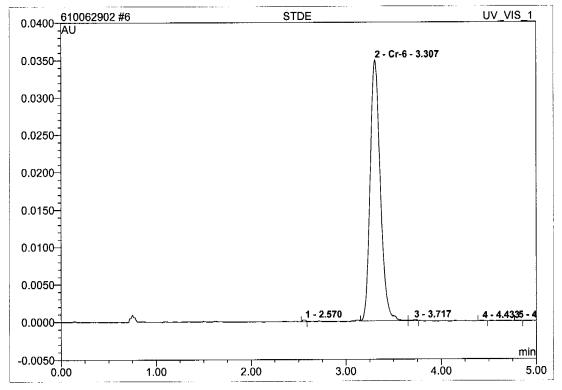


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.30	Cr-6	0.007	0.001	99.61	0.0976	BMB
2	3.59	n.a.	0.000	0.000	0.39	n.a.	BMB
Total:	* - "		0.007	0.001	100.00	0.098	



6	STD	E
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Sample Name: Vial Number:	STDE 6	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 9:14	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

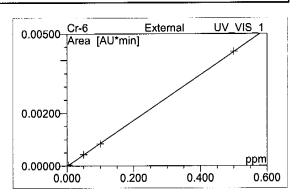


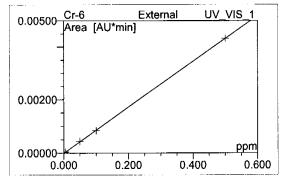
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.57	n.a.	0.000	0.000	0.20	n.a.	BMB
2	3.31	Cr-6	0.035	0.004	99.43	0.5004	BM
3	3.72	n.a.	0.000	0.000	0.22	n.a.	MB
4	4.43	n.a.	0.000	0.000	0.07	n.a.	BMB
5	4.81	n.a.	0.000	0.000	0.07	<u>n.a.</u>	BMB
Total:			0.035	0.004	100.00	0.500	

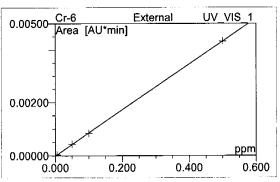


6 STDE			
Sample Name: Vial Number:	STDE 6	Injection Volume: Channel:	25.0 UV VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time: Run Time (min):	6/29/2010 9:14 5.00	Sample Weight: Sample Amount:	1.0000 1.0000

0.00500 Cr-6	External	UV_	VIS 1
_Area [	AU*min]	,	<b>/</b>
-	/		
0.00200			
-	2		ppm
0.00000	0.200	0.400	0.600





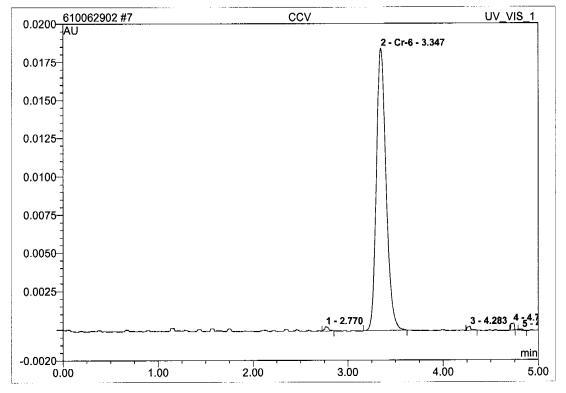


No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det.	Offset	Slope	Curve
1	2.57	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.31	Cr-6	LOff	5	99.9954_	0.0000	0.0087	0.0000
3	3.72	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	4.43	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4.81	n.a.	n.a	n.a.	n.a.	n.a.	n.a.	n.a.
Average:					99.9954	0.0000	0.0087	0.0000

hexachrome/Calibration(Batch)



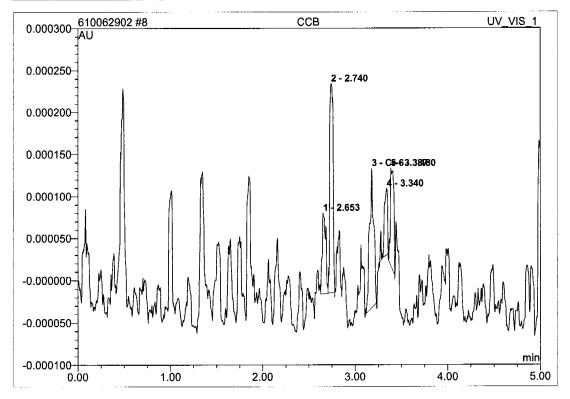
7 CCV			
Sample Name: Vial Number:	CCV	Injection Volume: Channel:	25.0 UV VIS 1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 10:22	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.77	n.a.	0.000	0.000	0.64	n.a.	BMB
2	3.35	Cr-6	0.018	0.002	97.83	0.2530	BMB
3	4.28	n.a.	0.000	0.000	0.57	n.a.	BMB
4	4.74	n.a.	0.000	0.000	0.80	n.a.	BMB
5	4.83	n.a.	0.000	0.000	0.16	n.a.	BMB
Total:			0.020	0.002	100.00	0.253	



8 CCB			
Sample Name: Vial Number:	CCB 8	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 10:29	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

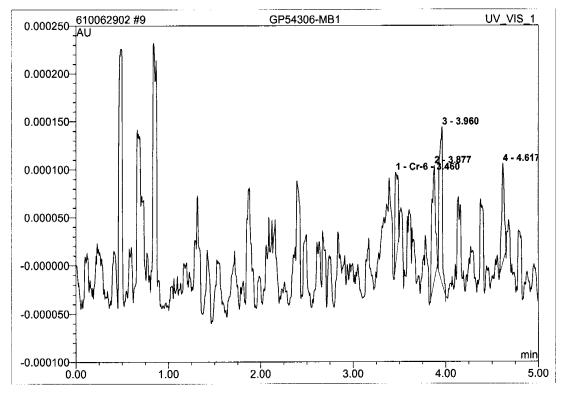


No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	2.65	n.a.	0.000	0.000	13.88	n.a.	BM
2	2.74	n.a.	0.000	0.000	33.32	n.a.	MB
3	3.18	Cr-6	0.000	0.000	26.88	0.0018	BMB
4	3.34	n.a.	0.000	0.000	9.84	n.a.	BMB
5	3.39	n.a.	0.000	0.000	16.08	n.a.	BMB
Total:			0.001	0.000	100.00	0.002	



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Sample Name: Injection Volume: 25.0 GP54306-MB1 Vial Number: Channel: UV\_VIS\_1 9 Sample Type: unknown Wavelength: n.a. Control Program: hexachrome Bandwidth: n.a. Dilution Factor: 1.0000 Quantif. Method: hexachrome Sample Weight: 1.0000 Recording Time: 6/29/2010 10:37 Sample Amount: 1.0000 Run Time (min): 5.00

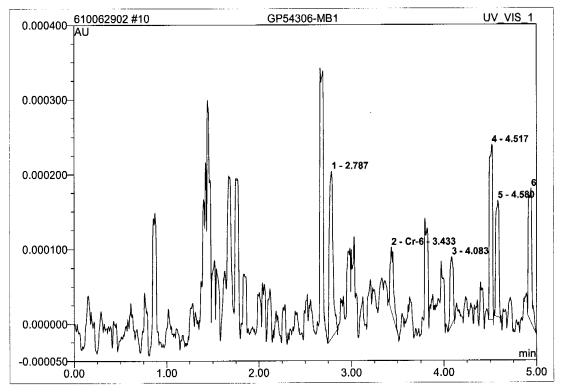


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.46	Cr-6	0.000	0.000	18.53	0.0012	вмв
2	3.88	n.a.	0.000	0.000	28.69	n.a.	BMB
3	3.96	n.a.	0.000	0.000	33.60	n.a.	BMB
4	4.62	n.a	0.000	0.000	19.18	n.a.	BMB
Total:			0.000	0.000	100.00	0.001	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



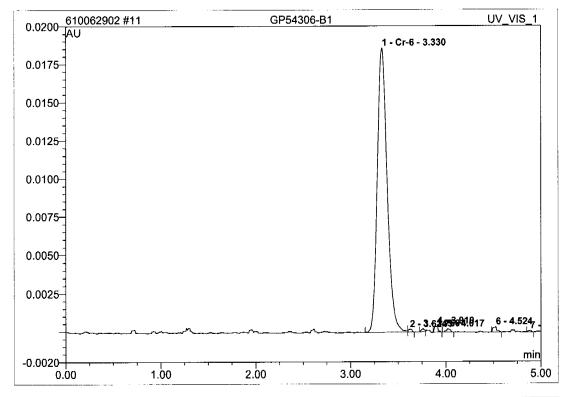
10 GP54306-MB1					
Sample Name: Vial Number:	GP54306-MB1 10	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	1.0000		
Recording Time:	6/29/2010 10:44	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.79	n.a.	0.000	0.000	24.94	n.a.	BMB
2	3.43	Cr-6	0.000	0.000	9.55	0.0012	BMB
3	4.08	n.a.	0.000	0.000	8.88	n.a.	BMB
4	4.52	n.a.	0.000	0.000	22.81	n.a.	BMB
5	4.58	n.a.	0.000	0.000	14.88	n.a.	BMB
6	4.94	n.a	0.000	0.000	18.94	n.a.	BMB
Total:			0.001	0.000	100.00	0.001	



11 GP54306-B1						
Sample Name: Vial Number:	GP54306-B1	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	4.0000			
Recording Time:	6/29/2010 10:51	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			

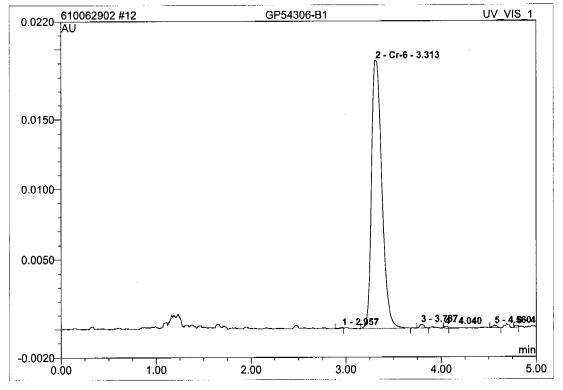


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.33	Cr-6	0.019	0.002	97.29	1.0371	ВМ
2	3.62	n.a.	0.000	0.000	0.34	n.a.	MB
3	3.76	n.a.	0.000	0.000	0.30	n.a.	BMB
4	3.91	n.a.	0.000	0.000	0.76	n.a.	BMB
5	4.02	n.a.	0.000	0.000	0.44	n.a.	BMB
6	4.52	n.a.	0.000	0.000	0.70	n.a.	BMB
7	4.89	n.a.	0.000	0.000	0.17	n.a.	BMB
Total:			0.020	0.002	100.00	1.037	



	00000000
12	GP54306-B1

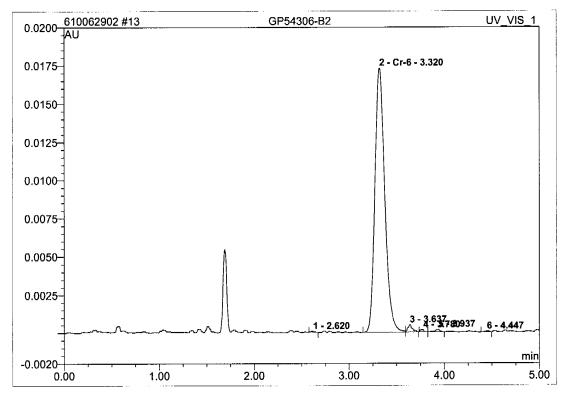
Sample Name:	GP54306-B1	Injection Volume:	25.0
Vial Number:	12	Channel:	UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	6/29/2010 10:59	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.96	n.a.	0.000	0.000	0.18	n.a.	BMB
2	3.31	Cr-6	0.019	0.002	98.41	1.1223	BMB
3	3.79	n.a.	0.000	0.000	0.58	n.a.	вмв
4	4.04	n.a.	0.000	0.000	0.20	n.a.	вмв
5	4.56	n.a.	0.000	0.000	0.43	n.a.	BMB
6	4.80	n.a.	0.000	0.000	0.21	n.a.	BMB
Total:			0.020	0.002	100.00	1.122	



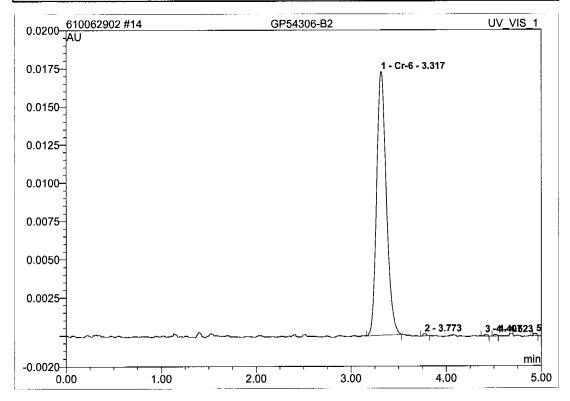
13 GP54306-B2					
Sample Name: Vial Number:	GP54306-B2 13	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	90.0000		
Recording Time:	6/29/2010 11:06	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.62	n.a.	0.000	0.000	0.18	n.a.	BMB
2	3.32	Cr-6	0.017	0.002	97.57	21.7152	BM
3	3.64	n.a.	0.000	0.000	1.25	n.a.	MB
4	3.78	n.a.	0.000	0.000	0.32	n.a.	BM
5	3.94	n.a.	0.000	0.000	0.50	n.a.	MB
6	4.45	n.a.	0.000	0.000	0.18	n.a.	BMB
Total:			0.018	0.002	100.00	21.715	



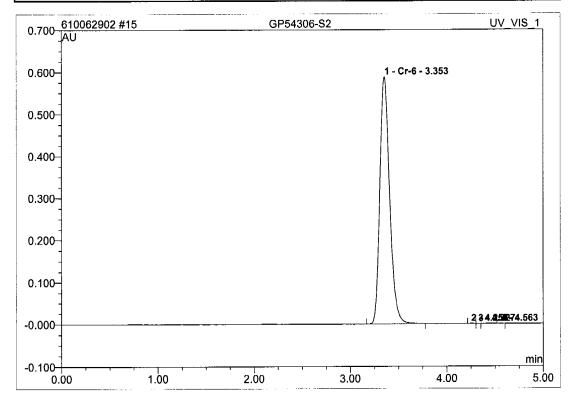
14 GP54306-B2					
Sample Name: Vial Number:	GP54306-B2 14	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	90.0000		
Recording Time: Run Time (min):	6/29/2010 11:14 5.00	Sample Weight: Sample Amount:	1.0000 1.0000		



No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Туре
	min		AU	AU*min	%	ppm	
1	3.32	Cr-6	0.017	0.002	99.01	21.2945	BMB
2	3.77	n.a.	0.000	0.000	0.29	n.a.	BMB
3	4.41	n.a.	0.000	0.000	0.23	n.a.	BMB
4	4.52	n.a.	0.000	0.000	0.20	n.a.	BMB
5	4.95	n.a.	0.000	0.000	0.28	n.a.	BMB
Total:			0.018	0.002	100.00	21.295	



15 GP54306-S2							
Sample Name: Vial Number:	GP54306-S2 15	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/29/2010 11:21	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.35	Cr-6	0.588	0.069	99.95	7.9902	BMB
2	4.25	n.a.	0.000	0.000	0.02	n.a.	вм
3	4.33	n.a.	0.000	0.000	0.01	n.a.	MB
4	4.56	n.a.	0.000	0.000	0.02	n.a.	BMB
Total:			0.589	0.069	100.00	7.990	



Recording Time:

Run Time (min):

6/29/2010 11:28

5.00

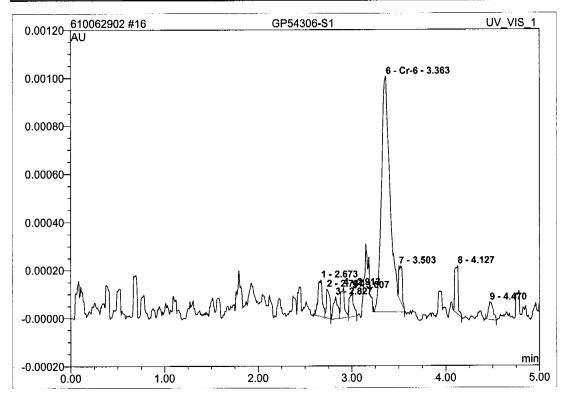
16 GP5430	6-S1		
Sample Name: Vial Number:	GP54306-S1	Injection Volume: Channel:	25.0 UV VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000

Sample Weight:

Sample Amount:

1.0000

1.0000

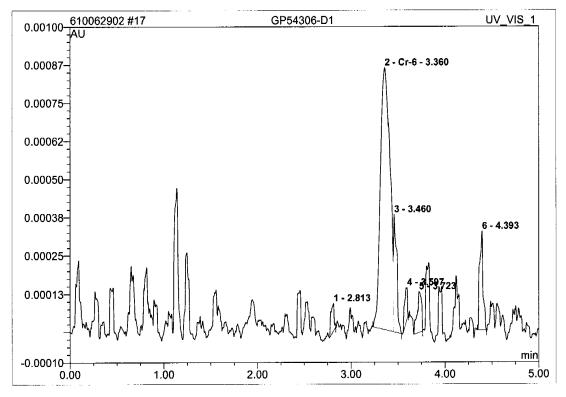


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.67	n.a.	0.000	0.000	5.37	n.a.	BM
2	2.74	n.a.	0.000	0.000	3.13	n.a.	MB
3	2.83	n.a.	0.000	0.000	3.08	n.a.	вм
4	2.91	n.a.	0.000	0.000	3.82	n.a.	M
5	3.01	n.a.	0.000	0.000	3.40	n.a.	MB
6	3.36	Cr-6	0.001	0.000	69.04	0.0131	BMB
7	3.50	n.a.	0.000	0.000	4.01	n.a.	Rd
8	4.13	n.a.	0.000	0.000	5.43	n.a.	BMB
9	4.47	n.a.	0.000	0.000	2.73	n.a.	BMB
Total:			0.002	0.000	100.00	0.013	

hexachrome/Integration



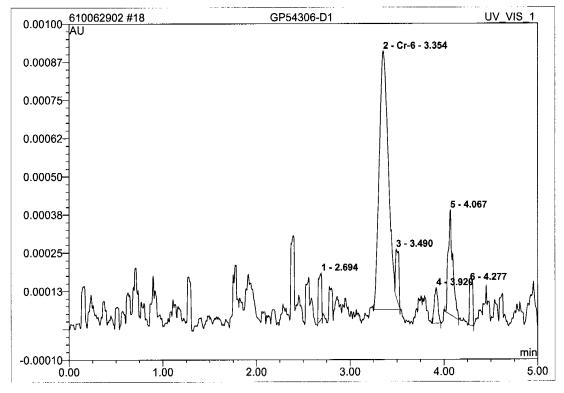
17 GP54306-D1							
Sample Name: Vial Number:	GP54306-D1 17	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time: Run Time (min):	6/29/2010 11:44 5.00	Sample Weight: Sample Amount:	1.0000 1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.81	n.a.	0.000	0.000	2.54	n.a.	вмв
2	3.36	Cr-6	0.001	0.000	69.72	0.0124	ВМ
3	3.46	n.a.	0.000	0.000	10.47	n.a.	MB
4	3.60	n.a.	0.000	0.000	2.74	n.a.	вмв
5	3.72	n.a.	0.000	0.000	5.06	n.a.	BMB
6	4.39	n.a.	0.000	0.000	9.46	n.a.	BMB
Total:			0.002	0.000	100.00	0.012	



18 GP54306-D1							
Sample Name: Vial Number:	GP54306-D1 18	Injection Volume: Channel:	25.0 UV_VI\$_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/29/2010 11:51	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				

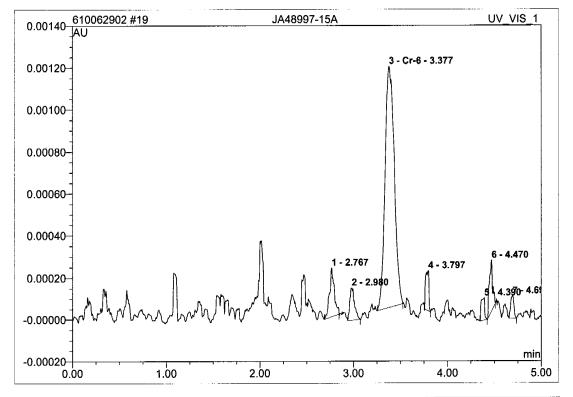


No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	2.69	n.a.	0.000	0.000	4.34	n.a.	ВМВ
2	3.35	Cr-6	0.001	0.000	69.56	0.0121	BMB
3	3.49	n.a.	0.000	0.000	4.69	n.a.	Rd
4	3.92	n.a.	0.000	0.000	3.67	n.a.	BMB
5	4.07	n.a.	0.000	0.000	13.59	n.a.	BMB
6	4.28	n.a.	0.000	0.000	4.14	n.a.	BMB
Total:			0.002	0.000	100.00	0.012	



19	JA4	899	7-1	5A
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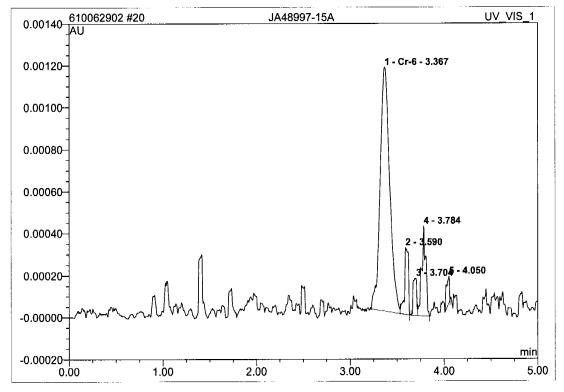
Sample Name:	JA48997-15A	Injection Volume:	25.0
Vial Number:	19	Channel:	UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 11:58	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.77	n.a.	0.000	0.000	7.63	n.a.	BMB
2	2.98	n.a.	0.000	0.000	5.05	n.a.	BMB
3	3.38	Cr-6	0.001	0.000	72.63	0.0160	BMB
4	3.80	n.a.	0.000	0.000	4.17	n.a.	BMB
5	4.39	n.a.	0.000	0.000	2.49	n.a.	BMB
6	4.47	n.a.	0.000	0.000	5.58	n.a.	BMB
7	4.69	n.a.	0.000	0.000	2.45	n.a.	BMB
Total:			0.002	0.000	100.00	0.016	



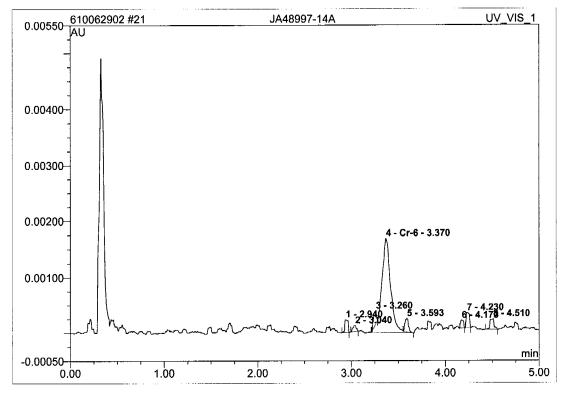
20 JA4899	7-15A		
Sample Name: Vial Number:	JA48997-15A 20	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 12:06	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.37	Cr-6	0.001	0.000	73.45	0.0167	ВМ
2	3.59	n.a.	0.000	0.000	8.18	n.a.	MB
3	3.70	n.a.	0.000	0.000	4.05	n.a.	вм
4	3.78	n.a.	0.000	0.000	11.70	n.a.	MB
5	4.05	n.a.	0.000	0.000	2.62	n.a.	BMB
Total:			0.002	0.000	100.00	0.017	



## 21 JA48997-14A Sample Name: JA48997-14A Injection Volume: 25.0 Channel: UV\_VIS\_1 Vial Number: 21 Wavelength: Sample Type: n.a. unknown Bandwidth: Control Program: hexachrome n.a. Dilution Factor: 1.0000 Quantif. Method: hexachrome Sample Weight: 1.0000 Recording Time: 6/29/2010 12:13 Sample Amount: 1.0000 Run Time (min): 5.00

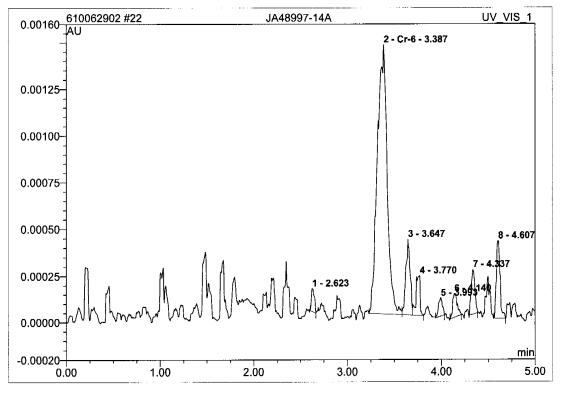


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.94	n.a.	0.000	0.000	3.89	n.a.	BMB
2	3.04	n.a.	0.000	0.000	1.81	n.a.	BMB
3	3.26	n.a.	0.000	0.000	3.83	n.a.	Ru
4	3.37	Cr-6	0.002	0.000	75.88	0.0225	BMB
5	3.59	n.a.	0.000	0.000	4.15	n.a.	Rd
6	4.17	n.a.	0.000	0.000	2.18	n.a.	BMB
7	4.23	n.a.	0.000	0.000	4.46	n.a.	BMB
8	4.51	n.a.	0.000	0.000	3.80	n.a <u>.</u>	BMB
Γotal:			0.003	0.000	100.00	0.022	

hexachrome/Integration



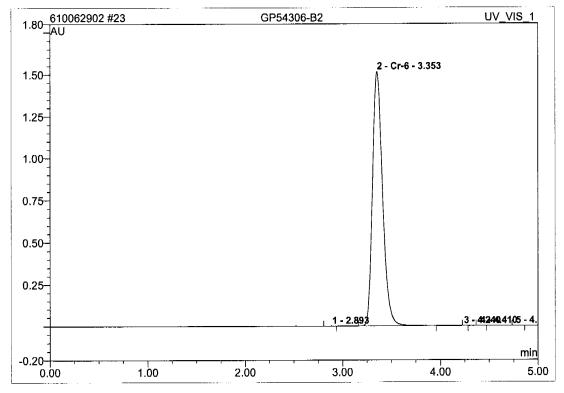
22 JA4899	7-14A		
Sample Name: Vial Number:	JA48997-14A 22	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a <i>.</i>
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 12:21	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.62	n.a.	0.000	0.000	1.82	n.a.	BMB
2	3.39	Cr-6	0.001	0.000	68.88	0.0210	вм
3	3.65	n.a.	0.000	0.000	8.38	n.a.	M
4	3.77	n.a.	0.000	0.000	4.26	n.a.	MB
5	3.99	n.a.	0.000	0.000	1.88	n.a.	BMB
6	4.14	n.a.	0.000	0.000	2.86	n.a.	BMB
7	4.34	n.a.	0.000	0.000	4.40	n.a.	BMB
8_	4.61	n.a.	0.000	0.000	7.51	n.a.	BMB
Total:			0.003	0.000	100.00	0.021	



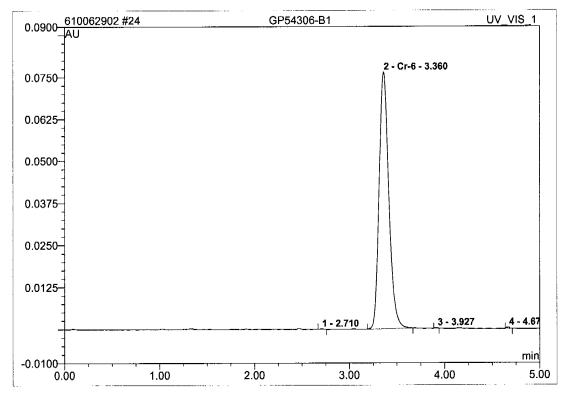
23 GP5430	6-B2		
Sample Name: Vial Number:	GP54306-B2 23	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time: Run Time (min):	6/29/2010 12:28 5.00	Sample Weight: Sample Amount:	1.0000 1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.89	n.a.	0.000	0.000	0.01	n.a.	BMB
2	3.35	Cr-6	1.515	0.182	99.98	20.9828	BMB
3	4.24	n.a.	0.000	0.000	0.00	n.a.	BMB
4	4.41	n.a.	0.000	0.000	0.00	n.a.	BMB
5	4.77	n.a.	0.000	0.000	0.01	n.a.	BMB
Total:			1.515	0.182	100.00	20.983	



### 24 GP54306-B1 Injection Volume: 25.0 Sample Name: GP54306-B1 Channel: UV\_VIS\_1 Vial Number: 24 Sample Type: unknown Wavelength: n.a. Control Program: Bandwidth: n.a. hexachrome Dilution Factor: 1.0000 Quantif. Method: hexachrome Sample Weight: 1.0000 Recording Time: 6/29/2010 12:35 1.0000 Sample Amount: Run Time (min): 5.00

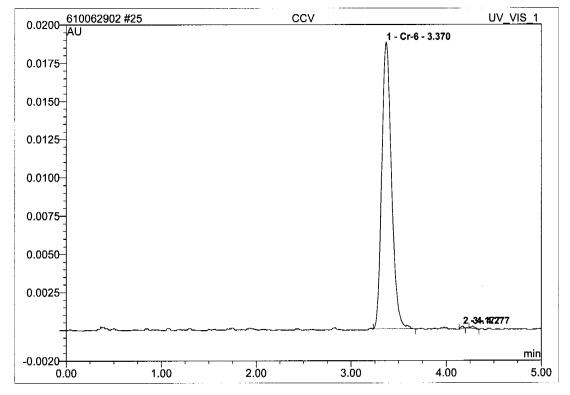


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.71	n.a.	0.000	0.000	0.06	n.a.	BMB
2	3.36	Cr-6	0.076	0.009	99.66	1.0423	BMB
3	3.93	n.a.	0.000	0.000	0.10	n.a.	BMB
4	4.68	n.a.	0.000	0.000	0.18	<u>n.a.</u>	BMB
Total:			0.077	0.009	100.00	1.042	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



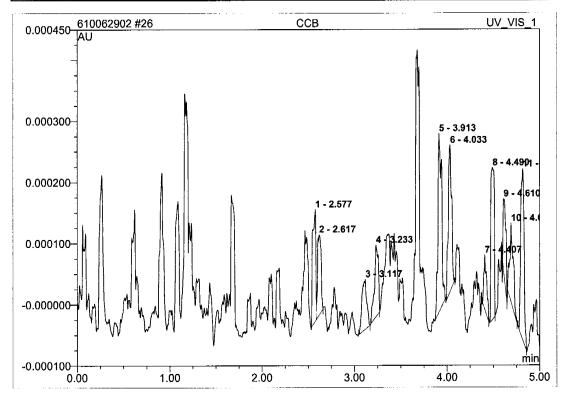
25 CCV			
Sample Name: Vial Number:	CCV 25	Injection Volume: Channel:	25.0 UV VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 12:43	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.37	Cr-6	0.019	0.002	99.39	0.2589	вмв
2	4.18	n.a.	0.000	0.000	0.27	n.a.	BMB
3	4.28	n.a.	0.000	0.000	0.34	n.a.	BMB
Total:			0.019	0.002	100.00	0.259	



26 CCB			
Sample Name: Vial Number:	CCB 26	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time: Run Time (min):	6/29/2010 12:50 5.00	Sample Weight: Sample Amount:	1.0000 1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.58	n.a.	0.000	0.000	8.46	n.a.	ВМ
2	2.62	n.a.	0.000	0.000	7.11	n.a.	MB
3	3.12	n.a.	0.000	0.000	5.95	n.a.	BMB
4	3.23	n.a.	0.000	0.000	7.13	n.a.	BMB
5	3.91	n.a.	0.000	0.000	15.96	n.a.	BMB
6	4.03	n.a.	0.000	0.000	12.18	n.a.	BMB
7	4.41	n.a.	0.000	0.000	3.98	n.a.	BMB
8	4.49	n.a.	0.000	0.000	12.47	n.a.	BMB
9	4.61	n.a.	0.000	0.000	5.62	n.a.	BMB
10	4.69	n.a.	0.000	0.000	6.88	n.a.	BMB
11	4.82	n.a.	0.000	0.000	14.25	n.a.	BMB



QC Reports:

GN39364

Operator:Chemistry Timebase:accutest Sequence:610062902

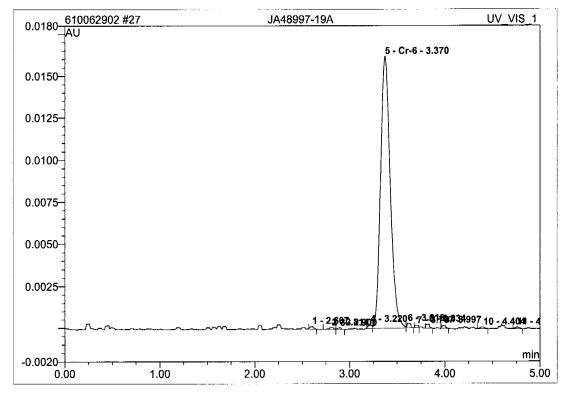
Page 27-38 6/29/2010 2:14 PM

Total:	0.002	0.000	100.00	0.000		
	1000000					

4

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

27 JA48997-19A							
Sample Name: Vial Number:	JA48997-19A 27	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/29/2010 12:58	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.61	n.a.	0.000	0.000	0.35	n.a.	вмв
2	2.81	n.a.	0.000	0.000	0.35	n.a.	ВМ
3	2.90	n.a.	0.000	0.000	0.21	n.a.	MB
4	3.22	n.a.	0.000	0.000	0.59	n.a.	ВМ
5	3.37	Cr-6	0.016	0.002	96.15	0.2221	М
6	3.61	n.a.	0.000	0.000	0.59	n.a.	MB
7	3.71	n.a.	0.000	0.000	0.28	n.a.	BMB
8	3.83	n.a.	0.000	0.000	0.55	n.a.	BMB
9	4.00	n.a.	0.000	0.000	0.40	n.a.	вмв
10	4.40	n.a.	0.000	0.000	0.29	n.a.	BMB
11	4.76	n.a.	0.000	0.000	0.24	n.a.	BMB



**QC Reports:** 

GN39364

Operator: Chemistry Timebase: accutest Sequence: 610062902

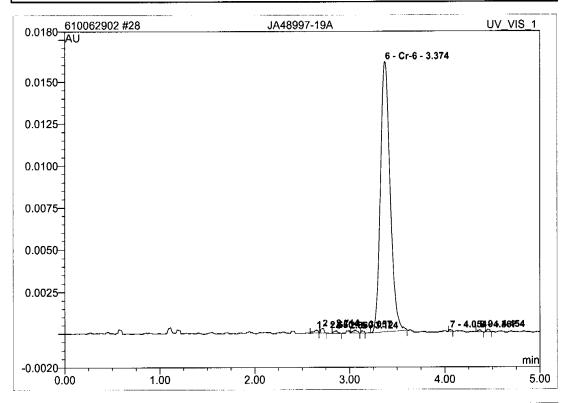
Page 29-38 6/29/2010 2:14 PM

Total:	0.018 0	.002	100.00	0.222

4

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

28 JA48997-19A						
Sample Name: Vial Number:	JA48997-19A 28	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 13:05	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.65	n.a.	0.000	0.000	0.49	n.a.	BMB
2	2.71	n.a.	0.000	0.000	0.57	n.a.	BMB
3	2.86	n.a.	0.000	0.000	0.38	n.a.	BMB
4	3.06	n.a.	0.000	0.000	0.50	n.a.	BMB
5	3.12	n.a.	0.000	0.000	0.28	n.a.	BMB
6	3.37	Cr-6	0.016	0.002	97.01	0.2207	BMB
7	4.05	n.a.	0.000	0.000	0.20	n.a.	BMB
8	4.37	n.a.	0.000	0.000	0.25	n.a.	BMB
9	4.45	n.a.	0.000	0.000	0.31	n.a.	BMB
Total:	·		0.017	0.002	100.00	0.221	



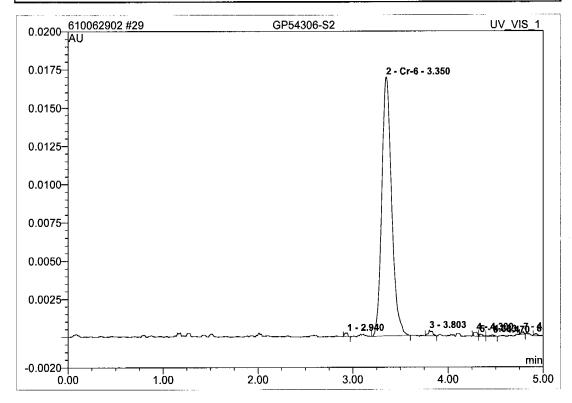
Run Time (min):

5.00

1.0000

Sample Amount:

29 GP54306-S2							
Sample Name: Vial Number:	GP54306-S2 29	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	35.0000				
Recording Time:	6/29/2010 13:12	Sample Weight:	1.0000				

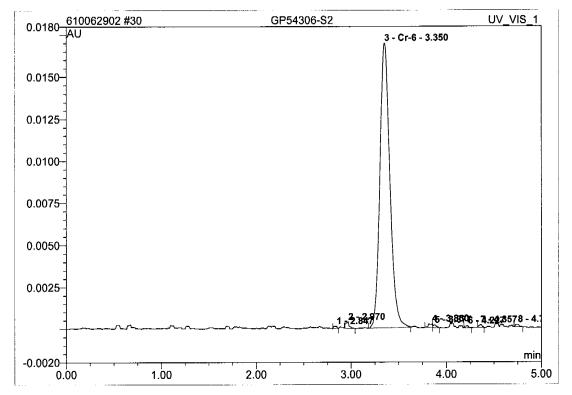


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.94	n.a.	0.000	0.000	0.47	n.a.	BMB
2	3.35	Cr-6	0.017	0.002	96.98	8.2659	BMB
3	3.80	n.a.	0.000	0.000	0.93	n.a.	BMB
4	4.30	n.a.	0.000	0.000	0.55	n.a.	BM
5	4.33	n.a.	0.000	0.000	0.27	n.a.	M
6	4.47	n.a.	0.000	0.000	0.23	n.a.	MB
7	4.79	n.a.	0.000	0.000	0.27	n.a.	BMB
8	4.93	n.a.	0.000	0.000	0.31	n.a.	BMB
Total:			0.018	0.002	100.00	8.266	

hexachrome/Integration



### 30 GP54306-S2 Injection Volume: 25.0 Sample Name: GP54306-S2 UV\_VIS\_1 Channel: Vial Number: 30 Wavelength: n.a. Sample Type: unknown Bandwidth: Control Program: hexachrome n.a. Dilution Factor: 35.0000 Quantif. Method: hexachrome Sample Weight: 1.0000 Recording Time: 6/29/2010 13:20 1.0000 Run Time (min): Sample Amount: 5.00



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.85	n.a.	0.000	0.000	0.23	n.a.	BMB
2	2.97	n.a.	0.000	0.000	0.78	n.a.	BMB
3	3.35	Cr-6	0.017	0.002	97.33	8.3818	BMB
4	3.85	n.a.	0.000	0.000	0.48	n.a.	BM
5	3.88	n.a.	0.000	0.000	0.32	n.a.	MB
6	4.23	n.a.	0.000	0.000	0.22	n.a.	BMB
7	4.36	n.a.	0.000	0.000	0.32	n.a.	BMB
8	4.75	n.a.	0.000	0.000	0.32	n.a.	BMB
Total:			0.018	0.002	100.00	8.382	

hexachrome/Integration



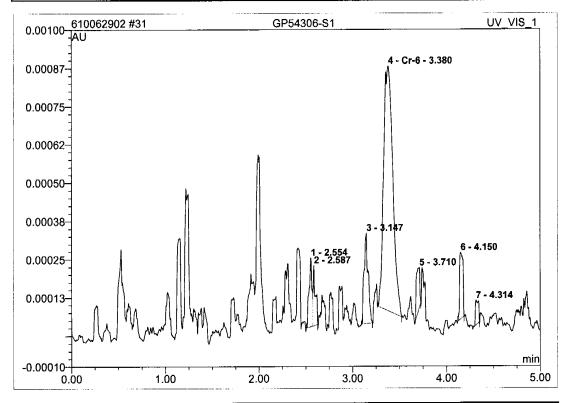
Run Time (min):

5.00

1.0000

Sample Amount:

31 GP5430	6-S1		
Sample Name:	GP54306-S1	Injection Volume:	25.0
Vial Number:	31	Channel:	UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 13:27	Sample Weight:	1.0000

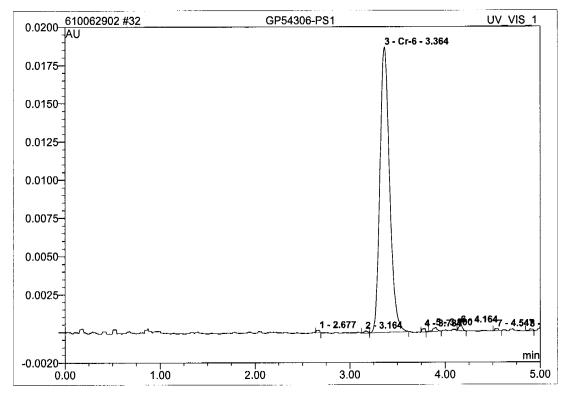


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.55	n.a.	0.000	0.000	5.93	n.a.	ВМ
2	2.59	n.a.	0.000	0.000	3.89	n.a.	MB
3	3.15	n.a.	0.000	0.000	10.53	n.a.	BMB
4	3.38	Cr-6	0.001	0.000	66.56	0.0113	BMB
5	3.71	n.a.	0.000	0.000	4.41	n.a.	BMB
6	4.15	n.a.	0.000	0.000	6.45	n.a.	BMB
7	4.31	n.a	0.000	0.000	2.22	n.a <u>.</u>	BMB
Total:			0.002	0.000	100.00	0.011	

hexachrome/Integration



32 GP5430	6-PS1		
Sample Name: Vial Number:	GP54306-PS1 33	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time: Run Time (min):	6/29/2010 13:35 5.00	Sample Weight: Sample Amount:	1.0000 1.0000

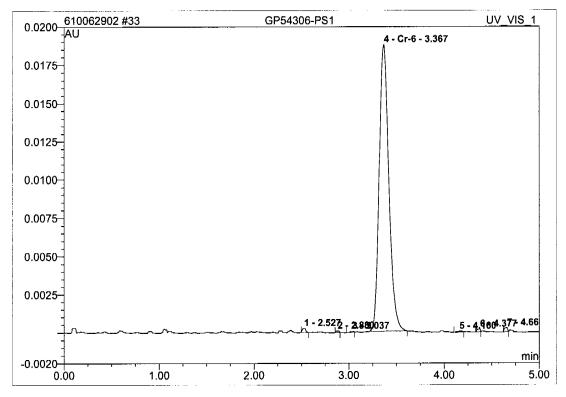


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.68	n.a.	0.000	0.000	0.30	n.a.	ВМВ
2	3.16	n.a.	0.000	0.000	0.28	n.a.	BM
3	3.36	Cr-6	0.019	0.002	97.22	1.0231	MB
4	3.78	n.a.	0.000	0.000	0.39	n.a.	BMB
5	3.90	n.a.	0.000	0.000	0.56	n.a.	BMB
6	4.16	n.a.	0.000	0.000	0.74	n.a.	BMB
7	4.55	n.a.	0.000	0.000	0.28	n.a.	BMB
8	4.89	n.a.	0.000	0.000	0.24	n.a.	BMB
Total:			0.020	0.002	100.00	1.023	

hexachrome/Integration



33 GP5430	6-PS1		
Sample Name: Vial Number:	GP54306-PS1 34	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	6/29/2010 13:42	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.53	n.a.	0.000	0.000	0.48	n.a.	BMB
2	2.88	n.a.	0.000	0.000	0.17	n.a.	BMB
3	3.04	n.a.	0.000	0.000	0.14	n.a.	BMB
4	3.37	Cr-6	0.019	0.002	98.26	1.0223	BMB
5	4.16	n.a.	0.000	0.000	0.19	n.a.	BMB
6	4.38	n.a.	0.000	0.000	0.31	n.a.	BMB
7	4.66	n.a.	0.000	0.000	0.45	n.a.	BMB
Γotal:			0.020	0.002	100.00	1.022	

hexachrome/Integration



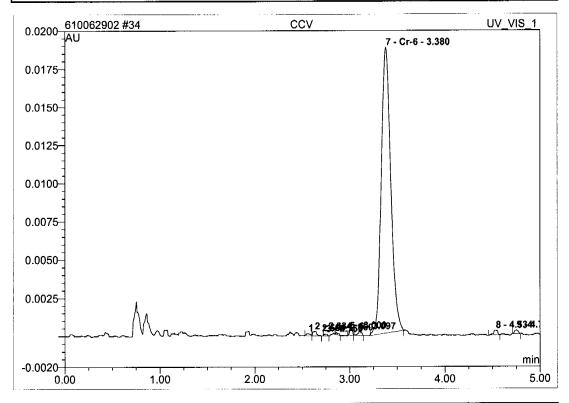
Run Time (min):

5.00

34 CCV			
Sample Name: Vial Number:	CCV 35	Injection Volume: Channel:	25.0 UV VIS 1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 13:49	Sample Weight:	1.0000

Sample Amount:

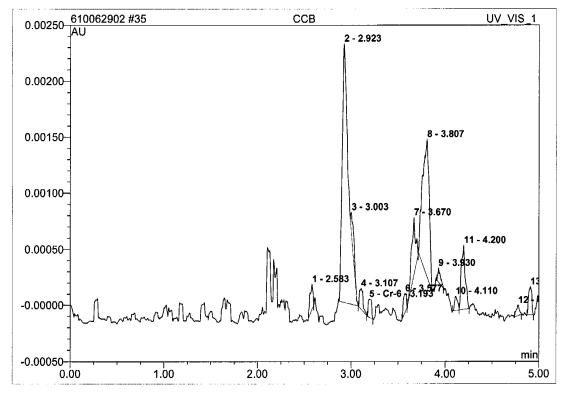
1.0000



No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	2.56	n.a.	0.000	0.000	0.28	n.a.	вм
2	2.63	n.a.	0.000	0.000	0.61	n.a.	MB
3	2.75	n.a.	0.000	0.000	0.20	n.a.	BMB
4	2.86	n.a.	0.000	0.000	0.18	n.a.	BMB
5	3.00	n.a.	0.000	0.000	0.57	n.a.	BMB
6	3.10	n.a.	0.000	0.000	0.51	n.a.	BMB
7	3.38	Cr-6	0.019	0.002	96.47	0.2518	BMB
8	4.53	n.a.	0.000	0.000	0.71	n.a.	BMB
9	4.75	n.a	0.000	0.000	0.48	n.a.	BMB
Total:			0.020	0.002	100.00	0.252	

hexachrome/Integration





No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.58	n.a.	0.000	0.000	2.08	n.a.	вмв
2	2.92	n.a.	0.002	0.000	45.70	n.a.	BMB
3	3.00	n.a.	0.000	0.000	2.53	n.a.	Rd
4	3.11	n.a.	0.000	0.000	2.02	n.a.	BMB
5	3.19	Cr-6	0.000	0.000	1.73	0.0016	BMB
6	3.58	n.a.	0.000	0.000	1.65	n.a.	BMB
7	3.67	n.a.	0.001	0.000	6.38	n.a.	BMB
8	3.81	n.a.	0.001	0.000	25.04	n.a.	BMB
9	3.93	n.a.	0.000	0.000	1.01	n.a.	BMB
10	4.11	n.a.	0.000	0.000	1.20	n.a.	ВМ
11	4.20	n.a.	0.001	0.000	7.21	n.a.	MB

hexachrome/Integration



**QC Reports:** 

GN39364

Operator:Chemistry Timebase:accutest Sequence:610062902

Page 38-38 6/29/2010 2:14 PM

12	4.78	n.a.	0.000	0.000	0.94	n.a.	вмв
13	4.91	n.a.	0.000	0.000	2.50	n.a.	BMB
Total:	,		0.006	0.000	100.00	0.002	

6.4

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

Sequence: Operator:	610062903 Chemistry	_							Page 1 of 2 Printed: 6/30/2010 10:58:28 AM	Page 1 of 2 0 10:58:28 AM
Title: Datasource: Location: Timebase: #Samples:	NJCHMICZ_local Accutest/2010\June accutest 45	2_local 010\June					Created: Last Update:	6/29/	6/29/2010 11:11:12 AM by Chemistry 6/29/2010 3:46:15 PM by Chemistry	A by Chemistry by Chemistry
	No. Name No. 1	BLANKCONF STDA STDB STDC STDD STDE CCV CCB GP54307-MB1 GP54307-B1 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2 GP54307-B2	Type Unknown Standard Standard Standard Standard Standard Unknown	Pos. Program  1 hexachrome 2 hexachrome 4 hexachrome 5 hexachrome 6 hexachrome 7 hexachrome 10 hexachrome 11 hexachrome 12 hexachrome 13 hexachrome 14 hexachrome 15 hexachrome 16 hexachrome 17 hexachrome 16 hexachrome 17 hexachrome 18 hexachrome 20 hexachrome 21 hexachrome 21 hexachrome 22 hexachrome 23 hexachrome 24 hexachrome 25 hexachrome 26 hexachrome 27 hexachrome 28 hexachrome 29 hexachrome 29 hexachrome 21 hexachrome 21 hexachrome 22 hexachrome 23 hexachrome 24 hexachrome	Method hexachrome	Status Finished	Inj. Date/Time 6/29/2010 8:37:01 AM 6/29/2010 8:44:26 AM 6/29/2010 8:51:50 AM 6/29/2010 8:59:14 AM 6/29/2010 9:06:38 AM 6/29/2010 2:21:43 PM 6/29/2010 2:21:43 PM 6/29/2010 2:36:32 PM 6/29/2010 2:51:20 PM 6/29/2010 2:51:20 PM 6/29/2010 3:06:09 PM 6/29/2010 3:06:09 PM 6/29/2010 3:35:45 PM 6/29/2010 3:35:45 PM 6/29/2010 3:35:45 PM 6/29/2010 3:50:34 PM 6/29/2010 3:50:37 PM 6/29/2010 3:50:37 PM 6/29/2010 3:50:37 PM 6/29/2010 4:05:22 PM 6/29/2010 4:05:22 PM 6/29/2010 4:05:22 PM 6/29/2010 4:27:35 PM		Dil. Factor 1,0000	
Unknown  25 CCB Unknown  26 JA48997-12A Unknown  10 January 27 JA48997-12A Unknown  10 January 27 JA48997-12A Unknown  Chromeleon © Dionex Corporation, Version 6.70 SP2a Build 1871	28 27 27 27 DEC Corpora	CCB JA48997-12A JA48997-12A ation, Version 6.70	Unknown Unknown Unknown SP2a Build 18	25 hexachrome 26 hexachrome 27 hexachrome	hexachrome hexachrome hexachrome	Finished Finished Finished	6/29/2010 4:34:59 PM 6/29/2010 4:42:23 PM 6/29/2010 4:49:48 PM	1.0000	1.0000 1.0000 1.0000	6239385



Page 2 of.2 Printed: 6/30/2010 10:58:29 AM	M by Chemistry A by Chemistry																			
Printed: 6/30/20	6/29/2010 11:11:12 AM by Chemistry 6/29/2010 3:46:15 PM by Chemistry	Dil. Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	80.0000	80.0000	15.0000	15,0000	4.0000	4.0000	4.0000	4.0000	1.0000	1.0000
	6/29 6/29	Weight	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	Created: Last Update:	Inj. Date/Time	6/29/2010 4:57:11 PM	6/29/2010 5:04:35 PM	6/29/2010 5:11:59 PM	6/29/2010 5:19:24 PM	6/29/2010 5:26:48 PM	6/29/2010 5:34:12 PM	6/29/2010 5:41:36 PM	6/29/2010 5:49:00 PM	6/29/2010 5:56:24 PM	6/29/2010 6:03:48 PM	6/29/2010 6:11:12 PM	6/29/2010 6:18:37 PM	6/29/2010 6:26:01 PM	6/29/2010 6:33:25 PM	6/29/2010 6:40:49 PM	6/29/2010 6:48:14 PM	6/29/2010 6:55:38 PM	6/29/2010 7:03:02 PM
		Status	Finished																	
		Method	hexachrome																	
		Pos. Program	28 hexachrome	29 hexachrome	30 hexachrome	31 hexachrome	32 hexachrome	33 hexachrome	34 hexachrome	35 hexachrome	36 hexachrome	37 hexachrome	38 hexachrome	39 hexachrome	40 hexachrome	41 hexachrome	42 hexachrome	43 hexachrome	44 hexachrome	45 hexachrome
		Туре	Unknown																	
_	_local J10\June	TI C	JA48997-13A	JA48997-13A	JA48997-16A	JA48997-16A	JA48997-17A	JA48997-17A	JA48997-18A	JA48997-18A	GP54307-S2	GP54307-S2	GP54307-S3	GP54307-S3	GP54307-S1	GP54307-S1	GP54307-PS1	GP54307-PS1	200	CCB
610062903 Chemistry	NJCHMIC2_local Accutestt2010\June accutest	No. Name	28	29	30	31	32	33	34	35	36	37	38	39	40	14	42	43	4	45
Sequence: Operator:	Title: Datasource: Location: Timebase:																			





Sequence: Operator:	610063001 Chemistry	3001 stry						Pr	inted: 6/30/20	Page 1 of.2 Printed: 6/30/2010 2:22:02 PM	eports
Title: Datasource: Location: Timebase: #Samples:	NJCHMI Accutest accutest 34	NJCHMIC2_local Accutest/2010\June accutest					Created: Last Update:	6/30/201	0 10:03:33 AN 0 12:18:33 PN	6/30/2010 10:03:33 AM by Chemistry 6/30/2010 12:18:33 PM by Chemistry	S:
	o N	E E	Type	Pos. Program	Method	Status	Ini. Date/Time	Weight D	Dii. Factor		
	•	BLANKCONF	Unknown	_	hexachrome	Finished	6/30/2010 10:03:38 AM	1.0000	1.0000		
	2	STDA	Standard	2 hexachrome	hexachrome	Finished	6/30/2010 10:14:11 AM	1.0000	1.0000		
	ო	STDB	Standard	3 hexachrome	hexachrome	Finished	6/30/2010 10:21:36 AM	1.0000	1.0000		
	4	STDC	Standard	4 hexachrome	hexachrome	Finished	6/30/2010 10:29:00 AM	1.0000	1.0000		
	c,	STDD	Standard	5 hexachrome	hexachrome	Finished	6/30/2010 10:36:24 AM	1.0000	1.0000		
	ဖ	STDE	Standard	6 hexachrome	hexachrome	Finished	6/30/2010 10:43:48 AM	1.0000	1.0000		
	7	200	Unknown	7 hexachrome	hexachrome	Finished	6/30/2010 10:51:12 AM	1.0000	1.0000		
	8	CCB	Unknown	8 hexachrome	hexachrome	Finished	6/30/2010 10:58:36 AM	1.0000	1.0000		
	6	GP54307-MB1CONF	Unknown	10 hexachrome	hexachrome	Finished	6/30/2010 11:06:00 AM	1.0000	1.0000		
	10	GP54307-B1CONF	Unknown	11 hexachrome	hexachrome	Finished	6/30/2010 11:13:25 AM	1.0000	4.0000		
	£	JA48997-12A	Unknown	26 hexachrome	hexachrome	Finished	6/30/2010 11:20:49 AM	1.0000	1.0000		
	12	JA48997-12A	Unknown	27 hexachrome	hexachrome	Finished	6/30/2010 11:28:13 AM	1.0000	1.0000		
	13	JA48997-13A	Unknown	28 hexachrome	hexachrome	Finished	6/30/2010 11:35:37 AM	1.0000	1.0000		
	4	JA48997-13A	Unknown	29 hexachrome	hexachrome	Finished	6/30/2010 11:43:01 AM	1.0000	1.0000		
	15	JA48997-16A	Unknown	30 hexachrome	hexachrome	Finished	6/30/2010 11:50:25 AM	1.0000	1.0000		(
	16	JA48997-16A	Unknown	31 hexachrome	hexachrome	Finished	6/30/2010 11:57:50 AM	1.0000	1.0000		GN3
	17	JA48997-17A	Unknown	32 hexachrome	hexachrome	Finished	6/30/2010 12:05:14 PM	1.0000	1.0000		3938
	18	JA48997-18A	Unknown	34 hexachrome	hexachrome	Finished	6/30/2010 12:12:38 PM	1.0000	1.0000		35
	19	GP54307-S2	Unknown	36 hexachrome	hexachrome	Finished	6/30/2010 12:20:02 PM	1.0000	80.0000		
	20	GP54307-S2	Unknown	37 hexachrome	hexachrome	Finished	6/30/2010 12:27:27 PM	1.0000	80.0000		
	21	GP54307-S3	Unknown	38 hexachrome	hexachrome	Finished	6/30/2010 12:34:51 PM	1.0000	15.0000		
	22	GP54307-S3	Unknown	39 hexachrome	hexachrome	Finished	6/30/2010 12:42:15 PM	1.0000	15.0000	(	
	23	GP54307-S1	Unknown	40 hexachrome	hexachrome	Finished	6/30/2010 12:49:39 PM	1.0000	4.0000	0	$\sim$
	24	GP54307-S1	Unknown	41 hexachrome	hexachrome	Finished	6/30/2010 12:57:04 PM	1.0000	4.0000	1	
	25	>OC	Unknown	42 hexachrome	hexachrome	Finished	6/30/2010 1:04:28 PM	1.0000	1.0000	) (	2
	56	CCB	Unknown	43 hexachrome	hexachrome	Finished	6/30/2010 1:11:52 PM	1.0000	1.0000	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	Cs
	27	GP54307-PS1	Unknown	44 hexachrome	hexachrome	Finished	6/30/2010 1:19:16 PM	1.0000	4.0000	) <sup>z</sup>	ر م
										, { =	<u>ک</u> رد
	,		:							5 >	5





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Page 2 of 2 Printed: 6/30/2010 2:22:02 PM	6/30/2010 10:03:33 AM by Chemistry 6/30/2010 12:18:33 PM by Chemistry	Weight Dil. Factor	900 4.0000	5.0000	000 5.0000	000 5.0000	000 5.0000	1.0000	1.0000
	6/3	Weig	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	Created: Last Update:	Inj. Date/Time	6/30/2010 1:26:40 PM	6/30/2010 1:34:05 PM	6/30/2010 1:41:29 PM	6/30/2010 1:48:53 PM	6/30/2010 1:56:17 PM	6/30/2010 2:03:42 PM	6/30/2010 2:11:06 PM
		Status	Finished						
		Method	hexachrome						
		Pos. Program	45 hexachrome	46 hexachrome	46 hexachrome	47 hexachrome	47 hexachrome	46 hexachrome	47 hexachrome
		Туре	Unknown						
3001 istry	NJCHMIC2_local Accutest/2010\June accutest	ame	GP54307-PS1	JA48997-17A	JA48997-17A	JA48997-18A	JA48997-18A	CCV	CCB
610063001 Chemistry	NJCHMII Accutest accutest 34	No. Name	28	58	30	33	32	33	发
Sequence: Operator:	Title: Datasource: Location: Timebase: #Samples:								

### တ

6.5

### ACCUTEST LABS DAYTON, NJ

# 3060A/7199 POST-DIGEST SPIKE LEVEL CALCULATION SPREADSHEET

NOTE: Always dilute post-spike first, then take a 20 ml aliquot of the diluted post-spike and add the spike amount.

								fv = 20  m	sample	in 5 ml	10 ppm abs	0.50 ml
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE! #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE! #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!   #VALUE!   #VALUE!	#VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		ianta/#		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!   #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		i3NTV#		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE! #VALUE! #VALUE!	#VALUE!	#VALUE!		#VALUE!		
calculated spike	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!  #VALUE!	#VALUE!		#VALUE!		
default spike?	mg/kg	l/gm	sample.	sample.	pe nsed	esn	pepeeu	solution	mg/kg.	Ξ	100 ml	Sample ID
Use calculated or	Amount in	curve in	dilution of	Dilution to on dilution of dilution of	Dilution to	Dilution to	Dilution	of 100 ppm Dilution	Results in	Digested in   Weight in 20   Results in	Digested in	
	Spike	back on	spike on	ppm to spike spike on	Actual	Suggested		ml to add			Weight in g	
	Calculated	ppm to Est. Read- Calculated	ppm to	ml of 100				Amount in			PS Aliquot	
			of 100	Suggested								
			Actual ml									

### 3060A/7196A INSOLUBLE SPIKE

CALCULATION

To enter	for 7199	in mg/l	22.36386	21.39851	i0/AIQ#	#DIV/0i	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	Amount	Spiked	866.816	855.941	#DIV/0i	i0//\lG#	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	Weight of	Sample	2.58	2.5							
	Weight of	PbCr04	0.0139	0.0133							

S2	8
ഗ	α

### Hexavalent Chromium pH Adjustment Log

Method:	CIMOAC	20604	/7100
Method:	5 VV 846	JUDUA	V / 199

Method: 344046 3000A	W/199	Digestion Date:	8-25-1
pH adj. start time:	13:45	pH adj. Date:	6/29/2010
pH adj. end time:	4:53	GN Batch ID:	6/39/385

	pH adj. end time:		4:53		GN Batch ID:	<u> </u>
	GP54307 Sample ID	Sample	pH after	Final Volume	Spike	_
	Sample <sup>l</sup> ID ` \	Weight in g	HNO3	(ml)	Amounts	Comments
	CCV		9.32	100	5m1	5 pph Ultra
	ccv			, v	4	
	ccv					
	ccv		<u>-</u>			
	CCB		9.37	100		
	CCB					
	ССВ					
	ССВ					
	MS (SOI) JA48997-11A	2.58	9.43	$ \varpi $	<u>                                      </u>	100 pph Alvoluta
	MS (Insol.)	2.58	9.51	1	0.0139	Pb Cr04
	DUP V	2.49	9.06		,	
	SB (Sol)		9.31		M	loopph Abrolute
	SB (Insol)		9.43		0.0133	76 Cr 04
	мв		9.37			
	1JA48997-11A	2.55	9.57			
<b>J</b> ?	2	2.58	9.43		3175 K	loopph Abrolute
	3 TA48997-12A	2.55	9.36			
	4   13	2.48	9.41			`
	5 16	2.53	4.40			
	6 17	2.43	9.38			
	7 18	2.48	9.37			
	8 RS ( (IA)	2.55	9.37		150mld	10th Hosoute
	9			7	MSm	Sample 120m
	10				,	
	11					
	12					
	13					
	14.					
	15					
	16		,			
	17					
	18					
	19			×		
	20				***	
	SB (Insol)		1			dilution
	MS (Insoi.)			1		dilution
	. (,					_
			1			
		l	1			

Reagent Reference Information - refer to attached reagent reference information page(s). [1000000 ug/g x Insoluble spike wt(g) x 52/323.2]/ms sample wt(g) = Insoluble spike amount of PbCrO4

Form: GN-067A



### Hexavalent Chromium Digestion Temperature Log Method: SW846 3060A

MIM ACCUTEST.

Record the temperature at the beginning, during, and at the end of each digestion.

Digestion Batch ID	Description	Time	Temp. in deg. C Hot Plate #1	lemp. in deg. C Hot Plate #1	I emp. in deg. C Hot Plate # 8	Femp. in deg. C Hot Plate # <b>≼</b>
Chyrgon	CASTRON Starting Time 112 45	11245			-5b	45
	Time 1	22 (5		-	96-	36
	Ending Time 1744	アンダ			25	-56
				-		
	Starting Time					
	Time 1					
	Ending Time					
	Starting Time					
	Time 1					
	Ending Time					

Analyst

Rev. Date:5/8/06 Form: GN-074

GN39241

## Sample Homogenization Log

					42							GN3	9385			
Comments					nd brown dry w/Mary			-		00) No (4pc		$\rightarrow$				
Homog. Device (blender, wand)	Spotula			S7416)	(1) Ft) 8 - 85					ر کلوملایا	Jest 1					
Sample Description (Soil, Sludge, etc.)	bour sett sant	redich brown W store	brown wet vand	but bount in ul sta	aby bout up to	12th bows W( stours	pro brail seed		7	losses bear in the many in	day dark gray w/ s	-				
fnitials	2	-			ja .							<u>, )</u>				
Homogenization Date	0 -54-9									 an lan		->				
from bottle #	1			}							-					
Accutest Sample ID	JA48999-157	\$	(g)	JA4.59999-11.A	7	2)	ગ	F	(م)	JAGBOY-IA	3	> 7				

Form: GN195-01 Rev. Date: 5/5/06







GN/GP Batch ID: 6754306, 54307, 5430 And Information Log - XCRA71901---

### Reagent Information Log - XCRA7199 (soil 3060A/7199)

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium,		
1000 mg/L Stock	1/1/2013	Absolute Grade Lot # 012010
Calibration Checks: Hexavalent Chromium,		
1000 mg/L Stock	7/31/2015	Ultra lot # J00509
B. W		
Spiking Solution Source	1/1/2013	Absolute Grade Lot # 012010
Lead Chromate (Insoluble Hexavalent		
Chromium Spike)	<u>NA</u>	Sigma Aldrich Lot # 09921LC
Digestion Solution	7-18-	OGNE 1-25331xck
Magnesium Chloride, Anhydrous	NA	Alfa Aesar Lot # I02T070
Phosphate Buffer Solution	12-8-15	GNE 1-25218XCMA
	olo al	C - OFOLK Vocas
5.0 M Nitric Acid	199910	6 NEW 25364-X CRA
Post-Columii (%)	7/2)	<b>/</b>
Reagent (Diphenylcarbazide Solution)	01061011	DNEW 25,398 ICKCR
Eluent	<u>alule</u>	6NE 6-25291-1CXCR
Buffer Solution	lala-laoi	Gre(0.25350-1CKCR
	- (50)	
XCR7199 Dilution Water	12/3/2010	6NEW-25297-10XCR
Filter	NA	FO CAP4 P66
Teflon Chips	JA	0919120
	7/10/	1 - 10-25413-108-10
Digestate When Jolution	(118/3010	the 600000 in a
()	1 '	

Form: GN087A-21 Rev. Date: 2/18/10





### Hexa valent Chromium pH Adjustment Log Meth od: SW846 3060A/7199

pH adj.	start time:	8:07
pH adj.	erd time:	830

pH adjustment Date:	6/39/19010
GN Batch ID:	70×39345

	Sample		Final	<u></u>	
	Weight in	pH after	Volume		
Sample ID	g	HNO3	(ml)	Comments	Spike Info.
Calibration Bank	NA	929	10:-		
0.005 mg/l slandard	NA	9.43	1	I ADM Absorbate	0.50 ml of 1.00 mg/l
0.050 mg/L standard	NA	() 23		7	5.00 ml of 1.00 mg/l
0.100 mg/l standard	NA	9.35		1000 Abrolute	1.00 ml of 10.0 mg/l
0.500 mg/l standard	NA	933	V		5.0 ml of 10.0 mg/l
			<u> </u>		
			1		
			1		

Reagent Reference Information - refer to attached reagent reference information page(s).  $\frac{1000000 \text{ ug/g} \times \text{Insoluble spike wt(g)} \times 52/323.2}{\text{Insoluble spike amount of PbCrO4} }$ 

Form: GN-068A Rev. Date: 05/08/06





## GENERAL CHEMISTRY STANDARD PREPARATION LOG Product;XCRA 1100(Sci.)

GN or GP Number:

J-ass							Final Conc			
			Stock volume or		•		of			
Intermediate	Stock used to	Stock	weight used with	Balance or		Final	Intermediate Expiration	Expiration		
Standard Description	prepare standard	concentration	units	Autopipet ID (*)	Diluent	Volume	(l/gm)	Date	Analyst	Date
10.0 mg/L Absolute	Absolute 012010	1000 mg/L	1.0 mL	А	Dilution	100 mL	10.0 mg/L	1/20/2013	Ą	C117X11
1.0 mg/L Absolute	10.0 mg/L Absolute	10.0 mg/L	10.0 mL	А	Water	100 mL	1.0 mg/L	1/20/2013	<b>\</b> -	
										.,
5.0 mg/L Ultra	Ultra J00509	1000 mg/L	1.0 mL	A	DI H2O	200 mL	5.0 mg/L	7/31/2015	>	
	Intermediate or Stock	П	Intermediate or							
49 ( <b>4</b> 1)	used to prepare	or Stock	Stock volume	Balance or		Final	of Standard	Expiration		
Standard Description	standard	concentration	used in ml	Autopipet ID (*)	Diluent	Volume		Date	Analyst	Date
0.005 mg/L	1.0 mg/L Absolute	1.0 mg/L	0.50 mŁ	А	Digestion	100 mL	0.005	01740	T	1193115
0.050 mg/L	1.0 mg/L Absolute	1.0 mg/L	5.0 mL	У	solution	100 mL	0.05			-
0.100 mg/L	10 mg/L Absolute	10.0 mg/L	1.0 mL	Y	and DI	100 mL	1.0		٠٠٠٠٠	an Japan S
0.500 mg/L	10 mg/L Absolute	10.0 mg/L	5.0 mL	А	Water	100 mL	0.5			
								·		
or 4000										
				¥	A					

\* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01 Rev. Date: 1/13/09





### Hexavalent Chromium pH Adjustment Log

Method: SW846 3060A/7199

pH adj. start time: pH adj. end time:

pH adjustment Date: <u>30 10</u>

GN Batch ID:

Sample		Final		
	pH after			Spike Info
			Comments	Spike Info.
		100		
NA	9.42		Ippm Abs	0.50 ml of 1.00 mg/l
NA			<u> </u>	5.00 ml of 1.00 mg/l
NA			10ppm Blos	1.00 ml of 10.0 mg/l
NA	9.46	4	<u> </u>	5.0 ml of 10.0 mg/l
<del>-</del>		ļ		
	<del>                                     </del>			
_				
		<del>                                     </del>		
	-			
	+			g the second and a
		<b>-</b>		
		<del> </del>		
<u> </u>		ļ		
		-		
_	-			
- 1				
	Weight in g NA NA NA NA	Weight in gH after g HNO3  NA 9.45  NA 9.34  NA 9.46  NA 9.46  NA 9.46	Weight in gH after HNO3 (ml)  NA 9.45 100  NA 9.34 NA 9.34 NA 9.46  NA 9.46	Weight in pH after HNO3 (ml) Comments  NA 9.45 100  NA 9.43 IPPM PIDS  NA 9.34 IOPPM PIDS  NA 9.40 IOPPM PIDS  NA 9.40 IOPPM PIDS

Reagent Reference Information - refer to attached reagent reference information page(s). {1000000 ug/g x Insoluble spike wt(g) x 52/323.2}/ms sample wt(g) = Insoluble spike amount of PbCrO4

Form: GN-068A Rev. Date: 05/08/06





# GENERAL CHEMISTRY STANDARD PREPARATION LOG Product;XCRA 7199(Scil)

GN or GP Number:

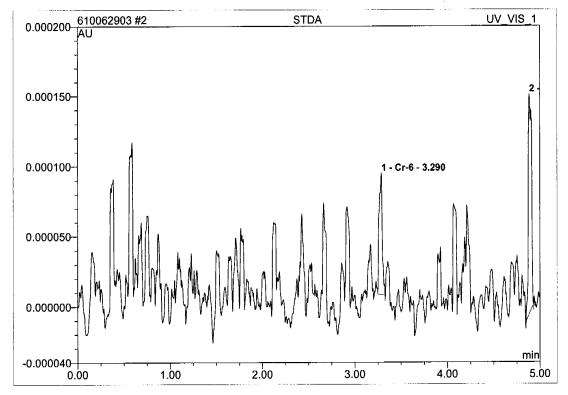
_				 	_			_	_				_	_	_	 	_	 	_
	Date	(1881)	-				. —	Date	(n/92/10)	1   1			•						
	Analyst	, , , ) C	_		į,			Analyst	70	_		, j							
	Expiration Date	1/20/2013	1/20/2013		7/31/2015		Expiration	Date	(1/2×1/1)	دام! ا									
Final Conc.	Intermediate Expiration (mg/l) Date	10.0 mg/L	1.0 mg/L		5.0 mg/L	Final Conc.	of Standard	(mg/l)	0.005	0.05	1.0	9.0							
	Final Volume	100 mL	100 mL		200 mL		Final	Volume	100 mL	100 mL	100 mL	100 mL							
	Difuent	Dilution	Water		DI H20			Diluent	Digestion	solution	and DI	Water							
	Balance or Autopipet ID (*)	A	A		A		Balance or	Autopipet ID (*)	A	A	A	A							
20 cm: loss slower	weight used with	1.0 mL	10.0 mL		1.0 mL	Intermediate or	Stock volume	used in mf	0.50 mL	5.0 mL	1.0 mL	5.0 mL							
	Stock concentration	1000 mg/L	10.0 mg/L		1000 mg/L	Intermediate	or Stock	concentration	1.0 mg/L	1.0 mg/L	لے								
	Stock used to prepare standard	Absolute 012010	10.0 mg/L Absolute		Ultra J00509	Intermediate or Stock Intermediate	used to prepare	standard	1.0 mg/L Absolute	1.0 mg/L Absolute	10 mg/L Absolute	10 mg/L Absolute							
	Intermediate Standard Description	10.0 mg/L Absolute	1.0 mg/L Absolute		5.0 mg/L Ultra			Standard Description	0.005 mg/L	0.050 mg/L	0.100 mg/L								

\* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

Form: GN121-01 Rev. Date: 1/13/09



2 STDA			
Sample Name: Vial Number:	STDA 2	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 8:44	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

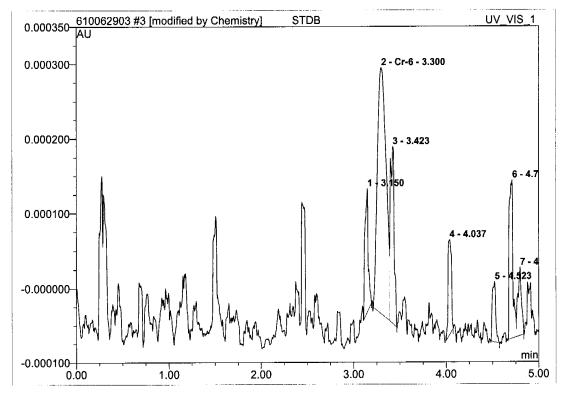


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.29	Cr-6	0.000	0.000	34.65	0.0012	BMB
2	4.89	n.a.	0.000	0.000	65.35	n.a.	BMB
Total:			0.000	0.000	100.00	0.001	





3 STDB			
Sample Name: Vial Number:	STDB 3	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 8:51	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

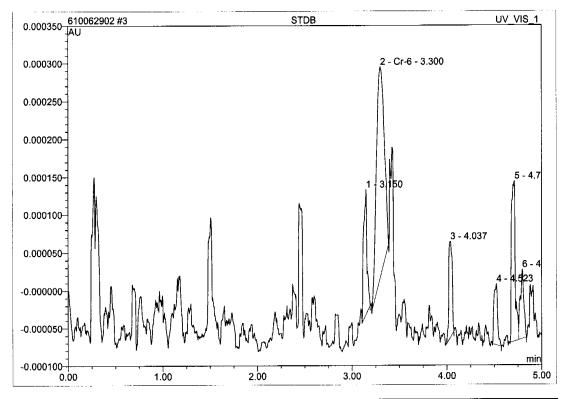


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.15	n.a.	0.000	0.000	8.97	n.a.	BMB
2	3.30	Cr-6	0.000	0.000	46.86	0.0049	BM *
3	3.42	n.a.	0.000	0.000	14.64	n.a.	MB*
4	4.04	n.a.	0.000	0.000	6.85	n.a.	BMB
5	4.52	n.a.	0.000	0.000	4.61	n.a.	BMB
6	4.71	n.a.	0.000	0.000	12.82	n.a.	ВМ
7	4.80	n.a.	0.000	0.000	5.25	n.a.	MB
Total:			0.001	0.000	100.00	0.005	

hexachrome/Integration



3 STDB			
Sample Name: Vial Number:	STDB 3	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 8:51	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



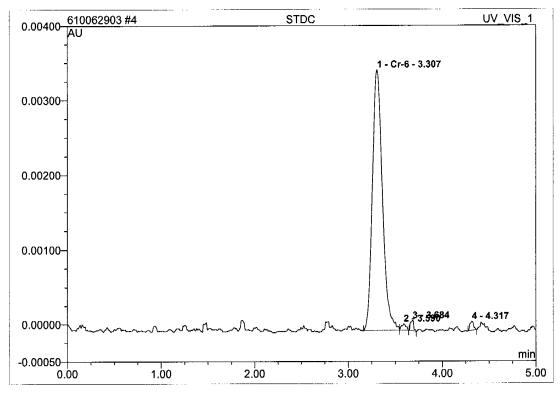
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.15	n.a.	0.000	0.000	12.26	n.a.	BMB
2	3.30	Cr-6	0.000	0.000	47.39	0.0041	BMB
3	4.04	n.a.	0.000	0.000	9.36	n.a.	BMB
4	4.52	n.a.	0.000	0.000	6.30	n.a.	BMB
5	4.71	n.a.	0.000	0.000	17.51	n.a.	вм
6	4.80	n.a.	0.000	0.000	7.17	n.a.	MB
Total:			0.001	0.000	100.00	0.004	

Sp 60 6/29/2010

hexachrome/Integration



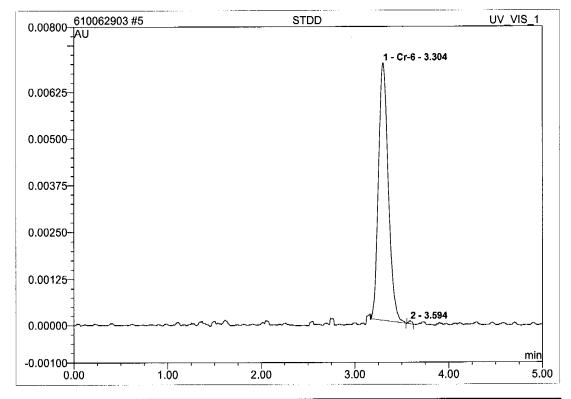
4 STDC			
Sample Name: Vial Number:	STDC 4	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 8:59	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Туре
1	3.31	Cr-6	0.003	0.000	96.40	0.0509	вм
2	3.59	n.a.	0.000	0.000	1.10	n.a.	MB
3	3.68	n.a.	0.000	0.000	1.27	n.a.	BMB
4	4.32	n.a.	0.000	0.000	1.23	n.a.	BMB
Total:			0.004	0.000	100.00	0.051	



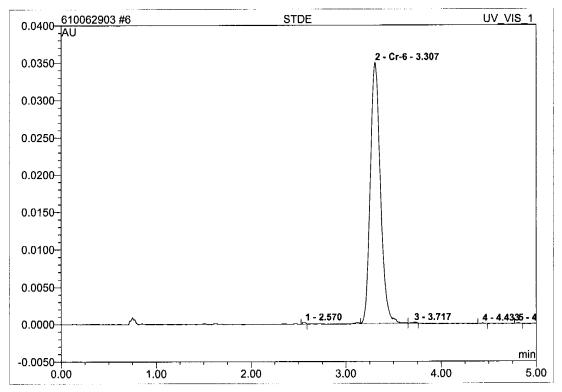
5 STDD			
Sample Name: Vial Number:	STDD 5	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 9:06	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.30	Cr-6	0.007	0.001	99.61	0.0976	вмв
2	3.59	n.a <u>.</u>	0.000	0.000	0.39	n.a.	BMB
Total:			0.007	0.001	100.00	0.098	



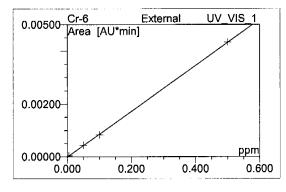
6 STDE			
Sample Name:	STDE	Injection Volume:	25.0
Vial Number:	6	Channel:	UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 9:14	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

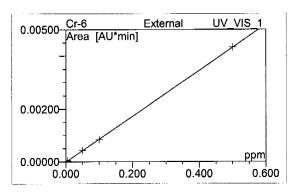


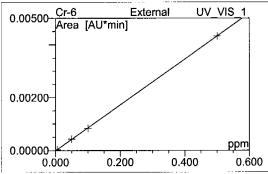
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.57	n.a.	0.000	0.000	0.20	n.a.	ВМВ
2	3.31	Cr-6	0.035	0.004	99.43	0.5004	BM
3	3.72	n.a.	0.000	0.000	0.22	n.a.	MB
4	4.43	n.a.	0.000	0.000	0.07	n.a.	BMB
5	4.81	n.a.	0.000	0.000	0.07	n.a.	BMB
Total:		- "	0.035	0.004	100.00	0.500	

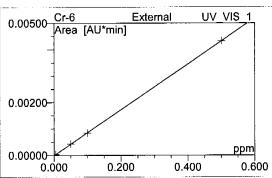


6 STDE			
Sample Name: Vial Number:	STDE 6	Injection Volume: Channel:	25.0 UV VIS 1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time: Run Time (min):	6/29/2010 9:14 5.00	Sample Weight: Sample Amount:	1.0000 1.0000







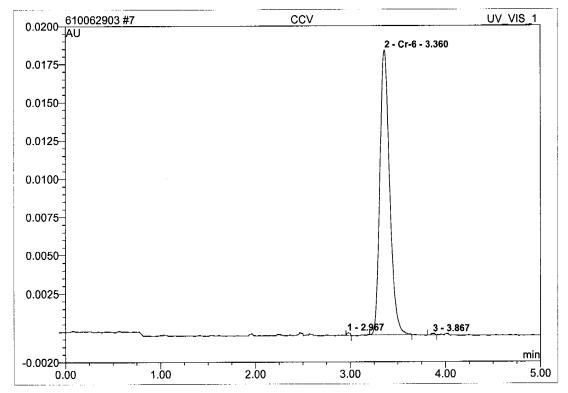


No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det.	Offset	Slope	Curve
1	2.57	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.31	Cr-6	LOff	5	99.9954	0.0000	0.0087	0.0000
3	3.72	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	4.43	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	4.81	n,a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Average:					99.9954	0.0000	0.0087	0.0000

hexachrome/Calibration(Batch)



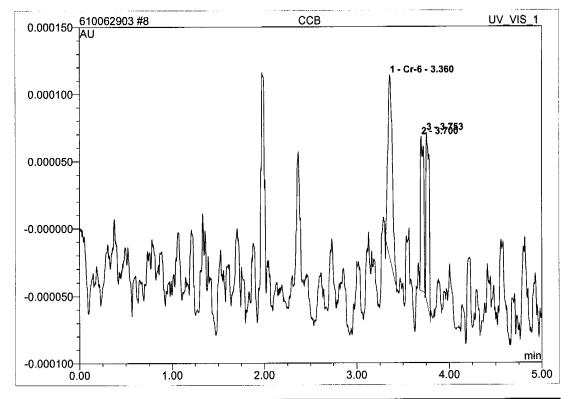
7 CCV			
Sample Name: Vial Number:	CCV 7	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 14:21	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



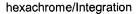
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.97	n.a.	0.000	0.000	0.32	n.a.	BMB
2	3.36	Cr-6	0.019	0.002	99.48	0.2564	BMB
3	3.87	n.a	0.000	0.000	0.19_	n.a.	ВМВ
Total:			0.019	0.002	100.00	0.256	



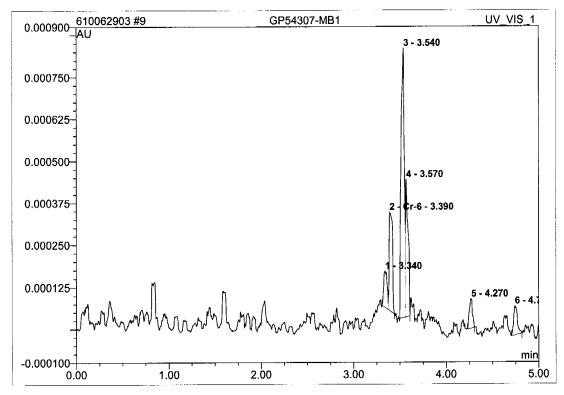
8 CCB			
Sample Name: Vial Number:	CCB 8	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 14:29	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.36	Cr-6	0.000	0.000	45.59	0.0017	BMB
2	3.70	n.a.	0.000	0.000	25.93	n.a.	BMB
3	3.75	n.a.	0.000	0.000	28.47	n.a.	BMB
Total:			0.000	0.000	100.00	0.002	



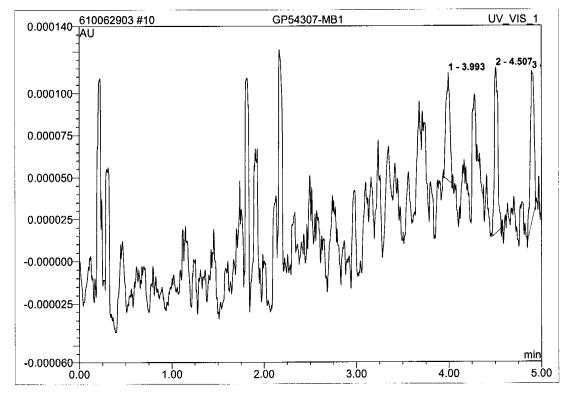
9 GP54307-MB1							
Sample Name: Vial Number:	GP54307-MB1 9	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/29/2010 14:36	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.34	n.a.	0.000	0.000	6.71	n.a.	BM
2	3.39	Cr-6	0.000	0.000	17.57	0.0022	MB
3	3.54	n.a.	0.001	0.000	45.83	n.a.	ВМ
4	3.57	n.a.	0.000	0.000	19.07	n.a.	MB
5	4.27	n.a.	0.000	0.000	4.98	n.a.	BMB
6	4.74	n.a.	0.000	0.000	5.83	n.a.	BMB
Total:			0.002	0.000	100.00	0.002	



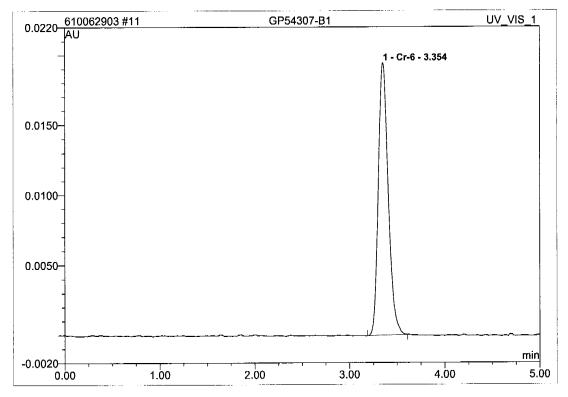
10 GP54307-MB1							
Sample Name: Vial Number:	GP54307-MB1 10	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/29/2010 14:43	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.99	n.a.	0.000	0.000	26.57	n.a.	BMB
2	4.51	n.a.	0.000	0.000	37.69	n.a.	BMB
3	4.90	n.a.	0.000	0.000	35.74	n.a.	BMB
Total:			0.000	0.000	100.00	0.000	



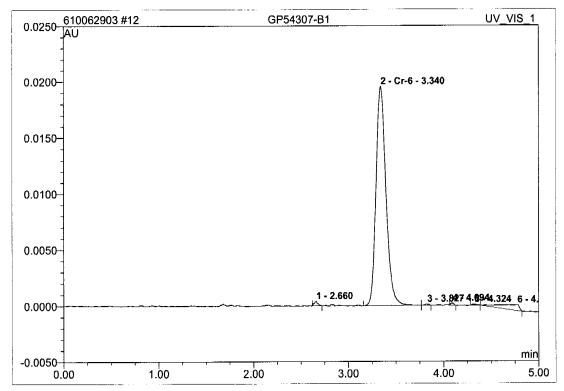
11 GP54307-B1						
Sample Name: Vial Number:	GP54307-B1	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	4.0000			
Recording Time:	6/29/2010 14:51	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.35	Cr-6	0.019	0.002	100.00	1.0900	BMB
Total:			0.019	0.002	100.00	1.090	



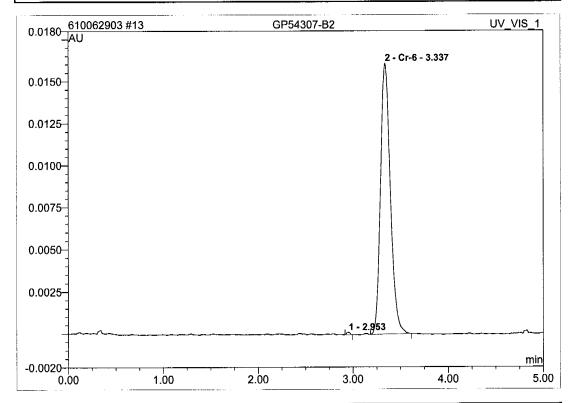
12 GP5430	7-B1		
Sample Name: Vial Number:	GP54307-B1 12	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	6/29/2010 14:58	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



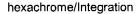
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.66	n.a.	0.000	0.000	0.69	n.a.	BMB
2	3.34	Cr-6	0.020	0.002	93.86	1.0980	ВМ
3	3.83	n.a.	0.000	0.000	0.20	n.a.	MB
4	4.09	n.a.	0.000	0.000	0.30	n.a.	BMB
5	4.32	n.a.	0.000	0.000	0.22	n.a.	BMB
6	4.77	n.a	0.001	0.000	4.73	n.a.	BMB
Γotal:			0.021	0.003	100.00	1.098	



13 GP54307-B2						
Sample Name: Vial Number:	GP54307-B2	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	90.0000			
Recording Time:	6/29/2010 15:06	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			

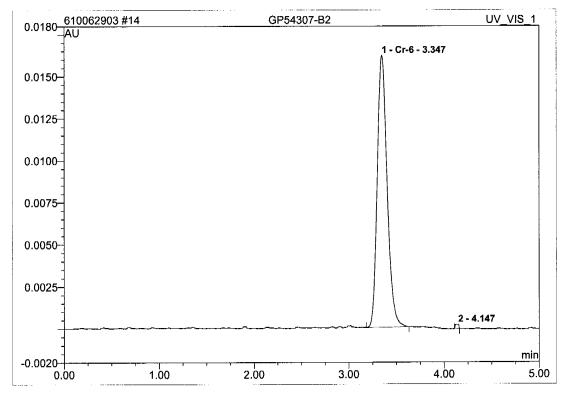


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.95	n.a.	0.000	0.000	0.30	n.a.	BMB
2	3.34	Cr-6	0.016	0.002	99.70	20.2164	BMB
Total:			0.016	0.002	100.00	20.216	





14 GP54307-B2							
Sample Name: Vial Number:	GP54307-B2 14	Injection Volume: Channel:	25.0 UV_VI\$_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	90.0000				
Recording Time:	6/29/2010 15:13	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.35	Cr-6	0.016	0.002	99.45	20.3602	BMB
2	4.15	n.a.	0.000	0.000	0.55	n. <u>a.</u>	BMB
Total:			0.016	0.002	100.00	20.360	



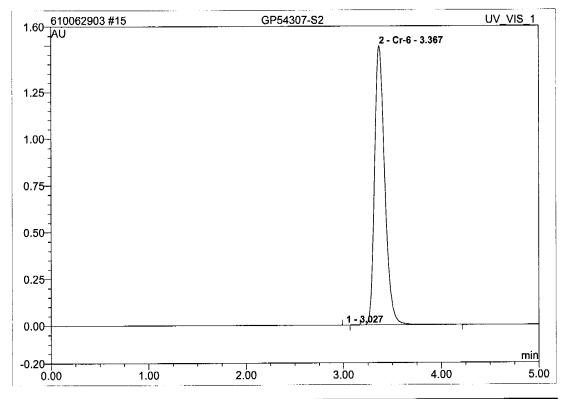
Run Time (min):

5.00

Sample Amount:

1.0000

15 GP54307-S2						
Sample Name: Vial Number:	GP54307-S2 15	Injection Volume: Channel:	25.0 UV VIS 1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 15:20	Sample Weight:	1.0000			
		~	4 4 4 4 4 4			



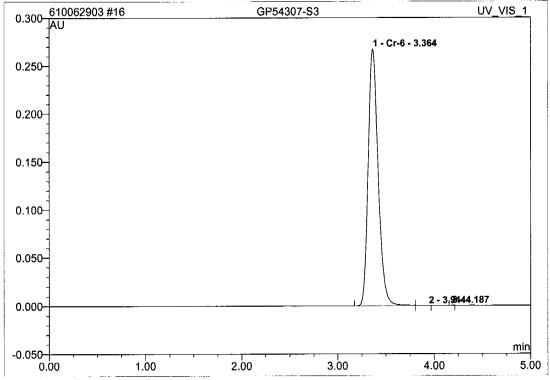
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.03	n.a.	0.000	0.000	0.00	n.a.	BMB
2	3.37	Cr-6	1.495	0.181	100.00	20.8723	BMB
Total:			1.495	0.181	100.00	20.872	

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6.5

16 GP54307-S3						
Sample Name: Vial Number:	GP54307-S3 16	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 15:28	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



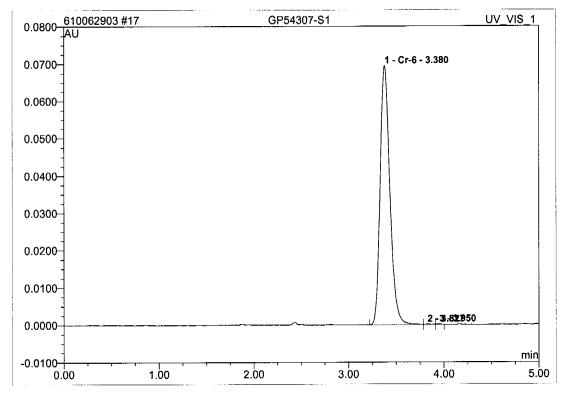
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.36	Cr-6	0.268	0.032	99.97	3.6958	BM
2	3.94	n.a.	0.000	0.000	0.01	n.a.	MB
3	4.19	n.a.	0.000	0.000	0.01	n.a.	BMB
Total:			0.268	0.032	100.00	3.696	

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6/30/201	0	10:59	A١

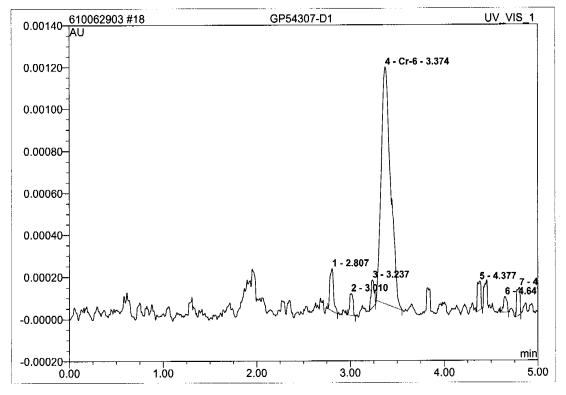
17 GP54307-S1						
Sample Name: Vial Number:	GP54307-S1 17	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 15:35	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.38	Cr-6	0.069	0.008	99.77	0.9537	ВМ
2	3.83	n.a.	0.000	0.000	0.12	n.a.	M
3	3.95	n.a	0.000	0.000	0.11	n.a.	MB
Total:			0.070	0.008	100.00	0.954	



18 GP54307-D1						
Sample Name: Vial Number:	GP54307-D1 18	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 15:43	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			

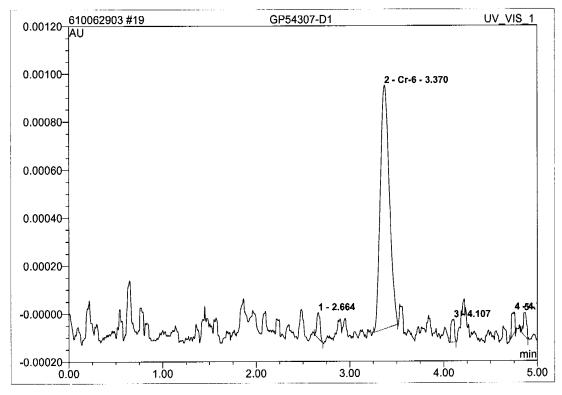


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.81	n.a.	0.000	0.000	5.56	n.a.	BMB
2	3.01	n.a.	0.000	0.000	2.69	n.a.	BMB
3	3.24	n.a.	0.000	0.000	3.12	n.a.	BMB
4	3.37	Cr-6	0.001	0.000	80.10	0.0159	BMB
5	4.38	n.a.	0.000	0.000	3.40	n.a.	BMB
6	4.65	n.a.	0.000	0.000	1.90	n.a.	BMB
7	4.80	n.a.	0.000	0.000	3.23	n.a.	BMB
Total:			0.002	0.000	100.00	0.016	

hexachrome/Integration



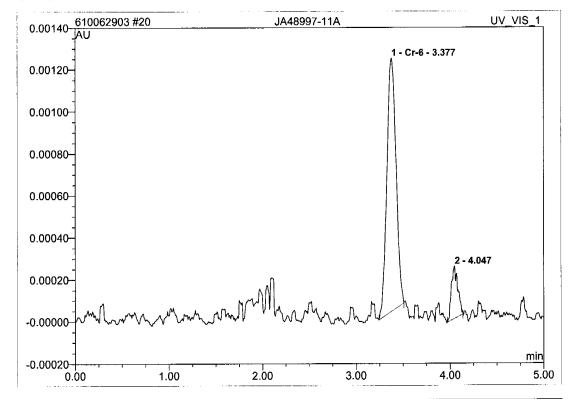
19 GP54307-D1						
Sample Name: Vial Number:	GP54307-D1 19	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 15:50	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	2.66	n.a.	0.000	0.000	3.41	n.a.	BMB
2	3.37	Cr-6	0.001	0.000	87.57	0.0139	BMB
3	4.11	n.a.	0.000	0.000	2.99	n.a.	BMB
4	4.76	n.a.	0.000	0.000	2.93	n.a.	BMB
5	4.86	n.a.	0.000	0.000	3.10	_n.a.	BMB
Total:			0.001	0.000	100.00	0.014	



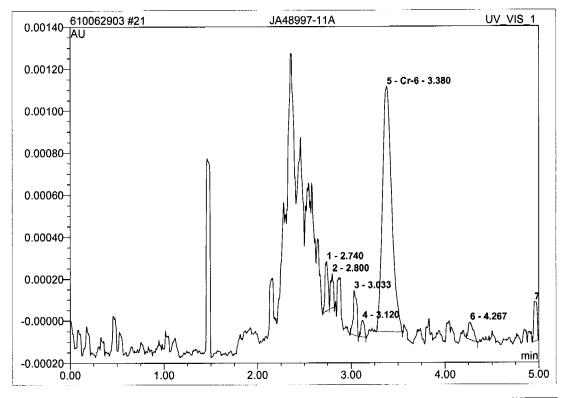
Sample Name:	JA48997-11A	Injection Volume:	25.0
Vial Number:	20	Channel:	UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 15:57	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.38	Cr-6	0.001	0.000	87.45	0.0166	вмв
2	4.05	n.a	0.000	0.000	12.55	n.a.	BMB
Total:			0.001	0.000	100.00	0.017	



21 JA48997-11A						
Sample Name: Vial Number:	JA48997-11A 21	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/29/2010 16:05	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



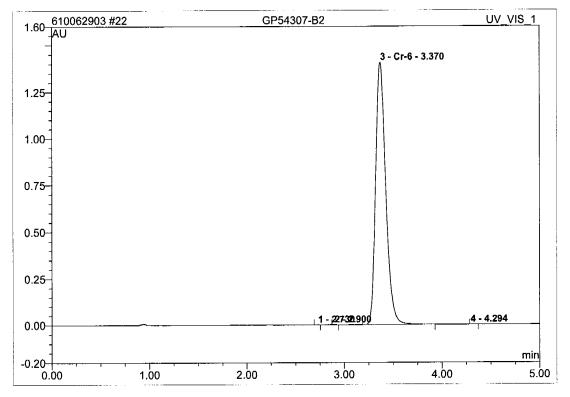
No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	2.74	n.a.	0.000	0.000	5.24	n.a.	ВМ
2	2.80	n.a.	0.000	0.000	3.27	n.a.	MB
3	3.03	n.a.	0.000	0.000	5.28	n.a.	BMB
4	3.12	n.a.	0.000	0.000	1.78	n.a.	BMB
5	3.38	Cr-6	0.001	0.000	76.96	0.0161	BMB
6	4.27	n.a.	0.000	0.000	2.97	n.a.	BMB
7	4.95	n,a,	0.000	0.000	4.50	n.a.	BMB
Total:			0.002	0.000	100.00	0.016	

hexachrome/Integration



22	GP	543	07	'-B2
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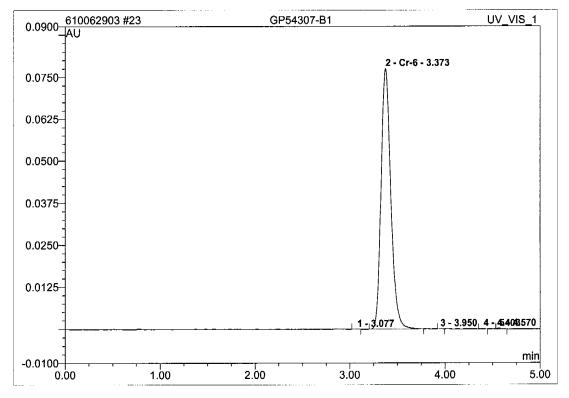
Sample Name:	GP54307-B2	Injection Volume:	25.0
Vial Number:	22	Channel:	UV_VIS_
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 16:12	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.73	n.a.	0.000	0.000	0.00	n.a.	BMB
2	2.90	n.a.	0.000	0.000	0.00	n.a.	BMB
3	3.37	Cr-6	1.407	0.169	99.99	19.4742	BMB
4	4.29	n.a.	0.000	0.000	0.01	n.a.	ВМВ
Total:			1.407	0.169	100.00	19.474	



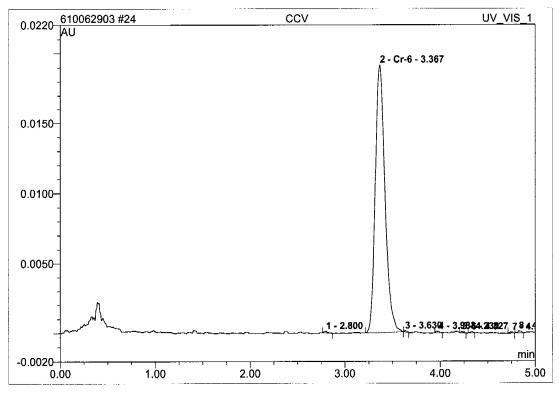
23 GP54307-B1								
Sample Name: Vial Number:	GP54307-B1 23	Injection Volume: Channel:	25.0 UV_VIS_1					
Sample Type:	unknown	Wavelength:	n.a.					
Control Program:	hexachrome	Bandwidth:	n.a.					
Quantif. Method:	hexachrome	Dilution Factor:	1.0000					
Recording Time:	6/29/2010 16:20	Sample Weight:	1.0000					
Run Time (min):	5.00	Sample Amount:	1.0000					



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.08	n.a.	0.000	0.000	0.03	n.a.	BMB
2	3.37	Cr-6	0.078	0.009	99.70	1.0637	BMB
3	3.95	n.a.	0.000	0.000	0.05	n.a.	BMB
4	4.40	n.a.	0.000	0.000	0.07	n.a.	BMB
5	4.57	n.a.	0.000	0.000	0.14	n.a.	BMB
Total:			0.078	0.009	100.00	1.064	



24 CCV			
Sample Name: Vial Number:	CCV 24	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 16:27	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

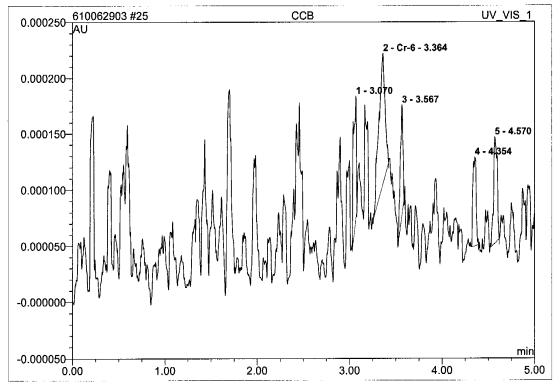


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.80	n.a.	0.000	0.000	0.22	n.a.	ВМВ
2	3.37	Cr-6	0.019	0.002	98.67	0.2624	BMB
3	3.63	n.a.	0.000	0.000	0.15	n.a.	BMB
4	3.98	n.a.	0.000	0.000	0.20	n.a.	BMB
5	4.23	n.a.	0.000	0.000	0.15	n.a.	BMB
6	4.33	n.a.	0.000	0.000	0.18	n.a.	BMB
7	4.76	n.a.	0.000	0.000	0.15	n.a.	BMB
8	4.83	n.a.	0.000	0.000	0.27	n.a.	BMB
Total:			0.020	0.002	100.00	0.262	

hexachrome/Integration



25 CCB			
Sample Name: Vial Number:	CCB 25	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/29/2010 16:34	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



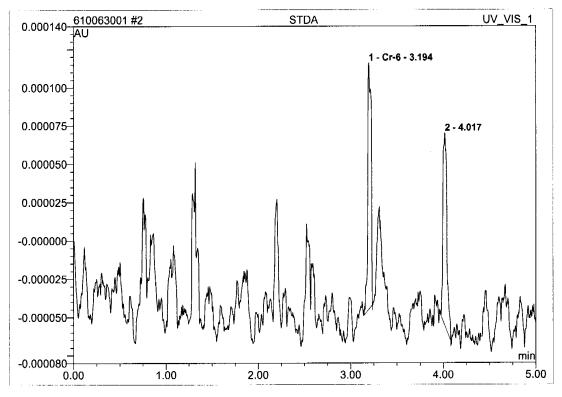
No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	3.07	n.a.	0.000	0.000	17.22	n.a.	BMB
2	3.36	Cr-6	0.000	0.000	38.05	0.0018	BMB
3	3.57	n.a.	0.000	0.000	13.90	n.a.	BMB
4	4.35	n.a.	0.000	0.000	13.39	n.a.	BMB
5	4.57	n.a.	0.000	0.000	17.45	n.a.	BMB
Total:			0.001	0.000	100.00	0.002	



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Operator: Chemistry Timebase: accutest Sequence: 610063001

2 STDA			
Sample Name: Vial Number:	STDA 2	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 10:14	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

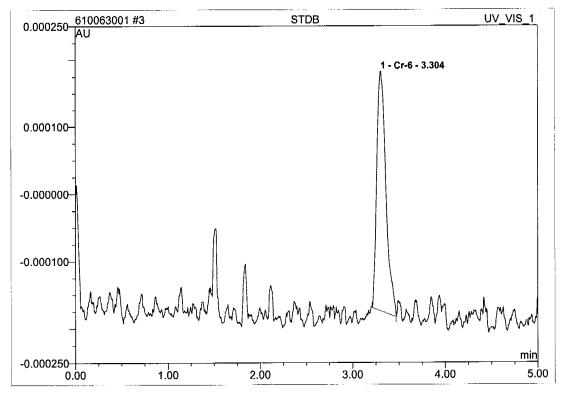


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.19	Cr-6	0.000	0.000	52.41	0.0011	BMB
2	4.02	n.a.	0.000	0.000	47.59	n.a.	BMB
Total:			0.000	0.000	100.00	0.001	

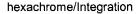
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

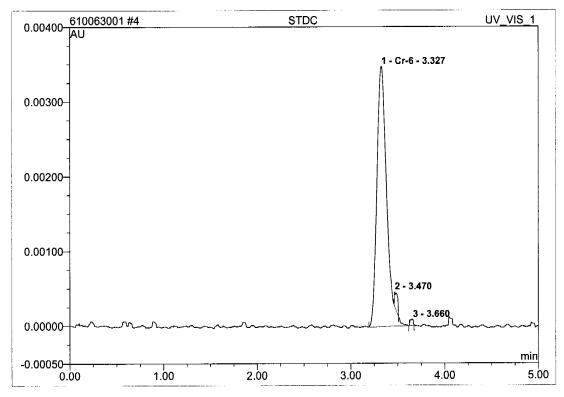


3 STDB			
Sample Name: Vial Number:	STDB	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 10:21	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.30	Cr-6	0.000	0.000	100.00	0.0052	BMB
Total:			0.000	0.000	100.00	0.005	

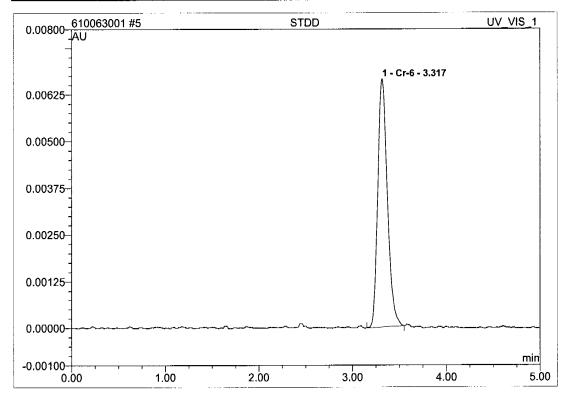




No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.33	Cr-6	0.003	0.000	97.17	0.0516	ВМВ
2	3.47	n.a.	0.000	0.000	2.08	n.a.	Rd
3	3.66	n.a	0.000	0.000	0.75	n.a.	BMB
Total:			0.004	0.000	100.00	0.052	



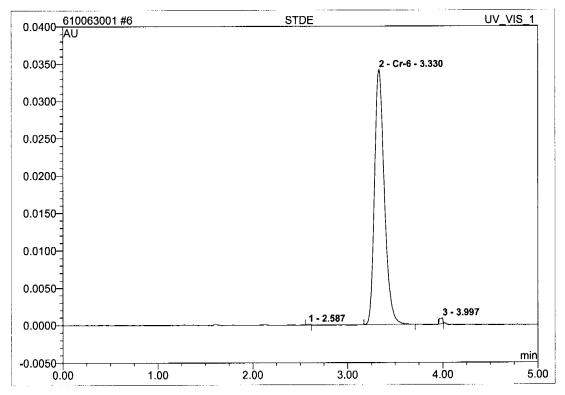
5 STDD			
Sample Name: Vial Number:	STDD 5	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 10:36	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.007	0.001	100.00	0.0967	BMB
Total:			0.007	0.001	100.00	0.097	



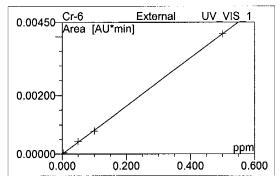
6 STDE			
Sample Name: Vial Number:	STDE 6	Injection Volume: Channel:	25.0 UV VIS 1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 10:43	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

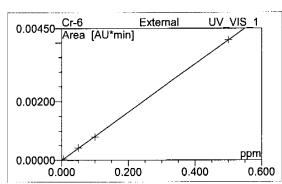


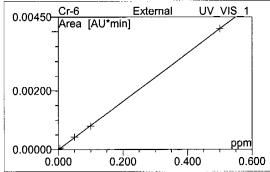
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.59	n.a.	0.000	0.000	0.14	n.a.	BMB
2	3.33	Cr-6	0.034	0.004	99.13	0.5005	BMB
3	4.00	n.a.	0.001	0.000	0.73	n.a	BMB
Total:			0.035	0.004	100.00	0.501	

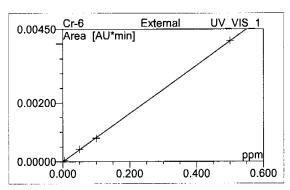


6 STDE			
Sample Name:	STDE	Injection Volume:	25.0
Vial Number:	6	Channel:	UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 10:43	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000





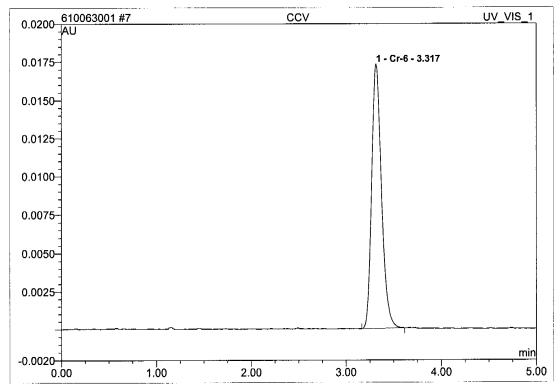




No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Curve
1	2.59	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	3.33	Cr-6	LOff	5	99.9916	0.0000	0.0082	0.0000
3	4.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Average:					99.9916	0.0000	0.0082	0.0000

hexachrome/Calibration(Batch)





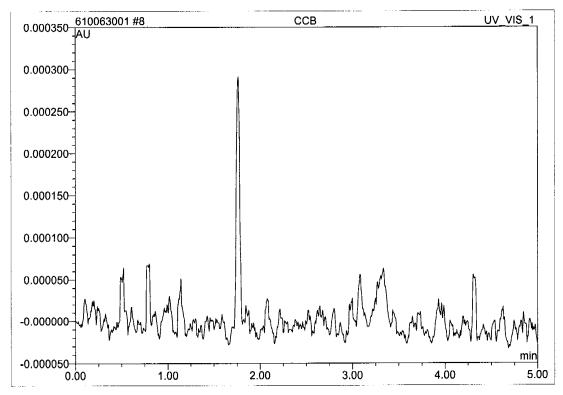
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.017	0.002	100.00	0.2538	BMB
Total:			0.017	0.002	100.00	0.254	

hexachrome/Integration



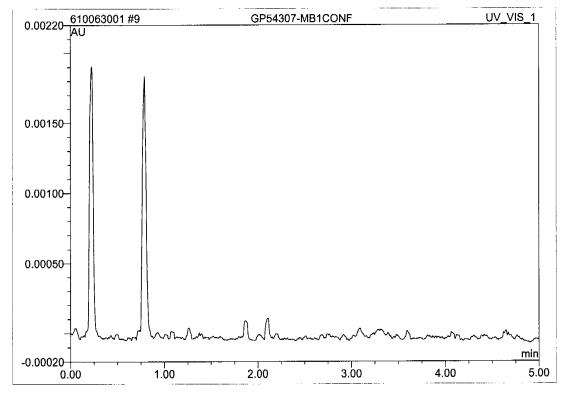
**o** 

8 CCB			
Sample Name: Vial Number:	CCB 8	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 10:58	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



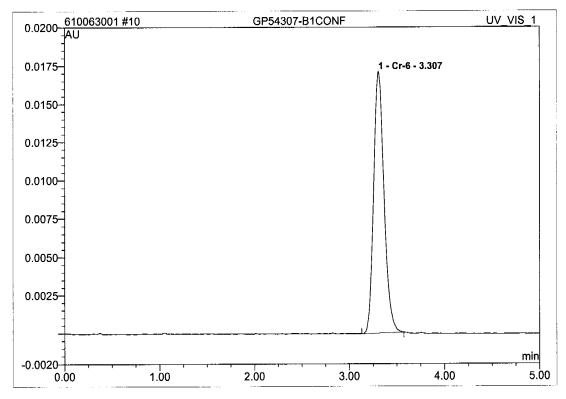
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
Total	:		0.000	0.000	0.00	0.000	

9 GP54307-MB1CONF							
Sample Name: Vial Number:	GP54307-MB1CONF 10	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/30/2010 11:06	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
Total:			0.000	0.000	0.00	0.000	





No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.31	Cr-6	0.017	0.002	100.00	1.0627	BMB
Total:			0.017	0.002	100.00	1.063	

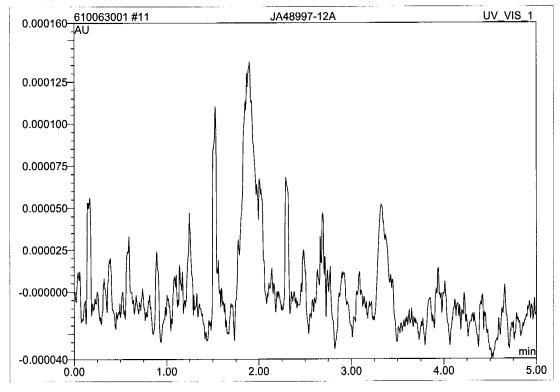
hexachrome/Integration



**o** 

**o** 

11 JA48997-12A							
Sample Name: Vial Number:	JA48997-12A 26	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/30/2010 11:20	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



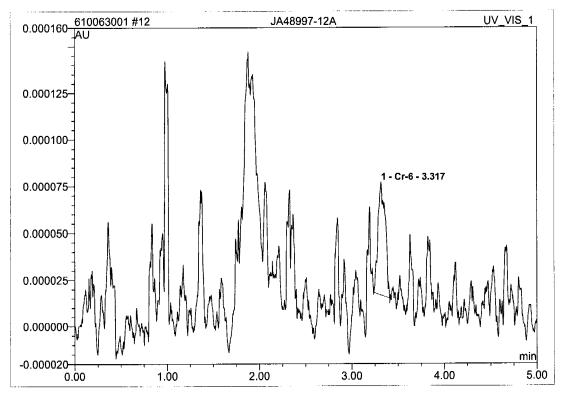
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

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	Pa	ge	12	-34
6/30/20	10	2:2	22	PM

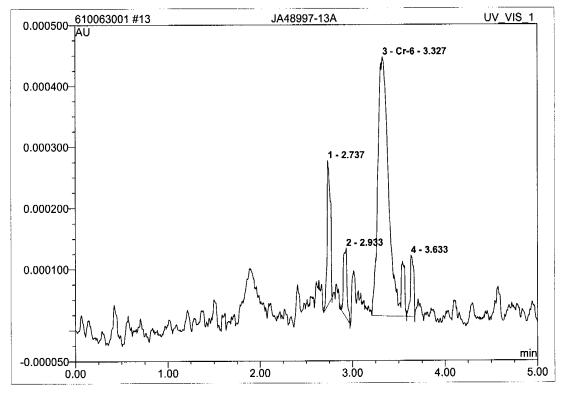
12 JA48997-12A						
Sample Name: Vial Number:	JA48997-12A 27	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/30/2010 11:28	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.32	Cr-6	0.000	0.000	100.00	0.0009	BMB_
Total:			0.000	0.000	100.00	0.001	



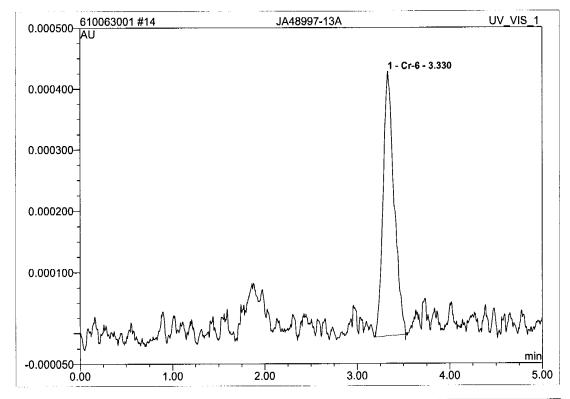
13 JA48997-13A						
Sample Name: Vial Number:	JA48997-13A 28	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	6/30/2010 11:35	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.74	n.a.	0.000	0.000	12.16	n.a.	BMB
2	2.93	n.a.	0.000	0.000	6.57	n.a.	BMB
3	3.33	Cr-6	0.000	0.000	75.72	0.0075	ВМ
4	3.63	n.a.	0.000	0.000	5.54	n.a.	MB
Total:			0.001	0.000	100.00	0.007	



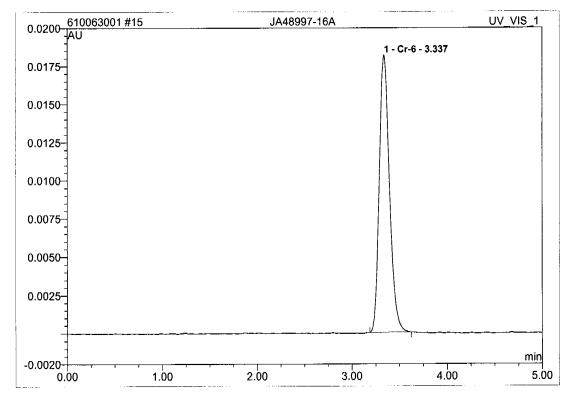
14 JA48997-13A							
Sample Name: Vial Number:	JA48997-13A 29	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	6/30/2010 11:43	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.33	Cr-6	0.000	0.000	100.00	0.0075	BMB
Total:			0.000	0.000	100.00	0.007	

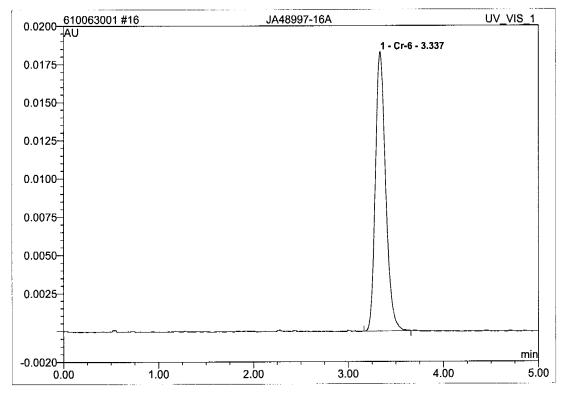


15 JA48997-16A					
Sample Name: Vial Number:	JA48997-16A 30	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	1.0000		
Recording Time:	6/30/2010 11:50	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		

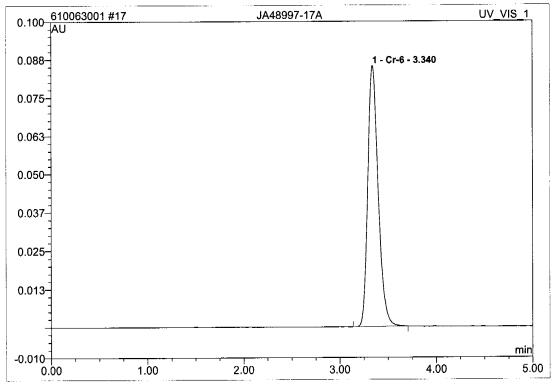


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.018	0.002	100.00	0.2769	вмв
Total:			0.018	0.002	100.00	0.277	





No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.018	0.002	100.00	0.2805	BMB
Total:			0.018	0.002	100.00	0.280	

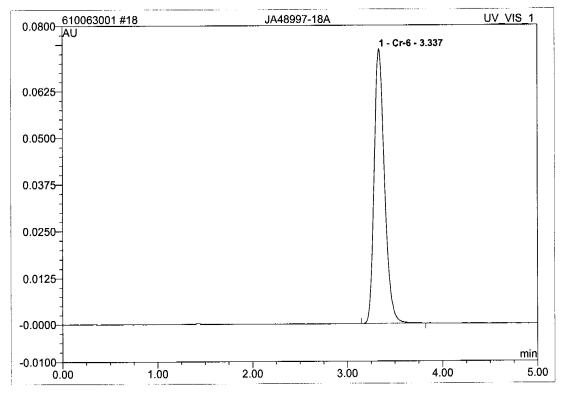


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.34	Cr-6	0.085	0.011	100.00	1.3033	BMB
Total:			0.085	0.011	100.00	1,303	



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18 JA48997-18A					
Sample Name: Vial Number:	JA48997-18A 34	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	1.0000		
Recording Time:	6/30/2010 12:12	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.074	0.009	100.00	1.1404	вмв
Total:			0.074	0.009	100.00	1.140	

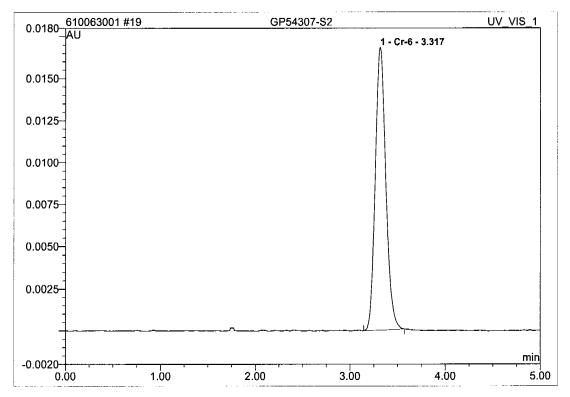
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



Operator: Chemistry Timebase: accutest Sequence: 610063001

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19 GP54307-S2					
Sample Name: Vial Number:	GP54307-S2 36	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	80.0000		
Recording Time:	6/30/2010 12:20	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		

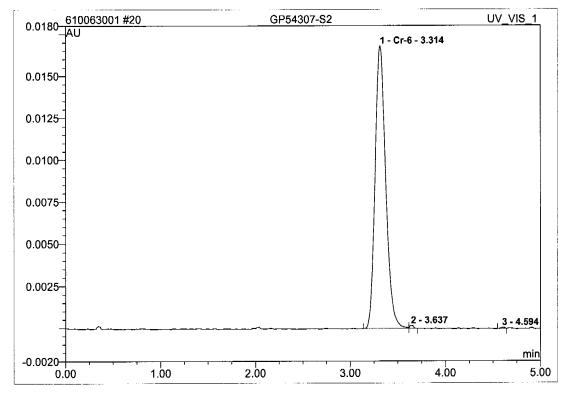


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.017	0.002	100.00	21.1406	вмв
Total:			0.017	0.002	100.00	21.141	

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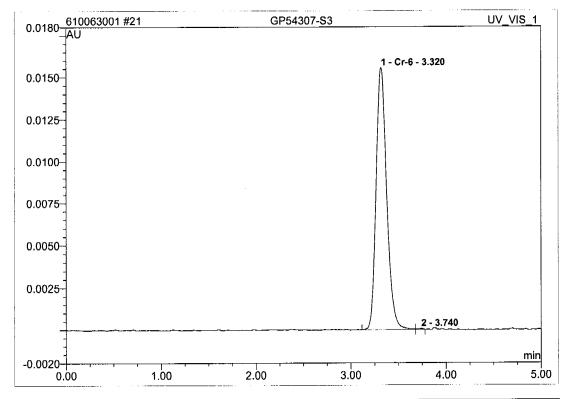
20 GP54307-S2					
Sample Name: Vial Number:	GP54307-S2 37	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	80.0000		
Recording Time:	6/30/2010 12:27	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.31	Cr-6	0.017	0.002	99.49	21.3106	ВМ
2	3.64	n.a.	0.000	0.000	0.35	n.a.	MB
3	4.59	n.a.	0.000	0.000	0.16	n.a.	BMB
Total:	i		0.017	0.002	100.00	21.311	



Injection Volume: 25.0 GP54307-S3 Sample Name: UV\_VIS\_1 Channel: Vial Number: 38 Wavelength: n.a. Sample Type: unknown Bandwidth: Control Program: n.a. hexachrome Dilution Factor: 15.0000 Quantif. Method: hexachrome Sample Weight: 1.0000 Recording Time: 6/30/2010 12:34 Sample Amount: 1.0000 Run Time (min): 5.00

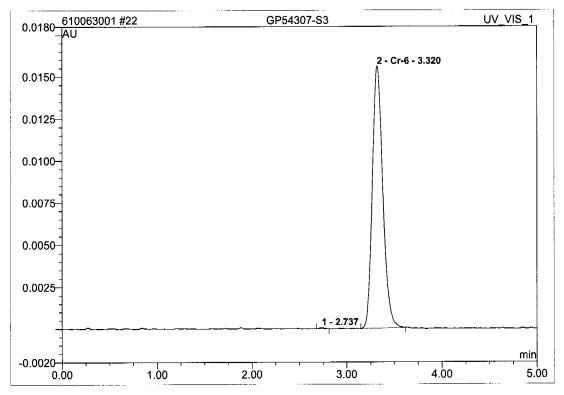


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.016	0.002	99.83	3.6832	BM
2	3.74	n.a	0.000	0.000	0.17	n.a.	MB
Total:			0.016	0.002	100.00	3.683	

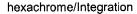
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



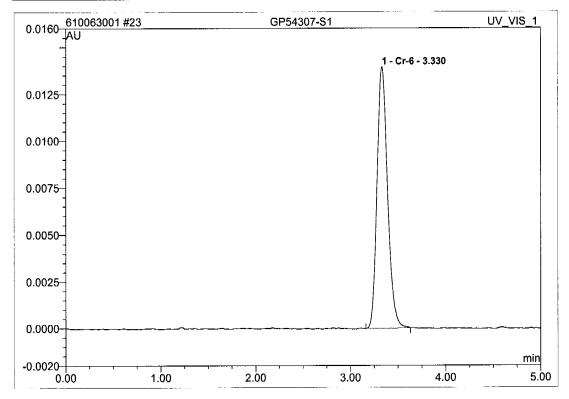
22 GP54307-S3					
Sample Name: Vial Number:	GP54307-S3 39	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	15.0000		
Recording Time:	6/30/2010 12:42	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.74	n.a.	0.000	0.000	0.23	n.a.	вмв
2	3.32	Cr-6	0.016	0.002	99.77	3.6605	BMB
Total:	•		0.016	0.002	100.00	3.660	



## 23 GP54307-S1 GP54307-S1 Injection Volume: 25.0 Sample Name: Vial Number: 40 Channel: UV\_VIS\_1 Wavelength: Sample Type: n.a. unknown Bandwidth: Control Program: hexachrome n.a. Dilution Factor: 4.0000 Quantif. Method: hexachrome Recording Time: Sample Weight: 1.0000 6/30/2010 12:49 Sample Amount: 1.0000 Run Time (min): 5.00



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.33	Cr-6	0.014	0.002	100.00	0.8765	BMB
Total:			0.014	0.002	100.00	0.876	

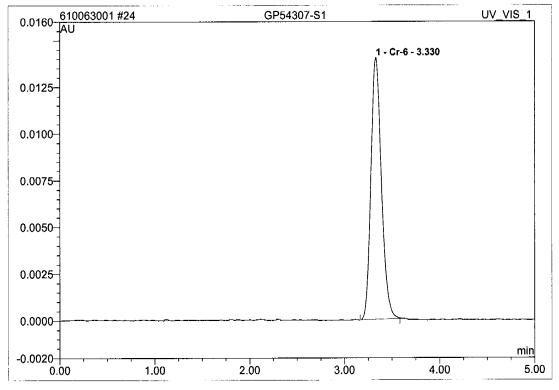
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



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24	GP54307-S	1

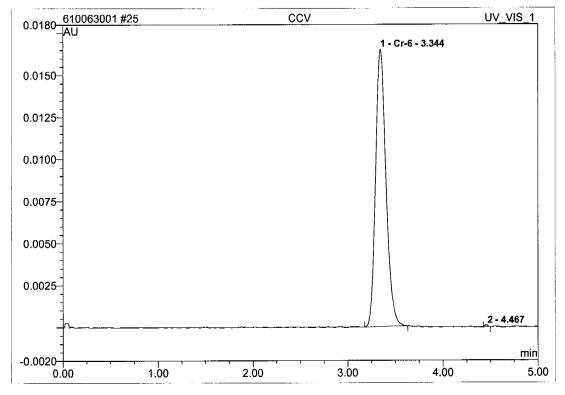
Sample Name:	GP54307-S1	Injection Volume:	25.0
Vial Number:	41	Channel:	UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	6/30/2010 12:57	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.33	Cr-6	0.014	0.002	100.00	0.8746	BMB
Total:		•	0.014	0.002	100.00	0.875	

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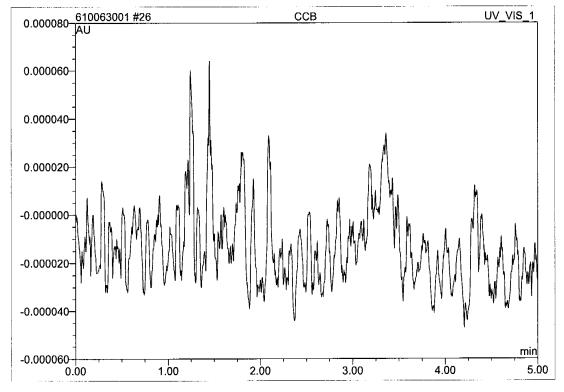


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.017	0.002	99.81	0.2563	BMB
2	4.47	n.a.	0.000	0.000	0.19	n.a.	BMB
Total:			0.017	0.002	100.00	0.256	



26	CCB

Injection Volume: 25.0 **CCB** Sample Name: UV\_VIS\_1 Vial Number: 43 Channel: Sample Type: unknown Wavelength: n.a. Control Program: hexachrome Bandwidth: n.a. Dilution Factor: 1.0000 Quantif. Method: hexachrome Recording Time: 6/30/2010 13:11 Sample Weight: 1.0000 Sample Amount: 1.0000 Run Time (min): 5.00

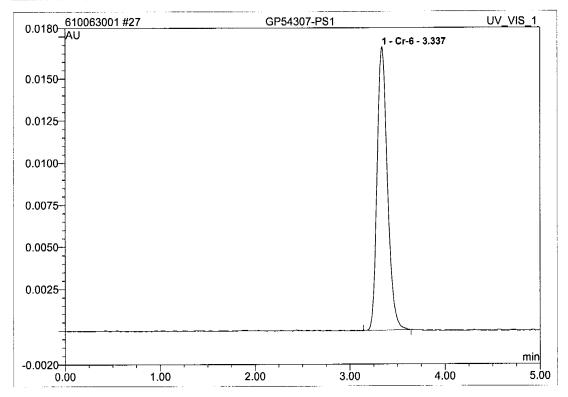


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
Total:			0.000	0.000	0.00	0.000	

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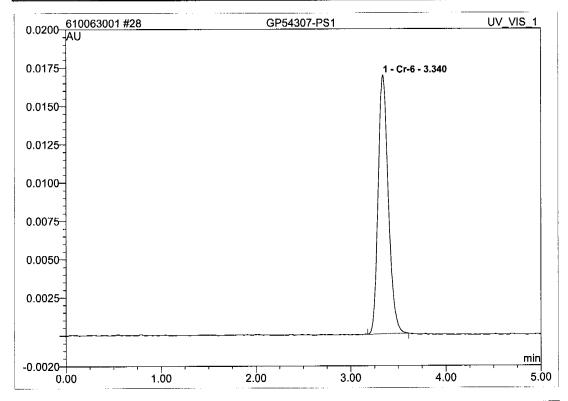
27 GP5430	7-PS1		
Sample Name: Vial Number:	GP54307-PS1	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	6/30/2010 13:19	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



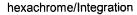
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.34	Cr-6	0.017	0.002	100.00	1.0423	BMB
Total:			0.017	0.002	100.00	1.042	



Injection Volume: 25.0 Sample Name: GP54307-PS1 Vial Number: 45 Channel: UV\_VIS\_1 Wavelength: Sample Type: n.a. unknown Bandwidth: Control Program: hexachrome n.a. Dilution Factor: 4.0000 Quantif. Method: hexachrome Recording Time: Sample Weight: 1.0000 6/30/2010 13:26 1.0000 Sample Amount: Run Time (min): 5.00



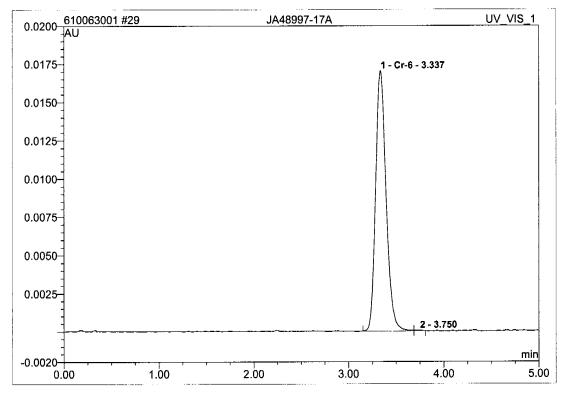
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.017	0.002	100.00	1.0289	BMB
Total:			0.017	0.002	100.00	1.029	



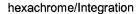


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29 JA48997-17A						
Sample Name: Vial Number:	JA48997-17A 46	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	5.0000			
Recording Time:	6/30/2010 13:34	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			

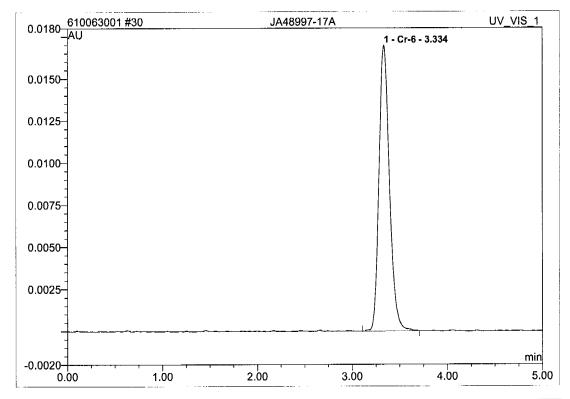


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.017	0.002	99.84	1.3278	ВМ
2	3.75	n.a.	0.000	0.000	0.16	n.a.	MB
Total:		*****	0.017	0.002	100.00	1.328	

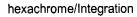


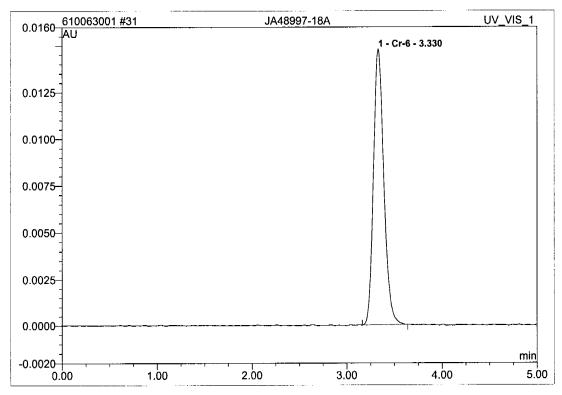


30 JA4899	7-17A		
Sample Name: Vial Number:	JA48997-17A 46	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	5.0000
Recording Time:	6/30/2010 13:41	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



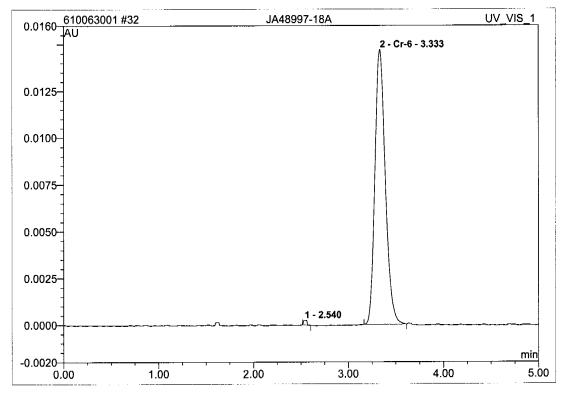
No.	Ret.Time min	Peak Name	Height AU	Area AU*min_	Rel.Area %	Amount ppm	Type
1	3.33	Cr-6	0.017	0.002	100.00	1.3260	BMB
Total:			0.017	0.002	100.00	1.326	



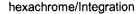


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.33	Cr-6	0.015	0.002	100.00	1.1468	BMB
Total:			0.015	0.002	100.00	1.147	

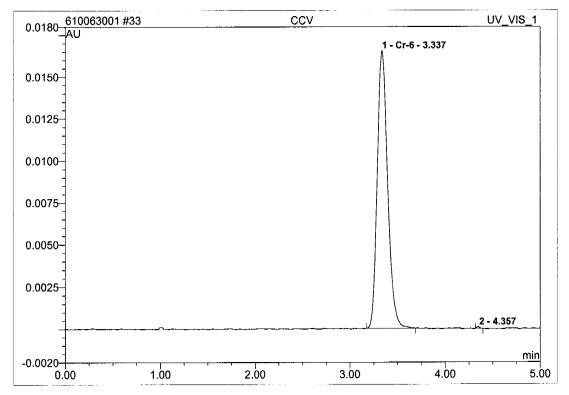
32 JA48997-18A							
Sample Name: Vial Number:	JA48997-18A 47	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	5.0000				
Recording Time:	6/30/2010 13:56	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.54	n,a.	0.000	0.000	0.59	n.a.	ВМВ
2	3.33	Cr-6	0.015	0.002	99.41	1.1 <u>401</u>	BMB
Total:			0.015	0.002	100.00	1.140	



33 CCV			
Sample Name: Vial Number:	CCV 46	Injection Volume: Channel:	25.0 UV VIS 1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 14:03	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

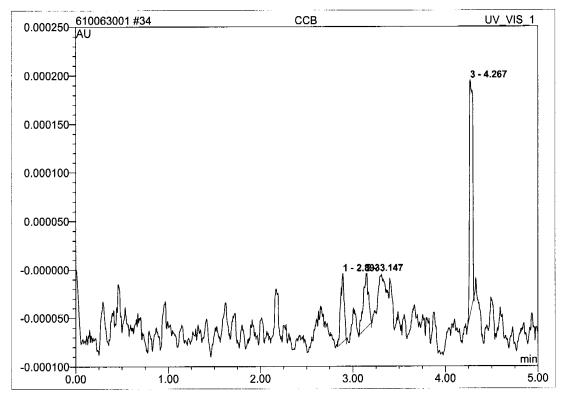


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.34	Cr-6	0.017	0.002	99.81	0.2564	BMB
2	4.36	n.a.	0.000	0.000	0.19	n.a.	BMB
Total:			0.017	0.002	100.00	0.256	



### Operator: Chemistry Timebase: accutest Sequence: 610063001

34 CCB			
Sample Name: Vial Number:	CCB 47	Injection Volume: Channel:	25.0 UV VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	6/30/2010 14:11	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.89	n.a.	0.000	0.000	19.33	n.a.	вмв
2	3.15	n.a.	0.000	0.000	22.47	n.a.	BMB
3	4.27	n.a.	0.000	0.000	58.21	n.a <u>.</u>	BMB
Total:	·		0.000	0.000	100.00	0.000	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



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Sequence: Operator:	610071201 Chemistry	201 Iry							Page 1 of 2 Printed: 7/12/2010 1:39:06 PM	Page 1 of 2 ~ 1:39:06 PM
Title: Datasource: Location: Timebase: #Samples:	NJCHMI Accutest accutest 38	NJCHMIC2_local Accutesf2010\July accutest 38					Created: Last Update:	711212	7/12/2010 8:45:08 AM by Chemistry 7/12/2010 12:11:50 PM by Chemistry	nemistry Chemistry
	Š	No. Name	Type	Pos. Program	Method	Status	Ini. Date/Time	Weight	Dil. Factor	
	-	BLANKCONF	Unknown	-	hexachrome	Finished	7/12/2010 8:50:05 AM		1.0000	
	2	STDA	Standard	2 hexachrome	hexachrome	Finished	7/12/2010 8:57:30 AM	1.0000	1.0000	
	က	STDB	Standard	3 hexachrome	hexachrome	Finished	7/12/2010 9:04:54 AM	1.0000	1.0000	
	4	STDC	Standard	4 hexachrome	hexachrome	Finished	7/12/2010 9:12:18 AM	1.0000	1.0000	
	£	STDD	Standard	5 hexachrome	hexachrome	Finished	7/12/2010 9:19:42 AM	1.0000	1.0000	
	Ģ	STDE	Standard	6 hexachrome	hexachrome	Finished	7/12/2010 9:27:06 AM	1.0000	1.0000	
	2	A CCC	Unknown	7 hexachrome	hexachrome	Finished	7/12/2010 9:34:31 AM	1.0000	1.0000	
	∞	CCB	Unknown	8 hexachrome	hexachrome	Finished	7/12/2010 9:41:55 AM	1.0000	1.0000	
	တ	GP54481-MB1	Unknown	9 hexachrome	hexachrome	Finished	7/12/2010 9:49:19 AM	1.0000	1.0000	
	10	GP54481-MB1	Unknown	10 hexachrome	hexachrome	Finished	7/12/2010 9:56:43 AM	1.0000	1.0000	
	#	GP54481-B1	Unknown	11 hexachrome	hexachrome	Finished	7/12/2010 10:04:08 AM	1.0000	4.0000	
	12	GP54481-B1	Unknown	12 hexachrome	hexachrome	Finished	7/12/2010 10:11:32 AM	1.0000	4.0000	
	13	GP54481-B2	Unknown	13 hexachrome	hexachrome	Finished	7/12/2010 10:18:56 AM	1.0000	80.0000	
	4	GP54481-B2	Unknown	14 hexachrome	hexachrome	Finished	7/12/2010 10:26:20 AM	1.0000	80.0000	
	15	GP54481-S2	Unknown	15 hexachrome	hexachrome	Finished	7/12/2010 10:33:45 AM	1.0000	1.0000	
	16	GP54481-S1	Unknown	16 hexachrome	hexachrome	Finished	7/12/2010 10:41:09 AM	1.0000	1.0000	
	17	GP54481-D1	Unknown	17 hexachrome	hexachrome	Finished	7/12/2010 10:48:33 AM	1.0000	1.0000	
	48	GP54481-D1	Unknown	18 hexachrome	hexachrome	Finished	7/12/2010 10:55:57 AM	1.0000	1.0000	
	19	JA48997-15AR	Unknown	19 hexachrome	hexachrome	Finished	7/12/2010 11:03:22 AM	1.0000	1.0000	
	20	JA48997-14AR	Unknown	21 hexachrome	hexachrome	Finished	7/12/2010 11:10:46 AM	1.0000	1.0000	
	21	JA48997-14AR	Unknown	22 hexachrome	hexachrome	Finished	7/12/2010 11:18:10 AM	1.0000	1.0000	
	22	GP54481-B2	Unknown	23 hexachrome	hexachrome	Finished	7/12/2010 11:25:34 AM	1.0000	1.0000	
	23	GP54481-B1	Unknown	24 hexachrome	hexachrome	Finished	7/12/2010 11:32:59 AM	1.0000	1.0000	
	24	CCV	Unknown	25 hexachrome	hexachrome	Finished	7/12/2010 11:40:23 AM	1.0000	1.0000	
	25	CCB	Unknown	26 hexachrome	hexachrome	Finished	7/12/2010 11:47:47 AM	1.0000	1.0000	G
	76	JA48997-15AR	Unknown	27 hexachrome	hexachrome	Finished	7/12/2010 11:55:11 AM	1.0000	5.0000	اس
	27	JA48997-15AR	Unknown	28 hexachrome	hexachrome	Finished	Z/12/2010 12:02:35 PM	1,0000	5.0000	3
						\ /				97
Chromeleon @	Dionex Com	Chromeleon @ Dionex Corporation Version 6 70 SP2a Build 1871	SP2a Build 1	1871		$\times$		7		14
						/	- -	<b>)</b>		



Page 2 of 2 10 1:39:07 PM	by Chemistry												
Page 2 of 2 Printed: 7/12/2010 1:39:07 PM	7/12/2010 8:45:08 AM by Chemistry 7/12/2010 12:11:50 PM by Chemistry	Oil. Factor	1.0000	1.0000	0000009	0000009	1.0000	4.0000	4.0000	15.0000	15.0000	1.0000	1.0000
	1112 12117	Weight Dil. Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	Created: Last Update:	lnj. Date/Time	7/12/2010 12:10:00 PM	7/12/2010 12:17:24 PM	7/12/2010 12:24:48 PM	7/12/2010 12:32:12 PM	7/12/2010 12:39:36 PM	7/12/2010 12:47:01 PM	7/12/2010 12:54:24 PM	7/12/2010 1:01:49 PM	7/12/2010 1:09:13 PM	7/12/2010 1:16:37 PM	7/12/2010 1:24:01 PM
		Status	Finished	Finished	Finished	Finished	Finished						
		Method	hexachrome	hexachrome	hexachrome	hexachrome	hexachrome						
		Pos. Program	29 hexachrome	30 hexachrome	31 hexachrome	32 hexachrome	33 hexachrome	34 hexachrome	35 hexachrome	36 hexachrome	37 hexachrome	38 hexachrome	39 hexachrome
		Type	Unknown	Unknown	Unknown	Unknown	Unknown						
-	2_local :010\July	те	3A48997-19AR Unknown	JA48997-19AR	GP54481-S2	GP54481-S2	GP54481-S1	GP54481-D1	GP54481-D1	GP54481-PS1	GP54481-PS1	CCV	CCB
610071201 Chemistry	NJCHMICZ_local Accutest/2010/July accutest 38	No. Name	28	29	30	31	32	33	æ	35	36	37	38





Datasource: Location: Timebase: #Samples:

Sequence: Operator: Title:

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### 6-39714

### ACCUTEST LABS DAYTON, NJ

# 3060A/7199 POST-DIGEST SPIKE LEVEL CALCULATION SPREADSHEET

NOTE: AN

INOTE: Always unite post-spine filet, tilen take a 20 file anguet of tile united post-spine and and tile spine annount.	าแนะ วันระจากเก	illot, ulcil tand	3 20 1111 all	act of the di	ביופטק מסומו	שווים מווח מחול	מ מוזכ פלוו ח	Hodist.				
									Actual m			
								Suggested	of 100			
	PS Aliquot			Amount in				ml of 100	ppm to	Est. Read- Calculated	Calculated	
	Weight in g			ml to add		Suggested	Actual	ppm to spike	spike on	back on	Spike	
	Digested in	Weight in 20	Results in	of 100 ppm	Dilution	Dilution to	_	Dilution to on dilution of	dilution of	curve in	Amount in	Use calculated or
Sample ID	100 ml	Ξ	mg/kg.	solution	pepeed	asn	pesn eq	samble.	sample.	l/gm	mg/kg	default spike?
		#VALUE!		#VALUE!	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!	calculated spike
		#VALUE!		#VALUE!	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!	calculated spike
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		#VALUE!		#VALUE!	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!	calculated spike
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		#VALUE!		#VALUE!	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!	calculated spike
		#VALUE!		#VALUE!	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!	calculated spike
		#VALUE!		#VALUE!	#VALUE!	#VALUE!		#VALUE!		#VALUE!	#VALUE!	calculated spike
0.544 ml	10 ppm abs	in 2 ml	sample	fv = 30 ml								

### 3060A/7196A INSOLUBLE SPIKE CALCULATION

Weight of V			
			lo enter
Pho-	Weight of	Amount	for 7199
1000	Sample	Spiked	in mg/l
0.0103	2.59	639.837	16.57178
0.0122	2.5	785.149	19.62871
		#DIV/0i	i0/AIQ#
		#DIV/0i	i0/AIQ#
		#VALUE!	#VALUE!
	•	#VALUE!	#VALUE!

	To ent	for 71	in mg	16.571	19.628	//I/O#	/\IQ# ]	#VALL	#VALL	#VALL	#VALL	#VALL
		Amount	Spiked	639.837	785.149	i0/AlQ#	i0/∧lΩ#	#VALUE!	#VALUE!	#VALUE!	i∃ΩTVA#	i∃ΩTVA#
		Weight of	Sample	2.59	2.5							
ζ,		Weight of	PbCr04	0.0103	0.0122							

GN39774	

Reducing

ACCUTEST.

Hexavalent Chromium pH Adjustment Log

Method: SW846 3060A/7199

918

Digestion Date:

pH adj. Date:

pH adj. start time: pH adj. end time:  GP54481 Sample Weight in g Sample Weight in g Sample ID  CCV CCV CCV CCV CCB CCB CCB CCB CCB CC
Sample   DH after   Final Volume   Spike   Amounts   Comments
Sample ID   Weight in g
CCV CCV CCB CCB CCB CCB CCB CCB SS(SOI) ANOTHER A-52 9.35 0.0103 para to solute MS (Insol) 2.59 9.35 0.0103 para to solute MS (Insol) 3.59 9.35 0.0103 para to solute SB (Soi) SB (Insol) 9.30   mc   100 para to solute SB (Insol) 9.35 0.0103 para to solute SB (Insol) 9.35 0.0103 para to solute SB (Insol) 9.35   0.0103 para to solute SB (Insol) 9.35   0.0102 para to
CCV CCV CCB CCB CCB CCB CCB CCB MS (SOI) ANOM FAC 2.52 9.47 0 ml 100 ppm 40 Solut MS (Insol) 2.54 9.35 0.0103 pcl.04  SB (Soi) SB (Insol) 0.0103 pcl.04  MB 11/1/1/1/1-15/1/2 2.57 9.31  TAURON 19/1/2 2.57 9.31
CCV CCB CCB CCB CCB CCB CCB MS (Sol) A4ROM +ACSOLUT MS (Insol.) DUP  SB (Sol) SB (Insol) MB  1 A1ROM - SAL A-SA 4, 14  2 A4ROM - IAR 2-SA 4, 14  2 A4ROM - IAR 2-SA 4, 34  3 A4ROM - IAR 2-SA 4, 34  3 A4ROM - IAR 2-SA 4, 34
CCV CCB CCB CCB CCB CCB CCB MS (Sol), A480M + AC 2 9.47 00 ml 100 ppm 46 Solut MS (Insol) 2.59 9.35 0.0103 focio  DUP 2 2-54 9.72 SB (Insol) MB 9.35 1 A180M - 15A( 2-54 9.19 2 A180M - 19A( 2-57 9.31) 3 (A480M - 19A( 2-57 9.31)
CCB CCB CCB CCB CCB MS (Sol) A480M + AC 2 9.47 0 ml 100 ppm 40 Solut MS (Insol.) 2.59 9.35 0.0103 pa.0.4  DUP 2.54 9.42  SB (Sol) SB (Insol) 935 0.0122 ppenous  MB 435 0.0122 ppenous  MB 935 0.0122 ppenous
CCB CCB MS (Sol) A4ROPT + A 2-54 9.35  MS (Insol.)  BE (Insol.)  MB  1 PL (100 PPM HOSolut  1 O.0103 Pacious  1 O.0103 P
CCB  CCB  MS (Sol) AUROM TEAC 2-52 9.47 [00] IML 100 APM HOSalut  MS (Insol.) 2.59 9.35 0.0103 POC.O.,  DUP 2-54 9.42  SB (Sol)  SB (Insol)  MB  1/P18047-15AC 2-54 9.31  2/P48997-14AC 2-57 9.31  3(Au8997-19AC 2-54 9.34)
CCB  MS (SOI) AUROPH TEAC 2-52 9.47 [O   ml   100 pp.m HoSolust  MS (Insol.) 2.59 9.35 0.0103 pc.io.,  DUP J 2-54 9.42  SB (SOI)  SB (Insol)  MB 9.35  IMISOLIT - DAIC 2-54 9.31  ZHURGAT - 14AC 2-54 9.31  ZHURGAT - 19AC 2-54 9.31
MS (Sol) A480M + FAC 2-52 9.47 (0)   mL 100 APM HOSolut MS (Insol.)
MS (Insol.)  DUP  2.54 9.35  SB (Sol)  SB (Insol)  MB  9.35  1/P18047-15A( 2.54 9.19  2/F48997-14A( 2.57 9.31)  3(Auron)  3(Au
DUP 2-54 9.42  SB (SOI)  SB (Insol)  MB  1/1/1/8047-15A( 2-54 9.14  2/1/4/8997-14A( 2-57 9.31  3/1/4/8997-19A( 2-54 9.34)
SB (Sol)  SB (Insol)  MB  9.35  1/M/2017-15AC 2-54 9, 19  2/H/2007-14AC 2-57 9, 31  3(Auron-19AC 2-54 9, 34)
SB (Insol)  MB  9.35  IMIXO17-15A( 2-54 9.19  21448997-14A( 2-57 9.31)  3(Au8997-19A( 2-54 9.34)
MB 9.35 1 M 8047-15A ( 2.54 9.19 2 A 48997-14A 2.57 9.31 3 (Au8997-19A) 2.54 9.34
2448997-14AR 2.57 9.31 3(Au8997-19AR 2.54 9.34 /
2A48997-14AR 2.57 9.31
3(AURGG7-19A) 2-54 9,34 1
4 PS/ 2.34 9.18 V 0.544 m1 of 10 ppm Arosoluse
5 In In Januar 7 30ml
6
7
8
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10
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12
13
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15
16
17
18
19
20
SB (Insol) dilution
MS (Insol.) dilution

Reagent Reference Information - refer to attached reagent reference information page(s).  $[1000000 \text{ ug/g} \times \text{Insoluble spike wt(g)} \times 52/323.2]/\text{ms sample wt(g)} = \text{Insoluble spike amount of PbCrO4}]$ 

Form: GN-067A Rev. Date:5/8/06





GN/GP Batch ID: GP 5 4481 63974

### Reagent Information Log - XCRA7199 (soil 3060A/7199)

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium,		
1000 mg/L Stock	1/1/2013	Absolute Grade Lot # 012010
Calibration Checks: Hexavalent Chromium,		
1000 mg/L Stock	7/31/2015	Ultra lot # J00509
Spiking Solution Source	1/1/2013	Absolute Grade Lot # 012010
Lead Chromate (Insoluble Hexavalent		
Chromium Spike)	NA	Sigma Aldrich Lot # 09921LC
	1 -1	
Digestion Solution	7/30/10	GNE 6-25430-XCR
Magnesium Chloride, Anhydrous	NA	Alfa Aesar Lot # I02T070
Pl 1 - P #	) [	0.74
Phosphate Buffer Solution	12/8/10	GNE6-25218-XCRA
5.0 M Nitric Acid	مايان	C = > 0H(20
Post-Column	111 2011	Due 1-25413-XCPA
Reagent (Diphenylcarbazide Solution)	حاليان	Gre 7-25519- 1CKCK
Reagent (Diphenylearbazide Solution)	Mills	900 1 30 31 1 10 01
Eluent	12/10/10	
	1/4 1/2	- Olyofo-soull Tox car
Buffer Solution	17/00/C	GNE 6-25 350- 1CKOR
	1	<u> </u>
XCR7199 Dilution Water	12/3/5	- GUEB-DS 383-1CKCR
Filter	NIA	10+ # FOCA84866
	19(7)	101 7 1 0 1 1 0 0
Teflon Chips	NA	chemware # D1069103
DOS	1.010	64E6-25403-1CKCC
	18/10	9 2 0)100 (400
	ı	

Form: GN087A-21 Rev. Date: 2/18/10



Date: 7/8/2010

GP54481

### MIN ACCUTEST.

## Hexavalent Chromium Digestion Temperature Log Method: SW846 3060A

Record the temperature at the beginning, during, and at the end of each digestion.

Digestion Batch ID	Description	Time	Temp. in deg. C Hot Plate #1	l emp. in deg. C Hot Plate # <b>2</b>	Temp. in deg. C Hot Plate # <b>3</b>	l lemp. in deg. C Hot Plate #1
GP34481	Starting Time 9:15	9:15	2, 16		ع°19	
	Time 1	9:45		-		
->	Ending Time	10:15	->		•	
	Starting Time					
	Time 1					
	Ending Time					
					•	
	Starting Time					
	Time 1					
	Ending Time		<u>-</u>			

Form: GN-074

Analyst

Rev. Date:5/8/06



### Hexavalent Chromium pH Adjustment Log

Method: SW846 3060A/7199

pH adj.	start time:
pH adj.	end time:

X	<u>ان</u>
4.	35

H adjustment Date:	7/	100	201		
GN Batch ID:	/	· 6	N39	MY.	

	Comple		Final		
	Sample Weight in	pH after	Volume		
Sample ID	g	HNO3	(ml)	Comments	Spike Info.
Calibration Blank	NA NA	9.41	100		
	NA NA	9.110	100	10PM ALOSOLUTE	0.50 ml of 1.00 mg/l
0.005 mg/l standard		942		DPM ACSOIDTE	5.00 ml of 1.00 mg/l
0.050 mg/l standard	NA			10 PPM Absolute	1.00 ml of 10.0 mg/l
0.100 mg/l standard	NA .	1.77		(OFF) APO 80 WAY	
0.500 mg/l standard	NA	9,4	<u> </u>	7	5.0 ml of 10.0 mg/l
	-				
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	<del>- </del>	<del>                                     </del>			
		<del> </del>	+		
<u></u>				d research reference informat	

Reagent Reference Information - refer to attached reagent reference information page(s). {1000000 ug/g x Insoluble spike wt(g) x 52/323.2}/ms sample wt(g) = Insoluble spike amount of PbCrO4

Form: GN-068A Rev. Date: 05/08/06



<u></u>



### GENERAL CHEMISTRY STANDARD PREPARATION LOG Product: \( \frac{1200}{200} \limits \( \frac{1200}{200} \right) \)

Product: X A 109( GN or GP Number: 白っ多

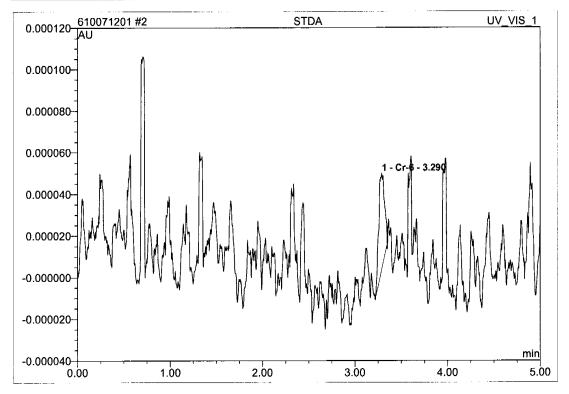
-					_						_				_						
		Date	CIPIL	4 ),						, Date	119 10	1		Υ		3	<u> </u>		1	a.	
		Analyst	Cy	•			)			Analyst	60			()							
	Expiration	Date	4/26/2013	4/26/2013			7/31/2015		Expiration	Date	1/2/10	,1 ,1,		)							
Final Conc.	of Intermediate	(mg/l)	10.0 mg/L	1.0 mg/L			5.0 mg/L	Final Conc.	of Standard	(mg/l)	0.005	0.05	0.1	0.5				i			
	Final	Volume	100 mL	100 mL			200 mL		Final	Volume	100 mL	100 mL	100 mL	100 mL							
		Difuent	Dilution	Water			DI H2O			Diluent	Digestion	sofution	and Di	Water							
	Balance or	Autopipet ID (*)	A	A			A		Balance or	Autopipet ID (*)	A	A	A	A							
	Stock volume or weight used with	units	1.0 mL	10.0 mL		a vitoria	1.0 mL	Intermediate or	Stock volume	used in ml	0.50 mL	5.0 mL	1.0 mL	5.0 mL	****	A. M.					
	Stock	concentration	1000 mg/L	10.0 mg/L			1000 mg/L	Intermediate	or Stock	concentration											
	Stock used to	prepare standard	Absolute 042610	10.0 mg/L Absolute			Ultra J00509	Intermediate or Stock	used to prepare	standard		1.0 mg/L Absolute	10 mg/L Absolute	10 mg/L Absolute							
	Intermediate	Standard Description	10.0 mg/L Absolute	1.0 mg/L Absolute			5.0 mg/L Ultra			Standard Description			0.100 mg/L	0.500 mg/L							

\* If Class A glass pipets are used, enter an A. For balances or autopipets, then enter the appropriate Accutest ID number.

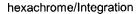
Form: GN121-01 Rev. Date: 1/13/09



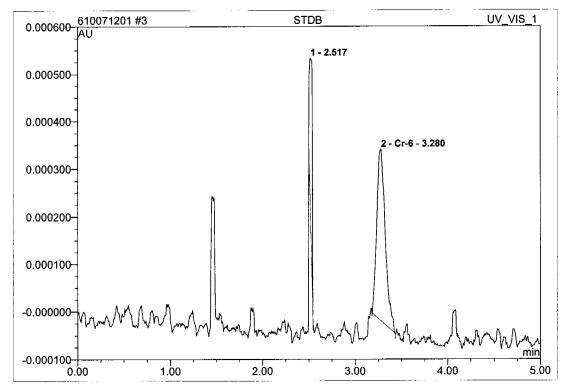
2 STDA			
Sample Name: Vial Number:	STDA 2	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time: Run Time (min):	7/12/2010 8:57 5.00	Sample Weight: Sample Amount:	1.0000 1.0000



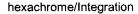
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.29	Cr-6	0.000	0.000	100.00	0.0015	BMB
Total:			0.000	0.000	100.00	0.001	

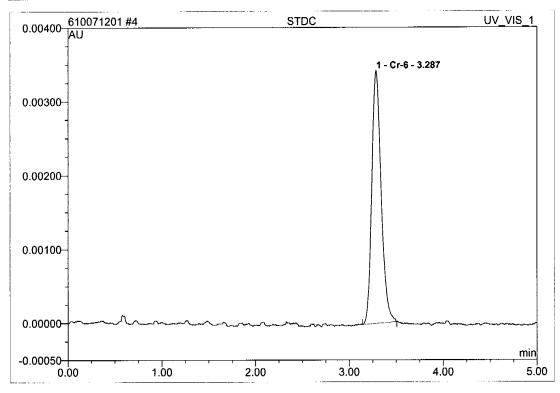


3 STDB			
Sample Name: Vial Number:	STDB 3	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 9:04	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.52	n.a.	0.000	0.000	25.55	n.a.	ВМВ
2	3.28	Cr-6	0.000	0.000	74.45	0.0056	BMB
Total:			0.001	0.000	100.00	0.006	

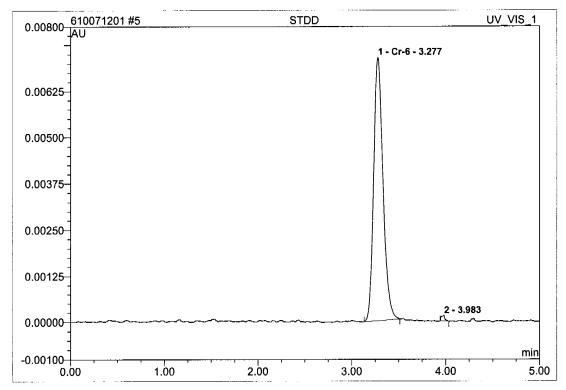




No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.29	Cr-6	0.003	0.000	100.00	0.0482	вмв
Total:			0.003	0.000	100.00	0.048	

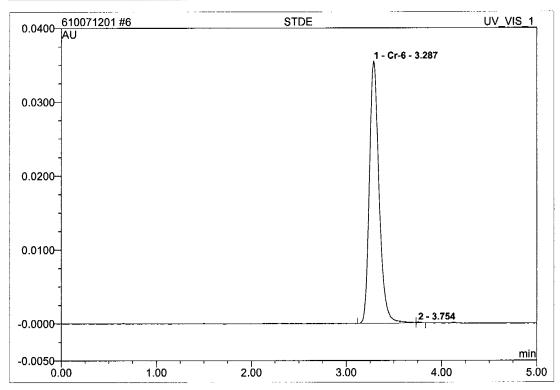


5 STDD			
Sample Name: Vial Number:	STDD 5	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 9:19	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.28	Cr-6	0.007	0.001	99.17	0.0995	ВМВ
2	3.98	n.a.	0.000	0.000	0.83	n.a.	BMB
Total:			0.007	0.001	100.00	0.099	

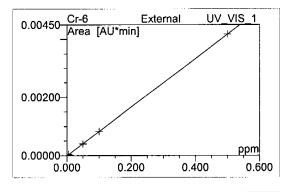


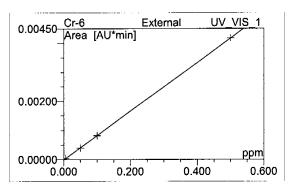


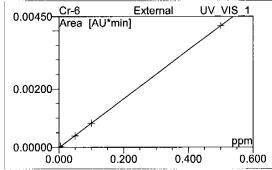
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.29	Cr-6	0.035	0.004	99.85	0.5003	вм
2	3.75	n.a.	0.000	0.000	0.15	n.a.	MB
Total:			0.036	0.004	100.00	0.500	

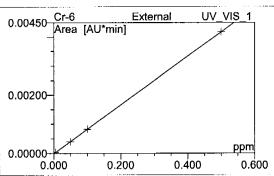
Operator: Chemistry Timebase: accutest Sequence: 610071201

6 STDE			
Sample Name:	STDE	Injection Volume:	25.0
Vial Number:	6	Channel:	UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 9:27	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



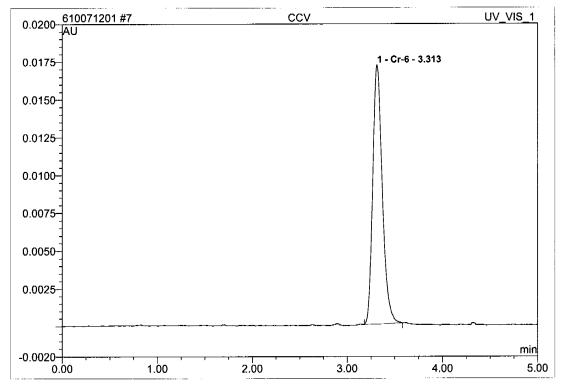






No.	Ret.Time	Peak Name	Cal.Type	Points	Coeff.Det.	Offset	Slope	Curve
	min				%			
1	3.29	Cr-6	LOff	5	99.9965	0.0000	0.0084	0.0000
2	3.75	n.a.	n.a.	n.a	n.a.	n.a.	n.a.	n.a.
Average:					99.9965	0.0000	0.0084	0.0000

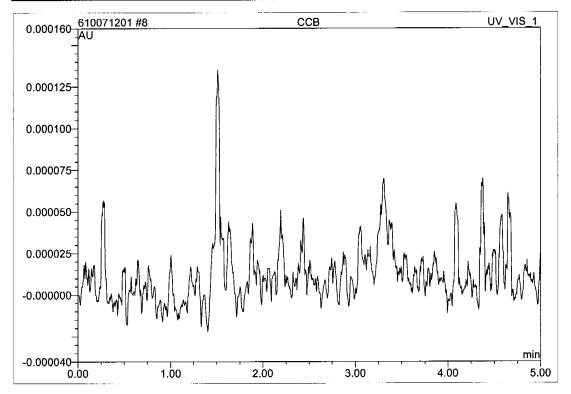




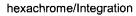
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.31	Cr-6	0.017	0.002	100.00	0.2400	BMB
Total:			0.017	0.002	100.00	0.240	



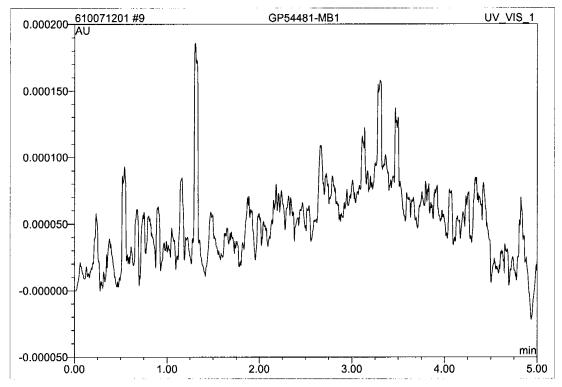
8 CCB			
Sample Name: Vial Number:	CCB 8	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 9:41	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



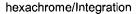
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	



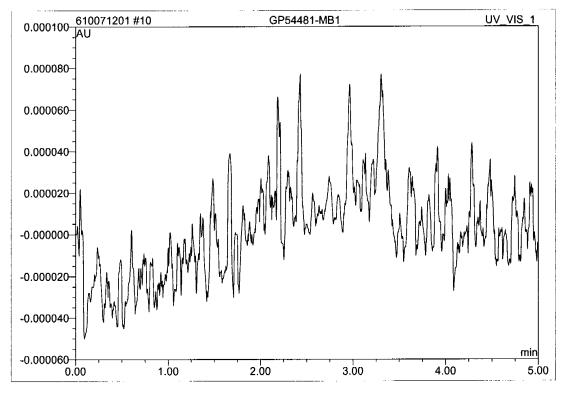
9 GP54481-MB1					
Sample Name: Vial Number:	GP54481-MB1 9	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	1.0000		
Recording Time:	7/12/2010 9:49	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

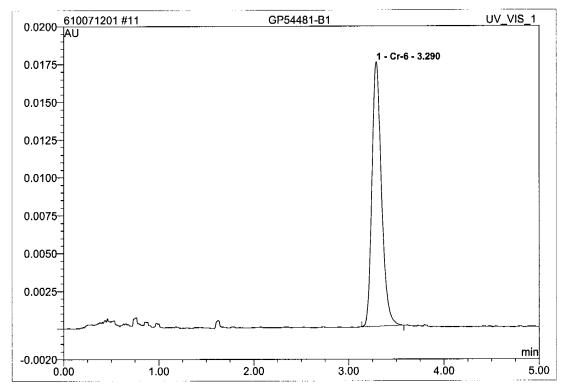


10 GP54481-MB1						
Sample Name:	GP54481-MB1	Injection Volume:	25.0			
Vial Number:	10	Channel:	UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	7/12/2010 9:56	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



N	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
Tot	al:		0.000	0.000	0.00	0.000	

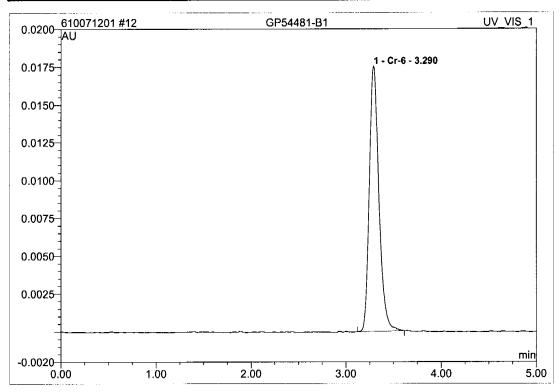
11 GP54481-B1						
Sample Name: Vial Number:	GP54481-B1 11	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	4.0000			
Recording Time:	7/12/2010 10:04	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.29	Cr-6	0.017	0.002	100.00	0.9756	вмв
Total:			0.017	0.002	100.00	0.976	



Injection Volume: 25.0 GP54481-B1 Sample Name: UV\_VIS\_1 Channel: Vial Number: 12 Sample Type: unknown Wavelength: n.a. Control Program: Bandwidth: n.a. hexachrome Dilution Factor: 4.0000 Quantif. Method: hexachrome 1.0000 Recording Time: Sample Weight: 7/12/2010 10:11 Sample Amount: 1.0000 Run Time (min): 5.00



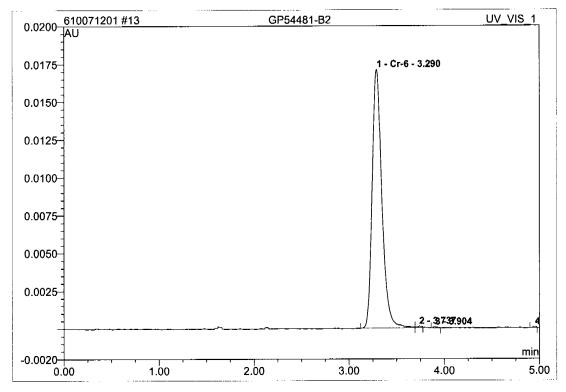
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.29	Cr-6	0.018	0.002	100.00	0.9832	ВМВ
Total:			0.018	0.002	100.00	0.983	

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13	GP	544	81	-B2
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25.0 Injection Volume: Sample Name: GP54481-B2 UV\_VIS\_1 Channel: Vial Number: 13 Wavelength: Sample Type: unknown n.a. Bandwidth: Control Program: n.a. hexachrome 80.0000 Dilution Factor: Quantif. Method: hexachrome Sample Weight: 1.0000 Recording Time: 7/12/2010 10:18 1.0000 Run Time (min): 5.00 Sample Amount:

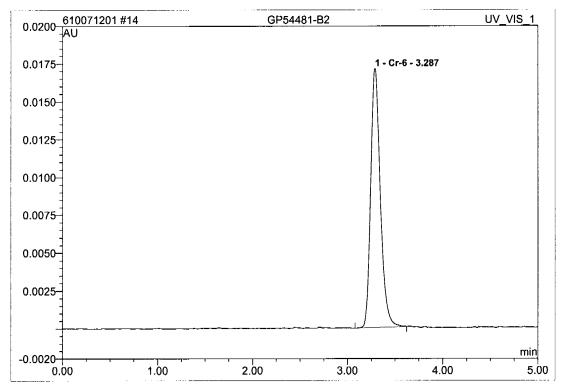


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.29	Cr-6	0.017	0.002	99.44	19.3983	BM
2	3.74	n.a.	0.000	0.000	0.22	n.a.	MB
3	3.90	n.a.	0.000	0.000	0.17	n.a.	BMB
4	4.95	n.a.	0.000	0.000	0.17	n.a.	BMB
Total:			0.017	0.002	100.00	19.398	

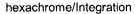
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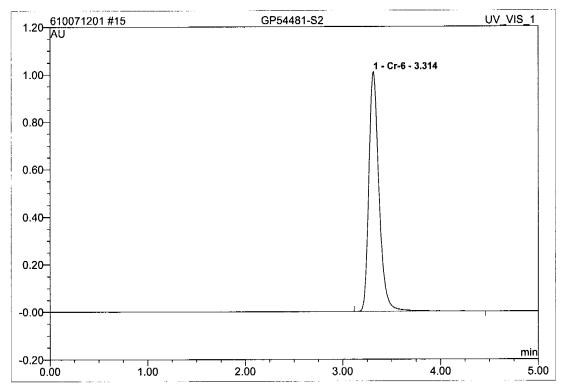


14 GP54481-B2							
Sample Name: Vial Number:	GP54481-B2	Injection Volume: Channel:	25.0 UV VIS 1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	80.0000				
Recording Time:	7/12/2010 10:26	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.29	Cr-6	0.017	0.002	100.00	19.2244	BMB
Total:			0.017	0.002	100.00	19.224	

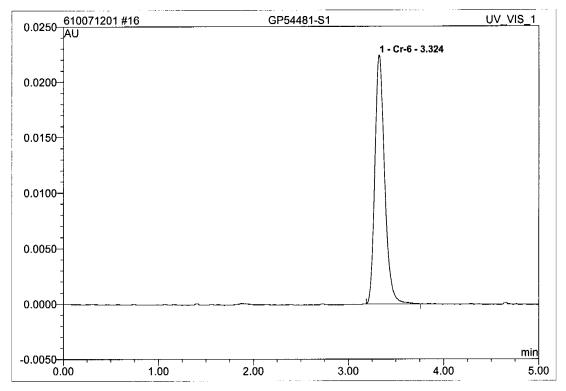




No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.31	Cr-6	1.011	0.122	100.00	14.5795	BMB
Total:			1.011	0.122	100.00	14.580	



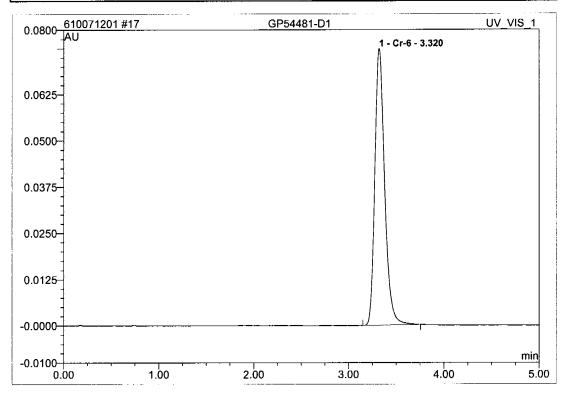
16 GP54481-S1							
Sample Name: Vial Number:	GP54481-S1 16	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	1.0000				
Recording Time:	7/12/2010 10:41	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.32	Cr-6	0.022	0.003	100.00	0.3189	вмв
Total:			0.022	0.003	100.00	0.319	

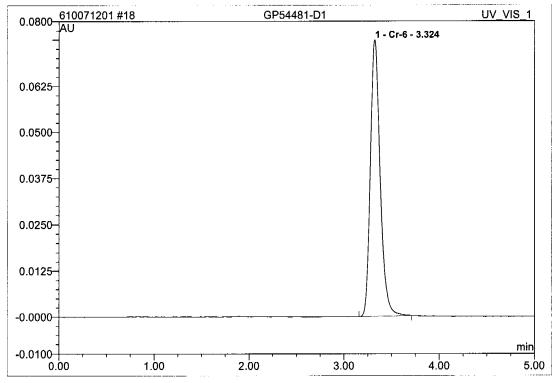


17 GP54481-D1								
Sample Name: Vial Number:	GP54481-D1 17	Injection Volume: Channel:	25.0 UV_VIS_1					
Sample Type:	unknown	Wavelength:	n.a.					
Control Program:	hexachrome	Bandwidth:	n.a.					
Quantif. Method:	hexachrome	Dilution Factor:	1.0000					
Recording Time:	7/12/2010 10:48	Sample Weight:	1.0000					
Run Time (min):	5.00	Sample Amount:	1.0000					



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.32	Cr-6	0.075	0.009	100.00	1.0657	BMB
Total:			0.075	0.009	100.00	1.066	

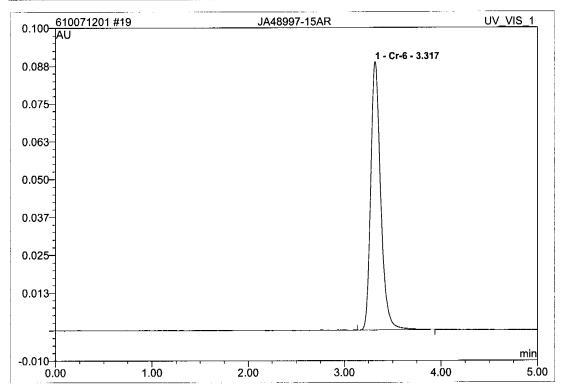




No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.075	0.009	100.00	1.0663	BMB
Total:			0.075	0.009	100.00	1.066	

Operator:Chemistry Timebase:accutest Sequence:610071201

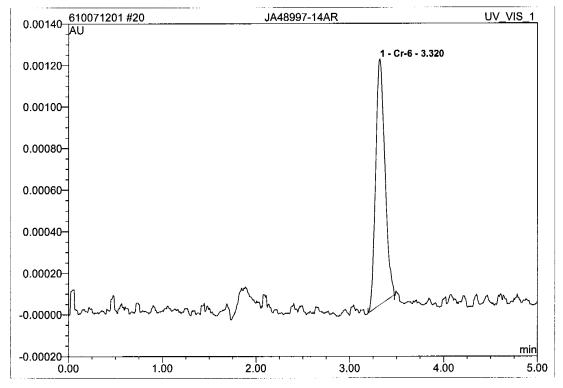
19 JA48997-15AR					
Sample Name: Vial Number:	JA48997-15AR 19	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	1.0000		
Recording Time:	7/12/2010 11:03	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



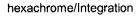
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.32	Cr-6	0.089	0.011	100.00	1.2676	BMB
Total:			0.089	0.011	100.00	1.268	



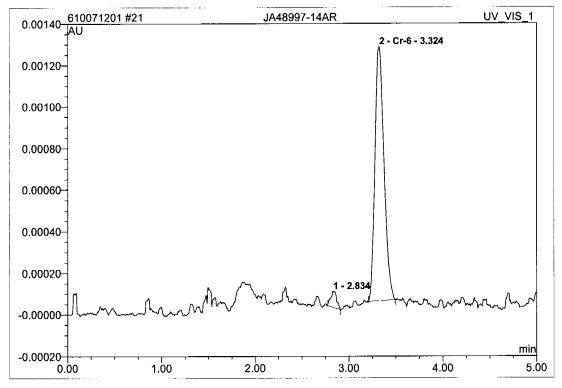
20 JA48997-14AR					
Sample Name: Vial Number:	JA48997-14AR 21	Injection Volume: Channel:	25.0 UV_VI\$_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	1.0000		
Recording Time:	7/12/2010 11:10	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.001	0.000	100.00	0.0171	BMB
Total:			0.001	0.000	100.00	0.017	



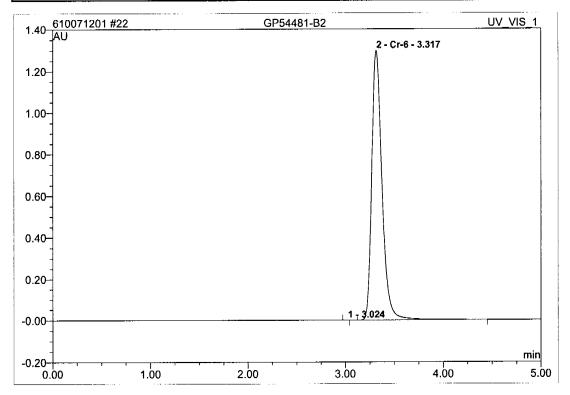
25.0 Injection Volume: Sample Name: JA48997-14AR UV\_VIS\_1 Channel: Vial Number: Sample Type: Wavelength: n.a. unknown Bandwidth: Control Program: n.a. hexachrome 1.0000 Dilution Factor: Quantif. Method: hexachrome 1.0000 Sample Weight: Recording Time: 7/12/2010 11:18 Sample Amount: 1.0000 Run Time (min): 5.00



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.83	n.a.	0.000	0.000	4.06	n.a.	вмв
2	3.32	Cr-6	0.001	0.000	95.94	0.0174	BMB
Total:			0.001	0.000	100.00	0.017	

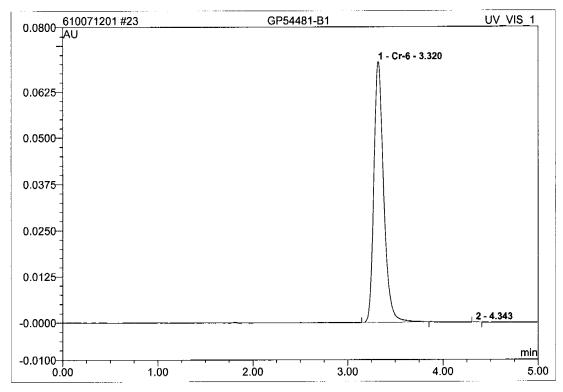
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No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.02	n.a.	0.000	0.000	0.00	n.a.	BMB
2	3.32	Cr-6	1.299	0.158	100.00	18.8 <u>658</u>	BMB
Total:			1.299	0.158	100.00	18.866	

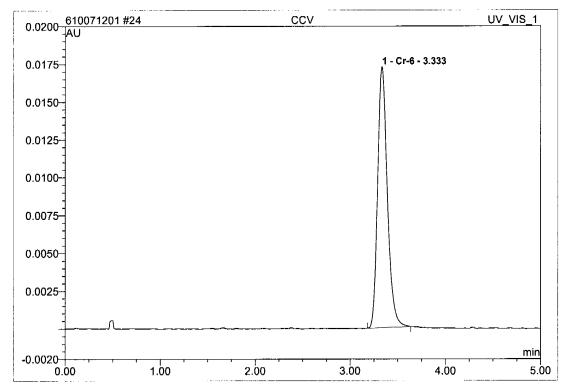




No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.32	Cr-6	0.071	0.008	99.93	1.0078	BMB
2	4.34	n.a	0.000	0.000	0.07	n.a.	BMB
Total:		_	0.071	0.008	100.00	1.008	



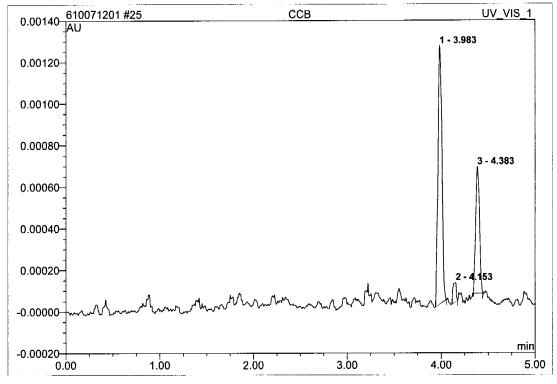
24 CCV			
Sample Name: Vial Number:	CCV 25	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 11:40	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.33	Cr-6	0.017	0.002	100.00	0.2446	вмв
Total:		•	0.017	0.002	100.00	0.245	



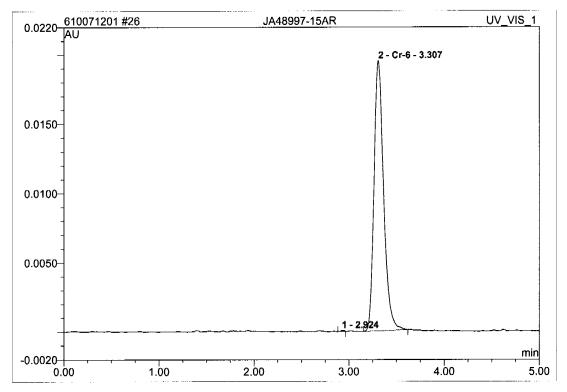
25 CCB			
Sample Name: Vial Number:	CCB 26	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 11:47	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



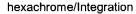
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.98	n.a.	0.001	0.000	64.98	n.a.	BMB
2	4.15	n.a.	0.000	0.000	4.07	n.a.	BMB
3	4.38	n.a.	0.001	0.000	30.95	n.a.	BMB
Total:			0.002	0.000	100.00	0.000	



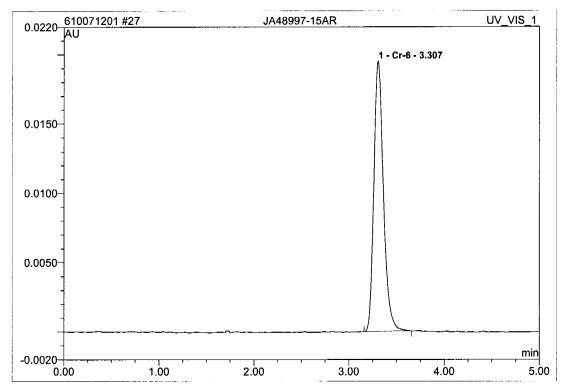
26 JA48997-15AR					
Sample Name: Vial Number:	JA48997-15AR 27	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	5.0000		
Recording Time:	7/12/2010 11:55	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.92	n.a.	0.000	0.000	0.17	n.a.	вмв
2	3.31	Cr-6	0.019	0.002	99.83	1.3638	BMB
Total:			0.020	0.002	100.00	1.364	



27 JA48997-15AR					
Sample Name: Vial Number:	JA48997-15AR 28	Injection Volume: Channel:	25.0 UV_VIS_1		
Sample Type:	unknown	Wavelength:	n.a.		
Control Program:	hexachrome	Bandwidth:	n.a.		
Quantif. Method:	hexachrome	Dilution Factor:	5.0000		
Recording Time:	7/12/2010 12:02	Sample Weight:	1.0000		
Run Time (min):	5.00	Sample Amount:	1.0000		

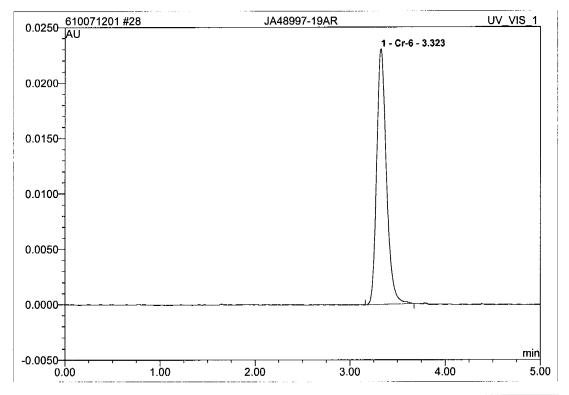


No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.31	Cr-6	0.020	0.002	100.00	1.3643	вмв
Total:			0.020	0.002	100.00	1.364	



6.6

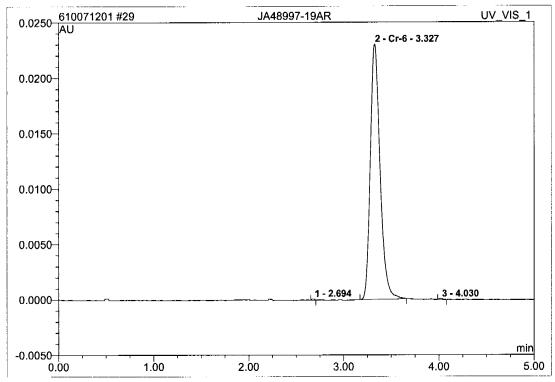
28 JA48997-19AR						
Sample Name: Vial Number:	JA48997-19AR 29	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	1.0000			
Recording Time:	7/12/2010 12:10	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.32	Cr-6	0.023	0.003	100.00	0.3281	вмв
Total:			0.023	0.003	100.00	0.328	

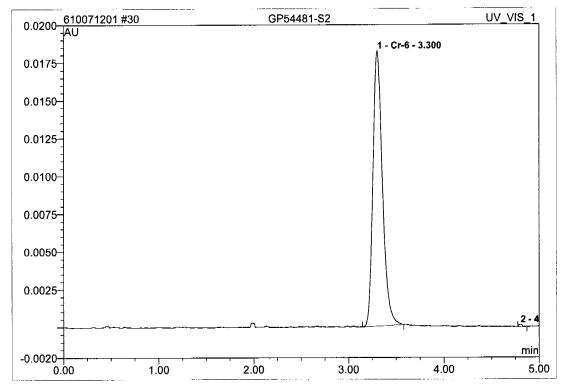
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871





No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.69	n.a.	0.000	0.000	0.16	n.a.	BMB
2	3.33	Cr-6	0.023	0.003	99.69	0.3267	BMB
3	4.03	n.a.	0.000	0.000	0.15	n.a.	BMB
Total:			0.023	0.003	100.00	0.327	•

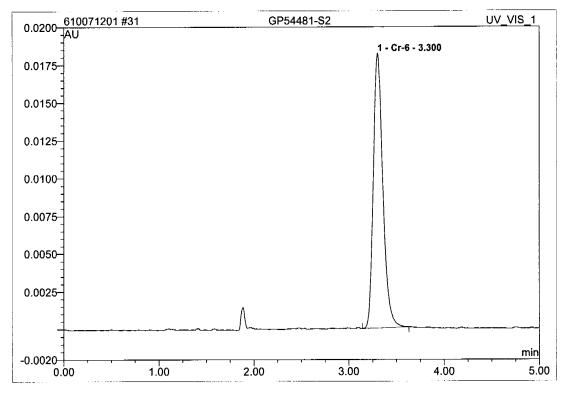




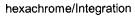
No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.30	Cr-6	0.018	0.002	99.70	15.1858	BMB
2	4.80	n.a.	0.000	0.000	0.30	n.a.	BMB
Total:			0.018	0.002	100.00	15.186	

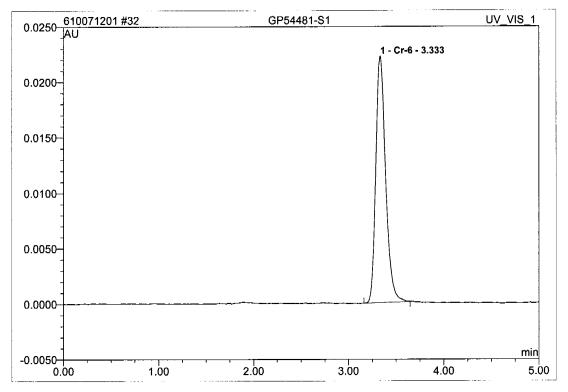


31 GP54481-S2						
Sample Name: Vial Number:	GP54481-S2 32	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	60.0000			
Recording Time:	7/12/2010 12:32	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.30	Cr-6	0.018	0.002	100.00	15.2327	ВМВ
Total:			0.018	0.002	100.00	15.233	

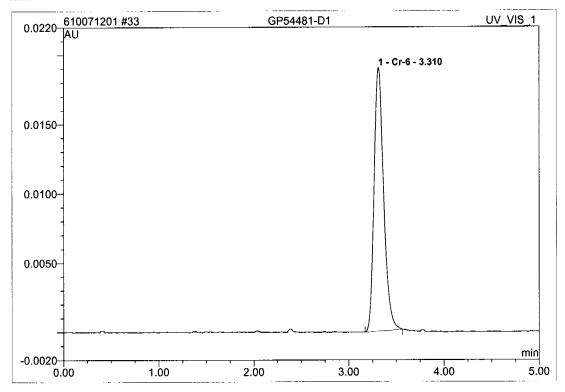




No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.33	Cr-6	0.022	0.003	100.00	0.3180	BMB
Total:			0.022	0.003	100.00	0.318	



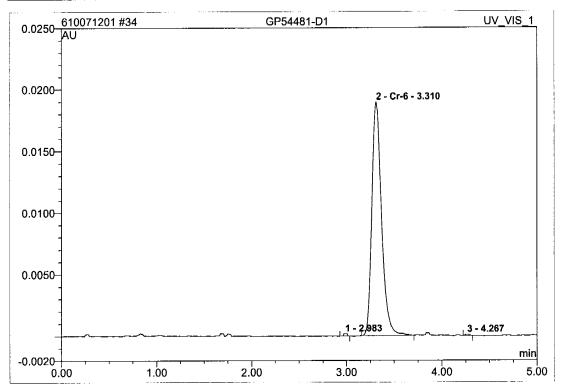
33 GP54481-D1						
Sample Name: Vial Number:	GP54481-D1 34	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	4.0000			
Recording Time:	7/12/2010 12:47	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.31	Cr-6	0.019	0.002	100.00	1.0630	BMB
Total:			0.019	0.002	100.00	1.063	



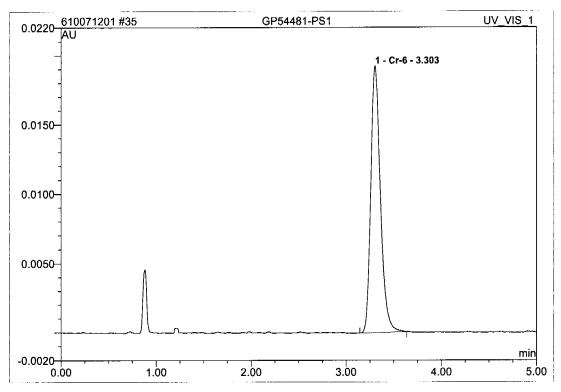
34 GP54481-D1							
Sample Name: Vial Number:	GP54481-D1 35	Injection Volume: Channel:	25.0 UV_VIS_1				
Sample Type:	unknown	Wavelength:	n.a.				
Control Program:	hexachrome	Bandwidth:	n.a.				
Quantif. Method:	hexachrome	Dilution Factor:	4.0000				
Recording Time:	7/12/2010 12:54	Sample Weight:	1.0000				
Run Time (min):	5.00	Sample Amount:	1.0000				



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.98	n.a.	0.000	0.000	0.40	n.a.	BMB
2	3.31	Cr-6	0.019	0.002	99.36	1.0708	BMB
3	4.27	n.a.	0.000	0.000	0.24	n.a.	BMB
Total:			0.019	0.002	100.00	1.071	



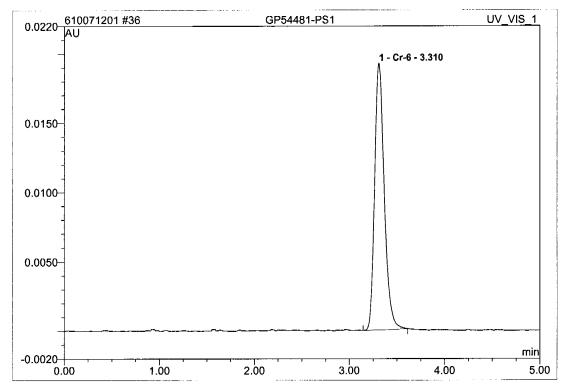
35 GP54481-PS1						
Sample Name: Vial Number:	GP54481-PS1 36	Injection Volume: Channel:	25.0 UV_VIS_1			
Sample Type:	unknown	Wavelength:	n.a.			
Control Program:	hexachrome	Bandwidth:	n.a.			
Quantif. Method:	hexachrome	Dilution Factor:	15.0000			
Recording Time:	7/12/2010 13:01	Sample Weight:	1.0000			
Run Time (min):	5.00	Sample Amount:	1.0000			



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.30	Cr-6	0.019	0.002	100.00	4.0581	BMB
Total:			0.019	0.002	100.00	4.058	



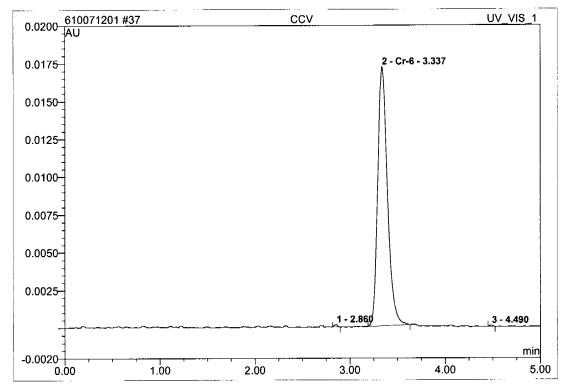
36 GP54481-PS1								
Sample Name: Vial Number:	GP54481-PS1 37	Injection Volume: Channel:	25.0 UV_VI\$_1					
Sample Type:	unknown	Wavelength:	n.a.					
Control Program:	hexachrome	Bandwidth:	n.a.					
Quantif. Method:	hexachrome	Dilution Factor:	15.0000					
Recording Time:	7/12/2010 13:09	Sample Weight:	1.0000					
Run Time (min):	5.00	Sample Amount:	1.0000					



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.31	Cr-6	0.019	0.002	100.00	4.0486	BMB
Total:			0.019	0.002	100.00	4.049	

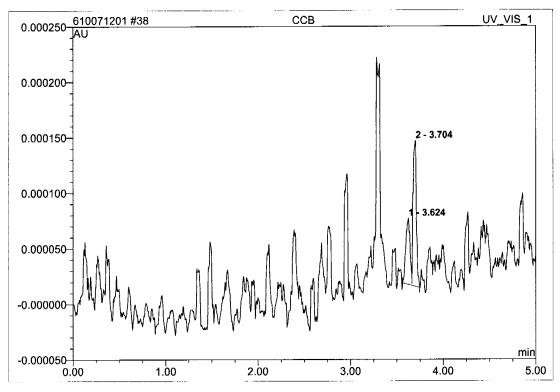


37 CCV			
Sample Name: Vial Number:	CCV 38	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/12/2010 13:16	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.86	n.a.	0.000	0.000	0.33	n.a.	BMB
2	3.34	Cr-6	0.017	0.002	99.49	0.2448	BMB
3	4.49	n.a	0.000	0.000	0.17	_n.a.	BMB
Total:			0.017	0.002	100.00	0.245	





No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3.62	n.a.	0.000	0.000	35.61	n.a.	ВМ
2	3.70	n.a.	0.000	0.000	64.39	n.a.	MB
Total:			0.000	0.000	100.00	0.000	



Raw Data





# GN39241

Sample Homogenization Log

# ACCUTEST. Laboratories

#### 1/2/ XX) くせる 7 Comments 170 긓 Z 9/24/3 がなら Homog. Device (blender, wand) 37.02 となる 5#3C) 100 とっよ F 25 (the E クなナ SALA L Jahar Sample Description (Soil, Słudge, etc.) 13 STON 7 ž 3 よう どと أسمارا 1500 C 1120 1324 1300 1 रिक् 12sailt brout, 2 Z <u>な</u> 1 Initials Homogenization Date ナゲ from bottle # \$ JAYLP9991-157 74 TA4LPOPPI-11A JAPON-IA 4 <u>م</u> F 2 Sample ID Accutest ⋺

Form: GN195-01 Rev. Date: 5/5/06







08/13/10



## Technical Report for

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Accutest Job Number: JA50921

Sampling Date: 07/08/10

Report to:

Mactec

vhlieu@mactec.com

ATTN: Vanthuy Lieu

Total number of pages in report: 151





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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David N. Speis

VP Ops, Laboratory Director

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S







Job No:

JA50921

# **Sample Summary**

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Comml-	Call4. 1			M-4:	•	Client
Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
JA50921-1	07/08/10	09:27 MD	07/08/10	AQ	Ground Water	079-MW-2A-070810
JA50921-1F	07/08/10	09:27 MD	07/08/10	AQ	Groundwater Filtered	079-MW-2A-070810
JA50921-2	07/08/10	10:37 MD	07/08/10	AQ	Ground Water	079-MW-1
JA50921-2D	07/08/10	10:37 MD	07/08/10	AQ	Water Dup/MSD	079-MW-1-MSD
JA50921-2DF	07/08/10	10:37 MD	07/08/10	AQ	Water Dup/MSD	079-MW-1-MSDF
JA50921-2F	07/08/10	10:37 MD	07/08/10	AQ	Groundwater Filtered	079-MW-1F
JA50921-2S	07/08/10	10:37 MD	07/08/10	AQ	Water Matrix Spike	079-MW-1-MS
JA50921-2SF	07/08/10	10:37 MD	07/08/10	AQ	Water Matrix Spike	079-MW-1-MSF
JA50921-3	07/08/10	10:38 MD	07/08/10	AQ	Ground Water	079-MW-1DP
JA50921-3F	07/08/10	10:38 MD	07/08/10	AQ	Groundwater Filtered	079-MW-1DP-F
JA50921-4	07/08/10	11:00 MD	07/08/10	AQ	Field Blank Water	079-FB-070810
JA50921-4F	07/08/10	11:00 MD	07/08/10	AO	Field Blank Filtered	079-FB-070810F





#### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Honeywell International Inc. Job No JA50921

Site: HLANJPR: SA-5, Site 079, Jersey City, NJ Report Date 7/27/2010 11:58:41 AM

On 07/08/2010, 5 Sample(s), 0 Trip Blank(s) and 2 Field Blank(s) were received at Accutest Laboratories at a temperature of 3 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA50921 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

#### Metals By Method SW846 6010B

Matrix: AO Batch ID: MP53708

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA50921-2FMS, JA50921-2FMSD, JA50921-2MS, JA50921-2MSD, JA50921-2SDL, JA50921-2FSDL were used as
  the QC samples for metals.
- RPD(s) for Serial Dilution for Chromium are outside control limits for sample MP53708-SD2. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</li>

#### Wet Chemistry By Method SW846 7196A

Matrix: AO Batch ID: GN39697

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA50921-2DUP, JA50921-2FDUP, JA50921-2FMS, JA50921-2MS were used as the QC samples for Chromium, Hexavalent.
- GN39697-S5 for Chromium, Hexavalent: Spike recovery indicates possible matrix interference. Good pH adjusted post spike recovery (96.7%)

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover







# Sample Results

Report of Analysis



### **Report of Analysis**

Page 1 of 1

**Client Sample ID:** 079-MW-2A-070810

Lab Sample ID:JA50921-1Date Sampled:07/08/10Matrix:AQ - Ground WaterDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	< 10	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

# Report of Analysis

**Client Sample ID:** 079-MW-2A-070810

Lab Sample ID:JA50921-1Date Sampled:07/08/10Matrix:AQ - Ground WaterDate Received:07/08/10Percent Solids:n/a

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	07/08/10 21:53	RA	SW846 7196A

# Report of Analysis

Client Sample ID: 079-MW-2A-070810

Lab Sample ID:JA50921-1FDate Sampled:07/08/10Matrix:AQ - Groundwater FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Dissolved Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	< 10	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

# Report of Analysis

**Client Sample ID:** 079-MW-2A-070810

Lab Sample ID:JA50921-1FDate Sampled:07/08/10Matrix:AQ - Groundwater FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium Hexavalent	< 0.010	0.010	mg/l	1	07/08/10	RΔ	SW846 71964

# Report of Analysis

Client Sample ID: 079-MW-1 Lab Sample ID: JA50921-2

 Lab Sample ID:
 JA50921-2
 Date Sampled:
 07/08/10

 Matrix:
 AQ - Ground Water
 Date Received:
 07/08/10

**Percent Solids:** n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	20.5	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

# Report of Analysis

Page 1 of 1

Client Sample ID: 079-MW-1

Lab Sample ID:JA50921-2Date Sampled:07/08/10Matrix:AQ - Ground WaterDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium Havayalant	< 0.010	0.010	ma/l	1	07/08/10 21:4	53 DA	SW846 7106A

# C

# Report of Analysis

Client Sample ID: 079-MW-1F

Lab Sample ID:JA50921-2FDate Sampled:07/08/10Matrix:AQ - Groundwater FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Dissolved Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	< 10	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

# C

# Report of Analysis

Client Sample ID: 079-MW-1F

Lab Sample ID:JA50921-2FDate Sampled:07/08/10Matrix:AQ - Groundwater FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	07/08/10 21:53	B RA	SW846 7196A

### **Report of Analysis**

Client Sample ID: 079-MW-1DP

Lab Sample ID:JA50921-3Date Sampled:07/08/10Matrix:AQ - Ground WaterDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	14.9	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

# Report of Analysis

Client Sample ID: 079-MW-1DP

Lab Sample ID:JA50921-3Date Sampled:07/08/10Matrix:AQ - Ground WaterDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method	
Chromium Hexavalent	< 0.010	0.010	ma/1	1	07/08/10 21:5	(2 DA	CW946 7106	

# Report of Analysis

Client Sample ID: 079-MW-1DP-F

Lab Sample ID:JA50921-3FDate Sampled:07/08/10Matrix:AQ - Groundwater FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Dissolved Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	< 10	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

## Report of Analysis

Client Sample ID: 079-MW-1DP-F

Lab Sample ID:JA50921-3FDate Sampled:07/08/10Matrix:AQ - Groundwater FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	07/08/10 21:53	RA	SW846 7196A

## Report of Analysis

Client Sample ID: 079-FB-070810

Lab Sample ID:JA50921-4Date Sampled:07/08/10Matrix:AQ - Field Blank WaterDate Received:07/08/10Percent Solids:n/a

Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	< 10	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

## Report of Analysis

Client Sample ID: 079-FB-070810

Lab Sample ID:JA50921-4Date Sampled:07/08/10Matrix:AQ - Field Blank WaterDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium Hexavalent	< 0.010	0.010	ma/1	1	07/08/10 21:4	(2 DA	CW946 7106

## Report of Analysis

Client Sample ID: 079-FB-070810F

Lab Sample ID:JA50921-4FDate Sampled:07/08/10Matrix:AQ - Field Blank FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **Dissolved Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Chromium	< 10	10	ug/l	1	07/14/10	07/20/10 GT	SW846 6010B <sup>1</sup>	SW846 3010A <sup>2</sup>

(1) Instrument QC Batch: MA24667(2) Prep QC Batch: MP53708

## Report of Analysis

Client Sample ID: 079-FB-070810F

Lab Sample ID:JA50921-4FDate Sampled:07/08/10Matrix:AQ - Field Blank FilteredDate Received:07/08/10Percent Solids:n/a

**Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

#### **General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium. Hexavalent	< 0.010	0.010	mg/l	1	07/08/10 21:5	53 RA	SW846 7196A



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- · Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



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		Sample	Identific	ation	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	# of Cont.	Graff	2	EPA 7199 Hexavalent	Total Chremium									_	ot	-	(Ver 3_7) 92-01-95	renesurgio	Daol.com
Location ID		Start epth (ft)	End Depth (f	t) Field Sample ID				S 2 F -			Unit		ng/L	mg/L												Lab Sample	Numbers	
079-MW-2A			1	079-MW-2A-070810	7/8/2010	9:27	GW	Water	REG	2	qua	N	x	X											L.	X_		
2 079-MW-2A		-1F		079-MW-2A-070810F	7/8/2010	9:29	GW	Water	REG	2	i	7)	x	х					L						1/	AM	ET ZY	,
3 079-MW-1	I		1	079-MW-1	7/8/2010	10:37	GW	Water	REG	2	1	N	x	х							L		┖		1_	N4	=41	
4 079-MW-1		26		079-MW-1F	7/8/2010	10:37	GW	Water	REG	2	ą.	9	/ <sub>x</sub>	x								$\perp$	L					_/
5 079-MW-1			ĺ	079-MW-IDP	7/8/2010	10:38	GW	Water	REG	2	î	N	x	x				1	L				_					
6 079-MW-1		-3¢		079-MW-1DP-F	7/8/2010	10:38	GW	Water	REG	2	Î	41	Y <sub>X</sub>	х			<u> </u>		L	<u> </u>	_		┺	_	$\triangle$			
7 079-MW-1			ľ	079-MW-1-MS	7/8/2010	10:37	GW	Water	REG	2	1	N	X	x	ļ		<u> </u>	_	L		L	1	┸	$\perp$				
8 079-MW-1			$\perp$	079-MW-1-MSF	7/8/2010	10:37	GW	Water	REG	2	ŝ	欗	Υ <sub>X</sub>	х	_			_	<u> </u>	L		_	$\perp$	_	_			
9 079-MW-1		-પ્ર	Ш	079-MW-1-MSD	7/8/2010	10:39	GW	Water	REG	2	Įŝ.	N	x	x	_	ļ	ļ.,		<u></u>		igspace	$\downarrow$	1	ļ.,	$\perp$	ļ		
10 079-MW-1			1	079-MW-1-MSD-F	7/8/2010	10:39	GW	Water	REG	2	1	â	Υ <u>x</u>	x	╙	<u> </u>	_	$\perp$	1-2	1-	4	14	m	_	1	-		
11 079-18-0708		48	1	079 <b>-</b> B-070810	7/8/2010	11:00	BikWater	Water	78	2	Įį.	N	X	x	$oxed{igspace}$	A	L	\$A	PI	E٤	R	CE	V	ED.	╧	<u> </u>		
12 079-FB-0708	10			079- <b>P</b> B-070810F	7/8/2010	11:00	BikWater	Water	<u>198</u>	2	亅	1	X	X		R	S	RV	€Đ	A\$	A	PPL	167	ABL	4	<u> </u>	·	
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reservatives: 0	- None	; [1 = E	ICL]; [2	= HNO3]; [3 = H2SO4]; [4 = N	aOH]; [5 = Zr	. Acetate];	[6 = MeOH	]; [7 = N	aHSO4];	8 = Oti	her (s	pecif	y):									Ц.		-				
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JA50921: Chain of Custody Page 1 of 2





## ACCUTEST.

#### **Accutest Laboratories Sample Receipt Summary**

Accutest Job Number: JA509	921 Client:		Immediate Client Serv	ices Action Required:	No
Date / Time Received: 7/8/20	O10 Delive	ery Method:	Client Service Action	on Required at Login:	No
Project:	No. Co	oolers:	1 Airbill #'s:		
	or N	Y or N	Sample Integrity - Documentation	Y or N	
1. Custody Seals Present:  2. Custody Seals Intact:	<ul><li>3. COC Present:</li><li>4. Smpl Dates/Time OK</li></ul>		Sample labels present on bottles:     Container labeling complete:		
Cooler Temperature	Y or N		Sample container label / COC agree:	<b>☑</b> □	
1. Temp criteria achieved:	<b>v</b>		Sample Integrity - Condition	Y or N	
Cooler temp verification:     Cooler media:	Infared gun Ice (bag)		1. Sample recvd within HT:		
Quality Control Preservatio	Y or N N/A		All containers accounted for:     Condition of sample:	☑ □ Intact	
1. Trip Blank present / cooler:			Sample Integrity - Instructions	Y or N	N/A
<ul><li>2. Trip Blank listed on COC:</li><li>3. Samples preserved properly:</li></ul>			Analysis requested is clear:     Bottles received for unspecified tests		
VOCs headspace free:			Sufficient volume recvd for analysis:		
			4. Compositing instructions clear:		<b>✓</b>
			5. Filtering instructions clear:		•
Comments					
Accutest Laboratories V:732.329.0200			Highway 130 2.329.3499		yton, Nev w/accute

JA50921: Chain of Custody

Page 2 of 2



Job No:

XCR

JA50921

## **Internal Sample Tracking Chronicle**

Honeywell International Inc.

JA50921-3F SW846 7196A

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA50921-1 079-MW-2	Collected: 08-JUL-10 ( A-070810	99:27 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC
	SW846 7196A SW846 6010B	08-JUL-10 21:53 20-JUL-10 02:54	RA GT	14-JUL-10	RH	XCR CR
JA50921-2 079-MW-1	Collected: 08-JUL-10 1	0:37 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC
	SW846 7196A SW846 6010B	08-JUL-10 21:53 20-JUL-10 00:21	RA GT	14-JUL-10	RH	XCR CR
JA50921-3 079-MW-11	Collected: 08-JUL-10 1 DP	0:38 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC
	SW846 7196A SW846 6010B	08-JUL-10 21:53 20-JUL-10 03:00	RA GT	14-JUL-10	RH	XCR CR
JA50921-4 079-FB-070	Collected: 08-JUL-10 1	1:00 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC
	SW846 7196A SW846 6010B	08-JUL-10 21:53 20-JUL-10 03:06	RA GT	14-JUL-10	RH	XCR CR
JA50921-11 079-MW-2	F Collected: 08-JUL-10 ( A-070810	99:27 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC
	FSW846 7196A FSW846 6010B	08-JUL-10 20-JUL-10 03:13	RA GT	14-JUL-10	RH	XCR CR
JA50921-2I 079-MW-1I	F Collected: 08-JUL-10 1	0:37 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC
	FSW846 7196A FSW846 6010B	08-JUL-10 21:53 20-JUL-10 00:45	RA GT	14-JUL-10	RH	XCR CR
JA50921-3I 079-MW-11	F Collected: 08-JUL-10 1 DP-F	0:38 By: MD	Receiv	ed: 08-JUL-	10 By:	MPC



Page 1 of 2

08-JUL-10 21:53 RA

Job No:

JA50921

**Internal Sample Tracking Chronicle** 

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA50921-31	F SW846 6010B	20-JUL-10 03:19	GT	14-JUL-10	RH	CR
JA50921-4 079-FB-070	F Collected: 08-JUL-10 0810F	11:00 By: MD	Receiv	ved: 08-JUL-	10 By:	MPC
	F SW846 7196A F SW846 6010B	08-JUL-10 21:53 20-JUL-10 03:25	RA GT	14-JUL-10	RH	XCR CR

Page 2 of 2

# Accutest Internal Chain of Custody Job Number: JA50921

HWINJM Honeywell International Inc. Account: **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Received: 07/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
IA50021 1 1	Sagurad Starage	Adom Coott	07/14/10 00:10	Datriava from Storage
JA50921-1.1	Secured Storage	Adam Scott		Retrieve from Storage
JA50921-1.1	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-1.1	Rowais Hanna	Secured Storage	07/14/10 16:10	Return to Storage
JA50921-1.1.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-1.1
JA50921-1.3	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-1.3	Ricky Agapay	Secured Storage	07/08/10 22:04	Return to Storage
JA50921-1.3	Secured Storage	Todd Shoemaker	07/09/10 08:25	Retrieve from Storage
JA50921-1.3	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-1F.2	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-1F.2	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-1F.2	Rowais Hanna	Secured Storage		Return to Storage
JA50921-1F.2.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-1F.
JA50921-1F.4	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-1F.4	Ricky Agapay	Secured Storage		Return to Storage
JA50921-1F.4	Secured Storage	Todd Shoemaker		Retrieve from Storage
JA50921-1F.4	Todd Shoemaker	Secured Storage		Return to Storage
JA50921-2.1	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-2.1	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-2.1	Rowais Hanna	Secured Storage		Return to Storage
JA50921-2.1.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-2.1
JA50921-2.2	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-2.2	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-2.2	Rowais Hanna	Secured Storage		Return to Storage
JA50921-2.3	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-2.3	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-2.3	Rowais Hanna	Secured Storage		Return to Storage
JA50921-2.7	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-2.7 JA50921-2.7	Ricky Agapay	Secured Storage		Return to Storage
JA50921-2.7 JA50921-2.7	Secured Storage	Todd Shoemaker		Retrieve from Storage
JA50921-2.7 JA50921-2.7	Todd Shoemaker	Secured Storage		Return to Storage
JAJU721-2. /	Toud Shotmart	Secured Storage	07/09/10 08.31	Return to Storage
JA50921-2.8	Secured Storage	Ricky Agapay		Retrieve from Storage
JA50921-2.8	Ricky Agapay Secured Storage	Secured Storage Todd Shoemaker		Return to Storage Retrieve from Storage
JA50921-2.8				



# Accutest Internal Chain of Custody Job Number: JA50921

HWINJM Honeywell International Inc. Account: **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Received: 07/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
7.1.700.71.7.0			0=10011000	
JA50921-2.8	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-2.9	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-2.9	Ricky Agapay	Secured Storage	07/08/10 22:04	Return to Storage
JA50921-2.9	Secured Storage	Todd Shoemaker	07/09/10 08:25	Retrieve from Storage
JA50921-2.9	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-2F.4	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-2F.4	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-2F.4	Rowais Hanna	Secured Storage		Return to Storage
JA50921-2F.4.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-2F.
JA50921-2F.5	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-2F.5	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-2F.5	Rowais Hanna	Secured Storage		Return to Storage
JA50921-2F.6	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-2F.6	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-2F.6	Rowais Hanna	Secured Storage		Return to Storage
JA50921-2F.10	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-2F.10	Ricky Agapay	Secured Storage		Return to Storage
JA50921-2F.10	Secured Storage	Todd Shoemaker		Retrieve from Storage
JA50921-2F.10	Todd Shoemaker	Secured Storage		Return to Storage
				-
JA50921-2F.11	Secured Storage	Ricky Agapay		Retrieve from Storage
JA50921-2F.11	Ricky Agapay	Secured Storage		Return to Storage
JA50921-2F.11	Secured Storage	Todd Shoemaker		Retrieve from Storage
JA50921-2F.11	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-2F.12	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-2F.12	Ricky Agapay	Secured Storage	07/08/10 22:04	Return to Storage
JA50921-2F.12	Secured Storage	Todd Shoemaker	07/09/10 08:25	Retrieve from Storage
JA50921-2F.12	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-3.1	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-3.1	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-3.1	Rowais Hanna	Secured Storage		Return to Storage
JA50921-3.1.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-3.1
JA50921-3.3	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA30/21-3.3				



# Accutest Internal Chain of Custody Job Number: JA50921

HWINJM Honeywell International Inc. Account: **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

Received: 07/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA50921-3.3	Secured Storage	Todd Shoemaker	07/09/10 08:25	Retrieve from Storage
JA50921-3.3	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-3F.2	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-3F.2	Adam Scott	Rowais Hanna	07/14/10 08:19	Custody Transfer
JA50921-3F.2	Rowais Hanna	Secured Storage	07/14/10 16:10	Return to Storage
JA50921-3F.2.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-3F.2
JA50921-3F.4	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-3F.4	Ricky Agapay	Secured Storage	07/08/10 22:04	Return to Storage
JA50921-3F.4	Secured Storage	Todd Shoemaker	07/09/10 08:25	Retrieve from Storage
JA50921-3F.4	Todd Shoemaker	Secured Storage		Return to Storage
JA50921-4.1	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-4.1	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-4.1	Rowais Hanna	Secured Storage		Return to Storage
JA50921-4.1.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-4.1
JA50921-4.3	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-4.3	Ricky Agapay	Secured Storage	07/08/10 22:04	Return to Storage
JA50921-4.3	Secured Storage	Todd Shoemaker	07/09/10 08:25	Retrieve from Storage
JA50921-4.3	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage
JA50921-4F.2	Secured Storage	Adam Scott	07/14/10 08:18	Retrieve from Storage
JA50921-4F.2	Adam Scott	Rowais Hanna		Custody Transfer
JA50921-4F.2	Rowais Hanna	Secured Storage	07/14/10 16:10	Return to Storage
JA50921-4F.2.1	Rowais Hanna	Metals Digestion	07/14/10 11:01	Digestate from JA50921-4F.2
JA50921-4F.4	Secured Storage	Ricky Agapay	07/08/10 20:42	Retrieve from Storage
JA50921-4F.4	Ricky Agapay	Secured Storage		Return to Storage
JA50921-4F.4	Secured Storage	Todd Shoemaker		Retrieve from Storage
JA50921-4F.4	Todd Shoemaker	Secured Storage	07/09/10 08:31	Return to Storage





### Metals Analysis

### QC Data Summaries

#### Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- · High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- · Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries



#### Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Analyst: GT

Date Analyzed: 07/19/10 Run ID: MA24667

Methods: EPA 200.7, SW846 6010B

Parameters: Cr

Time		Dilution PS Factor Recov	Comments
16:19	MA24667-STD1	1	STDA
16:25	MA24667-STD2	1	STDB
16:31	MA24667-STD3	1	STDC
16:37	MA24667-CCV1	1	
16:43	MA24667-CCB1	1	
16:49	MA24667-CRIB1	1	
16:56	MA24667-CRID1	1	
17:02	MA24667-ICV1	1	
17:08	MA24667-ICB1	1	
17:14	MA24667-CCV2	1	
17:20	MA24667-CCB2	1	
17:26	MA24667-ICSA1	1	
17:32	MA24667-ICSAB1	1	
17:40	MA24667-CCV3	1	
17:46	MA24667-CCB3	1	
17:52	MP53768-MB1	1	
17:58	MP53768-B1	1	
18:04	MP53768-S1	1	
18:11	MP53768-S2	1	
18:17	JA51512-1	1	(sample used for QC only; not part of login JA50921)
18:23	MP53768-SD1	5	
18:29	ZZZZZZ	1	
18:35	ZZZZZZ	1	
18:41	ZZZZZZ	1	
18:48	ZZZZZZ	1	
18:54	MA24667-CCV4	1	
19:00	MA24667-CCB4	1	
19:06	ZZZZZZ	1	
19:12	ZZZZZZ	1	
19:19	ZZZZZZ	1	
19:25	ZZZZZZ	1	
19:31	ZZZZZZ	1	
19:37	ZZZZZZ	1	



## Accutest Laboratories Instrument Runlog Inorganics Analyses

### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Analyst: GT Date Analyzed: 07/19/10 Run ID: MA24667 Methods: EPA 200.7, SW846 6010B

Parameters: Cr

Time		Dilution Factor	Comments
19:44	ZZZZZZ	1	
19:50	ZZZZZZ	1	
19:56	ZZZZZZ	1	
20:02	ZZZZZZ	1	
20:08	MA24667-CCV5	1	
20:14	MA24667-CCB5	1	
20:20	ZZZZZZ	1	
20:27	ZZZZZZ	1	
20:33	ZZZZZZ	1	
20:39	ZZZZZZ	1	
20:46	MP53734-MB1	1	
20:52	MP53734-LC1	1	
20:58	MP53734-S1	1	
21:04	MP53734-S2	1	
21:10	JA50868-1	1	(sample used for QC only; not part of login JA50921)
21:17	MP53734-SD1	5	High RSD
21:23	MA24667-CCV6	1	
21:29	MA24667-CCB6	1	
21:35	MP53734-S1	10	
21:41	MP53734-S2	10	
21:48	JA50868-1	10	(sample used for QC only; not part of login JA50921)
21:54	MP53734-SD1	50	
22:00	ZZZZZZ	1	
22:06	ZZZZZZ	1	
22:12	ZZZZZZ	1	
22:19	ZZZZZZ	1	
22:25	ZZZZZZ	1	
22:31	ZZZZZZ	1	
22:37	MA24667-CCV7	1	
22:43	MA24667-CCB7	1	
22:49	ZZZZZZ	1	
22:55	ZZZZZZ	1	
23:01	ZZZZZZ	1	



## Accutest Laboratories Instrument Runlog Inorganics Analyses

#### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: MA24667

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B

Analyst: GT Parameters: Cr

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:07	ZZZZZZ	1		
23:14	ZZZZZZ	1		
23:20	ZZZZZZ	1		
23:26	ZZZZZZ	1		
23:32	ZZZZZZ	1		
23:38	ZZZZZZ	1		
23:44	MA24667-CCV8	1		
23:50	MA24667-CCB8	1		
23:57	MP53708-MB1	1		
00:03	MP53708-LC1	1		
00:09	MP53708-S1	1		
00:15	MP53708-S2	1		
00:21	JA50921-2	1		
00:27	MP53708-SD1	5		
00:33	MP53708-S3	1		
00:39	MP53708-S4	1		
00:45	JA50921-2F	1		
00:51	MP53708-SD2	5		
00:57	MA24667-CCV9	1		
01:03	MA24667-CCB9	1		
01:10	MA24667-ICSA2	1		
1:16	MA24667-ICSAB2	1		
01:22	MA24667-CCV10	1		
1:28	MA24667-CCB10	1		
1:34	ZZZZZZ	1		
1:41	ZZZZZZ	1		
01:47	ZZZZZZ	1		
01:53	ZZZZZZ	1		
01:59	ZZZZZZ	1		
02:05	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:18	ZZZZZZ	1		
2:24	ZZZZZZ	1		



## Accutest Laboratories Instrument Runlog Inorganics Analyses

#### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: MA24667

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B

Analyst: GT Parameters: Cr

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Para	meters: Cr			
Time		Dilution Factor		Comments
02:30	ZZZZZZ	1		
02:36	MA24667-CCV11	1		
02:42	MA24667-CCB11	1		
02:48	ZZZZZZ	1		
02:54	JA50921-1	1		
03:00	JA50921-3	1		
03:06	JA50921-4	1		
03:13	JA50921-1F	1		
03:19	JA50921-3F	1		
Last r	eportable sample	1 e/prep for 1	job JA50	921
03:37	ZZZZZZ	1		
03:43	ZZZZZZ	3		
03:50	MA24667-CCV12	1		
03:56	MA24667-CCB12	1		
04:02	ZZZZZZ	1		
04:08	ZZZZZZ	1		
04:14	ZZZZZZ	1		
04:21	ZZZZZZ	1		
04:27	ZZZZZZ	1		
04:33	ZZZZZZ	1		
04:39	ZZZZZZ	1		
04:45	ZZZZZZ	1		
04:51	ZZZZZZ	1		
04:58	MA24667-CCV13	1		
05:04	MA24667-CCB13	1		
05:10	ZZZZZZ	1		
05:16	ZZZZZZ	1		
05:22	MP53752-S1	1		
05:28	MP53752-S2	1		
05:34	JA51290-10	1		(sample used for QC only; not part of login JA50921)
05:40	MP53752-SD1	5		
05:46	ZZZZZZ	1		



#### Accutest Laboratories Instrument Runlog Inorganics Analyses

### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: MA24667

File ID: SA071910M2.ICP Analyst: GT Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B

Parameters: Cr

Time	Sample Description	Dilution Factor	PS Recov	Comments
05:52	ZZZZZZ	1		
05:58	ZZZZZZ	1		
06:04	ZZZZZZ	1		
06:10	MA24667-CCV14	1		
06:16	MA24667-CCB14	1		
06:23	ZZZZZZ	1		
06:29	ZZZZZZ	1		
06:35	ZZZZZZ	1		
06:41	ZZZZZZ	1		
06:47	ZZZZZZ	1		
06:53	ZZZZZZ	1		
06:59	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:17	ZZZZZZ	1		
07:23	MA24667-CCV15	1		
07:29	MA24667-CCB15	1		
07:36	ZZZZZZ	1		
07:42	MP53638-S1	1		
07:48	MP53638-S2	1		
07:55	JA50695-1	1		(sample used for QC only; not part of login JA50921)
08:01	MP53638-SD1	5		
08:07	MP53638-S1	2		Needs higher dilution for CR
08:14	MP53638-S2	2		Needs higher dilution for CR
08:20	JA50695-1	2		(sample used for QC only; not part of login JA50921)
08:26	MP53638-SD1	10		Needs higher dilution for CR
08:32	MA24667-CCV16	1		
08:38	MA24667-CCB16	1		
08:44	MA24667-ICSA3	1		
08:51	MA24667-ICSAB3	1		
	ZZZZZZ	1		
09:04	ZZZZZZ	10		
09:10	ZZZZZZ	10		



#### Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 File ID: SA071910M2.ICP Methods: EPA 200.7, SW846 6010B Run ID: MA24667

Analyst: GT Parameters: Cr

Time	-	Dilution Factor		Comments
09:16	ZZZZZZ	2		
09:22	ZZZZZZ	2		
09:28	ZZZZZZ	3		
09:35	MA24667-CCV17	1		
Last r	MA24667-CCB17 reportable CCB fo MA24667-ICSA4		0921	
09:53	MA24667-ICSAB4	1		
09:59	MA24667-CCV18	1		
10:05	MA24667-CCB18	1		
10:12	ZZZZZZ	1		
10:18	ZZZZZZ	1		
10:24	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: MA24667

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B

Analyst: GT
Parameters: Cr

Para	meters: Cr				
Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:19	MA24667-STD1	2548 R	157470 R	27957 R	5458 R
16:25	MA24667-STD2	2503	155190	27795	5255
16:31	MA24667-STD3	2397	148650	27395	4882
16:37	MA24667-CCV1	2459	152220	27702	5093
16:43	MA24667-CCB1	2535	156790	27824	5434
16:49	MA24667-CRIB1	2519	156070	27961	5372
16:56	MA24667-CRID1	2533	157120	27932	5429
17:02	MA24667-ICV1	2516	156220	27672	5344
17:08	MA24667-ICB1	2541	157070	27790	5457
17:14	MA24667-CCV2	2458	152540	27581	5099
17:20	MA24667-CCB2	2526	157080	27820	5429
17:26	MA24667-ICSA1	2245	139440	26529	4508
17:32	MA24667-ICSAB1	2239	139900	26545	4471
17:40	MA24667-CCV3	2464	152490	27455	5105
17:46	MA24667-CCB3	2536	157110	27835	5430
17:52	MP53768-MB1	2565	158980	28446	5530
17:58	MP53768-B1	2484	156130	27964	5246
18:04	MP53768-S1	2484	156960	29025	4913
18:11	MP53768-S2	2474	155340	28151	5096
18:17	JA51512-1	2495	157220	28443	5187
18:23	MP53768-SD1	2533	157620	27953	5380
18:29	ZZZZZZ	2513	157610	28480	5182
18:35	ZZZZZZ	2521	158470	28614	5177
18:41	ZZZZZZ	2527	157980	28679	5227
18:48	ZZZZZZ	2479	156100	28426	5057
18:54	MA24667-CCV4	2461	152200	27276	5099
19:00	MA24667-CCB4	2548	156930	27700	5445
19:06	ZZZZZZ	2498	156650	28323	5154
19:12	ZZZZZZ	2643	166200	31584	4630
19:19	ZZZZZZ	2515	157480	28267	5271
19:25	ZZZZZZ	2548	158060	28187	5378
19:31	ZZZZZZ	2565	159050	28345	5380
19:37	ZZZZZZ	2527	158230	28410	5221



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 Run ID: MA24667 File ID: SA071910M2.ICP Methods: EPA 200.7, SW846 6010B

Analyst: GT Parameters: Cr

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
19:44	ZZZZZZ	2533	158710	28728	5103
19:50	ZZZZZZ	2529	157130	28194	5347
19:56	ZZZZZZ	2561	158860	28633	5262
20:02	ZZZZZZ	2454	153600	27998	4983
20:08	MA24667-CCV5	2485	152820	27295	5120
20:14	MA24667-CCB5	2565	157500	27702	5465
20:20	ZZZZZZ	2380	154970	28242	5068
20:27	ZZZZZZ	2596	160750	28821	5268
20:33	ZZZZZZ	2513	157310	28645	5111
20:39	ZZZZZZ	2664	166570	31721	4612
20:46	MP53734-MB1	2579	158140	27869	5501
20:52	MP53734-LC1	2539	156650	27632	5365
20:58	MP53734-S1	2057	120160	24410	3923
21:04	MP53734-S2	2020	119090	24221	3844
21:10	JA50868-1	2029	119680	24401	3883
21:17	MP53734-SD1	2347	141970	26389	4724
21:23	MA24667-CCV6	2509	153520	27148	5146
21:29	MA24667-CCB6	2583	158230	27577	5481
21:35	MP53734-S1	2441	146580	26795	5002
21:41	MP53734-S2	2426	146190	26807	4972
21:48	JA50868-1	2431	147030	26748	4995
21:54	MP53734-SD1	2540	154780	27312	5339
22:00	ZZZZZZ	2559	157890	27671	5453
22:06	ZZZZZZ	2419	148820	27547	5052
22:12	ZZZZZZ	2312	140260	26549	4609
22:19	ZZZZZZ	2556	158040	27697	5438
22:25	ZZZZZZ	2345	145050	26580	4790
22:31	ZZZZZZ	2557	158000	27963	5450
22:37	MA24667-CCV7	2503	153480	27384	5136
22:43	MA24667-CCB7	2589	158580	27686	5487
22:49	ZZZZZZ	2517	156130	27681	5334
22:55	ZZZZZZ	2566	158100	28276	5455
23:01	ZZZZZZ	2542	155480	27609	5349



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Analyst: GT

Date Analyzed: 07/19/10 Run ID: MA24667

Methods: EPA 200.7, SW846 6010B

Parameters: Cr

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:07	ZZZZZZ	2524	154210	27714	5271
23:14	ZZZZZZ	2558	157180	27702	5429
23:20	ZZZZZZ	2478	149540	27518	5049
23:26	ZZZZZZ	2482	149020	27304	5087
23:32	ZZZZZZ	2529	156590	27793	5358
23:38	ZZZZZZ	2575	158780	27733	5471
23:44	MA24667-CCV8	2518	153990	27350	5145
23:50	MA24667-CCB8	2597	158670	27701	5487
23:57	MP53708-MB1	2625	160460	28063	5574
00:03	MP53708-LC1	2538	157090	27635	5344
00:09	MP53708-S1	2370	142180	26608	4714
00:15	MP53708-S2	2361	141950	26525	4697
00:21	JA50921-2	2379	142280	27046	4776
00:27	MP53708-SD1	2530	152590	27479	5271
00:33	MP53708-S3	2352	142160	26709	4686
00:39	MP53708-S4	2353	141930	26740	4703
00:45	JA50921-2F	2364	141780	26856	4762
00:51	MP53708-SD2	2509	152440	27464	5234
00:57	MA24667-CCV9	2495	153370	27604	5118
01:03	MA24667-CCB9	2577	158050	27814	5468
01:10	MA24667-ICSA2	2284	140700	26331	4509
01:16	MA24667-ICSAB2	2241	139810	26221	4435
01:22	MA24667-CCV10	2503	153060	27219	5123
01:28	MA24667-CCB10	2585	157820	27624	5468
01:34	ZZZZZZ	2475	151290	27260	5145
01:41	ZZZZZZ	2520	155950	27644	5307
01:47	ZZZZZZ	2568	158290	27696	5463
01:53	ZZZZZZ	2427	149780	26988	5051
01:59	ZZZZZZ	2418	149320	27038	5018
02:05	ZZZZZZ	2485	152950	27295	5218
02:11	ZZZZZZ	2457	151160	27134	5100
02:18	ZZZZZZ	2517	155360	28108	4949
02:24	ZZZZZZ	2568	157700	28190	5347



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Analyst: GT Date Analyzed: 07/19/10 Run ID: MA24667 Methods: EPA 200.7, SW846 6010B

Parameters: Cr

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:30	ZZZZZZ	2546	156860	27905	5323
02:36	MA24667-CCV11	2497	152770	27259	5112
02:42	MA24667-CCB11	2577	157770	27593	5465
02:48	ZZZZZZ	2817	172500	30819	5339
02:54	JA50921-1	2456	150360	27228	5074
03:00	JA50921-3	2377	142170	26666	4775
03:06	JA50921-4	2560	157820	27724	5441
03:13	JA50921-1F	2453	149940	27244	5063
03:19	JA50921-3F	2371	141920	26494	4763
03:25	JA50921-4F	2556	155570	27569	5433
03:31	ZZZZZZ	2450	150100	27161	5082
03:37	ZZZZZZ	2255	133240	25878	4421
03:43	ZZZZZZ	2419	145010	26597	4900
03:50	MA24667-CCV12	2492	152750	27117	5104
03:56	MA24667-CCB12	2577	157910	27488	5455
04:02	ZZZZZZ	2376	144550	26694	4820
04:08	ZZZZZZ	2560	157640	27716	5441
04:14	ZZZZZZ	2414	144760	26888	4870
04:21	ZZZZZZ	2571	157860	27421	5445
04:27	ZZZZZZ	2408	144340	26755	4857
04:33	ZZZZZZ	2468	151770	27430	5131
04:39	ZZZZZZ	2401	142590	27783	4519
04:45	ZZZZZZ	2257	134780	26060	4433
04:51	ZZZZZZ	2584	158110	27465	5458
04:58	MA24667-CCV13	2502	152970	27247	5112
05:04	MA24667-CCB13	2583	157970	27507	5464
05:10	ZZZZZZ	2648	161230	28250	5614
05:16	ZZZZZZ	2535	156380	27601	5255
05:22	MP53752-S1	2542	156830	27751	5227
05:28	MP53752-S2	2531	156630	27663	5205
05:34	JA51290-10	2631	160830	28217	5489
05:40	MP53752-SD1	2605	159180	27702	5477
05:46	ZZZZZZ	2587	159180	28176	5312



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Project: HLANDPR: SA-5, Site 079, Jersey City, No

File ID: SA071910M2.ICP Analyst: GT Parameters: Cr Date Analyzed: 07/19/10 Run ID: MA24667

Methods: EPA 200.7, SW846 6010B

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
05:52	ZZZZZZ	2610	159620	28069	5473
05:58	ZZZZZZ	2600	159150	27965	5475
06:04	ZZZZZZ	2599	159310	28166	5465
06:10	MA24667-CCV14	2505	153110	27202	5113
06:16	MA24667-CCB14	2595	157970	27439	5470
06:23	ZZZZZZ	2607	159260	28061	5470
06:29	ZZZZZZ	2629	160320	28125	5408
06:35	ZZZZZZ	2601	158740	28425	5405
06:41	ZZZZZZ	2626	160140	28346	5476
06:47	ZZZZZZ	2620	159750	28307	5464
06:53	ZZZZZZ	2589	159510	28470	5302
06:59	ZZZZZZ	2608	159120	28036	5441
07:05	ZZZZZZ	2611	159200	28240	5455
07:11	ZZZZZZ	2618	159840	28265	5438
07:17	ZZZZZZ	2605	159930	28211	5417
07:23	MA24667-CCV15	2516	152870	27349	5115
07:29	MA24667-CCB15	2603	158080	27717	5474
07:36	ZZZZZZ	2587	158630	28085	5473
07:42	MP53638-S1	2186	144590	26742	4605
07:48	MP53638-S2	2170	144010	26722	4580
07:55	JA50695-1	2174	144640	27043	4610
08:01	MP53638-SD1	2479	153720	27560	5160
08:07	MP53638-S1	2352	149510	27482	4895
08:14	MP53638-S2	2347	149370	27225	4874
08:20	JA50695-1	2349	149710	27226	4889
08:26	MP53638-SD1	2544	156300	27612	5302
08:32	MA24667-CCV16	2534	153690	27375	5136
08:38	MA24667-CCB16	2612	158490	27813	5487
08:44	MA24667-ICSA3	2304	140930	26350	4514
08:51	MA24667-ICSAB3	2302	141040	26481	4497
08:57	ZZZZZZ	1921	137700	26404	4399
09:04	ZZZZZZ	2495	155110	27622	5215
09:10	ZZZZZZ	2455	153140	27551	5140





Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B File ID: SA071910M2.ICP Run ID: MA24667

Analyst: GT Parameters: Cr

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:16	ZZZZZZ	2576	157830	28351	5300
09:22	ZZZZZZ	2639	161180	29924	4910
09:28	ZZZZZZ	2623	159950	29237	5023
09:35	MA24667-CCV17	2529	153130	27644	5127
09:41	MA24667-CCB17	2601	158360	27969	5475
09:47	MA24667-ICSA4	2297	140280	26629	4507
09:53	MA24667-ICSAB4	2287	139780	26461	4483
09:59	MA24667-CCV18	2515	152360	27460	5111
10:05	MA24667-CCB18	2603	158320	27768	5481
10:12	ZZZZZZ	2573	155980	27767	5413
10:18	ZZZZZZ	8446 !	412490 !	47588 !	16274 !
10:24	ZZZZZZ	2603	154560	29059	5260
D - Do	forence for TOW	D limita	l - Outai	da limita	

R = Reference for ISTD limits. ! = Outside limits.

#### LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Tetd#4	Indium	60-125 %



#### BLANK RESULTS SUMMARY

#### Part 1 - Initial and Continuing Calibration Blanks

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Methods: EPA 200.7, SW846 6010B File ID: SA071910M2.ICP Date Analyzed: 07/19/10

QC Limits: result < RL Run ID: MA24667 Units: ug/l

Time:			17:08		17:20		17:46		19:00	
Sample ID: Metal	RL	IDL	ICB1 raw	final	CCB2 raw	final	CCB3 raw	final	CCB4 raw	final
Aluminum	200	9.9	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	2	anr							
Barium	200	.3	anr							
Beryllium	1.0	. 2	anr							
Boron	100	1.7	anr							
Cadmium	3.0	. 3	anr							
Calcium	5000	47	anr							
Chromium	10	.3	0.30	<10	0.50	<10	0.40	<10	0.50	<10
Cobalt	50	. 4	anr							
Copper	10	.5	anr							
Iron	100	3.8	anr							
Lead	3.0	1	anr							
Magnesium	5000	15	anr							
Manganese	15	. 2	anr							
Molybdenum	20	.7	anr							
Nickel	10	. 9	anr							
Palladium	50	1.5								
Potassium	10000	24	anr							
Selenium	10	2.2	anr							
Silicon	200	3.7	anr							
Silver	10	. 4	anr							
Sodium	10000	17	anr							
Strontium	10	.3	anr							
Thallium	2.0	.7	anr							
Tin	10	.5	anr							
Titanium	10	. 4	anr							
Tungsten	50	8.7								
Vanadium	50	. 3	anr							
Zinc	20	2.5	anr							
Zirconium	10	.5								



## BLANK RESULTS SUMMARY Part 1 - Initial and Continuing Calibration Blanks

#### Login Number: JA50921

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B QC Limits: result < RL Run ID: MA24667 Units: ug/1

Time: Sample ID:			20:14 CCB5		21:29 CCB6		22:43 CCB7		23:50 CCB8	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	9.9	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	2	anr							
Barium	200	.3	anr							
Beryllium	1.0	.2	anr							
Boron	100	1.7	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	47	anr							
Chromium	10	.3	0.50	<10	0.60	<10	0.40	<10	0.50	<10
Cobalt	50	. 4	anr							
Copper	10	.5	anr							
Iron	100	3.8	anr							
Lead	3.0	1	anr							
Magnesium	5000	15	anr							
Manganese	15	. 2	anr							
Molybdenum	20	.7	anr							
Nickel	10	.9	anr							
Palladium	50	1.5								
Potassium	10000	24	anr							
Selenium	10	2.2	anr							
Silicon	200	3.7	anr							
Silver	10	. 4	anr							
Sodium	10000	17	anr							
Strontium	10	.3	anr							
Thallium	2.0	.7	anr							
Tin	10	.5	anr							
Titanium	10	. 4	anr							
Tungsten	50	8.7								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							
Zirconium	10	. 5								

<sup>(\*)</sup> Outside of QC limits
(anr) Analyte not requested



## BLANK RESULTS SUMMARY Part 1 - Initial and Continuing Calibration Blanks

#### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B

File ID: SAC QC Limits: res			Dat	e Analyze Run I	ed: 07/19/ D: MA2466		Methods: EPA 200.7, SW846 6010B Units: ug/l				
Time: Sample ID: Metal	RL	IDL	01:03 CCB9 raw	final	01:28 CCB10 raw	final	02:42 CCB11 raw	final	03:56 CCB12 raw	final	
Aluminum	200	9.9	anr								
Antimony	6.0	1	anr								
Arsenic	3.0	2	anr								
Barium	200	.3	anr								
Beryllium	1.0	.2	anr								
Boron	100	1.7	anr								
Cadmium	3.0	.3	anr								
Calcium	5000	47	anr								
Chromium	10	.3	0.50	<10	0.40	<10	0.50	<10	0.90	<10	
Cobalt	50	. 4	anr								
Copper	10	.5	anr								
Iron	100	3.8	anr								
Lead	3.0	1	anr								
Magnesium	5000	15	anr								
Manganese	15	.2	anr								
Molybdenum	20	.7	anr								
Nickel	10	.9	anr								
Palladium	50	1.5									
Potassium	10000	24	anr								
Selenium	10	2.2	anr								
Silicon	200	3.7	anr								
Silver	10	. 4	anr								
Sodium	10000	17	anr								
Strontium	10	.3	anr								
Thallium	2.0	.7	anr								
Tin	10	.5	anr								
Titanium	10	. 4	anr								
Tungsten	50	8.7									
Vanadium	50	.3	anr								
Zinc	20	2.5	anr								
Zirconium	10	.5									

<sup>(\*)</sup> Outside of QC limits
(anr) Analyte not requested



#### BLANK RESULTS SUMMARY Part 1 - Initial and Continuing Calibration Blanks

## Login Number: JA50921

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 File ID: SA071910M2.ICP Methods: EPA 200.7, SW846 6010B Units: ug/l QC Limits: result < RL Run ID: MA24667

Time:			05:04 CCB13		06:16 CCB14		07:29 CCB15		08:38 CCB16	
Sample ID: Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	9.9	anr							
Antimony	6.0	1	anr							
Arsenic	3.0	2	anr							
Barium	200	.3	anr							
Beryllium	1.0	. 2	anr							
Boron	100	1.7	anr							
Cadmium	3.0	.3	anr							
Calcium	5000	47	anr							
Chromium	10	.3	0.70	<10	0.70	<10	0.80	<10	1.0	<10
Cobalt	50	. 4	anr							
Copper	10	.5	anr							
Iron	100	3.8	anr							
Lead	3.0	1	anr							
Magnesium	5000	15	anr							
Manganese	15	. 2	anr							
Molybdenum	20	.7	anr							
Nickel	10	. 9	anr							
Palladium	50	1.5								
Potassium	10000	24	anr							
Selenium	10	2.2	anr							
Silicon	200	3.7	anr							
Silver	10	. 4	anr							
Sodium	10000	17	anr							
Strontium	10	. 3	anr							
Thallium	2.0	.7	anr							
Tin	10	. 5	anr							
Titanium	10	. 4	anr							
Tungsten	50	8.7								
Vanadium	50	.3	anr							
Zinc	20	2.5	anr							
Zirconium	10	.5								

<sup>(\*)</sup> Outside of QC limits (anr) Analyte not requested



#### BLANK RESULTS SUMMARY

#### Part 1 - Initial and Continuing Calibration Blanks

Login Number: JA50921

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B QC Limits: result < RL Run ID: MA24667 Units: ug/l

~				
Time: Sample ID:			09:41 CCB17	
Metal	RL	IDL	raw	final
Aluminum	200	9.9	anr	
Antimony	6.0	1	anr	
Arsenic	3.0	2	anr	
Barium	200	.3	anr	
Beryllium	1.0	. 2	anr	
Boron	100	1.7	anr	
Cadmium	3.0	.3	anr	
Calcium	5000	47	anr	
Chromium	10	. 3	0.60	<10
Cobalt	50	. 4	anr	
Copper	10	.5	anr	
Iron	100	3.8	anr	
Lead	3.0	1	anr	
Magnesium	5000	15	anr	
Manganese	15	. 2	anr	
Molybdenum	20	.7	anr	
Nickel	10	.9	anr	
Palladium	50	1.5		
Potassium	10000	24	anr	
Selenium	10	2.2	anr	
Silicon	200	3.7	anr	
Silver	10	. 4	anr	
Sodium	10000	17	anr	
Strontium	10	.3	anr	
Thallium	2.0	.7	anr	
Tin	10	. 5	anr	
Titanium	10	. 4	anr	
Tungsten	50	8.7		
Vanadium	50	.3	anr	
Zinc	20	2.5	anr	
Zirconium	10	.5		

<sup>(\*)</sup> Outside of QC limits (anr) Analyte not requested



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP QC Limits: 95 to 105 % Recovery Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B Units: ug/l Run ID: MA24667

Time: Sample ID:	ICV	17:02 ICV1		ccv	17:14 CCV2		CCV	17:40 CCV3		
Metal	True	Results	* Rec	True	Results	% Rec	True	Results	% Rec	
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium										
Boron	anr									
Cadmium	anr									
Calcium	anr		104.0			101.0		0010	100 5	
Chromium	1000	1040	104.0	2000	2020	101.0	2000	2010	100.5	
Cobalt	anr									
Copper										
Iron	anr									
Lead Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Palladium	ani									
Potassium	anr									
Selenium	anr									
Silicon	anr									
Silver	anr									
Sodium	anr									
Strontium	anr									
Thallium	anr									
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	anr									
Zinc	anr									
Zirconium										



### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP QC Limits: 95 to 105 % Recovery

Date Analyzed: 07/19/10 Run ID: MA24667

Methods: EPA 200.7, SW846 6010B

Units: ug/l

Time: Sample ID: Metal		18:54 CCV4 Results	% Rec	CCV True	20:08 CCV5 Results	% Rec	CCV True	21:23 CCV6 Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Boron	anr								
Cadmium	anr								
Calcium	anr								
Chromium	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	anr								
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Palladium									
Potassium	anr								
Selenium	anr								
Silicon	anr								
Silver	anr								
Sodium	anr								
Strontium	anr								
Thallium	anr								
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium	anr								
Zinc	anr								
Zirconium									



### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP QC Limits: 95 to 105 % Recovery

Date Analyzed: 07/19/10 Run ID: MA24667

Methods: EPA 200.7, SW846 6010B Units: ug/l

Time: Sample ID: Metal		22:37 CCV7 Results	% Rec	CCV True	23:44 CCV8 Results	% Rec	CCV True	00:57 CCV9 Results	% Rec	
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Boron	anr									
Cadmium	anr									
Calcium	anr									
Chromium	2000	2040	102.0	2000	2040	102.0	2000	2040	102.0	
Cobalt	anr									
Copper	anr									
Iron	anr									
Lead	anr									
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Palladium										
Potassium	anr									
Selenium	anr									
Silicon	anr									
Silver	anr									
Sodium	anr									
Strontium	anr									
Thallium	anr									
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	anr									
Zinc	anr									
Zirconium										



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID: SA071910M2.ICP QC Limits: 95 to 105 % Recovery Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B Run ID: MA24667 Units: ug/l

Time: Sample ID: Metal		01:22 CCV10 Results	% Rec	CCV True	02:36 CCV11 Results	% Rec	CCV True	03:50 CCV12 Results	% Rec	
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Boron	anr									
Cadmium	anr									
Calcium	anr									
Chromium	2000	2070	103.5	2000	2080	104.0	2000	2080	104.0	
Cobalt	anr									
Copper	anr									
Iron	anr									
Lead	anr									
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Palladium										
Potassium	anr									
Selenium	anr									
Silicon	anr									
Silver	anr									
Sodium	anr									
Strontium	anr									
Thallium	anr									
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	anr									
Zinc	anr									
Zirconium										



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Methods: EPA 200.7, SW846 6010B File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Run ID: MA24667 Units: ug/l

QC Limits: 95 to 105 % Recovery

Time: Sample ID: Metal		04:58 CCV13 Results	% Rec	CCV True	06:10 CCV14 Results	% Rec	CCV True	07:23 CCV15 Results	% Rec	
Aluminum	anr									
Antimony	anr									
Arsenic	anr									
Barium	anr									
Beryllium	anr									
Boron	anr									
Cadmium	anr									
Calcium	anr									
Chromium	2000	2100	105.0	2000	2100	105.0	2000	2110	105.5	
Cobalt	anr									
Copper	anr									
Iron	anr									
Lead	anr									
Magnesium	anr									
Manganese	anr									
Molybdenum	anr									
Nickel	anr									
Palladium										
Potassium	anr									
Selenium	anr									
Silicon	anr									
Silver	anr									
Sodium	anr									
Strontium	anr									
Thallium	anr									
Tin	anr									
Titanium	anr									
Tungsten										
Vanadium	anr									
Zinc	anr									
Zirconium										



# CALIBRATION CHECK STANDARDS SUMMARY Initial and Continuing Calibration Checks

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: MA24667

Units: ug/l

File ID: SA071910M2.ICP Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B

QC Limits: 95 to 105 % Recovery

Time:		08:32			09:35	
Sample ID: Metal		CCV16 Results	% Rec	CCV True	CCV17 Results	% Rec
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium	anr					
Chromium	2000	2110	105.5	2000	2110	105.5
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Palladium						
Potassium	anr					
Selenium	anr					
Silicon	anr					
Silver	anr					
Sodium	anr					
Strontium	anr					
Thallium	anr					
Tin	anr					
Titanium	anr					
Tungsten						
Vanadium	anr					
Zinc	anr					
Zirconium						

(\*) Outside of QC limits
(anr) Analyte not requested

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### LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Run ID: MA24667

Units: ug/l

Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B File ID: SA071910M2.ICP

QC Limits: 50 to 150 % Recovery

~					
Time: Sample ID: Metal		CRIA True	CRID True	16:56 CRID1 Results	% Rec
Aluminum			100	anr	
Antimony	120		3.0	anr	
Arsenic	20	3.0	3.0	anr	
Barium	400		4.0	anr	
Beryllium	10	1.0	1.0	anr	
Boron			10	anr	
Cadmium	10		1.0	anr	
Calcium			1000	anr	
Chromium	20		2.0	2.2	110.0
Cobalt	100		3.0	anr	
Copper	50		2.0	anr	
Iron					
Lead	6.0		2.5	anr	
Magnesium			100	anr	
Manganese	30		3.0	anr	
Molybdenum	40				
Nickel	80		4.0	anr	
Palladium					
Potassium			2000	anr	
Selenium	10		5.0	anr	
Silicon	-		- · · <del>-</del>		
Silver	20		1.0	anr	
Sodium	-		1000	anr	
Strontium					
	20	2.0	2.0	anr	
Tin	20	2.0	2.0		
Titanium					
Tungsten	50				
Vanadium	100		2.0	anr	
Zinc	40		10	anr	
		1.0		aní	
Zirconium	10	10	5.0		

### LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B File ID: SA071910M2.ICP Units: ug/l Run ID: MA24667

QC Limits: 50 to 150 % Recovery

Time: Sample IDI CRIB   16:49   Secults   Se	QC HIMICS: 30	00 130 8	RECOVELY		Run ID: MAZ4007	onics. ug/i
Antimony 6.0 Arsenic 8.0 Barium 200 Beryllium 2.0 Boron 100 Cadmium 3.0 Calcium 5000 Chromium 10 9.7 97.0 Cobalt 50 Copper 10 Iron 1000 Lead 3.0 Magnesium 5000 Manganese 15 Molybdenum 20 Nickel 10 Palladium 50 Potassium 10000 Selenium 10 Silicon 200 Silver 5.0 Sodium 10000 Strontium 10 Tin 10 Tin 10 Tinalium 10 Tinalium 10 Tinalium 50 Vanadium 50 Vanad	Sample ID:	CRIB	CRIB1	% Rec		
Areenic 8.0 Barium 200 Beryllium 2.0 Boron 100 Cadmium 3.0 Calcium 5000 Chromium 10 9.7 97.0 Cobalt 50 Copper 10 Iron 100 Lead 3.0 Magnesium 5000 Manganese 15 Molybdenum 20 Nickel 10 Palladium 50 Potassium 10000 Selenium 10 Silicon 200 Silver 5.0 Sodium 10000 Strontium 10 Tian um 10 Tianium 10 Tianium 10 Tungsten 50 Vanadium 50 Vana	Aluminum	200				
Barium 200 Beryllium 2.0 Boron 100 Cadmium 3.0 Calcium 5000 Chromium 10 9.7 97.0 Cobalt 50 Copper 10 Iron 100 Lead 3.0 Magnesium 5000 Manganese 15 Molybdenum 20 Nickel 10 Palladium 50 Potassium 10000 Selenium 10 Silicon 200 Silver 5.0 Sodium 10000 Strontium 10 Tianium 10 Tungsten 50 Vanadium 50 Vana	Antimony	6.0				
Beryllium         2.0           Boron         100           Cadmium         3.0           Calcium         5000           Chromium         10         9.7         97.0           Cobalt         50         50           Copper         10         100         100           Lead         3.0         400         400           Magnesium         5000         400         400           Mickel         10         400         400           Potassium         10000         400         400           Selenium         10         400         400           Silver         5.0         50         400           Strontium         10         400         400           Tinalium         10         400         400           Titanium         10         400         400           Titanium         10         400         400         400           Tungsten         50         400         400         400         400         400           Tungsten         50         400         400         400         400         400         400         400         400	Arsenic	8.0				
Boron         100           Cadmium         3.0           Calcium         5000           Chromium         10         9.7         97.0           Cobalt         50         97.0           Copper         10         9.7         97.0           Copper         10         9.7         97.0           Iron         100         9.0         9.0           Manganesium         5000         9.0         9.0           Mickel         10         9.0         9.0           Potassium         10000         9.0         9.0         9.0           Silicon         200         9.0         9	Barium	200				
Cadmium         3.0           Calcium         5000           Chromium         10         9.7         97.0           Cobalt         50         Copper         10           Iron         100         Lead         3.0         Magnesium         5000           Manganese         15         Molybdenum         20         Nickel         10         Palladium         50         Fotassium         10000         Selenium         10         Silicon         200         Silicon         200         Silver         5.0         Sodium         10000         Strontium         10         Thallium         10         Trianium         10         Trianium         10         Trianium         10         Trianium         50         Trianium         50 <t< td=""><td>Beryllium</td><td>2.0</td><td></td><td></td><td></td><td></td></t<>	Beryllium	2.0				
Calcium         5000           Chromium         10         9.7         97.0           Cobalt         50         10 <td>Boron</td> <td>100</td> <td></td> <td></td> <td></td> <td></td>	Boron	100				
Chromium         10         9.7         97.0           Cobalt         50             Copper         10             Iron         100             Lead         3.0             Manganesium         5000             Molybdenum         20             Nickel         10             Potassium         10000             Selenium         10             Silver         5.0             Sodium         10000             Strontium         10             Tin         10             Titanium         10             Tungsten         50             Vanadium         50	Cadmium	3.0				
Copper         10           Iron         100           Lead         3.0           Magnesium         5000           Manganese         15           Molybdenum         20           Nickel         10           Palladium         50           Potassium         10000           Selenium         10           Silicon         200           Silver         5.0           Sodium         10000           Strontium         10           Tin         10           Titanium         10           Tungsten         50           Vanadium         50           Zinc         20	Calcium	5000				
Copper         10           Iron         100           Lead         3.0           Magnesium         5000           Manganese         15           Molybdenum         20           Nickel         10           Palladium         50           Potassium         10000           Selenium         10           Silicon         200           Sodium         10000           Strontium         10           Tin         10           Titanium         10           Titanium         50           Vanadium         50           Zinc         20	Chromium	10	9.7	97.0		
Iron     100       Lead     3.0       Magnesium     5000       Manganese     15       Molybdenum     20       Nickel     10       Palladium     50       Potassium     10000       Selenium     10       Silicon     200       Silver     5.0       Sodium     10000       Strontium     10       Thallium     10       Tin     10       Titanium     10       Tungsten     50       Vanadium     50       Zinc     20	Cobalt	50				
Lead       3.0         Magnesium       5000         Manganese       15         Molybdenum       20         Nickel       10         Palladium       50         Potassium       10000         Selenium       10         Silicon       200         Sodium       10000         Strontium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Copper	10				
Magnesium       5000         Manganese       15         Molybdenum       20         Nickel       10         Palladium       50         Potassium       10000         Selenium       10         Silicon       200         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Iron	100				
Manganese       15         Molybdenum       20         Nickel       10         Palladium       50         Potassium       10000         Selenium       10         Silicon       200         Silver       5.0         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Tungsten       50         Vanadium       50         Zinc       20	Lead	3.0				
Molybdenum       20         Nickel       10         Palladium       50         Potassium       10000         Selenium       10         Silven       5.0         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Magnesium	5000				
Nickel       10         Palladium       50         Potassium       10000         Selenium       10         Silicon       200         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Manganese	15				
Palladium       50         Potassium       10000         Selenium       10         Silicon       200         Silver       5.0         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Molybdenum	20				
Potassium       10000         Selenium       10         Silicon       200         Silver       5.0         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Nickel	10				
Selenium       10         Silicon       200         Silver       5.0         Sodium       10000         Strontium       10         Thallium       10         Tin       10         Titanium       10         Tungsten       50         Vanadium       50         Zinc       20	Palladium	50				
Silicon     200       Silver     5.0       Sodium     10000       Strontium     10       Thallium     10       Tin     10       Titanium     10       Tungsten     50       Vanadium     50       Zinc     20	Potassium	10000				
Silver     5.0       Sodium     10000       Strontium     10       Thallium     10       Tin     10       Titanium     10       Tungsten     50       Vanadium     50       Zinc     20	Selenium	10				
Sodium 10000 Strontium 10 Thallium 10 Tin 10 Titanium 10 Tungsten 50 Vanadium 50 Zinc 20	Silicon	200				
Strontium 10 Thallium 10 Tin 10 Titanium 10 Tungsten 50 Vanadium 50 Zinc 20	Silver	5.0				
Thallium 10 Tin 10 Titanium 10 Tungsten 50 Vanadium 50 Zinc 20	Sodium	10000				
Tin 10 Titanium 10 Tungsten 50 Vanadium 50 Zinc 20	Strontium	10				
Titanium 10 Tungsten 50 Vanadium 50 Zinc 20	Thallium	10				
Tungsten 50 Vanadium 50 Zinc 20	Tin	10				
Vanadium 50 Zinc 20	Titanium	10				
Zinc 20	Tungsten	50				
	Vanadium	50				
Zirconium 10	Zinc	20				
	Zirconium	10				



#### INTERFERING ELEMENT CHECK STANDARDS SUMMARY Part 1 - ICSA and ICSAB Standards

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 File ID: SA071910M2.ICP Methods: EPA 200.7, SW846 6010B Units: ug/l

QC Limits: 80 to 120 % Recovery Run ID: MA24667

Time: Sample ID: Metal		ICSAB True	17:26 ICSA1 Results	% Rec	17:32 ICSAB1 Results	% Rec	01:10 ICSA2 Results	% Rec	01:16 ICSAB2 Results	% Rec
Aluminum	500000	500000	470000	94.0	481000	96.2	480000	96.0	494000	98.8
Antimony		1000	0.90		1030	103.0	1.6		1040	104.0
Arsenic		1000	1.0		1060	106.0	0.0		1050	105.0
Barium		500	-3.7		497	99.4	-3.9		498	99.6
Beryllium		500	0.10		482	96.4	0.10		488	97.6
Boron			0.70		9.9		0.30		10.1	
Cadmium		1000	2.2		1030	103.0	2.4		1040	104.0
Calcium	400000	400000	368000	92.0	368000	92.0	372000	93.0	376000	94.0
Chromium		500	2.1		458	91.6	2.0		469	93.8
Cobalt		500	0.60		467	93.4	0.70		468	93.6
Copper		500	0.10		466	93.2	0.40		469	93.8
Iron	200000	200000	187000	93.5	183000	91.5	190000	95.0	185000	92.5
Lead		1000	2.1		974	97.4	1.9		992	99.2
Magnesium	500000	500000	503000	100.6	495000	99.0	512000	102.4	505000	101.0
Manganese		500	-1.4		476	95.2	-0.60		488	97.6
Molybdenum		500	0.50		501	100.2	0.50		505	101.0
Nickel		1000	-4.1		971	97.1	-4.3		1010	101.0
Palladium		500	-51		494	98.8	-54		502	100.4
Potassium			0.0		41.5		82.1		105	
Selenium		1000	-4.2		1000	100.0	-2.3		1010	101.0
Silicon			-1.6		7.6		-1.0		9.0	
Silver		1000	-0.60		1020	102.0	1.4		1040	104.0
Sodium			878		905		1160		1220	
Strontium			1.0		2.1		0.80		1.9	
Thallium		1000	-1.1		978	97.8	-1.6		1000	100.0
Tin			-7.8		-8.1		-7.6		-7.8	
Titanium			3.9		4.2		3.9		3.9	
Tungsten		500	43.5		499	99.8	35.5		461	92.2
Vanadium		500	-0.60		452	90.4	-0.90		461	92.2
Zinc		1000	-5.9		906	90.6	-5.9		915	91.5
Zirconium		500	1.9		484	96.8	1.9		485	97.0



#### INTERFERING ELEMENT CHECK STANDARDS SUMMARY Part 1 - ICSA and ICSAB Standards

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Date Analyzed: 07/19/10 Methods: EPA 200.7, SW846 6010B Run ID: MA24667 Units: ug/l File ID: SA071910M2.ICP Units: ug/l Run ID: MA24667

QC Limits: 80 to 120 % Recovery

QC HIMICS: 00	00 120 0	necevery		Ruii 1	D. MAZ400	,
Time: Sample ID: Metal			08:44 ICSA3 Results	% Rec	08:51 ICSAB3 Results	% Rec
Aluminum	500000	500000	481000	96.2	495000	99.0
Antimony		1000	3.3		1040	104.0
Arsenic		1000	1.5		1050	105.0
Barium		500	-4.0		500	100.0
Beryllium		500	0.10		490	98.0
Boron			-0.10		9.4	
Cadmium		1000	2.3		1040	104.0
Calcium	400000	400000	376000	94.0	377000	94.3
Chromium		500	2.0		476	95.2
Cobalt		500	0.30		468	93.6
Copper		500	0.40		472	94.4
Iron	200000	200000	191000	95.5	186000	93.0
Lead		1000	0.10		1010	101.0
Magnesium	500000	500000	524000	104.8	511000	102.2
Manganese		500	-0.10		493	98.6
Molybdenum		500	1.0		506	101.2
Nickel		1000	-4.8		1020	102.0
Palladium		500	-58		509	101.8
Potassium			32.4		40.1	
Selenium		1000	-0.70		1010	101.0
Silicon			-2.3		8.0	
Silver		1000	2.9		1050	105.0
Sodium			880		923	
Strontium			1.0		2.1	
Thallium		1000	-0.40		1020	102.0
Tin			-7.0		-7.7	
Titanium			3.9		4.1	
Tungsten		500	40.7		480	96.0
Vanadium		500	-1.2		468	93.6
Zinc		1000	-5.4		922	92.2
Zirconium		500	2.1		487	97.4

<sup>(\*)</sup> Outside of QC limits (anr) Analyte not requested



### BLANK RESULTS SUMMARY Part 2 - Method Blanks

## Login Number: JA50921

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:

07/14/10

TICP DAGE					0 / / 1 1 / 1 0
Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	9.9	7.8		
Antimony	6.0	1	2.2		
Arsenic	3.0	2	1.4		
Barium	200	.3	.44		
Beryllium	1.0	. 2	.24		
Boron	100	1.7	2.2		
Cadmium	3.0	.3	.35		
Calcium	5000	47	44		
Chromium	10	.3	.59	0.0	<10
Cobalt	50	. 4	.65		
Copper	10	.5	2.5		
Iron	100	3.8	18		
Lead	3.0	1	1.9		
Magnesium	5000	15	15		
Manganese	15	.2	.46		
Molybdenum	20	.7	2.7		
Nickel	10	.9	.51		
Palladium	50	1.5	1.5		
Potassium	10000	24	75		
Selenium	10	2.2	1.9		
Silicon	200	3.7	6.1		
Silver	10	. 4	.53		
Sodium	10000	17	14		
Strontium	10	.3	.68		
Thallium	2.0	.7	1.8		
Tin	10	.5	1.1		
Titanium	10	. 4	1.3		
Tungsten	50	8.7	23		
Vanadium	50	.3	.56		
Zinc	20	2.5	1.4		
Zirconium	10	. 5	1.6		

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: JA50921

Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Units: ug/l

Matrix Type: AQUEOUS

Prep Date: Metal

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/10

Metal	JA50921 Origina		Spikelo MPIRW1	t % Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium	20.5	226	200	102.8	75-125
Cobalt					
Copper					
Iron	anr				
Lead	anr				
Magnesium					
Manganese	anr				
Molybdenum					
Nickel					
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					
Zirconium					

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units:  $\mbox{ug/l}$ 

Prep Date: 07/14/10

Metal	JA50921 Origina		Spikelot MPIRW1	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium	20.5	229	200	104.3	1.3	20
Cobalt						
Copper						
Iron	anr					
Lead	anr					
Magnesium						
Manganese	anr					
Molybdenum						
Nickel						
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						
Zirconium						

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Metal

Prep Date:

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/10

Metal	JA50921 Origina		Spikelot MPIRW1	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium	0.60	209	200	104.2	75-125
Cobalt					
Copper					
Iron	anr				
Lead	anr				
Magnesium					
Manganese	anr				
Molybdenum					
Nickel					
Palladium					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc					
Zirconium					

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B

Matrix Type: AQUEOUS

Prep Date:

07/14/10

Units: ug/l

Metal	JA50921 Origina		Spikelo MPIRW1	t % Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium	0.60	203	200	101.2	2.9	20
Cobalt						
Copper						
Iron	anr					
Lead	anr					
Magnesium						
Manganese	anr					
Molybdenum						
Nickel						
Palladium						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc						
Zirconium						

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes



Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Units: ug/l

Matrix Type: AQUEOUS

Prep Date:

Metal

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/14/10

Metal	LCS Result	Spikelot MPLCW3	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	516	500	103.2	80-120
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Magnesium				
Manganese	anr			
Molybdenum				
Nickel				
Palladium				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Гin				
Γitanium				
[ungsten				
Vanadium				
Zinc				
Zirconium				

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes



# 5.2.3

### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits
(anr) Analyte not requested

\_\_\_\_\_

### SERIAL DILUTION RESULTS SUMMARY

#### Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Units: ug/l

QC Batch ID: MP53708 Methods: SW846 6010B

Prep Date: 07/14/10 07/14/10

Matrix Type: AQUEOUS

Metal	JA50921- Original	-2 l SDL 1:5	%DIF	QC Limits	JA50921- Original	2F SDL 1:5	%DIF	QC Limits
Aluminum								
Antimony								
Arsenic								
Barium								
Beryllium								
Boron								
Cadmium								
Calcium								
Chromium	20.5	21.3	3.9	0-10	0.600	0.00	100.0(a)	0-10
Cobalt								
Copper								
Iron	anr							
Lead	anr							
Magnesium								
Manganese	anr							
Molybdenum								
Nickel								
Palladium								
Potassium								
Selenium								
Silicon								
Silver								
Sodium								
Strontium								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium								
Zinc								
Zirconium								

Associated samples MP53708: JA50921-1, JA50921-2, JA50921-3, JA50921-4, JA50921-1F, JA50921-2F, JA50921-3F, JA50921-4F

Results < IDL are shown as zero for calculation purposes

Results \ IDD are shown as zero for carculation purposes

# 5.2.4

### SERIAL DILUTION RESULTS SUMMARY

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

QC Batch ID: MP53708 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample  $\,$  concentration (< 50 times IDL).

5.3

# **Instrument Detection Limits**

**Job Number:** JA50921

Account: HWINJM Honeywell International Inc.
Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

**Instrument ID:** SSTRACE1 **Effective Date:** 03/08/10

Analyte	IDL ug/l
Aluminum	9.9
Antimony	1
Arsenic	2
Barium	.3
Beryllium	.2
Boron	1.7
Cadmium	.3
Calcium	47.1
Chromium	.3
Cobalt	.4
Copper	.5
Iron	3.8
Lead	1
Magnesium	15.1
Manganese	.2
Molybdenum	.7
Nickel	.9
Palladium	1.5
Potassium	24.4
Selenium	2.2
Silicon	3.7
Silver	.4
Sodium	16.7
Strontium	.3
Thallium	.7
Tin	.5
Titanium	.4
Tungsten	8.7
Vanadium	.3
Zinc	2.5
Zirconium	.5

The above applies to the following instrument runs: MA24667



5.3

# **Instrument Linear Ranges**

**Job Number:** JA50921

**Account:** HWINJM Honeywell International Inc. **Project:** HLANJPR: SA-5, Site 079, Jersey City, NJ

**Instrument ID:** SSTRACE1 **Effective Date:** 06/21/10

Analyte	Linear Range ug/l
Aluminum	1000000
Antimony	50000
Arsenic	10000
Barium	50000
Beryllium	25000
Boron	50000
Cadmium	10000
Calcium	1000000
Chromium	25000
Cobalt	50000
Copper	50000
Iron	500000
Lead	50000
Magnesium	1000000
Manganese	10000
Molybdenum	50000
Nickel	50000
Palladium	50000
Potassium	1000000
Selenium	50000
Silicon	50000
Silver	2000
Sodium	1000000
Strontium	25000
Thallium	50000
Tin	50000
Titanium	50000
Tungsten	50000
Vanadium	50000
Zinc	25000
Zirconium	25000

The above applies to the following instrument runs:  $MA24667\,$ 





3.6 . 1	A 1	
Metals	Δnal	VCIC
Mictais	milai	A DID

Raw Data



Raw Data MA24667	page 1 of 217

Raw Data MA24667 page 3 of 217

									◀ Zoom In ▶ Zoom Out
Sample Na			ed: 7/19/20		٠.	e: Cal			
Method: Ad	cutest1(v1	72) Mo	de: IR	Corr. Facto	r: 1.00000	0			
User: admi	n Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.480	2.213	1.292	1.242	.0715	.2358	.5080	.4674	.0153 .0001
Stddev %RSD	.1232	.0494	.0280	.0356	.0000	.1539	.0044	.0005	.3376
								.0991	.3370
#1	1.478	2.214	1.292	1.242	.0715	.2360	.5080	.4671	.0153
#2	1.481	2.212	1.292	1.241	.0715	.2355	.5080	.4678	.0153
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg Stddev	.0000	.9293	.2022	.0700	.1855 .0001	.1335	.2435	.5427 .0001	1.044 .003
%RSD	.0070	.0738	.1897	.0895	.0486	.0613	.0000	.0243	.2774
#1	.1231	.9298	.2020	.0699	.1855	.1334	.2435	.5426	1.046
#2	.1232	.9289	.2025	.0700	.1856	.1335	.2436	.5428	1.042
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.040	.0826	.3501	1.268	.3174	.9073	.0372	.8409	.2365
Stddev %RSD	.002	.0002	.0004	.000 .0293	.0005	.0008	.0001 .2076	.0014	.0002
70K3D					.1463				.0960
#1	1.041	.0827	.3503	1.268	.3171	.9067	.0373	.8399	.2363
#2	1.038	.0825	.3498	1.268	.3178	.9079	.0372	.8419	.2366
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Units	Cts/S	Cts/S	Cts/S	Cts/S					
Avg	2.523	.1369	.3945	.3333					
Stddev	.006	.0000	.0015	.0002					
%RSD	.2542	.0224	.3902	.0625					
#1	2.519	.1369	.3934	.3334					
#2	2.528	.1369	.3956	.3331					

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◀ Zoom In ▶

Sample Name: STDB Acquired: 7/19/2010 16:25:23 Type: Cal Method: Accutest1(v172) Mode: IR Corr. Factor: 1.000000 Custom ID1: User: admin Custom ID2: Comment:

Y\_3600 Y\_3710 Y\_2243 In2306

Sample Name: StdA Acquired: 7/19/2010 16:19:11 Type: Cal

Y\_2243

Cts/S 2548.2

.02157

2548.6

2547.8

Custom ID2:

In2306

5457.9 2.6

.04766

5459.7

5456.

Cts/S

Custom ID3:

Method: Accutest1(v172) Mode: IR Corr. Factor: 1.000000

Custom ID1:

Y\_3710

27957.

.27993

28013.

27902

Cts/S

78.

Y\_3600

157470. 461.

.29307

157140.

157800.

Cts/S

User: admin

Comment:

Int. Std.

Units

Avg Stddev

%RSD

Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	155190.	27795.	2503.1	5255.0
Stddev	41.	126.	.7	1.0
%RSD	.02631	.45214	.02871	.01971
#1	155160.	27707.	2503.6	5255.8
#2	155220.	27884.	2502.6	5254.3

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Cts/S

.0640

.0001

.2129

.0641

.0639

.006

.1410

Cts/S .9343

0004

.0437

9341

.9346

**∢** Zoom In ▶

Sample Name: STDC

User: admin

Comment:

Int. Std.

Units

Avg Stddev

%RSD

Method: Accutest1(v172)

Y\_3600

148650

.06269

148580.

148720

Cts/S

93

Custom ID1:

Y\_3710

Cts/S

27395. 91.

.33130

27459.

27330

004

.0807

5 183

5.177

Cts/S

1.353

1 353

1.353

.000

7r3391

000

.0188

1 279

1.279

003

.0913

3 635

3.640

0001

1537

.1536

001

.0279

3 431

3.433

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■ Zoom In ▶

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003

.0724

4.096

4.101

Sr4077

Cts/S 9.871

9.846

9.895

%RSD

Flem

Units

Avg Stddev %RSD

0007

3377

.3388

Ti3349

Cts/S .5541

.0016

5552

.5530

000

.0125

1 462

1.462

W\_2079 Cts/S

1.626

.007

1 621

1.631

Sample Name: CCV	Acquired:	7/19/2010 1	6:37:47	Type: QC
Method: Accutest1(v1	72) Mode	: CONC	Corr. Fa	ctor: 1.000000
User: admin Cus	tom ID1:	Custom	ID2:	Custom ID3:
Comment:				

Ba4554 Be3130 Cd2288 Co2286 Cr2677

Cu3247 Mn2576 Ni2316 Ag3280 ppm 2.003 .003 ppm 2.051 .001 ppm 2.013 .002 ppm 1.999 .000 ppm 2.050 .001 ppm 2.000 .001 Units ppm 1.995 ppm 1.978 ppm 2455 Avg Stddev .004 .006 .0001 %RSD .1417 .0396 .1940 .0945 .0204 .3088 .0367 .0672 .0347 2.011 1.974 1.982 2.005 2.051 2.050 .2454 2.051 1.998 2.014 1.998 #2 2.001 2.001

Check? Chk Pass Value

Range

Flem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 AI3961 Ca3179 Units ppm 1.980 ppm 2.021 ppm 1.993 ppm 2.017 ppm ppm 1.995 ppm ppm 39.12 ppm 39.83 Avg Stddev %RSD 1.989 1.985 .001 .003 .004 .004 .002 .003 .003 .02 .04 .0750 .0990 1 979 2 020 1 991 2.015 1 987 1 992 1 983 39 13 39.80 2.022 1.995 1.981 2.020 1.991 1.988 39.11 1.998 39.86

Check? Chk Pass Chk Value Range

Elem Fe2599 Mg2790 B\_2089 Si2124 K\_7664 Na5895 Mo2020 Pd3404 Sn1899 ppm 38.84 ppm 38.82 Units ppm 39.98 ppm 39.36 ppm 2.011 ppm 2.008 ppm 1.988 ppm 4.966 ppm 2.029 Avg Stddev .04 .05 .03 .03 .004 .005 .003 .012 .001 %RSD .1050 .1331 .0822 .0714 .2120 .2604 .1389 .2476 .0397 39.95 38.80 38.85 39.38 2.008 2.004 1.986 1.990 4.957 2.028 4.974 40.01 38.87 38.80 39.34 2.014

Check ? Chk Pass Chk

Range

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Sample Name: CCV Acquired: 7/19/2010 16:37:47 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Comment: Sr4077 Ti3349 W\_2079 Zr3391 ppm 2.036 .002 ppm 1.997 .002 ppm 1.972 .006 Units ppm 1.969 .000 %RSD .1124 .1219 .3071 .0108 1.969 1.969 2.038 2.035 1.995 1.999 1.968 1.976 #2 Chk Pass Chk Pass Chk Pass Check? Value Range Int. Std. Y\_3600 Cts/S Y\_3710 Cts/S 27702. Y\_2243 Cts/S 2459.1 In2306 Cts/S Units Avg Stddev %RSD 152220 5092.6 .04553 .20715 .13146 152170 27743 2461.0 5097 3 152270. 2457.2 27661. 5087.9

Acquired: 7/19/2010 16:31:22

Y\_2243

Cts/S 2396.7

.04351

2396.0

2397.4

1.0

Mode: IR Corr. Factor: 1.000000

In2306

Cts/S

4881.6

.11600

4877.5

Custom ID2:

Type: Cal

Custom ID3

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									◀ Zoom I
									Zoom O
Sample Na	me: CCB	Acquire	d: 7/19/201	0 16:43:44	Type:	QC			
	cutest1(v1		de: CONC		actor: 1.00				
		,							
Jser: admi	n Cus	tom ID1:	Cusio	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0005	.0002	.0003	.0007	.0003	.0004	.0001	.0001
Stddev	.0001	.0000	.0001	.0000	.0003	.0002	.0000	.0003	.0003
%RSD	18.55	.4375	27.88	15.21	44.37	46.21	.5879	217.3	414.1
#1	.0004	.0005	.0002	.0003	.0010	.0004	.0004	.0003	
#2	.0005	.0005	.0001	.0003	.0005	.0002	.0004	0001	0001
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0002	.0014	.0011	.0000	.0016	.0013	.0062	.0068
Stddev	.0001	.0000	.0003	.0000	.0003	.0001	.0004	.0006	
%RSD	18.96	12.17	23.63	1.573	1560.	6.380	33.74	9.770	22.03
<b>#1</b>	.0005	.0002	.0017	.0011	.0002	.0017	.0016	.0066	
#2	.0003	.0001	.0012	.0011	0002	.0015	.0010	.0058	.0057
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Avg	.0081	0038	.0275	0008	.0040	F .0027	.0005	.0040	
Stddev	.0012	.0100	.0048	.0026	.0001	.0003	.0006	.0008	
%RSD	14.78	259.4	17.64	350.1	1.682	12.64	129.4	20.41	101.2
±1	.0090	.0032	.0240	0026	.0040	.0029	.0009	.0035	0005
#2	.0073	0109	.0309	.0011	.0039	.0024	.0000	.0046	0001
Check ? High Limit ow Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail .0021 0021	Chk Pass	Chk Pass	Chk Pass

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Raw Dat	a IVIAZ400	r page	9 01 217						
									◀ Zoom In ▶
									Zoom Out
Sample Na	me: CRIB	Acquire	d: 7/19/201	10 16:49:56	Type:	QC			
	cutest1(v1		de: CONC		actor: 1.00				
User: admi		tom ID1:		om ID2:		m ID3:			
	ii Cus	tom ib i.	Cusii	JIII IDZ.	Cusio	111103.			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1969	.0021	.0030	.0504	.0097	.0094	.0162	.0109	.0043
Stddev %RSD	.0000	.0000	.0001 3.937	.0001	.0003 3.362	.0000	.0000	.0000	.0001 2.709
70K3D	.0133	1.030	3.937	.2911	3.302	.2991	.1019	.3929	2.709
#1	.1969	.0021	.0031	.0503	.0094	.0094	.0162	.0109	.0042
#2	.1968	.0021	.0029	.0505	.0099	.0094	.0162	.0109	.0044
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elom	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Elem Units	V_2924 ppm	2112062 ppm	ppm	ppm	ppm	561400 bbm	ppm	ppm	
Avq	.0486	.0218	.0084	.0109	.0029	.0104	.0062	.1929	ppm 5.055
Stddev	.0003	.0000	.0000	.0005	.0027	.0002	.0002	.0033	.002
%RSD	.5396	.0807	.3537	4.175	11.19	1.660	3.773	1.703	.0387
#1	.0488	.0218	.0084	.0106	.0031	.0106	.0063	.1906	5.054
#2	.0484	.0218	.0084	.0113	.0026	.0103	.0060	.1953	5.056
	011.5	011.0	011.5	011.0	011.0	011.0	011.0	011.0	011.5
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									
Elem	Fe2599	Mq2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avq	.1183	4.830	9.598	9.746	.0986	.0215	.0518	.1971	.0102
Stddev	.0001	.014	.005	.003	.0000	.0001	.0002	.0005	.0003
%RSD	.0816	.2798	.0545	.0266	.0049	.4798	.3625	.2456	2.585
#1	.1184	4.821	9.602	9.748	.0986	.0216	.0517	.1967	.0104
#2	.1182	4.840	9.595	9.744	.0986	.0214	.0520	.1974	.0100
Check?	Chk Dacc	Chk Pass	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dace
Value	OHK FASS	CHK FaSS	CHK FaSS	OHK Fass	CHK FaSS	CHK FaSS	CHK FaSS	CHK FaSS	CHK FdSS
Range									
90									

							Zoom Out
Sample Na	me: CCB	Acquire	d: 7/19/201	0 16:43:44	Type: QC		
	cutest1(v17		de: CONC		ctor: 1.000000		
User: admi		om ID1:	Custo	om ID2:	Custom ID3:		
Comment:							
Elem	Sr4077	Ti3349	W_2079	Zr3391			
Units	ppm	ppm	ppm	ppm			
Avg	.0004	.0003	.0200	.0011			
Stddev	.0000	.0002	.0028	.0000			
%RSD	4.101	67.17	14.07	3.442			
#1	.0005	.0004	.0219	.0011			
#2	.0004	.0001	.0180	.0011			
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass			
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 156790. 9.	Y_3710 Cts/S 27824. 120. .42993	Y_2243 Cts/S 2535.1 9.3 .36562	Cts/S			
#1 #2	156780. 156800.	27740. 27909.	2541.7 2528.6	5440.0 5428.2			

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- 4	Zoc	m	In	▶
- :	Zool	m (	Dut	

			de: CONC Custo		ctor: 1.000000 Custom ID3:	
Oser: admir Comment:	ı Cus	iom IDT:	Custo	im ID2:	Custom ID3:	
Elem Jnits Avg Stddev %RSD	Sr4077 ppm .0101 .0000 .0525	ppm .0099 .0001	.0596	ppm F .0020 .0001		
⊭1 ⊭2	.0101 .0101					
Check ? /alue Range	Chk Pass	Chk Pass	Chk Pass	Chk Fail .2000 -50.00%		
nt. Std. Jnits Avg Stddev %RSD	Y_3600 Cts/S 156070. 104. .06656	27961. 25.	Cts/S 2518.9	Cts/S 5372.0		
‡1 ‡2		27979. 27943.				

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Custom ID1:

Be3130

ppm .0011

.0000

2.547

.0010

.0011

7n2062

ppm .0104

.0000

.0104

Sample Name: CRID

User: admin

Comment: Elem

Units

Avg Stddev

%RSD

Check ?

Value

Flem

Units

Avg Stddev

%RSD

Value Range

#2

Range

#2

Method: Accutest1(v172)

Ba4554

ppm .0041

.0001

2.745

.0040

.0041

V 2924

ppm 0020

.0001

5.226

.0021

.0020

Acquired: 7/19/2010 16:56:02

Cd2288

ppm .0011

.0000

.2537

.0011

.0011

As1890

ppm .0029

.0001

.0029

Mode: CONC Corr. Factor: 1.000000

Co2286

ppm .0026

.0000

1.526

.0026

.0026

TI1908

ppm .0028

.0002

.0029

.0027

Chk Pass, Chk Pa

Custom ID2:

◀ Zoom In ▶ Zoom Out			
		ame: CRID ccutest1(v17; in Custo	
Ag3280 ppm .0007 .0001 9.052	Elem Units Avg Stddev %RSD	Sr4077 ppm .0000 .0000 44.79	T
.0007 .0008	#1 #2	.0000	-
Chk Pass	Check ? Value Range	None	
Ca3179 ppm 1.010 .004 .4347	Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 157120. 169. .10756	Y_ 2
1.013 1.007	#1 #2	157240. 157000.	2
Chk Pass			
Sn1899			

Check? Chk Pass Value Range

Type: QC

Cr2677

ppm .0022

.0002

10.00

.0021

.0024

Ph2203

ppm .0020

.0002 9.173

.0019

.0021

Custom ID3:

Cu3247

ppm .0018

.0001

2.992

.0019

.0018

Se1960

ppm .0059

.0003

0057

.0062

Mn2576

ppm .0033

.0000

1.117

.0034

.0033

Sh2068

ppm .0035

.0003

.0033

.0038

Ni2316

ppm .0043

.0000

.3359

.0043

.0043

AI3961

ppm .0980

3000

.8190

.0985

.0974

	- 0-00				B 0000		D 10 10 1	010404	0 4000
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0896	1.957	.9782	.0112	.0006	0001	.0019	0003
Stddev	.0006	.0093	.001	.0006	.0001	.0000	.0000	.0002	.0001
%RSD	13.35	10.37	.0673	.0632	1.293	7.630	71.76	10.46	47.30
// 4	0000	0000	1.05/	0707	0110	0005	0000	0001	0000
#1	.0039	.0830	1.956	.9786	.0113	.0005	.0000	.0021	0002
#2	.0047	.0962	1.958	.9778	.0111	.0006	0001	.0018	0004
Check?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None	None

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■ Zoom In ▶

%RSD

Acquired: 7/19/2010 17:02:12 Sample Name: ICV Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 Custom ID1: Custom ID2: Custom ID3: User: admin Comment Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 ppm 1.011 .000 ppm 1.049 .000 ppm 1.004 .002 ppm 1.034 .002 ppm 1.036 .004 ppm F 1.061 .002 ppm 1.010 .000 Units ppm 9811 ppm 5133 Avg Stddev .0003 .0008 %RSD .0175 .0207 .1686 .2006 .3332 .0268 .1696 .0116 1503 1.049 1.032 1.035 .9813 1.011 1.011 1.002 1.033 1.060 1.062 #2 1.049 1.005 1.038 9809 1.010 Check? Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Fail Chk Pass Chk Pass Value 1 000 Range Flem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 AI3961 Ca3179 Units ppm 1.014 ppm 9863 ppm 1.037 ppm 1.005 ppm 1.007 ppm 9916 ppm 9972 ppm 4.952 ppm 5.018 Avg Stddev %RSD .0009 .001 .003 .000 .001 .0054 .5400 .0009 .008 .009 9856 1.036 1.003 1.013 1.008 9878 9965 4 958 5.025 9869 1.014 1.038 1.007 .9978 4.946 5.012 1.008 .9953 Check ? Value Chk Pass Range Mg2790 Na5895 Sn1899 Elem Fe2599 K\_7664 B\_2089 Mo2020 Pd3404 Si2124 ppm 9.862 Units ppm 5.136 ppm 4.974 ppm 9.735 ppm 1.005 ppm 1.006 ppm 9834 ppm 1.011 ppm 1.027 Avg Stddev .004 .005 .025 .012 .003 .002 .0001 .003 .002 %RSD .0827 .1089 .2537 .1210 .2992 .2207 .0051 .3068 .1785 4.978 4.970 9.718 9.753 9.853 1.003 1.005 9834 1.008 1.026 5.139 #2 9.870 1.007 1.008 .9834 1.013 1.028 Check ? Chk Pass Chk Range

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.1520

✓ Zoom In ▶

Sample Nam			7/19/2010 de: CONC		Type: QC
		,			
User: admin	Custo	m ID1:	Custo	m ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	
Units	ppm	ppm	ppm	ppm	
Avq	1.046	1.017	1.032	.9766	
Stddev	.002	.000	.003	.0007	

.3221

.0729

.0126

Acquired: 7/19/2010 16:56:02 Type: QC

Custom ID2:

W\_2079

ppm F .0067

.0005

7.956

.0070

.0063

0040

Chk Fail

50.00%

Y\_2243

2532.6

.00151

2532.6

Cts/S

Custom ID1:

Ti3349

ppm .0001

.0001

162.3

.0000

-.0001

None

Y\_3710

27932

Cts/S

32

.11336

27909

27954

Mode: CONC Corr. Factor: 1.000000

Zr3391

ppm .0002

.0001

36.83

.0002

.0003

0040 -50.00%

Chk Fail

In2306

5428.5

.09902

5432.3

5424.6

Cts/S

Custom ID3:

#1	1.045			
#2	1.047	1.017	1.034	.9771
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Int. Std.			Y_2243	
Units Avg	Cts/S 156220.	Cts/S		
Stddev	231.			
%RSD	.14805	.28403	.21017	.10561
#1	156380.	27617.	2519.7	5348.3
#2	156050.	27728.	2512.2	5340.3

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									◀ Zoom Zoom
	ame: ICB			0 17:08:10	Type:				
Method: A	ccutest1(v1	,	de: CONC		Factor: 1.0	00000			
User: adm	nin Cus	stom ID1:	Cus	om ID2:	Cust	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0001	.0001	.0001	.0003	.0000	.0000	.0001	0002
Stddev	.0000	.0000	.0001	.0002	.0000	.000	.0000	.0001	.0000
%RSD	32.94	63.61	105.7	145.6	7.159	70.51	4.175	122.4	12.23
<b>#1</b>	.0000	.0001	.0000	.0000	.0003	.0000	.0000	.0001	0002
<sup>‡</sup> 2	.0001	.0000	.0001	.0002	.0003	0001	.0000	.0000	0002
Check ? High Limit Low Limit		Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0001	0002	.0001	.0005	0005	.0015	0002	0028	.0004
Stddev	.0001	.0000	.0001	.0002	.0006	.0006	.0000	.0022	.0008
6RSD	114.7	14.79	113.8	48.32	125.1	37.76	7.235	79.04	216.4
¥1	0002	0001	.0002	.0003	0001	.0011	0002	0044	0002
2	.0000	0002	.0000	.0007	0009	.0019	0002	0012	.0010
Check ? High Limit ow Limit		Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
lem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0001	0102	.0041	0232	.0012	.0010	0007	.0001	.0001
Stddev	.0011	.0044	.0080	.0013	.0001	.0000	.0000	.0003	.0003
6RSD	1306.	43.51	196.7	5.453	9.156	.4837	2.213	456.5	642.9
1	.0007	0134	.0098	0223	.0013	.0010	0007	.0003	.0003
<b>#</b> 2	0009	0071	0016	0241	.0012	.0010	0007	0002	0002
Check ? ligh Limit .ow Limit		Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

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									◀ Zoom In ▶ Zoom Out
Method: A	ame: CCV ccutest1(v1	72) Mo	ode: CONC		Factor: 1.0	00000			
User: adm Comment		stom ID1:	Cus	tom ID2:	Cust	om ID3:			
Elem Units Avg Stddev %RSD	Ba4554 ppm 1.999 .001 .0357	Be3130 ppm 2.056 .001 .0341	ppm 2.002 .002	ppm 2.019 .003	2.015 .008	Cu3247 ppm 1.981 .005 .2580	ppm 2.057 .005	ppm 1.994 .003	ppm .2458 .0001
#1 #2	1.998 1.999	2.055 2.056		2.017 2.021	2.009 2.020	1.985 1.977		1.992 1.996	
Check? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm 1.995 .002 .0950	ppm 2.031 .003 .1496	ppm 1.997 .004 .2076	ppm 2.014 .001 .0367	ppm 1.987 .003 .1569	ppm 1.998 .007 .3481	ppm 1.988 .001 .0494	ppm 39.40 .01 .0229	ppm 39.98 .04 .0965
#1 #2	1.993 1.996	2.029 2.034				1.993 2.003		39.41 39.40	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm 40.11 .02 .0415	Mg2790 ppm 39.59 .03 .0847	ppm 39.26 .04	ppm 39.63 .00	ppm 2.004	Mo2020 ppm 2.008 .001 .0702	ppm 1.982 .001		ppm 2.032 .006
#1 #2	40.10 40.12	39.61 39.56	39.29 39.23		2.003 2.005	2.007 2.009		4.964 4.965	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Sample Na Method: Ac User: admi	ccutest1(v1		de: CONC	0 17:08:10 Corr. F lom ID2:	Type: QC actor: 1.000000 Custom ID3:	
Comment: Elem Units	Sr4077 ppm	Ti3349	W_2079	Zr3391 ppm		
Avg Stddev %RSD	.0000 .0000 27.71	.0002 .0000 24.32	.0070 .0001 1.065	.0004 .0000 1.821		
#1 #2 Check?	.0000 .0000	.0002 .0002 Chk Pass	.0069 .0070	.0004 .0004		
High Limit Low Limit						
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 157070. 62. .03973		Y_2243 Cts/S 2541.1 11.7 .46021	In2306 Cts/S 5456.8 21.4 .39210		
#1 #2	157110. 157020.	27874. 27707.	2532.8 2549.3	5441.6 5471.9		

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4	Zoon	ln	Þ
	Zoom	Ou	t

Comment:					
Elem Units Avg Stddev %RSD	Sr4077 ppm 2.064 .002 .0711	ppm 2.010 .002		ppm 1.967 .001	
#1 #2	2.065 2.063				
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Int. Std. Units Avg Stddev %RSD	Cts/S 152540.	Cts/S 27581.	Y_2243 Cts/S 2457.6 2.0 .08014	Cts/S 5099.3	
#1 #2	152570. 152510.	27613. 27550.	2458.9 2456.2	5106.4 5092.3	

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									Zoom
Sample Na	me: CCB	Acquire	d: 7/19/201	10 17:20:21	1 Type	: QC			
/lethod: Ac	cutest1(v1	72) Mo	de: CONC	Corr.	Factor: 1.0	00000			
Jser: admi	n Cus	tom ID1:	Cust	om ID2:	Cust	om ID3:			
Comment:									
omment.									
lem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm		ppm
vq	.0002	.0003	.0000	.0003	.0005	.0001	.0002	0002	.0000
Stddev	.0000	.0000	.000	.0002	.0001	.0001	.0000	.0001	.000
6RSD	.7986	1.859	1479.	57.14	15.27	46.05	7.744	67.07	77.75
1	.0002	.0003	.0001	.0004	.0004	.0001	.0002	0001	0001
2	.0002	.0003	0001	.0002	.0005	.0001	.0002	0002	.0000
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
ligh Limit	2 455	27 000	27 000	2 / 000	2	2 4000	2 000	27 000	2
ow Limit									
lem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
lvg	.0004	0001	.0011	.0014	0010	.0016	.0002	.0054	.0058
Stddev	.0002	.0000	.0002	.0007	.0011	.0008	.0001	.0038	.0002
6RSD	50.30	10.70	18.53	49.89	106.4	47.61	47.76	71.89	3.068
1	.0003	0001	.0010	.0019	0002	.0022	.0001	.0081	.0059
2	.0006	0001	.0012	.0009	0017	.0011	.0003	.0026	.0057
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
ligh Limit									
ow Limit									
lem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
wg	.0053	.0015	.0153	0177	.0027	.0018	0003	.0007	.0002
Stddev	.0008	.0084	.0112	.0012	.0006	.0002	.0002	.0001	.0003
6RSD	15.15	554.3	73.09	6.710	22.44	8.888	60.78	16.06	141.0
1	.0059	.0074	.0232	0169	.0032	.0019	0002	.0006	.0004
2	.0037	0044	.0074	0186	.0032	.0017	0002	.0008	.0004
-	.0040	.0044	.0074	.0100	.0023	.0017	.0000	.0000	.0000
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
ligh Limit									

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Naw Dat	a IVIAZ4U	n page	21 01 21	<i>'</i>					
									◀ Zoom II
									Zoom O
	ame: ICSA			10 17:26:3	٠.	: QC			
Method: A	ccutest1(v1	72) Mo	ode: CONC	Corr.	Factor: 1.0	00000			
User: admi	in Cus	stom ID1:	Cus	tom ID2:	Cust	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Jnits	ppm	ppm	ppm	ppm		ppm	ppm		ppm
Avq	0037	.0001	.0022	.0006		.0001	0014	0041	0006
Stddev	.0000	.0000	.0001	.0002	.0001	.0000	.0002	.0000	.0001
%RSD	1.156	4.657	2.780	24.48	6.620	22.00	11.09	.1608	24.93
#1	0037	.0001	.0021	.0007		.0002	0015		0005
#2	0037	.0001	.0022	.0005	.0020	.0001	0013	0041	0007
Check?	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Dacc	Chk Pass	Chk Dacc
High Limit	CIIK Fass	CIIK Fass	CIIK Fass	CIIK Fass	CIR Fass	CIIK Fass	CIIK Fass	CIIK Fass	CIK Fass
Low Limit									
LOW LININ									
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	0006	0059	.0010	0011	.0021	0042	.0009	469.7	367.8
Stddev	.0001	.0003	.0012	.0004		.0025	.0005	3.7	2.0
%RSD	22.06	4.413	118.4	33.46	94.23	58.71	52.56	.7868	.5348
#1	0005	0060	.0002	0008	.0007	0025	.0012	472.3	369.2
#1	0003		.0002	0008		0025	.0006		366.5
72	0007	0037	.0010	0013	.0033	0000	.0000	407.0	300.3
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
_ow Limit									
Elem	Fe2599		K_7664	Na5895		Mo2020	Pd3404		Sn1899
Units	ppm 187.0	ppm 502.6	.0000	ppm .8780	ppm .0007	.0005	ppm 0506	ppm 0016	ppm 0078
Avg Stddev	.6	2.0	.000	.0042		.0005	.0013		.0078
%RSD	.3144	.3885	15390.	.4761		97.51	2.507		1.359
701K3D	.5144	.5005	15576.	.4701	25.41	77.51	2.507	1.040	1.557
#1	187.4	504.0	.0037	.8810	.0006	.0008	0497	0016	0077
#2	186.6	501.2	0037	.8751	.0008	.0001	0515	0016	0079
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Nai	me: CCB	Acquire	d: 7/19/201	0 17:20:21	Type: QC		
Method: Ac	cutest1(v1	72) Mo	de: CONC	Corr. Fa	ctor: 1.000000		
User: admir	n Cus	tom ID1:	Cust	om ID2:	Custom ID3	:	
Comment:							
Elem	Sr4077	Ti3349	W_2079	Zr3391			
Units	ppm	ppm	ppm	ppm			
Avg	.0002	.0004	.0139	.0007			
Stďdev	.0000	.0004	.0028	.0001			
%RSD	1.352	99.57	19.82	10.07			
#1	.0002	.0001	.0159	.0007			
#2	.0002	.0001	.0139	.0007			
#2	.0003	.0000	.0120	.0008			
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass			
LOW LITTIIL							
Int. Std.	Y_3600	V 3710	Y_2243	In2306			
Units	Cts/S			Cts/S			
Avq	157080.			5429.1			
Stddev	68.			5.4			
%RSD	.04343			.09985			
	157130.	27852.	2528.8				
#1 #2	157030.	27787.	2522.4				

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4	Zoon	n In	Þ
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Drills   ppm   p		Sr4077	T13340	W_2079	Zr3391	
#2 .0011 .0040 .0427 .0018  Check? Chk Pass Chk Pass Chk Pass Chk Pass Ligh Limit Low Limit  Int. Std. Y_3600 Y_3710 Y_2243 In2306 Units Cts/S Cts/S Cts/S Cts/S Avg 139440. 26529. 2245.0 4507.6 Stddev 69, 83. 19.5 32.9 %RSD .04960 .31280 .86652 .72974  #1 139490. 26470. 2231.2 4484.3	Units Avg Stddev %RSD	ppm .0010 .0000	.0039 .0001	ppm .0435 .0011	ppm .0019 .0000	
Units Cts/S Cts/S Cts/S Cts/S Cts/S Avg 139440. 26529. 2245.0 4507.6 Stddev 69. 83. 19.5 32.9 %RSD .04960 .31280 .86652 .72974 #1 139490. 26470. 2231.2 4484.3	#1 #2		.0038 .0040	.0443 .0427		
Units Cts/S Cts/S Cts/S Cts/S Cts/S Avg 139440. 26529. 2245.0 4507.6 Stddev 69. 83. 19.5 32.9 %RSD .04960 .31280 .86652 .72974 #1 139490. 26470. 2231.2 4484.3	High Limit		Chk Pass	Chk Pass	Chk Pass	
	Units Avg Stddev	Cts/S 139440. 69.	Cts/S 26529. 83.	Cts/S 2245.0 19.5	Cts/S 4507.6 32.9	

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◀ Zoom In ▶ Zoom Out

									◀ Zoom Zoom
									200111
ample N	lame: ICSAE	. Acqui	red: 7/19/2	010 17:32	:53 Tvt	oe: QC			
	Accutest1(v1		de: CONC		Factor: 1.0				
ser: adm	•	tom ID1:		om ID2:		om ID3:			
		tom ib i.	Cusi	UIII IDZ.	Cusi	UIII IDS.			
omment	:								
lem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
vq	.4967	.4821	1.034	.4665	.4583	.4659		.9709	1.024
tddev	.0014	.0006	.001	.0001	.0003	.0003	.0001	.0014	.000
RSD	.2771	.1288	.0776	.0176	.0583	.0710	.0268	.1459	.0129
1	.4958	.4817	1.033	.4665	.4581	.4661	.4757	.9699	1.024
2	.4977	.4826	1.035	.4664	.4585	.4657	.4758	.9719	1.024
heck?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
'alue									
Range									
lem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
nits	ppm	ppm	ppm	ppm			ppm	ppm	ppm
vg	.4522	.9064	1.056	.9780	.9741	1.003	1.034	481.4	368.1
tddev	.0002	.0019	.001	.0022		.000	.001	3.9	2.2
6RSD	.0335	.2103	.1013	.2286	.2720	.0399	.1320	.8131	.6020
1	.4521	.9051	1.055	.9764			1.033		369.6
2	.4523	.9078	1.057	.9796	.9760	1.003	1.035	484.2	366.5
heck?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
ange									
lem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
nits	ppm	ppm	ppm	ppm			ppm		ppm
vg	183.0	495.1	.0415	.9049	.0099	.5007	.4943	.0076	0081
tddev	.8	1.3	.0097	.0055	.0009		.0004	.0021	.0008
6RSD	.4359	.2661	23.35	.6037	8.733	.1166	.0883	27.90	9.505
1	183.5	496.0	.0347	.9088	.0105	.5003	.4940	.0091	0076
2	182.4	494.2	.0484	.9010	.0093	.5011	.4946	.0061	0087
heck?	Chk Pass	Chk Pass	None	None	None	Chk Pass	Chk Pass	None	None
alue									
ange									

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				_					◀ Zoom In
									Zoom Out
Sample N	lame: CCV	Acquire	d: 7/19/20	10 17:40:1	7 Type	: QC			
Method: A	Accutest1(v1	72) Mo	de: CONC	Corr.	Factor: 1.0	000000			
User: adr	nin Cus	stom ID1:	Cus	tom ID2:	Cust	tom ID3:			
Commen	t:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm					ppm
Avg	2.003	2.058	1.999	2.018		1.980		1.999	.2464
Stddev	.002	.004	.002	.003				.004	.0004
%RSD	.0816	.1800	.0955	.1420	.3651	.0744	.4071	.2275	.1724
#1	2.004	2.061	1.998	2.016	2.006	1.981	2.049	1.995	.2467
#2	2.002	2.056	2.000	2.020	2.016	1.979	2.060	2.002	.2461
Check?	Chk Dace	Chk Pass	Chk Dace	Chk Dass	Chl Dacc	Chl Dacc	Chk Dace	Chk Dace	Chl Dacc
Value	CIR Fass	CIIK Fass	CIIK Fass	CIK Fass	CIK Pass	CIIK Pass	CIR Fass	CIIK Fass	CIIK Fass
Range									
Elem	V_2924	Zn2062	As1890						Ca3179
Units Ava	ppm 1.988	ppm 2.029	ppm 1.998	ppm 2.017			ppm 1.984	ppm 39.39	ppm 40.15
Stddev	.007	.005	.003	.004				.09	.07
%RSD	.3793	.2608	.1297	.1732		.0068		.2356	.1732
#1	1.983	2.025	1.996	2.014				39.45	40.20
#2	1.994	2.033	1.999	2.019	1.994	1.998	1.984	39.32	40.10
Check?	Chk Pass      Chk Pass	Chk Pass	Chk Pass	Chk Pass					
Value	Orac r doo	OTIN T GOO	OTIK I GOO	011101 000	011111 055	011101 000	OTHER GOS	OTIN T GOO	OTHER GOO
Range									
Elem	Fe2599	Mg2790	K 7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Units	ppm	ppm		ppm					ppm
Avg	40.21	39.42	39.06	39.47				4.960	2.035
Stddev	.09	.17	.13	.05			.002	.003	.002
%RSD	.2338	.4236	.3332	.1361	.1138	.0707	.1074	.0523	.1164
#1	40.28	39.54	39.16	39.50	2.001	2.007	1.979	4.958	2.033
#2	40.14	39.30	38.97	39.43			1.976	4.962	2.037
	01.1.5	011.0	011.5	011.0	011.5	011.5	011.5	011.0	011.5
Check ? Value	Cnk Pass	Chk Pass	Cnk Pass	Cnk Pass	Cnk Pass	Cnk Pass	Cnk Pass	Cnk Pass	Cnk Pass
Range									
Lungo									

Sample Na	ame: ICSAB	Acqui	red: 7/19/20	010 17:32:53	Type: Q	С	
Method: A	ccutest1(v17	'2) Mo	de: CONC	Corr. Fa	tor: 1.00000	0	
User: adm		om ID1:	Custo	om ID2:	Custom II	03:	
Comment:							
Elem	Sr4077	Ti3349	W_2079	Zr3391			
Units	ppm	ppm	ppm	ppm			
Avg	.0021	.0042	.4988	.4837			
Stddev			.0064				
%RSD	2.911	8.828	1.283	.1253			
#1	.0022	.0040	.4943	.4833			
#2	.0021	.0045	.5033	.4841			
Check ? Value	None	None	Chk Pass (	Chk Pass			
Range							
Int. Std.	Y_3600	Y_3710	Y_2243	In2306			
Units	Cts/S	Cts/S		Cts/S			
Avg	139900.			4471.2			
Stddev	46.	41.		2.3			
%RSD	.03276	.15454	.03884	.05087			
	139930.	26516.	2238.1	4472.8			
#1		26574.	2239.3	4469.6			

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ample Name: CCV
ethod: Accutest1(v172)
ethod: Accutest1(v172)
ser: admin
em Sr4077 T13349 W_2079 Zr3391 nils ppm ppm ppm ppm ppm yg 2.050 2.005 1.956 1.973 ddev .007 .000 .009 .001 RSD .3393 .0001 .4842 .0336  1 2.055 2.005 1.949 1.972 2 2.045 2.005 1.949 1.972 2 2.045 Z.005 1.962 1.973 heck? Chk Pass Chk Pass Chk Pass alue ange  1. Std. Y_3600 Y_3710 Y_2243 In2306 clist Cts/S Cts/S Cts/S Cts/S yg 152490. 27455. 2463.6 5105.2 ddev 318 63 1.0 2.0 RSD .20867 .23056 .03988 .04011  1 152710. 27410. 2464.2 5106.7
em Sr4077 Ti3349 W_2079 Zr3391 nits ppm ppm ppm ppm ppm gg 2.050 2.005 1.956 1.973 ddev .007 .000 .009 .001 RSD .3393 .0001 .4842 .0336  I 2.055 2.005 1.949 1.972 2 2.045 2.005 1.962 1.973 heck? Chk Pass Chk Pass Chk Pass Chk Pass alue ange t. Std. Y_3600 Y_3710 Y_2243 In2306 hits Cts/S Cts/S Cts/S Cts/S rg 152490. 27455. 2463.6 5105.2 ddev 318. 63. 1.0 2.0 RSD .20867 .23056 .03988 .04011
nits ppm ppm ppm ppm ppm ppm ppm ppm ppm pp
nits ppm ppm ppm ppm ppm ppm ppm ppm ppm pp
g 2.050 2.005 1.956 1.973 ddev 0.007 .000 .009 .001 RSD .3393 .0001 .4842 .0336
RSD .3393 .0001 .4842 .0336  1
L Std. V_3600 Y_3710 Y_2243 In2306 Cts/S C
heck? Chk Pass Chk Pass Chk Pass Chk Pass lature ange lt. Std. Y_3600 Y_3710 Y_2243 In2306 Cts/S Cts/S Cts/S Cts/S Cts/S Cts/S Cts/S ddev 318. 63. 1.0 2.0 RSD .20867 .23056 .03988 .04011
heck? Chk Pass Chk Pass Chk Pass Chk Pass lature ange lt. Std. Y_3600 Y_3710 Y_2243 In2306 Cts/S Cts/S Cts/S Cts/S Cts/S Cts/S Cts/S ddev 318. 63. 1.0 2.0 RSD .20867 .23056 .03988 .04011
heck? Chk Pass Chk Pass Chk Pass Chk Pass lature ange lt. Std. Y_3600 Y_3710 Y_2243 In2306 Cls/S
alue ange  t. Std. Y_3600 Y_3710 Y_2243 In2306  nits Cts/S Cts/S Cts/S Cts/S  vg 152490. 27455. 2463.6 5105.2  ddev 318. 63. 1.0 2.0  RSD 2.0867 .23056 .03988 .04011  I 152710. 27410. 2464.2 5106.7
nits Cts/S c
nits Cts/S Cts/S Cts/S Cts/S Cts/S yg 152490. 27455. 2463.6 5105.2 ddev 318. 63. 1.0 2.0 RSD .20867 .23056 .03988 .04011
ddev 318. 63. 1.0 2.0 RSD .20867 .23056 .03988 .04011
RSD .20867 .23056 .03988 .04011 I 152710. 27410. 2464.2 5106.7
152710. 27410. 2464.2 5106.7

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■ Zoom In ▶ Zoom Out Acquired: 7/19/2010 17:46:16 Type: QC Sample Name: CCB Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment: Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Units ppm .0003 ppm .0002 ppm .0000 ppm .0002 ppm .0004 ppm .0002 ppm .0002 ppm .0002 ppm .0000 Avg Stddev .0001 .0001 .0001 .0000 .0000 .0000 .0000 .0002 .0003 %RSD 42.04 36.23 185.4 3.780 7.574 8.952 21.18 62.20 1434 .0002 .0002 .0001 .0002 .0004 .0002 .0003 .0004 .0002 #2 .0004 .0003 .0000 .0002 .0004 .0002 .0002 .0001 -.0002 Check ? Chk Pass High Limit Low Limit Flem V\_2924 Zn2062 As1890 TI1908 Ph2203 Se1960 Sh2068 Al3961 Ca3179 Units ppm .0003 ppm .0000 ppm .0014 ppm .0007 ppm .0004 ppm .0008 ppm .0003 ppm .0246 ppm .0282 Avg Stddev %RSD .0000 .0001 .0003 .0004 .0001 .0003 .0003 99.55 .0126 .0143 58.03 .0016 .0010 .0005 .0010 .0005 .0193 #1 #2 .0003 .0000 .0004 .0001 .0347 .0372 .0012 .0003 .0006 Check? Chk Pass High Limit Low Limit Fe2599 Mg2790 Sn1899 Elem Na5895 B\_2089 Mo2020 Pd3404 Si2124 K\_7664 Units ppm F .0145 ppm .0224 ppm .0091 ppm .0201 ppm .0018 ppm .0018 ppm .0000 ppm .0013 Avg Stddev .0065 .0063 .0037 .0052 .0002 .0004 0004 .0002 .0003 %RSD 44.90 28.06 41.06 25.82 12.72 22.56 2308. 17.79 514.0

-.0238

-.0164

.0064

.0117

.0020

.0017

Chk Fail Chk Pass Chk

-.0003

.0003

.0021

.0015

.0015

.0012

-.0001

.0002

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	h3

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Sample Name: CCB Acquired: 7/19/2010 17:46:16 Type: QC

Custom ID1:

Ti3349

ppm .0003

.0002

44.98

.0005

.0002

Y\_3710 Cts/S

27835

145

.52049

27937. 27732.

Chk Pass Chk Pass Chk Pass

Sr4077

ppm .0002

.0000

2.739

.0002

.0002

Y\_3600 Cts/S 157110.

.00923

157120.

157100.

User: admin

Comment:

Elem

Units

Avg Stddev

%RSD

Check?

Int Std

Units

Avg Stddev

%RSD

#2

High Limit Low Limit

#2

Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

W\_2079

ppm .0151

.0016

10.87

.0162

.0139

Y\_2243 Cts/S 2535.9

.34764

2542.1

2529.6

Custom ID2:

Zr3391

ppm .0009

.0000

.1725

.0009

.0009

In2306

5430.1

.21746

5438.4

5421.7

Cts/S

									◀ Zoom Ir Zoom O
Sample Nam	ne: MP537	68-B1	Acquired:	7/19/2010	17:58:40	Type: U	nk		
Method: Acc	utest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admin	Cus	tom ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247		Ni2316	Ag3280
Avg	3.820	.0975	.0889	.9594	.3816	.4573	.9860	.9499	.0885
Stddev	.005	.0001	.0002	.0011	.0005	.0011	.0002	.0022	.0002
%RSD	.1224	.0710	.1860	.1119	.1340	.2411	.0220	.2282	.2570
#1	3.816	.0974	.0891	.9602	.3820	.4565	.9862	.9484	.0886
#2	3.823	.0975	.0888	.9587	.3812	.4580	.9859	.9515	.0883
Elem	V_2924	Zn2062	As1890	TI1908				Al3961	
Avg	.9109	.9612	3.785	3.735	.9291	3.704	.9294	49.72	11.92
Stddev	.0002	.0003	.008	.004	.0008	.008	.0024	.02	.02
%RSD	.0180	.0350	.2066	.1114	.0854	.2261	.2551	.0355	.1333
#1	.9108	.9610	3.791		.9296	3.710	.9311	49.73	11.93
#2	.9110	.9615	3.779	3.738	.9285	3.699	.9277	49.71	11.91
Elem	Fe2599		K_7664	Na5895	B_2089			Si2124	Sn1899
Avg	50.37	11.33	11.46	11.51	.0033	0010	0105	.0397	.0182
Stddev	.02	.07	.01	.01	.0002	.0000	.0003	.0000	.0000
%RSD	.0436	.6559	.1304	.0874	6.369	1.542	2.675	.1086	.2251
#1	50.38	11.39	11.45	11.50	.0031	0010	0107	.0397	.0182
#2	50.35	11.28	11.47	11.52	.0034	0010	0103	.0397	.0183
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0006	.0020	.0522	.0034					
Stddev	.0001	.0001	.0008	.0000					
%RSD	8.834	6.857	1.482	.9040					
#1	.0005	.0019	.0527	.0033					
<b>#</b> 2	.0006	.0021	.0516	.0034					
nt. Std.	Y_3600		Y_2243	In2306					
Avg	156130.	27964.	2484.3	5245.8					
Stddev	96.	41.	4.8	.6					
%RSD	.06147	.14814	.19278	.01063					
	156200.		2481.0	5245.4					
#1 #2	156060.	27994.	2487.7	5246.2					

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.0099

.0191

.0114 -.0114

#2

Check ?

High Limit

.0180

.0268

									Zoom Ou	
	me: MP537			ed: 7/19/20			e: Unk			
User: admi Comment:	ccutest1(v1 in Cus	tom ID1:	de: CONC Cust	om ID2:	actor: 1.00 Custo	om ID3:				
Elem Avg Stddev %RSD	Ba4554 .0006 .0001 19.24	Be3130 .0000 .0000 70.65	Cd2288 0002 .0001 54.49	Co2286 .0001 .0000 91.82	Cr2677 .0003 .0001 31.89	Cu3247 .0006 .0000 6.423	Mn2576 .0002 .0000 24.17	Ni2316 .0004 .0003 73.76	Ag3280 .0761 .0000 .0510	
#1 #2	.0005 .0006	.0000	0001 0002	.0000	.0004	.0005 .0006	.0002 .0002	.0002 .0005	.0762 .0761	
Elem Avg Stddev %RSD	V_2924 .0000 .000 360.3	Zn2062 .0186 .0001 .5362	As1890 .0009 .0002 23.37	TI1908 .0017 .0005 31.61	Pb2203 .0002 .0003 135.8	Se1960 .0005 .0003 70.59	Sb2068 0001 .0005 376.5	Al3961 .0235 .0034 14.67	Ca3179 .0322 .0009 2.885	
#1 #2	.0001 0001	.0187 .0185	.0011 .0008	.0013 .0021	.0004	.0007 .0002	.0002 0005	.0259 .0210	.0315 .0328	
Elem Avg Stddev %RSD	Fe2599 .0124 .0000 .3529	Mg2790 .0113 .0154 135.9	K_7664 .0077 .0174 226.7	Na5895 0242 .0012 5.040	B_2089 .0018 .0001 3.795	Mo2020 .0009 .0000 .7759	Pd3404 .0027 .0006 23.93	Si2124 .0097 .0003 3.222	Sn1899 .0065 .0000 .7117	
#1 #2	.0124 .0124	.0222 .0004	.0200 0046	0234 0251	.0019 .0018	.0009	.0022 .0031	.0100 .0095	.0065 .0064	
Elem Avg Stddev %RSD	Sr4077 .0002 .0000 15.36	Ti3349 .0003 .0001 18.52	W_2079 .0118 .0002 2.012	Zr3391 .0004 .0000 1.581						
#1 #2	.0002 .0002	.0004 .0003	.0120 .0116	.0004 .0004						
Int. Std. Avg Stddev %RSD	Y_3600 158980. 100. .06264	Y_3710 28446. 10. .03649	Y_2243 2565.3 4.0 .15686	In2306 5530.3 8.4 .15171						
#1 #2	159050. 158910.	28454. 28439.	2562.4 2568.1	5524.4 5536.2						

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82 of 151 ACCUTEST. JA50921 Laboratori

		Raw
	◀ Zoom In ▶ Zoom Out	
		Samp Metho User: Comm
Ni2316 .0004 .0003 73.76	Ag3280 .0761 .0000 .0510	Elem Avg Stdde %RSE
.0002 .0005	.0762 .0761	#1 #2
Al3961 .0235 .0034 14.67	Ca3179 .0322 .0009 2.885	Elem Avg Stdde %RSE
.0259 .0210	.0315 .0328	#1 #2
Si2124 .0097 .0003 3.222	Sn1899 .0065 .0000 .7117	Elem Avg Stdde %RSE
.0100 .0095	.0065 .0064	#1 #2
		Elem Avg Stdde %RSE
		#1 #2
		Int. St Avg Stdde %RSE
		#1 #2

◀ Zoom In ▶

 Zoom In ▶
 Zoom Out Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment: Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Avg Stddev %RSD 7.063 .1048 .0991 .9693 1.901 2.066 3.332 1.463 .0917 .042 .0002 .0001 .0004 .006 .004 .011 .001 .0005 .2004 .1402 .0376 .1861 .3316 .5005 7.093 7.033 .1046 .1049 .0991 .0990 .9696 .9691 1.905 1.897 2.063 2.069 1.463 1.464 .0914 #1 #2 3.324 .0920 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Sb2068 Al3961 Ca3179 Avg Stddev 1.102 .001 7.037 3.673 3.604 9.756 3.553 .5259 .0021 145.5 130.2 1.5 .1306 .0128 .0351 .0169 .0181 1.119 1.103 1.101 7.042 7.032 3.673 3.673 3.605 3.603 3.553 3.553 145.6 145.5 #1 9 755 5244 129 1 #2 .5275 131.2 9.756 Fe2599 196.0 1.5 Mg2790 50.43 .25 Elem K\_7664 24.02 Na5895 17.33 Pd3404 -.0604 B\_2089 Mo2020 Si2124 Sn1899 .2053 .0352 6.466 Avg Stddev .0002 .0006 .00 .04 .0002 .018 %RSD .7783 .4871 .0020 .2122 .2781 50.26 2047 0353 6 479 194 9 24 02 17 36 - 0602 3073 #2 197.1 .0350 -.0605 6.453 Flem Sr4077 W\_2079 Ti3349 7r3391 .8285 .0028 4.037 .1538 .0003 .1061 Avg Stddev %RSD .3327 .2169 .1642 .2246 .8305 4.043 .1536 .1060 #2 .8266 4.031 .1063 Int. Std. Y\_3710 Y 3600 Y 2243 In2306 156960. 60. 29025. 302. 2483.6 2.7 4912.8 Avg Stddev 03800 %RSD 1.0417 .10732 05587

Method: Ac	cutest1(v1)	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admir	n Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem Avg Stddev %RSD	Ba4554 6.674 .041 .6190	Be3130 .0879 .0001 .1248	.0868	Co2286 .8583 .0015 .1787	Cr2677 1.468 .002 .1318	1 801	Mn2576 2.102 .002 .0935	Ni2316 1.234 .001 .0601	Ag3280 .0823 .0001 .0647
#1 #2	6.644 6.703	.0880 .0878			1.466 1.469	1.802	2.101		.0823 .0824
Elem Avg Stddev %RSD	.9465	6.215 .020	.006	3.132 .002	Pb2203 7.765 .014 .1734	3.149 .007	.5168 .0008	0.1	Ca3179 63.16 .01 .0194
#1 #2	.9461 .9468	6.201 6.229	3.243 3.252	3.133 3.130	7.756 7.775	3.144 3.154		98.73 98.74	63.15 63.17
Elem Avg Stddev %RSD				12.02 .00	B_2089 .1514 .0001 .0451	.0245	Pd3404 0463 .0001 .2954	.010	Sn1899 .3532 .0009 .2594
#1 #2	173.6 173.8	21.72 21.82		12.02 12.03	.1513 .1514	.0246 .0243		5.285 5.271	.3525 .3538
Elem Avg Stddev %RSD	Sr4077 .4508 .0001 .0226	Ti3349 2.175 .001 .0243	.0009	.0669					
#1 #2	.4508 .4509	2.175 2.175	.1275 .1262	.0669 .0669					
Int. Std. Avg Stddev %RSD	Y_3600 155340. 16. .01026		2473.9 3.5						
#1 #2	155350. 155320.	28159. 28144.	2476.3 2471.4						

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157010.

156920.

28811.

2485.5 2481.7

4910.8

									<b>▼</b> Zoom In ▶
									Zoom Out
Sample N	ame: JA515	12-1 A	cquired: 7/	19/2010 18	:17:14	Type: Unk			
Method: A	Accutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00				
User: adm	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment									
Common									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avg	4.108	.0093	.0096	.0898	4.904	1.641	1.795	2.212	.0074
Stddev	.006	.0000	.0000	.0001	.005	.002	.003	.001	.0003
%RSD	.1519	.0145	.2476	.1103	.1090	.1193	.1825	.0409	4.288
#1	4.112	.0093	.0096	.0898	4.900	1.643	1.793	2.212	.0072
#2	4.103	.0093	.0095	.0897	4.908	1.640	1.797	2.211	.0076
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avq	.2197	5.886	.0523	.0049	7.002	.0129	.0445	68.74	46.51
Stddev	.0004	.000	.0002	.0009	.003	.0009	.0008	.08	.11
%RSD	.2029	.0046	.4656	17.32	.0408	7.089	1.856	.1168	.2289
701100	.2027	.0010	. 1000	17.02	.0100	7.007	1.000		.LLG7
#1	.2194	5.886	.0525	.0055	7.004	.0135	.0450	68.69	46.44
#2	.2200	5.886	.0522	.0043	7.000	.0122	.0439	68.80	46.59
E1	F-0F00	14-0700	14 7//4	NI-5005	D 2000	14-2020	D-12404	CIDADA	C-1000
Elem	Fe2599 162.9	Mg2790 16.26	K_7664 11.30	Na5895 4,405	B_2089 .1408	Mo2020 .0746	Pd3404 0450	Si2124 3,473	Sn1899 .3616
Avg Stddev	1.4	.11	.00	.005	.0009	.0003	.0002	.008	.0008
%RSD	.8655	.6745	.0241	.1134	.6441	.4124	.5421	.2416	.2184
701130	.0000	.0743	.0241	.1154	.0441	.7127	.5421	.2410	.2104
#1	161.9	16.18	11.30	4.408	.1401	.0744	0448	3.479	.3611
#2	163.9	16.34	11.30	4.401	.1414	.0748	0451	3.468	.3622
Elem	Sr4077	Ti3349		Zr3391					
Avg	.4207	2.340	.1065	.0663					
Stddev	.0002	.004	.0001	.0002					
%RSD	.0394	.1512	.1007	.3533					
#1	.4206	2.338	.1066	.0661					
#2	.4208	2.343	.1065	.0665					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	157220.	28443.	2494.9	5187.3					
Stddev	27.	108.	2.2	4.5					
%RSD	.01686	.38115	.08758	.08595					
#1	157230.	28520.	2496.4	5190.5					
#2	157200.	28366.	2493.3	5184.2					
				· · · · <del>-</del>					

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Elem Avg Avg Stiddev         Ba4554 0.096         Be3130 0.0087         Cd2288 0.096         Co2286 0.097         Cd2677 0.093         Cu3247 5.131         Mn2576 1.601         Ni2316 1.900         Ag3280 0.0087 0.0089 0.0007           Stiddev %RSD         0.006         0.0007 0.009         0.002 0.004         0.004 0.004         0.004 0.004         0.004 0.002         0.004 0.004         0.004 0.005         0.006 0.092         0.006 0.007         0.008 0.007         0.008 0.007         0.008 0.005 0.005 0.005 0.005 0.007         0.008 0.007         0.002 0.007         0.002 0.007         0.002 0.007         0.002 0.007         0.002 0.007         0.002 0	Method: Acc User: admir Comment:		72) Mo om ID1:	de: CONC Custi	Corr. F om ID2:	actor: 5.00 Custo	00000 om ID3:			
#2	Avg Stddev	4.226 .006	.0096	.0087 .0007	.0932	5.131 .002	1.601 .004	1.900 .004	2.267 .002	.0089
Avg         7_299         6.314         0.0584         .0052         7.075         .0170         .0462         70.23         48.60           Stddev         .0007         .008         .0017         .0040         .005         .0052         .0018         .10         .20           %RSD         .2866         .1326         2.980         .77.38         .0760         30.70         3.822         .1382         .4070           #1         .2294         6.308         .0596         .0081         7.071         .0133         .0475         70.16         48.46           #2         .2304         6.320         .0572         .0024         7.079         .0207         .0450         70.30         48.74           Elem         Fe2599         Mg2790         K_7664         Na5895         B_2089         Mc02020         Pd3404         Si2124         Sn1899           Avg         177.4         16.89         11.56         4.365         .1473         .0784        0518         3.547         .3739           Stddev         .3         .04         .04         .018         .0099         .0022         .0007         .012         .0029           %RSD         .1524 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
#2	Avg Stddev	.2299	6.314	.0584 .0017	.0052	7.075 .005	.0170 .0052	.0462 .0018	70.23 .10	48.60 .20
Avg     177.4     16.89     11.56     4.365     1473     0.784     -0.518     3.547     3.739       Stddev     3     0.4     0.4     0.18     0.099     0.022     0.007     0.12     0.029       %RSD     .1524     .2320     .3486     .4182     .5960     2.836     1.330     .3251     .7632       #1     177.2     16.87     11.59     4.352     .1466     .0800    0513     3.556     .3759       #2     177.6     16.92     11.53     4.378     .1479     .0769    0523     3.539     .3719       Elem     Sr4077     Ti3349     W_2079     Z73391       Avg     4.293     2.416     .0990     .0694       Stddev     .0002     .000     .0027     .0002       %RSD     .0532     .0088     2.757     .2847       #1     .4292     2.416     .0971     .0695       Int. Std.     Y_3600     Y_3710     Y_2243     In2306       Avg     157620     .27953     .2533 4     5379.8       Stddev     202     100     .20     .55       %RSD     .12789     .35722     .08013     .10285										
#2 177.6 16.92 11.53 4.378 .1479 .0769 -0.523 3.539 .3719  Elem Sr4077 T13349 W_2079 Zr3391 Avg .4293 2.416 .0990 .0694 Stddev .0002 .000 .0027 .0002 %RSD .0532 .0088 2.757 .2847  #1 4.292 2.417 .1009 .0692 #2 4.295 2.416 .0971 .0695  Int. Std. Y_3600 Y_3710 Y_2243 In.2306 Avg 157620 .27953 .2533.4 5379.8 Stddev .202 .100 .2.0 5.5 %RSD .12789 .35722 .08013 .10285  #1 157760. 28023. 2534.8 5383.7	Avg Stddev	177.4 .3	16.89 .04	11.56 .04	4.365 .018	.1473	.0784 .0022	0518 .0007	3.547 .012	.3739 .0029
Avg     .4293     2.416     -0990     .0694       Stddev     .0002     .000     .0027     .0002       %RSD     .0532     .0088     2.757     .2847       #1     .4292     2.417     .1009     .0692       #2     .4295     2.416     .0971     .0695       Int. Std.     Y_3600     Y_3710     Y_2243     In2306       Avg     157620     .27953.     .2533.4     5379.8       Stddev     202.     100.     2.0     5.5       %RSD     .12789     .35722     .08013     .10285       #1     157760.     28023.     2534.8     5383.7										
#2 .4295 2.416 .0971 .0695  Int. Std. Y_3600 Y_3710 Y_2243 In2306 Avg 157620 27953. 2533.4 5379.8 Stddev 202. 100. 2.0 5.5 %RSD .12789 .35722 .08013 .10285  #1 157760. 28023. 2534.8 5383.7	Avg Stddev	.4293 .0002	2.416 .000	.0990	.0694 .0002					
Avg 157620. 27953. 2533.4 5379.8 Stddev 202. 100. 2.0 %RSD .12789 .35722 .08013 .10285 #1 157760. 28023. 2534.8 5383.7										
	Avg Stddev	157620. 202.	27953. 100.	2533.4 2.0	5379.8 5.5					

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Ag3280

.0007

6.375

.0007

Ca3179

28.58

.4278

28 67

28.50

Sn1899 .4452 .0001

.0216

4453

.4451

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	mot do		AL TOO	•						
									▼ Zoom In Zoom Ou	
									200111 00	ii.
Sample N	lame: JA515	12-2 A	cquired: 7/	19/2010 18	:29:27	Type: Unk				
Method: A	Accutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
User: adn	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment										
Comment										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	10.80	.0050	.0180	.0487	.4350	1.451	2.611	.2926	.0078	
Stddev	.04	.0000	.0001	.0001	.0011	.004	.007	.0002	.0000	
%RSD	.3682	.6878	.3836	.1572	.2448	.2660	.2662	.0705	.1253	
#1	10.83	.0050	.0180	.0488	.4357	1.454	2.616	.2924	.0078	
#2	10.63	.0030	.0179	.0487	.4342	1.434	2.606	.2927	.0078	
#2	10.77	.0049	.0179	.0487	.4342	1.449	2.000	.2921	.0078	
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.1870	8,400	.0641	.0033	12.70	.0102	.0174	47.76	45.35	
Stddev	.0004	.011	.0007	.0001	.00	.0007	.0000	.12	.02	
%RSD	.2257	.1247	1.015	1.975	.0283	7.231	.2509	.2448	.0511	
#1	.1873	8.408	.0645	.0033	12.70	.0107	.0174	47.68	45.36	
#2	.1867	8.393	.0636	.0034	12.69	.0096	.0174	47.85	45.33	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	109.4	26.20	6.600	1.165	.0885	.0208	0312	3.456	.2235	
Stddev	.0	.03	.025	.007	.0006	.0000	.0002	.006	.0015	
%RSD	.0235	.1147	.3718	.6382	.7324	.1732	.7437	.1658	.6882	
#1	109.4	26.18	6.583	1.159	.0881	.0208	0310	3.451	.2224	
#2	109.4	26.23	6.618	1.170	.0890	.0208	0313	3.460	.2246	
π2	107.4	20.23	0.010	1.170	.0070	.0200	0313	3.400	.2240	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Ava	.3554	1.952	.1017	.0316						
Stddev	.0016	.002	.0007	.0001						
%RSD	.4587	.0872	.7083	.2480						
#1	.3543	1.954	.1012	.0317						
#2	.3566	1.951	.1022	.0316						
		14 0740	14 0040							
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg	157610.	28480.	2512.6	5181.9						
Stddev	468.	65.	4.3	6.4						
%RSD	.29722	.22876	.17261	.12272						
#1	157280.	28434.	2515.7	5186.4						
#2	157940.	28526.	2509.5	5177.4						
"-	137,740.	20020.	2507.5	3177.4						

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Raw Data MA24667 page 40 of 217

Sample Name: JA51512-3 Acquired: 7/19/2010 18:35:35 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

.0261

.0001

.2044

.0260 .0261

As1890

.0947

.1617

0948

.0946

K\_7664 8.655 .024 .2717

8 638

.1885 .0006

.3424

.1889

.1880

Y 2243

2520.6 1.3

.05263

2519.7

Custom ID2:

Co2286

.0825

.0000

.0280

.0825 .0825

TI1908

.0037

0039

.0035

Na5895 1.280 .005

.3917

1.277

7r3391

.0552

.0580

.0552

.0551

In2306

5176.6

.07495

5173.8

Custom ID3:

Cu3247

2.075

.001

.0302

2.076 2.075

Se1960

.0049

11.34

0052

.0032

Mo2020 .0199 .0004

0202

Mn2576

3.632

.001

3.632

.0257

0260

.0253

Pd3404 -.0468

.0002

- 0469

Ni2316

.6866

.0004

.0581

.6869

.6864

Al3961

57.48 .02

.0377

57 49

57.46

Si2124 6.351 .005

.0873

6 347

6.355

Cr2677

.3112

.0002

.0625

.3114 .3111

Pb2203

6.545

.0792

6 549

6.541

B\_2089 .0996 .0002

0995

Custom ID1:

Be3130

.0075

.0000

.5482

.0075 .0074

Zn2062

17.69

17.71 17.67

Mg2790 17.73

.02

.1327

17.74

3.615

.0955

3.617

3.612

Y\_3710

28614. 141.

.49393

28714.

Ti3349 W\_2079

Ba4554

3.175 .006 .1995

3.171 3.180

V\_2924

.3035

3036

.3034

Fe2599 175.0 2.7

1.547

176.9

Sr4077

.3233

.2025

.3228

.3237

Y 3600

158470. 136.

.08551

158370.

158570.

User: admin

Comment: Elem

Avg Stddev

%RSD

#1 #2

#1

#2

Elem

Avg Stddev

%RSD

Flem

Avg Stddev %RSD

Int. Std.

%RSD

#1

Elem

Avg Stddev

	✓ Zoom In ▶										◀ Zoom I	n⊳
	Zoom Out										Zoom O	
		Sample Na	ame: JA515	12-5 A	cquired: 7/1	19/2010 18	:48:02	Type: Unk				
		Method: A	ccutest1(v1)	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
		User: adm	•	tom ID1:		om ID2:		om ID3:				
				ioni ib i.	Cusii	UIII IDZ.	Cusii	JIII IDS.				
		Comment:										
Ni2316	Aq3280	Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280	
.6751	.0249	Avq	6.538	.0071	.0156	.0894	.6257	2.554	5.926	.2856	0018	
.0006	.0001	Stddev	.103	.0000	.0001	.0003	.0021	.004	.003	.0003	.0004	
.0881	.4344	%RSD	1.579	.6747	.4540	.3242	.3331	.1393	.0423	.1049	20.40	
.0001	.4544	701130	1.577	.0747	.+5+0	.5242	.5551	.1373	.0423	.1047	20.40	
.6747	.0249	#1	6.611	.0072	.0156	.0891	.6242	2.557	5.927	.2854	0016	
.6755	.0250	#2	6.465	.0072	.0155	.0896	.6272	2.552	5.924	.2858	0021	
.0733	.0230	πZ	0.403	.0071	.0133	.0070	.0272	2.552	3.724	.2030	0021	
AI3961	Ca3179	Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
57.84	21.29	Avg	.2942	11.69	.1325	.0046	4.196	0005	.0157	87.54	115.2	
.19	.06	Stddev	.0002	.00	.0011	.0018	.002	.0016	.0016	.02	.2	
.3311	.2732	%RSD	.0721	.0383	.8352	39.18	.0417	298.2	10.47	.0206	.2167	
.3311	.2132	/0K3D	.0721	.0363	.0332	39.10	.0417	290.2	10.47	.0200	.2107	
57.97	21.33	#1	.2943	11.70	.1317	.0058	4.198	.0006	.0169	87.52	115.4	
57.70	21.25	#2	.2940	11.69	.1333	.0033	4.195	0016	.0145	87.55	115.0	
37.70	21.23	#2	.2940	11.09	.1333	.0033	4.193	0010	.0143	67.55	115.0	
Si2124	Sn1899	Elem	E-2E00	Mg2790	K_7664	Na5895	P 2000	Mo2020	Pd3404	Si2124	Sn1899	
2.970	.5707	Avq	242.0	27.31	9.330	5.963	.1146	.0163	0629	2.744	.1547	
.005	.0016	Stddev	.8	.08	.013	.018	.0001	.0000	.0004	.002	.0010	
.1560	.2832	%RSD	.3415	.2976	.1357	.3085	.0813	.2829	.5665	.0780	.6290	
.1300	.2032	/0K3D	.3413	.2970	.1337	.3063	.0013	.2029	.3003	.0760	.0290	
2.973	.5696	#1	242.6	27.37	9.321	5.950	.1146	.0162	0627	2.746	.1540	
2.966	.5719	#2	241.4	27.25	9.339	5.976	.1147	.0163	0632	2.743	.1553	
2.900	.3719	#2	241.4	21.23	9.339	3.970	.1147	.0103	0032	2.743	.1000	
		Elem	Sr4077	T13340	W 2079	Zr3391						
		Avq	.8300	4.037	.1519	.0423						
		Stddev	.0004	.004	.0006	.0001						
		%RSD										
		76R3D	.0533	.0954	.4257	.3458						
		#1	.8297	4.040	.1524	.0424						
		#2	.8303	4.040	.1514	.0424						
		#2	.8303	4.035	.1514	.0422						
		Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
		Avq	156100.	28426.	2478.5	5057.4						
		Stddev	55.	65.		1.1						
					.9							
		%RSD	.03533	.22930	.03670	.02124						
		#1	156140.	28380.	2477.8	5058.2						
		#1	156140.	28380. 28472.	2477.8	5058.2						
		#2	156060.	28472.	2479.1	5056.7						

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									◀ Zoom Zoom (
	ame: JA5151 ccutest1(v11		cquired: 7/1 de: CONC		:41:48 Factor: 1.00	Type: Unk			
User: adm		tom ID1:		om ID2:		om ID3:			
Comment:		ioni ib i.	Cusi	om ibz.	Ousid	JIII 103.			
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg Stddev	3.378 .010	.0071	.0353	.0830	.9722	4.425 .013	3.247 .022	.6751 .0006	.0249
%RSD	.2920	.7189	.3965	.1545	.2805	.2846	.6687	.0881	.4344
#1	3.385	.0071	.0352	.0829	.9741	4.434	3.262	.6747	.0249
#2	3.371	.0070	.0354	.0831	.9703	4.416	3.231	.6755	.0250
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.3696	6.956	.0745	.0028	9.101	.0150	.0475	57.84	21.29
Stddev %RSD	.0011 .2975	.017 .2371	.0013 1.771	.0002 7.702	.012 .1327	.0005 3.501	.0006 1.301	.19 .3311	.06 .2732
#1	.3703	6.944	.0735	.0026	9.092	.0146	.0479	57.97	21.33
#2	.3688	6.968	.0754	.0029	9.110	.0154	.0470	57.70	21.25
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg Stddev	170.6 .3	18.58	7.568 .041	1.255	.0901	.1527	0417	2.970	.5707 .0016
%RSD	.1695	.5947	.5449	.3650	.1328	.1813	.0020 4.817	.1560	.2832
#1	170.8	18.66	7.597	1.259	.0902	.1529	0431	2.973	.5696
#2	170.4	18.50	7.538	1.252	.0900	.1525	0403	2.966	.5719
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg Stddev	.1942	2.284	.1376	.0111					
%RSD	.3406	.3359	.2286	.4533					
#1	.1947	2.290	.1374	.0111					
#2	.1937	2.279	.1379	.0112					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg Stddev	157980. <b>591</b> .	28679. 72.	2526.9 1.1	5227.4 1.1					
%RSD	.37386	.25057	.04302	.02044					
#1	157560.	28628.	2526.1	5228.2					
#2	158390.	28730.	2527.7	5226.7					

84 of 151 ACCUTEST. JA50921 Laboratories

◀ Zoom In ▶ Zoom Out

	Inst QC	- 17	IA2466	1					47.
									▼ Zoom Zoom C
amnle N	ame: CCV	Acquire	d: 7/19/20	10 18:54:2	1 Type	· 0C			
	Accutest1(v1		de: CONC		Factor: 1.0				
ser: adm		tom ID1:		tom ID2:		om ID3:			
comment									
lem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
vg	2.001	2.058	1.999	2.017	2.015	1.980	2.056	1.997	.2459
tddev	.001	.005	.001	.000	.011	.005	.007	.002	
6RSD	.0393	.2303	.0289	.0080	.5482	.2473	.3193	.0800	.0802
1	2.002	2.061	2.000	2.017	2.022	1.977	2.061	1.996	.2460
2	2.000	2.055	1.999	2.017	2.007	1.984	2.052	1.998	.2457
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Range									
lem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
lvg Stddev	1.990	2.031	1.992	2.018	1.989	1.990	1.982	39.37	40.26
6RSD	.1029	.0629	.0508	.1714	.1852	.002	.0657	.02	
OKSD	.1027	.0027	.0300	.1714	.1032	.0730	.0037	.0470	.2407
1	1.991	2.030	1.992	2.015	1.987	1.989	1.982	39.38	
2	1.989	2.032	1.991	2.020	1.992	1.992	1.983	39.35	40.19
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue Range									
lem	Fe2599	Mq2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	K_/664 ppm	ppm	D_2089	ppm	ppm	512124 ppm	ppm
NVQ	40.24	39.60	39.06	39.43	2.001	2.005	1.978	4.976	2.030
Stddev	.09	.14	.06	.03	.001	.001	.002	.001	.003
6RSD	.2225	.3409	.1590	.0657	.0378	.0225	.1157	.0183	.1498
1	40.30	39.69	39.11	39.41	2.002	2.005	1.976	4.977	2.028
1									

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Jser: admi Comment:	n Custo	om ID1:	Cust	om ID2:	Custom ID3:
Elem Jnits Avg Stddev %RSD	Sr4077 ppm 2.053 .001 .0622	ppm 2.006 .005	1.953	ppm 1.963 .003	
#1 #2	2.052 2.054				
Check ? Value Range	Chk Pass C	Chk Pass	Chk Pass	Chk Pass	
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 152200. 70. .04568	Cts/S 27276. 96.	Cts/S 2460.9 1.6	Cts/S 5098.9 .8	
#1 #2	152150. 152250.			5099.5 5098.3	

Sample Name: CCV Acquired: 7/19/2010 18:54:21 Type: QC

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Check ?

Value Range

									Zoon
Sample Na	me: CCB	Acquire	d: 7/19/20	10 19:00:1	9 Type	: QC			
Method: Ad	ccutest1(v1	72) Mo	de: CONC	Corr.	Factor: 1.0	00000			
User: admi	n Cus	tom ID1:	Cus	tom ID2:	Cust	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286		Cu3247	Mn2576		
Jnits	ppm	ppm	ppm	ppm		ppm	ppm		
Avg	.0001	.0001	.0001	.0001	.0005	.0003	.0003		
Stddev	.0002	.0001	.0000	.0003		.0002	.0001	.000	
%RSD	139.2	67.41	41.86	238.2	10.33	77.23	21.78	454.9	81.31
<b>#1</b>	.0000	.0000	.0001	.0004	.0005	.0005	.0003	.0000	0002
#2	.0002	.0001	.0001	0001	.0006	.0001	.0002	0001	0001
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppn
Avq	.0003	.0001	.0014	.0007	0005	.0020	.0003	.0026	
Stddev	.0003	.0001	.0004	.0003	.0002	.0010	.0001	.0028	.0022
%RSD	116.4	132.1	26.69	50.03	46.69	50.88	35.61	105.9	66.97
#1	.0005	.0001	.0011	.0009	0003	.0013	.0002	.0007	.0018
#2	.0001	.0000	.0016	.0004	0007	.0027	.0004	.0046	.0049
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									
Elem	Fe2599	Mq2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppn
Avq	.0035	0013	0014	0420		.0020	.0008		
Stddev	.0015	.0110	.0018	.0036	.0006	.0004	.0008	.0004	.000
%RSD	43.44	825.2	125.8	8.538	35.71	20.19	104.1	22.08	49.09
¥1	.0024	.0064	0026	0446	.0021	.0023	.0014	.0019	.0000
#2	.0045	0091	0002	0395	.0013	.0017	.0002	.0014	
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
_ow Limit									

Sample Name: CCB Acquired: 7/19/2010 19:00:19 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Comment: Sr4077 Ti3349 W\_2079 Zr3391 Units ppm .0001 .0001 ppm .0005 .0002 ppm .0093 .0016 17.03 ppm .0007 .0000 %RSD 93.81 32.63 5.408 #1 #2 .0000 .0004 .0104 .0008 Check? Chk Pass Chk Pass Chk Pass High Limit Low Limit Y\_3600 Y\_3710 Y\_2243
Cts/S Cts/S Cts/S
156930. 27700. 2548.4
72. 205. 2.1
.04608 .73977 .08070 Int. Std. Units In2306 Cts/S 5444.6 Avg Stddev %RSD .02202 156980. 27555. 2547.0 5445.5 27845. 2549.9

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Ag3280

Ca3179

176.2 1.3

.7391

177 1

175.3

Sn1899 .0176 .0003

0173

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									■ Zoom I
									Zoom O
	me: JA515			19/2010 19		Type: Unk			
	cutest1(v1	,	de: CONC		actor: 1.00				
User: admi	n Cust	tom ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	5.953	.0335	.0966	.2443	1.295	6.747	4.510	1.355	.0271
Stddev	.008	.0000	.0004	.0001	.001	.019	.011	.003	.0006
%RSD	.1300	.1418	.4504	.0264	.0731	.2837	.2442	.2472	2.277
#1	5.958	.0335	.0963	.2443	1.296	6.734	4.517	1.353	.0275
#2	5.947	.0334	.0969	.2444	1.294	6.761	4.502	1.357	.0267
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.4918	26.93	.1403	.0061	12.92	.0170	.0834	73.36	42.01
Stddev %RSD	.0001	.02 .0750	.0003	.0005 7.730	.03 .2633	.0001 .7681	.0003 .3793	.04	.14 .3316
70K3D	.0305	.0750	.2322	7.730	.2033	./001	.3/93	.0610	.3310
#1	.4919	26.92	.1401	.0064	12.90	.0171	.0832	73.39	42.10
#2	.4917	26.95	.1406	.0058	12.95	.0169	.0837	73.32	41.91
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	271.7	26.13	8.921	2.139	.2118	.1567	0693	3.911	1.899
Stddev	3.6	.03	.006	.004	.0002	.0005	.0008	.023	.003
%RSD	1.334	.1069	.0657	.1617	.0852	.3304	1.114	.5789	.1706
#1	274.2	26.11	8.925	2.141	.2120	.1563	0688	3.927	1.897
#2	269.1	26.15	8.917	2.136	.2117	.1570	0699	3.895	1.901
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.3802	3.154	.3980	.0537					
Stddev %RSD	.0001	.002	.0010	.0002					
70K3D	.0136	.0678	.2510	.3770					
#1	.3802	3.153	.3987	.0538					
#2	.3801	3.156	.3973	.0535					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	156650.	28323.	2497.9	5153.7					
Stddev	6.	91.	2.9	12.2					
%RSD	.00360	.32165	.11492	.23713					
#1	156650.	28259.	2499.9	5162.3					
#2	156660.	28388.	2495.8	5145.0					

D . 1110	400=	40	

Sample Name: JA51512-7 Acquired: 7/19/2010 19:12:57 Type: Unk
Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

.0178

.0001

.7453

.0177 .0179

As1890

.0779

0780

.0778

K\_7664 84.22 .02

.0257

84 24

.5031 .0007

.1329

.5036

.5026

Y 2243

2642.7 2.1

08035

2641.2

Co2286

.2424

.0001

.0233

.2424 .2423

TI1908

-.0203 .0019

9.472

- 0190

-.0217

Na5895

21.31

.0291

21 30

7r3391

.5136

.0166

.5136

.5137

In2306

4629.6

.08226

4626.9

.01

Custom ID3:

Cu3247

.5944

.0014

.2375

.5934 .5954

Se1960

-.0372 .0044

- 0403

-.0342

Mo2020 .0607 .0003

0605

.0609

Mn2576

2.440

.003

2.443 2.438

.0203

0208

.0198

Pd3404

-.2428

- 2430

-.2425

Ni2316

.5396

.0010

.1799

.5389

.5403

Al3961

564.7 4.5

.7974

561.5

567.8

Si2124 1.148

.001

1.148

Cr2677

1.194 .002 .1241

1.195 1.193

Pb2203

.8646

.0636

8642

.8650

B\_2089

.4825 .0006

4821

.4830

.0439

.0001

.2755

.0438 .0439

Zn2062

36.97

.0443

36.98

36.96

.00

.0071

33.88

22.15

.0858

22.13

22.16

Y\_3710

31584. 98.

.31176

31514.

31653.

Ti3349 W\_2079

Mg2790 33.88

Ba4554 Be3130

9.421 .237 2.513

9.589

9.254

V\_2924

.9395 .0018

9407

.9382

Fe2599

620.8

.0207

620.8

620.9

Sr4077

5.836

1.471

5.896

5.775

Y 3600

166200. 92.

166260.

166130.

.05565

Comment: Elem

%RSD

#1 #2

#1

Elem

Avg Stddev

%RSD

Flem

Avg Stddev %RSD

Int. Std.

%RSD

#2

Elem

Avg Stddev

		.  5-							4- 1	_
									◀ Zoom II Zoom O	
Sample N	ame: JA515	12-8 A	cauired: 7/	19/2010 19	:19:30	Type: Unk				
	ccutest1(v1		de: CONC		actor: 1.00	٥.				
User: adm		tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment										
COMMISSION										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280	
Avg	1.310	.0077	.0213	.0666	.5423	2.252	6.517	.6555	.0084	
Stddev	.003	.0000	.0001	.0002	.0022	.002	.011	.0016	.0008	
%RSD	.2424	.2000	.4376	.2730	.3970	.0759	.1709	.2515	9.620	
#1	1.308	.0077	.0212	.0667	.5408	2.253	6.510	.6544	.0090	
#2	1.312	.0077	.0212	.0665	.5439	2.250	6.525	.6567	.0078	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.1428	8.755	.0584	.0023	4.034	.0024	.0392	45.25	26.26	
Stddev %RSD	.0002 .1054	.016 .1828	.0016 2.656	.0009 39.58	.006 .1583	.0010 43.40	.0001 .2417	.00 .0078	.21 .7959	
/0K3D	.1034	.1020	2.030	39.30	.1303	43.40	.2417	.0076	.1737	
#1	.1427	8.744	.0573	.0017	4.030	.0031	.0391	45.26	26.41	
#2	.1429	8.766	.0595	.0029	4.039	.0016	.0392	45.25	26.11	
Elem	Fe2599	Mq2790	K_7664	Na5895	B 2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	220.1	14.93	4.246	1.710	.1249	.0423	0567	1.965	.4421	
Stddev	2.7	.17	.007	.001	.0003	.0002	.0008	.010	.0004	
%RSD	1.219	1.133	.1702	.0577	.2487	.5512	1.451	.5243	.1003	
#1	222.0	15.05	4.241	1.710	1047	0421	0572	1.072	4410	
#1	218.2	15.05 14.81	4.241	1.710	.1247 .1252	.0421 .0424	0573 0561	1.972 1.958	.4418 .4424	
""	210.2	14.01	4.232	1.707	.1232	.0424	.0501	1.750	.4424	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.2343	1.777	.1082	.0525						
Stddev	.0007	.001	.0003	.0004						
%RSD	.3029	.0261	.3062	.7388						
#1	.2338	1.776	.1084	.0528						
#2	.2348	1.777	.1079	.0523						
Int. Std.	Y_3600	Y 3710	Y_2243	In2306						
Avq	157480.	28267.	2515.1	5271.0						
Stddev	85.	292.	2.4	.7						
%RSD	.05370	1.0340	.09513	.01304						
114	157540	200/1	0510.5	F070 F						
#1 #2	157540. 157420.	28061. 28474.	2513.5 2516.8	5270.5 5271.4						
π_2	13/420.	20474.	2310.0	JZ/1.4						

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Sample Nan			cquired: 7/			Type: Unk			
Method: Acc	•		de: CONC		actor: 1.00				
Jser: admin	Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avg	.5007	.0007	.0071	.0173	.0958	.1817	.5291	.2412	.0031
Stďdev	.0004	.0000	.0001	.0000	.0000	.0004	.0007	.0002	.0004
%RSD	.0753	1.128	1.430	.1436	.0215	.2404	.1356	.0827	12.13
#1	.5009	.0007	.0072	.0173	.0957	.1820	.5296	.2411	.0028
#2	.5004	.0007	.0071	.0173	.0958	.1813	.5286	.2414	.0033
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0380	2.342	.0256	.0011	.6733	.0031	.0042	20.32	7.003
Stddev	.0000	.002	.0006	.0000	.0007	.0000	.0000	.01	.023
%RSD	.0343	.0998	2.152	1.206	.0981	.4501	.3431	.0459	.3281
#1	.0380	2.343	.0252	.0011	.6738	.0031	.0043	20.32	7.020
#2	.0380	2.340	.0260	.0011	.6729	.0031	.0042	20.31	6.987
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	82.82	3.311	1.028	.6767	.0432	.0219	0212	3.176	.0401
Stďdev	.14	.010	.008	.0054	.0003	.0002	.0005	.004	.0002
%RSD	.1658	.2906	.7828	.8035	.7049	.9529	2.451	.1432	.3844
#1	82.92	3.304	1.034	.6805	.0430	.0217	0215	3.172	.0400
#2	82.73	3.317	1.023	.6729	.0434	.0220	0208	3.179	.0402
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0719	.8232	.0320	.0250					
Stddev	.0001	.0038	.0003	.0002					
%RSD	.1604	.4636	.7945	.9600					
#1	.0719	.8259	.0318	.0252					
#2	.0720	.8205	.0322	.0248					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	158060.	28187.	2548.0	5377.7					
Stddev	311.	102.	3.5	2.3					
%RSD	.19677	.36274	.13800	.04253					
	157040	28115.	2550.5	5379.3					
#1 #2	157840. 158280.	28259.	2545.5	5376.0					

86 of 151 ACCUTEST. JA50921 Laboratories

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									Zoom (	D
Comple N	ame: JA515	12.10	A consistent 7	/10/2010 1	0.21.47	Tumo. Um	.le			
	ccutest1(v17		Acquired: 7 de: CONC		9.31.40 actor: 1.00	Type: Un	IK.			
		72) IVIO tom ID1:								
User: adm		tom IDT:	Cusi	om ID2:	Custo	om ID3:				
Comment										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.2415	.0009	.0008	.0045	.0374	.8456	.4150	.0484	.0032	
Stddev	.0003	.0000	.0001	.0001	.0002	.0019	.0012	.0003	.0001	
%RSD	.1272	2.281	11.65	2.796	.5877	.2282	.2777	.5239	1.659	
#1	.2413	.0009	.0008	.0046	.0372	.8442	.4158	.0482	.0033	
#2	.2417	.0009	.0009	.0044	.0375	.8469	.4142	.0486	.0032	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0207	.7660	.0177	.0011	.2878	0003	.0031	16.76	8.717	
Stddev	.0001	.0020	.0001	.0008	.0010	.0001	.0007	.01	.048	
%RSD	.4463	.2649	.4291	66.14	.3398	45.52	23.50	.0331	.5498	
#1	.0207	.7645	.0177	.0017	.2871	0002	.0026	16.76	8.751	
#2	.0206	.7674	.0176	.0006	.2885	0004	.0036	16.76	8.683	
Elem	Fe2599		K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	76.49	3.941	1.041	.9310	.0420	.0095	0214	3.236	.0452	
Stddev	.17	.040	.012	.0013	.0005	.0004	.0005	.005	.0000	
%RSD	.2253	1.022	1.118	.1444	1.141	3.908	2.240	.1416	.0747	
#1	76.62	3.969	1.049	.9300	.0424	.0097	0210	3.239	.0451	
#2	76.37	3.912	1.033	.9319	.0417	.0092	0217	3.233	.0452	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0690	1.104	.0168	.0387						
Stddev	.0002	.000	.0003	.0000						
%RSD	.3039	.0257	1.751	.0630						
#1	.0689	1.103	.0166	.0387						
#2	.0692	1.104	.0170	.0387						
Int. Std.	Y_3600		Y_2243	In2306						
Avg	159050.	28345.	2565.4	5380.2						
Stddev	214.	202.	1.5	5.7						
%RSD	.13462	.71345	.05823	.10648						
#1	158890.	28202.	2566.4	5384.2						
#2	159200.	28488.	2564.3	5376.1						

	me: JA515 cutest1(v1) n Cus		de: CONC		actor: 1.00	٠.	k		
Elem Avg Stddev %RSD	Ba4554 4.955 .060 1.204	Be3130 .0019 .0000 .8836	Cd2288 .0188 .0000 .1836	Co2286 .0274 .0002 .8850	Cr2677 .6887 .0010 .1502	Cu3247 1.053 .001 .1311	Mn2576 1.203 .001 .0925	Ni2316 .3582 .0013 .3585	Ag3280 .0208 .0000 .0724
#1 #2	4.913 4.997	.0019 .0019	.0188 .0187	.0273 .0276	.6879 .6894			.3573 .3591	.0208 .0208
Elem Avg Stddev %RSD	V_2924 .1283 .0001 .0680	Zn2062 2.544 .000 .0137	As1890 .0592 .0000 .0244	TI1908 .0015 .0006 36.53	Pb2203 2.907 .002 .0793	Se1960 .0076 .0007 9.340	Sb2068 .0154 .0009 5.554	Al3961 39.59 .02 .0629	Ca3179 70.57 .08 .1089
#1 #2	.1283 .1284	2.544 2.544	.0592 .0592	.0011 .0019	2.905 2.908	.0081 .0071	.0148 .0160	39.58 39.61	70.63 70.52
Elem Avg Stddev %RSD	Fe2599 100.6 .1 .0586	Mg2790 16.89 .01 .0679	K_7664 4.034 .021 .5217	Na5895 1.065 .004 .3949	B_2089 .0523 .0003 .6340	Mo2020 .0223 .0001 .5866	0350 .0006	Si2124 2.039 .004 .1930	Sn1899 .2203 .0002 .1120
#1 #2	100.6 100.5	16.90 16.89	4.049 4.019	1.062 1.068	.0521 .0525	.0222 .0224	0345 0354	2.036 2.042	.2201 .2205
Elem Avg Stddev %RSD	Sr4077 .3953 .0004 .1098	Ti3349 1.052 .001 .1326	W_2079 .0530 .0001 .2632	Zr3391 .0445 .0000 .0244					
#1 #2	.3950 .3956	1.051 1.052	.0529 .0531	.0445 .0445					
Int. Std. Avg Stddev %RSD	Y_3600 158230. 204. .12881	Y_3710 28410. 6. .02212		In2306 5221.0 17.4 .33357					
#1 #2	158370. 158080.	28406. 28415.	2533.2 2521.0	5233.3 5208.7					

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									Zoom O
Sample Nan	ne: JA515	12-12	Acquired: 7	/19/2010 1	9:44:00	Type: Un	k		
Method: Acc	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admin Comment:	Cusi	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem Avg Stddev %RSD	Ba4554 2.013 .001 .0612	Be3130 .0237 .0000 .0739	Cd2288 .0101 .0000 .3865	Co2286 .1095 .0003 .2441	Cr2677 .6119 .0012 .2012	Cu3247 7.217 .059 .8249	Mn2576 2.366 .003 .1347	Ni2316 .9101 .0011 .1176	Ag3280 .0047 .0007 15.56
#1 #2	2.014 2.013	.0237 .0237	.0101 .0102	.1093 .1097	.6128 .6110	7.259 7.174	2.369 2.364	.9094 .9109	.0052 .0042
Elem Avg Stddev %RSD	V_2924 .2827 .0001 .0273	Zn2062 7.742 .009 .1177	As1890 .0464 .0006 1.324	TI1908 .0031 .0000 .8716	Pb2203 3.764 .001 .0171	Se1960 .0039 .0009 22.25	Sb2068 .0162 .0000 .1458	Al3961 68.43 .01 .0168	Ca3179 84.56 .03 .0299
#1 #2	.2827 .2826	7.736 7.749	.0468 .0460	.0031 .0031	3.763 3.764	.0045 .0033	.0162 .0162	68.42 68.44	84.54 84.58
Elem Avg Stddev %RSD	Fe2599 193.1 1.2 .6256	Mg2790 33.76 .01 .0150	K_7664 7.496 .018 .2404	Na5895 4.255 .009 .2068	B_2089 .3838 .0003 .0790	Mo2020 .0371 .0001 .2984	Pd3404 0604 .0002 .4135	Si2124 3.401 .026 .7627	Sn1899 .5344 .0009 .1759
#1 #2	194.0 192.2	33.76 33.76	7.509 7.483	4.261 4.249	.3836 .3840	.0370 .0372	0602 0605	3.419 3.383	.5351 .5337
Elem Avg Stddev %RSD	Sr4077 .4405 .0002 .0405	Ti3349 5.187 .003 .0630	W_2079 .1156 .0002 .2070	Zr3391 .1004 .0001 .1451					
#1 #2	.4404 .4406	5.189 5.185	.1155 .1158	.1005 .1003					
Int. Std. Avg Stddev %RSD	Y_3600 158710. 26. .01613	Y_3710 28728. 5. .01767	Y_2243 2532.5 .3 .01135	In2306 5102.9 1.7 .03289					
#1 #2	158690. 158730.	28732. 28725.	2532.7 2532.3	5104.1 5101.7					

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									Zoom Ou
Sample Na	ame: JA515	12-13	Acquired: 7	/19/2010 1	9:50:12	Type: Ur	ık		
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	in Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg Stddev	.4797	.0008	.0045	.0249	.1493	1.618	1.886	.3187	.0072
%RSD	.1063	1.972	3.893	.0287	.0765	.2526	.0954	.1582	2.430
<sup>#</sup> 1	.4800	.0007	.0044	.0249	.1492	1.615	1.888	.3183	.0073
#2	.4793	.0008	.0046	.0249	.1494	1.620	1.885	.3190	.0071
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg Stddev	.0493	1.309	.0389	.0014	1.432	.0026	.0166 .0011	19.98 .02	14.71 .07
%RSD	.0050	.1084	1.433	51.41	.1669	.8644	6.428	.1054	.4643
¥1	.0493	1.308	.0393	.0019	1.430	.0027	.0174	20.00	14.75
<sup>‡</sup> 2	.0493	1.310	.0385	.0009	1.433	.0026	.0159	19.97	14.66
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg Stddev	164.3 .5	3.133	1.355	5.929	.0583	.0221	0397 .0008	2.235	.1363
%RSD	.3324	.0318	.4807	.0392	.3929	.4333	1.934	.1146	.3052
#1	164.7	3.134	1.350	5.927	.0584	.0220	0403	2.233	.1360
#2	163.9	3.133	1.360	5.930	.0581	.0221	0392	2.236	.1366
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg Stddev	.0878	.6860	.0342	.0227					
%RSD	.0166	.1282	2.352	.2499					
#1	.0878	.6866	.0337	.0227					
#2	.0878	.6853	.0348	.0228					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg Stddev	157130. 29.	28194. 115.	2528.5 1.9	5347.4 6.0					
%RSD	.01834	.40918	.07572	.11161					
#1	157110.	28112.	2529.9	5351.6					
#2	157150.	28276.	2527.2	5343.1					

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Sample Nar	no: IA51E	12.14	\cauirod: 7	/19/2010 1	0.56.22	Type: Un	ν		
						٥.	K		
Method: Acc		,	de: CONC		actor: 1.00				
User: admin	Cust	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	1.540	.0259	.0081	.0967	.5033	1.742	2.405	.6121	.0020
Stddev	.003	.0001	.0000	.0002	.0013	.002	.003	.0003	.0001
%RSD	.2153	.3435	.5364	.1943	.2501	.0952	.1309	.0554	3.312
#1	1.542	.0259	.0081	.0966	.5041	1.741	2.407	.6123	.0020
#2	1.538	.0258	.0081	.0969	.5024	1.744	2.403	.6118	.0019
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avq	.1581	7.950	.0459	.0022	3.333	.0029	.0382	59.11	24.61
Stďdev	.0002	.005	.0003	.0013	.004	.0016	.0003	.05	.07
%RSD	.1175	.0690	.7315	58.09	.1252	55.28	.8012	.0850	.3033
#1	.1582	7.954	.0461	.0031	3.336	.0018	.0384	59.15	24.66
#2	.1580	7.946	.0457	.0013	3.330	.0040	.0380	59.08	24.55
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	155.6	12.94	6.755	1.776	.1515	.0401	0438	3.295	.3968
Stddev	.2	.07	.002	.008	.0010	.0005	.0002	.002	.0008
%RSD	.1311	.5623	.0290	.4421	.6422	1.343	.3665	.0704	.1949
#1	155.4	12.99	6.756	1.782	.1508	.0398	0437	3.297	.3963
#2	155.7	12.89	6.753	1.771	.1522	.0405	0439	3.293	.3973
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avq	.1941	1.934	.0957	.0713					
Stďdev	.0000	.001	.0005	.0001					
%RSD	.0046	.0340	.4953	.0893					
#1	.1941	1.933	.0961	.0713					
#2	.1941	1.934	.0954	.0712					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	158860.	28633.	2560.8	5262.4					
Stddev	126.	65.	5.1	3.3					
%RSD	.07960	.22682	.19962	.06224					
#1	158770.	28587.	2564.5	5264.7					
#2	158950.	28679.	2557.2	5260.0					
-	.50750.	20077.	2001.2	3200.0					

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									◀ Zoom In I
									Zoom Out
	ame: CCV		ed: 7/19/20 ode: CONC	10 20:08:4 Corr.	6 Type				
User: adm Comment		stom ID1:	Cus	tom ID2:	Cust	tom ID3:			
Elem Units Avg Stddev %RSD	Ba4554 ppm 1.994 .001 .0250	Be3130 ppm 2.059 .002 .0854	ppm 1.992 .000	ppm 2.010	ppm 2.021 .004	ppm 1.981 .000	ppm 2.066 .003	ppm	ppm .2467 .0006
#1 #2	1.994 1.994	2.061 2.058	1.992 1.992	2.009 2.011	2.024 2.019		2.068 2.064	2.012 2.014	
Check? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm 1.998 .001 .0437	Zn2062 ppm 2.029 .001 .0277	ppm 1.980 .002		ppm 1.999 .001	ppm 1.980 .004	ppm 1.980 .002		40.19
#1 #2	1.999 1.998	2.029 2.029		2.036 2.040			1.981 1.979	39.39 39.39	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm 40.23 .06 .1556	Mg2790 ppm 39.78 .09 .2243	ppm 39.09 .02	Na5895 ppm 39.55 .03 .0743	ppm 2.001 .002	ppm 2.004 .004	ppm 1.991 .005	Si2124 ppm 4.975 .005 .1044	ppm 2.024 .002
#1 #2	40.28 40.19	39.84 39.72		39.57 39.53			1.987 1.994	4.971 4.979	2.025 2.022
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Sample Nar Method: Ac User: admir Comment:	cutest1(v1		Acquired: 7. de: CONC Custo		actor: 1.00	Type: Un 00000 om ID3:	k		
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	9.223	.0024	.0126	.0371	.1451	.3398	1.715	.1163	.0021
Stddev	.058	.0000	.0001	.0000	.0004	.0005	.000	.0002	.0000
%RSD	.6247	.4485	.8487	.0997	.2644	.1365	.0236	.1801	2.062
#1	9.264	.0024	.0125	.0371	.1454	.3395	1.716	.1162	.0020
#2	9.182	.0024	.0126	.0371	.1448	.3402	1.715	.1165	.0021
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.1828	8.159	.0775	.0028	10.75	.0059	.0052	53.08	269.2
Stddev	.0002	.019	.0004	.0002	.00	.0003	.0001	.03	1.3
%RSD	.0930	.2296	.5014	6.631	.0092	4.743	2.350	.0489	.5011
#1	.1829	8.172	.0778	.0029	10.75	.0061	.0051	53.06	268.3
#2	.1827	8.146	.0772	.0026	10.75	.0057	.0053	53.10	270.2
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	97.35	20.47	7.666	1.489	.0501	0040	0326	1.973	.0602
Stddev	.18	.08	.028	.004	.0006	.0004	.0002	.002	.0000
%RSD	.1822	.3729	.3687	.2499	1.170	9.763	.5406	.0842	.0278
#1	97.23	20.42	7.646	1.487	.0497	0043	0325	1.974	.0602
#2	97.48	20.52	7.686	1.492	.0505	0038	0328	1.972	.0602
Elem Avg Stddev %RSD	Sr4077 .8600 .0006 .0716	Ti3349 1.631 .001 .0291	W_2079 .0975 .0002 .1569	Zr3391 .0341 .0001 .2880					
#1 #2	.8596 .8605	1.632 1.631	.0974 .0976	.0341 .0342					
Int. Std. Avg Stddev %RSD	Y_3600 153600. 79. .05153	Y_3710 27998. 12. .04363	Y_2243 2454.0 3.8 .15507	In2306 4982.9 8.6 .17173					
#1 #2	153650. 153540.	28006. 27989.	2456.7 2451.3	4988.9 4976.8					

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4	Zoom	ln ▶			
Zoom Out					

					Type: QC
					ctor: 1.000000
User: adm		om ID1:	Custo	om ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	
Units	ppm	ppm	ppm	ppm	
Avg	2.063				
Stddev %RSD	.004		.009 .4615	.001 .0595	
/0K3D	.1040	.0039	.4015	.0393	
#1	2.061				
#2	2.066	2.013	1.954	1.964	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass(	Chk Pass	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306	
Units	Cts/S			Cts/S	
Avg	152820.				
Stddev %RSD	238. .15578	80. .29365	2.0 .08116		
#1	152650.				
#2	152980.	27352.	2483.5	5117.0	

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◀ Zoom In ▶

	1131 40		AZ-100						<b>▼</b> Zoom In ▶
									Zoom Out
Sample Na	me: CCB	Acquire	d: 7/19/201	0 20:14:45	Type:	QC			
Method: Ad	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	0000			
User: admi	n Cus	tom ID1:	Custo	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0004	.0003	.0002	.0005	.0004	.0005	.0001	.0000
Stddev	.0000	.0000	.0001	.0000	.0000	.0000	.0000	.0000	.000
%RSD	5.439	6.796	39.33	.8526	5.460	.8164	.0845	24.23	67.41
#1	.0004	.0004	.0004	.0002	.0005	.0004	.0005	.0001	.0000
#2	.0004	.0004	.0002	.0002	.0005	.0004	.0005	.0001	0001
Check ? High Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Low Limit									
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0003	.0008	.0008	.0002	.0017	.0011	.0065	.0138
Stddev	.0001	.0000	.0001	.0010	.0000	.0008	.0002	.0013	.0001
%RSD	14.52	12.71	9.278	123.8	5.268	43.45	17.79	19.83	.8809
#1	.0006	.0003	.0009	.0015	.0002	.0023	.0012	.0074	.0139
#2	.0005	.0002	.0008	.0001	.0001	.0012	.0010	.0056	.0137
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev	Fe2599 ppm .0111 .0012	Mg2790 ppm .0044 .0047	.0040 .0112	Na5895 ppm 0393 .0063	B_2089 ppm .0017 .0004	F .0021 .0003	Pd3404 ppm 0002 .0001	Si2124 ppm .0024 .0002	Sn1899 ppm .0003 .0004
%RSD	10.41	106.6	280.7	16.05	23.14	12.78	53.84	8.992	137.1

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.0119

High Limit Low Limit

.0077

.0011

.0119

-.0039

-.0348

-.0437

Check? Chk Pass 
.0020

.0014

.0023

.0019

.0021

-.0003

-.0001

.0026

.0023

.0000

.0006

									◀ Zoom In
									Zoom Out
Sample Na	ame: JA515	12-16	Acquired: 7.	/19/2010 2	0:20:59	Type: Un	k		
Method: A	ccutest1(v17	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	in Cust	tom ID1:	Custo	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	9.895	.0035	.0395	.1501	26.47	2.445	3.949	3.536	.0101
Stddev	.131	.0000	.0001	.0000	.04	.003	.019	.009	.0001
%RSD	1.323	.7454	.1420	.0207	.1383	.1338	.4855	.2395	.5757
#1	9.987	.0035	.0395	.1501	26.49	2.443	3.935	3.530	.0101
#2	9.802	.0034	.0395	.1500	26.44	2.448	3.962	3.542	.0102
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.3395	7.817	.1422	0033	10.32	0060	.1048	70.58	98.76
Stddev	.0005	.014	.0004	.0001	.02	.0017	.0002	.03	.33
%RSD	.1379	.1833	.2931	2.894	.2044	29.07	.1577	.0469	.3301
#1	.3391	7.807	.1419	0032	10.30	0072	.1047	70.61	98.53
#2	.3398	7.827	.1425	0033	10.33	0047	.1049	70.56	98.99
El	E-0500	14-0700	1/ 7//4	N-5005	D 2000	14-2020	D-12404	CIDADA	C-1000
Elem Avg	Fe2599 403.6	Mg2790 23.08	K_7664 10.16	Na5895 1.557	B_2089 .1004	Mo2020 .4475	Pd3404 1236	Si2124 2.982	Sn1899 .6784
Stddev	.5	.01	.00	.003	.0012	.0008	.0002	.011	.0003
%RSD	.1324	.0555	.0180	.1588	1.227	.1837	.1463	.3561	.0482
701100		.0000	.0100			.1007		.0001	.0.102
#1	403.3	23.07	10.16	1.559	.0996	.4481	1235	2.989	.6782
#2	404.0	23.09	10.16	1.556	.1013	.4469	1238	2.974	.6787
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avq	.8181	2.548	.2196	.0355					
Stddev	.0005	.002	.0023	.0001					
%RSD	.0577	.0611	1.028	.3263					
	0405	0.543	0040	005/					
#1 #2	.8185 .8178	2.547 2.549	.2212 .2180	.0356 .0354					
#2	.0170	2.549	.2180	.0354					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	154970.	28242.	2379.5	5068.3					
Stddev	121.	116.	4.1	.2					
%RSD	.07793	.41101	.17086	.00375					
#1	155060.	28324.	2376.7	5068.2					
#2	154890.	28160.	2382.4	5068.4					
	154070.	20100.	2502.4	3000.4					

Elem	Sr4077	Ti3349	W_2079	Zr3391
Units	ppm	ppm	ppm	ppm
Avg	.0004	.0005	.0094	.0009
Stddev	.0000	.0005	.0015	.0000
%RSD	9.294	93.28	16.01	2.781
#1	.0004	.0002	.0105	.0009
#2	.0005	.0008	.0083	.0009
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Int. Std.	Y_3600	Y_3710	Y_2243	Cts/S
Units	Cts/S	Cts/S	Cts/S	
Avg	157500.	27702.	2564.6	
Stddev	444.	39.	.4	
%RSD	.28201	.14172	.01562	
#1	157180.	27675.	2564.8	5464.4
#2	157810.	27730.	2564.3	5465.6

Sample Name: CCB Acquired: 7/19/2010 20:14:45 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3:

Comment:

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									Zoom C
	me: JA515		Acquired: 7			Type: Un	k		
	ccutest1(v1	,	de: CONC		actor: 1.00				
User: admi Comment:		tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem Avg Stddev	Ba4554 .5836 .0051	Be3130 .0031 .0000	Cd2288 .0055 .0001	Co2286 .0516 .0002	Cr2677 .1746 .0007	Cu3247 .5880 .0008	Mn2576 2.574 .002	Ni2316 .2171 .0005	Ag3280 .0008 .0003
%RSD	.8804	.1177	.9771	.3366	.3732	.1443	.0580	.2389	32.34
#1	.5800	.0031	.0054	.0517	.1751	.5874	2.575	.2167	.0006
#2	.5872	.0031	.0055	.0515	.1741	.5886	2.573	.2174	.0010
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg Stddev	.1516	2.246	.0748	.0023	.6105 .0026	.0031	.0085	52.89 .55	28.46 .31
%RSD	.0775	.0094	.2450	35.43	.4272	38.08	13.90	1.040	1.097
#1	.1516	2.246	.0746	.0017	.6087	.0023	.0093	52.50	28.24
#2	.1517	2.246	.0749	.0029	.6124	.0040	.0076	53.28	28.68
Elem	Fe2599	Mg2790 21.74	K_7664	Na5895 1.217	B_2089		Pd3404	Si2124 2,227	Sn1899
Avg Stddev	144.5 1.8	.26	10.29	.011	.0775	.0190	0401 .0007	.004	.0771
%RSD	1.256	1.203	.8405	.8595	.0792	1.021	1.639	.1975	.8103
#1	143.3	21.55	10.22	1.210	.0775	.0192	0406	2.230	.0766
#2	145.8	21.92	10.35	1.225	.0775	.0189	0397	2.224	.0775
Elem Ava	Sr4077 .1542	Ti3349 1.831	W_2079 .0402	Zr3391 .0578					
Stddev	.0015	.001	.0005	.0001					
%RSD	.9478	.0788	1.350	.2425					
#1	.1532	1.832	.0399	.0577					
#2	.1553	1.830	.0406	.0579					
Int. Std. Avg	Y_3600 160750.	Y_3710 28821.	Y_2243 2596.1	In2306 5267.6					
Stddev	213.	276.	4.7	5.2					
%RSD	.13271	.95715	.18105	.09901					
#1	160900.	29016.	2592.8	5271.3					
#2	160600.	28625.	2599.4	5263.9					

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◀ Zoom In ▶ Zoom Out

									■ Zoom I	n J
									Zoom O	ut
Sample Nam			Acquired: 7			Type: Un	k			
Method: Acc			de: CONC		actor: 1.00					
User: admin Comment:	Cusi	tom ID1:	Cusi	om ID2:	Cusio	om ID3:				
Elem Avg Stddev %RSD	Ba4554 3.604 .003 .0852	Be3130 .0078 .0001 .7078	Cd2288 .0326 .0001 .2132	Co2286 .1502 .0001 .0721	Cr2677 .7108 .0014 .2002	Cu3247 3.238 .008 .2551	Mn2576 3.238 .011 .3382	Ni2316 .9333 .0007 .0784	Ag3280 .0167 .0001 .5198	
#1 #2	3.602 3.607	.0078 .0079	.0325 .0326	.1503 .1501	.7098 .7118	3.232 3.243	3.230 3.245	.9328 .9338	.0168 .0167	
Elem Avg Stddev %RSD	V_2924 .3076 .0002 .0587	Zn2062 13.68 .01 .0627	As1890 .1003 .0007 .7467	TI1908 .0012 .0006 53.74	Pb2203 6.864 .004 .0547	Se1960 .0015 .0011 72.20	Sb2068 .0451 .0016 3.521	Al3961 92.03 .01 .0124	Ca3179 74.21 .28 .3730	
#1 #2	.3075 .3078	13.68 13.69	.1008 .0998	.0007 .0016	6.861 6.866	.0007 .0023	.0440 .0462	92.04 92.02	74.01 74.41	
Elem Avg Stddev %RSD	Fe2599 328.5 .5 .1470	Mg2790 26.32 .03 .1324	K_7664 11.73 .03 .2198	Na5895 3.503 .002 .0622	B_2089 .1289 .0003 .2365	Mo2020 .0731 .0001 .1084	Pd3404 0908 .0007 .7383	Si2124 3.090 .020 .6339	Sn1899 .4964 .0009 .1831	
#1 #2	328.2 328.8	26.30 26.35	11.75 11.71	3.504 3.501	.1287 .1291	.0731 .0732	0913 0903	3.104 3.076	.4958 .4970	
Elem Avg Stddev %RSD	Sr4077 .7209 .0013 .1811	Ti3349 3.870 .003 .0698	W_2079 .2088 .0001 .0718	Zr3391 .0886 .0001 .1021						
#1 #2	.7218 .7200	3.868 3.872	.2087 .2089	.0886 .0885						
Int. Std. Avg Stddev %RSD	Y_3600 157310. 228. .14502	Y_3710 28645. 120. .41992	Y_2243 2513.1 .5 .02186	In2306 5110.8 3.2 .06231						
#1 #2	157470. 157150.	28731. 28560.	2513.5 2512.7	5113.1 5108.6						

5	Sample Nan	ne: JA515	12-19	Acquired: 7	/19/2010 2	0:39:45	Type: Un	k		
1	Method: Acc	utest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
l	Jser: admin	Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
(	Comment:									
	Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
1	Avg	10.42	.0460	.0210	.2478	1.275	1.352		.6271	
	Stddev	.28		.0001		.003		.006	.0001	
9	%RSD	2.726	.3147	.4083	.1751	.2350	.0979	.2052	.0218	
	<b></b> 1	10.22	.0459	.0211		1.273	1.353	2.906		
ŧ	‡2	10.62	.0461	.0209	.2482	1.277	1.351	2.897	.6272	
		V_2924	Zn2062			Pb2203		Sb2068	Al3961	
	Avg			.0898			0359			
	Stddev	.001	.04		.0015	.003	.0008		.7	.4
,	%RSD	.0840	.0770	.5690			2.291	2.450	.1108	.2127
#	¥1	1.007	45.77	.0902 .0895	0279 0258	1.069	0353	.0204 .0211	599.1	187.3
#	<b>#</b> 2	1.009	45.72	.0895	0258	1.073	0365	.0211	600.1	187.8
E	Elem	Fe2599	Mg2790		Na5895			Pd3404		Sn1899
	Avg	656.5	35.25			.5353		2647		.0359
	Stddev	4.0	.22 .6160	.21	.02	.0002	.0001	.0001 .0237	.004	
9	%RSD	.6131	.6160	.21 .2444	.1038	.0306	.1091	.0237	.1625	4.143
	<b>#1</b>	653.6		84.91		.5351	.0626	2647	2.154	
#	<sup>‡</sup> 2	659.3	35.41	85.20	23.67	.5354	.0627	2648	2.149	.0370
E	Elem			W_2079						
	Avg	6.185	24.35		.5268					
	Stddev	.061	.03		.0012					
9	%RSD	.9798	.1264	.1329	.2308					
	<b>#1</b>	6.142	24.33	.6253						
#	<sup>‡</sup> 2	6.228	24.37	.6265	.5277					
				Y_2243						
	Avg		31721.							
	Stddev	365.	170.							
,	%RSD	.21935	.53549	.13007	.08554					
	¥1	166830.	31841.							
#	<b>#</b> 2	166310.	31601.	2661.2	4609.0					

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									Zoom (	Dι
Sample Na				ed: 7/19/20		٠.	e: Unk			
Method: Ac		,	de: CONC		actor: 1.00					
User: admir Comment:	n Cusi	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Elem Avg Stddev %RSD	Ba4554 .0066 .0003 4.123	Be3130 .0000 .000 12.02	Cd2288 .0001 .0000 3.517	Co2286 .0000 .000 24620.	Cr2677 .0005 .0001 14.72	Cu3247 .0003 .0000 3.719	Mn2576 .0003 .0000 4.701	Ni2316 .0002 .0003 129.1	Ag3280 .0001 .0002 126.8	
#1 #2	.0068 .0065	.0000	.0001 .0001	0001 .0001	.0005 .0004	.0003	.0003 .0004	.0000	.0000	
Elem Avg Stddev %RSD	V_2924 .0000 .0001 514.2	Zn2062 .0030 .0002 7.731	As1890 0002 .0002 105.9	TI1908 .0011 .0008 73.70	Pb2203 0001 .0004 518.7	Se1960 .0009 .0001 8.995	Sb2068 0002 .0004 259.2	Al3961 .0365 .0136 37.24	Ca3179 .0273 .0018 6.620	
#1 #2	0001 .0001	.0032 .0029	0001 0004	.0016 .0005	.0002 0004	.0008	0005 .0001	.0461 .0269	.0286 .0261	
Elem Avg Stddev %RSD	Fe2599 .0457 .0052 11.36	Mg2790 .0082 .0008 10.06	K_7664 .0449 .0078 17.31	Na5895 0562 .0008 1.454	B_2089 .0008 .0001 14.51	Mo2020 .0003 .0000 3.897	Pd3404 .0004 .0001 17.97	Si2124 .0527 .0007 1.248	Sn1899 0004 .0004 87.66	
#1 #2	.0493 .0420	.0076 .0088	.0504 .0394	0568 0556	.0007	.0003	.0004 .0005	.0522 .0532	0007 0002	
Elem Avg Stddev %RSD	Sr4077 .0004 .0000 2.881	Ti3349 .0012 .0002 15.40	W_2079 0022 .0001 3.699	Zr3391 .0013 .0000 1.752						
#1 #2	.0004 .0004	.0011 .0014	0022 0023	.0013 .0013						
Int. Std. Avg Stddev %RSD	Y_3600 158140. 117. .07412	Y_3710 27869. 154. .55096	Y_2243 2579.4 4.1 .15740	In2306 5500.9 2.3 .04268						
#1 #2	158060. 158230.	27978. 27761.	2582.3 2576.5	5502.6 5499.3						

Sample Name: MP53734-LC1											
Method: Acci	•	,	de: CONC		actor: 1.00						
User: admin Comment:	Cust	om ID1:	Custo	om ID2:	Custo	m ID3:					
Elem Avg Stddev %RSD	Ba4554 .5033 .0011 .2123	Be3130 .5349 .0000 .0023	Cd2288 .5077 .0001 .0277	Co2286 .5235 .0002 .0413	Cr2677 .5234 .0006 .1146	Cu3247 .4928 .0000 .0081	Mn2576 .5412 .0007 .1304	Ni2316 .5201 .0012 .2317	Ag3280 .1861 .0000 .0095		
#1 #2	.5040 .5025	.5349 .5349	.5078 .5076	.5237 .5234	.5230 .5238	.4929 .4928	.5407 .5417	.5193 .5210	.1861 .1860		
Elem Avg Stddev %RSD	V_2924 .5010 .0006 .1152	Zn2062 .5300 .0011 .2130	As1890 .5080 .0009 .1822	TI1908 .5119 .0012 .2273	Pb2203 .5067 .0020 .4016	Se1960 .4994 .0011 .2148	Sb2068 .4954 .0018 .3663	Al3961 4.840 .000 .0006	Ca3179 5.653 .002 .0308		
#1 #2	.5006 .5014	.5292 .5308	.5073 .5086	.5110 .5127	.5053 .5081	.5002 .4986	.4967 .4941	4.840 4.840	5.652 5.655		
Elem Avg Stddev %RSD	Fe2599 5.628 .001 .0095	Mg2790 5.305 .006 .1091	K_7664 9.528 .011 .1173	Na5895 9.755 .014 .1389	B_2089 .0128 .0003 2.457	Mo2020 .5133 .0003 .0588	Pd3404 0016 .0017 107.3	Si2124 .0591 .0003 .4737	Sn1899 0009 .0003 34.14		
#1 #2	5.628 5.629	5.309 5.301	9.536 9.520	9.765 9.746	.0126 .0130	.5135 .5131	0028 0004	.0593 .0589	0007 0012		
Elem Avg Stddev %RSD	Sr4077 .0001 .0001 87.48	Ti3349 .5142 .0005 .0992	W_2079 .0122 .0001 .8326	Zr3391 .0103 .0006 5.631							
#1 #2	.0001 .0000	.5139 .5146	.0121 .0123	.0108 .0099							
Int. Std. Avg Stddev %RSD	Y_3600 156650. 151. .09620	Y_3710 27632. 33. .11897	Y_2243 2539.2 5.8 .22982	In2306 5364.7 6.8 .12662							
	156550. 156760.	27609. 27655.	2535.0 2543.3	5359.9 5369.5							

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.0642

.0006

1.012

.0646

.0637

Ca3179

378.1

.4956

376.8

379.4

Sn1899

.0029

.0005

16.03

0032

◀ Zoom In ▶

Type: Unk

Cu3247

.2821

.0002

.0795

.2823

.2819

Se1960

2.299

.3091

2 304

2.294

Mo2020

.0027

.0000

1.054

0027

.0027

Mn2576

1.379

.002

.1231

1.378

Sb2068

.5562

0004

.0653

5565

.5560

Pd3404

.0079

.0008

- 0084

-.0073

Ni2316

.5359

.0007

.1304

5354

.5364

Al3961

2.265

.5922

2 274

2.255

Si2124

11.66

.0926

11.67

.01

Custom ID3:

Cr2677

.2015

.0011

.5416

2023

.2008

Pb2203

.5028

0014

.2831

5018

.5038

B\_2089

1.230

.000

.0134

1 230

**o** 

Raw Data I	/IA24667	page 66 o	f 217

Sample Name: MP53734-S2 Acquired: 7/19/2010 21:04:45

Custom ID1:

Be3130

.0507

.0001

.1907

.0508

.0506

Zn2062

4870

0002

4868

.4871

Mg2790

465.1 1.8

.3864

466.3

463.8

Ti3349

.0002

2.526

-.0078

-.0080

Y 3710

24221

01722

24224.

24218.

Ba4554

2.104

.1402

2.102 2.106

V\_2924

5031

0006

.1219

5036

.5027

Fe2599

1.228

1 225

1.232

Sr4077

5.296 .038

.7190

5.269

5.323

Y 3600

119090. 209.

17570

119240.

.005

.003

User: admin

Comment:

Elem

Avg Stddev

%RSD

#1 #2

#1

#2

Elem

Avq

Stddev

%RSD

Flem

Avg Stddev

%RSD

Int. Std.

%RSD

#2

#1

#2

Elem

Avg Stddev

Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

.0560

.0001

.1745

.0560

As1890

2.291

.0201

2 292

2.291

K\_7664

104.1

.2107

104 3

103.9

.0525 .0011

2.138

.0517

.0533

Y 2243

2020.2

17595

2017.7

2022.7

W 2079

Custom ID2:

Co2286

.4787

.0005

.1062

.4791

.4784

TI1908

1.896

.1782

1.893

1.898

Na5895

2503

15

.6055

2514

2492.

7r3391

.0000

2.481

.0006

.0007

In2306

3844.3

00619

3844.5

		Zoom	Out							
Sample N										
	Accutest1(v1		de: CONC	l: 7/19/2010 Corr. F	actor: 5.00	٠.				
User: adn	•	tom ID1:	Custom ID2: Custom ID3:							
Comment	t:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.0543	0001	.0008	.0024	.0020	.0097	.8688	.0217	.0028	
Stddev %RSD	.0004 .8066	.0000 49.31	.0001 17.34	.0003 13.12	.0015 74.89	.0029 30.13	.0503 5.789	.0008 3.813	.0028 96.92	
#1	.0540	0001	.0009	.0026	.0009	.0076	.8332	.0211	.0009	
#2	.0546	0001	.0007	.0022	.0030	.0118	.9043	.0222	.0048	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0094	.0183	.0008	.0002	.0019	.0061	.0026	.4815	370.5	
Stddev	.0006	.0001	.0020	.0027	.0023	.0019	.0012	.0031	1.4	
%RSD	6.831	.7632	242.5	1361.	117.1	31.53	47.11	.6367	.3654	
#1	.0089	.0184	0006	.0021	.0035	.0075	.0018	.4793	371.5	
#2	.0098	.0182	.0023	0017	.0003	.0048	.0035	.4836	369.6	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089		Pd3404	Si2124	Sn1899	
Avg Stddev	.0004	423.7 1.7	69.86	2831. 14.	1.216	.0049	0096 .0106	11.20	0060 .0025	
%RSD	.2241	.4056	.0866	.4777	.0554	17.31	109.9	.0312	41.01	
#1	.1958	424.9	69.90	2840.	1.215	.0043	0021	11.21	0077	
#2	.1951	422.4	69.82	2821.	1.216	.0055	0171	11.20	0043	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	5.398	0058	.0175	0001						
Stddev	.006	.0003	.0016	.0002						
%RSD	.1072	4.876	9.373	234.3						
#1	5.394	0060	.0187	0002						
#2	5.402	0056	.0164	.0000						
Int. Std.	Y_3600	Y_3710		In2306						
Avg Stddev	141970. 7433.	26389. 128.	2347.0 2.2	4723.8 2.8						
%RSD	5.2358	.48559		.05967						
#1	147220.	26298.	2345.5	4721.8						
#2	136710.	26479.	2348.6	4725.8						

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Sample Name: JA508661										◀ Zoom Zoom 0	
User: admin   Custom ID1:   Custom ID2:   Custom ID3:   Custom ID3:	Sample N	lame: JA508	68-1 A	cquired: 7/	19/2010 21	:10:58	Type: Unk				
Elem	Method: A	Accutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
Elem	User: adm	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Avg         .0525         .0000         .0011         .0055         .0012         .0076         .8383         .0198         .0027           Stddev         .0003         .0000         .0001         .0003         .0004         .0001         .0002         .0001         .0004           %RSD         .6095         35.82         8.284         5.054         34.88         .7183         .0202         .7055         15.52           #1         .0522         .0001         .0010         .0057         .0015         .0077         .8381         .0199         .0030           #2         .0527         .0000         .0011         .0053         .0009         .0076         .8384         .0197         .0024           Lelem         V_2924         Zn2062         As1890         T11908         Pb2203         Se1960         Sb2068         Al3961         Ca3179           Avg         .0085         .0002         .0001         .0004         .0006         .0008         .0004         .9           %RSD         2.412         10.06         2.862         13.90         227.6         22.20         154.1         .3004         2542           #1         .0086         .0018	Comment	t:									
SIddev %RSD         .0003 .6095         .0000 35.82         .0001 8.284         .0003 5.054         .0001 34.88         .0001 .7183         .0002 .7055         .0001 15.52           #1         .0522 .0527         .0001 .0000         .0010 .0011         .0053 .0009         .0077 .0005         .8381 .0097         .0030 .0030         .0007 .0076         .8381 .0197         .0020 .0030         .0003 .0037         .0004 .0037         .0004 .0037         .0004 .0006         .0008 .0005         .0004 .0004         .0004 .0006         .0008 .0005         .0004 .0004         .0004 .0006         .0008 .0005         .0004 .0004         .0004 .0006         .0008 .0005         .0004 .0004         .0004 .0006         .0008 .0005         .0004 .0006         .0008 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0031 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0043 .0007         .0044 .0003         .0044 .0007<	Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280	
%RSD         .6095         35.82         8.284         5.054         34.88         .7183         .0202         .7055         15.52           #1         .0522         .0001         .0010         .0057         .0015         .0077         .8381         .0199         .0030           #2         .0527         .0000         .0011         .0053         .0009         .0076         .8384         .0197         .0030           Avg         .0024         Z2062         As1890         T11908         Pb2203         Se1606         Sb2084         .0197         .0031           Avg         .0085         .0020         .0050         .0027         .0003         .0037         .0004         .1384         343.0           Slddev         .0002         .0002         .0001         .0004         .0006         .0008         .0005         .0004         .9           %RSD         2.412         10.06         2.862         13.90         227.6         22.20         154.1         .3004         .2542           #1         .0086         .0018         .0051         .0030         .0007         .0043         .0000         .1381         343.6           #2         .0083											
#1											
#2	%RSD	.6095	35.82	8.284	5.054	34.88	.7183	.0202	.7055	15.52	
Elem											
Avg         Tools         -0020         0050         .0027         .0003         .0037         .0004         .1384         343.0           Stddev         0.002         .0002         .0001         .0004         .0006         .0008         .0005         .0004         .2542           #1         .0086        0018         .0051         .0030         .0007         .0043         .0000         .1381         343.6           #2         .0083        0021         .0049         .0024        0002         .0031         .0007         .1387         342.4           Elem         Fe2599         Mg2790         K_7664         Na5895         B_2089         Mc2020         Pd3404         Si2124         Sn1899           Avg         .1727         423.4         72.03         2334         .1194         .0033         .0068         11.30        0031           Stddev         .0001         .5         .04         31         .001         .0001         .001         .01         .00           %RSD         .0464         .1189         .0488         1.313         .0840         4.440         16.20         .1124         12.76           #1         .1728         4	#2	.0527	.0000	.0011	.0053	.0009	.0076	.8384	.0197	.0024	
Stădev %RSD         .0002 2.412         .0001 10.06         .0004 2.862         .0004 13.90         .0008 2.27.6         .0008 2.22.6         .0008 2.0007         .004 3.22.6         .0000 2.0031         .0000 2.0031         .0000 2.0007         .1387 342.4         343.6           Elem Avg Stddev McSD         Fe2599 2.004         Mg2790 2.23.4         K.7664 72.03         Na5895 2.334.         B.2089 2.334.         Mo2020 1.194         Pd3404 5.119         Si2124 5.119         Si2124 5.0033         Sn1899 2.0031         Na680 2.334.         1.194 1.0033         .0008 1.001         0.011 1.001         .01 1.0001         .0001 1.0004         .0001 1.0004         .0011 1.000         .01 1.0001         .0011 1.001         .01 1.0000         .0011 1.001         .01 1.0000         .0004 1.129         .0034 1.0028         .0060 1.129         .0034 1.0028         .0060 1.130         .0061 1.300         .0061 1.300         .0062 1.300											
%RSD         2.412         10.06         2.862         13.90         227.6         22.20         154.1         .3004         .2542           #1         .0086         .0018         .0051         .0030         .0007         .0043         .0000         .1381         343.6           #2         .0083         .0021         .0049         .0024        0002         .0031         .0000         .1381         343.6           Elem         Fe2599         Mg2790         K_7664         Na5895         B_2089         Mc2020         Pd3404         Si2124         Sn1891           Avg         .1727         423.4         72.03         2334.         1.194         .0033         -0068         11.30         -0319           Stddev         .0001         .5         .04         31.         .001         .0001         .0011         .01         .004           %RSD         .0464         .1189         .0488         1.313         .0840         4.440         16.20         .1124         12.76           #1         .1728         423.0         72.05         2356.         1.193         .0032         -0060         11.29         -0034           Avg         5.111         -											
#1											
#2	%RSD	2.412	10.06	2.862	13.90	227.6	22.20	154.1	.3004	.2542	
February   February	#1	.0086	0018	.0051	.0030	.0007	.0043	.0000	.1381	343.6	
Avg     1.727     423.4     72.03     2334.     1.194     .0033    0068     11.30    0031       Stddev     0.001     5     .04     31.     .001     .0011     .002     .1124     12.76       #1     1.728     423.0     72.05     2356.     1.193     .0032    0060     11.29    0034       #2     1.777     423.7     72.00     271391     .0034    0076     11.30    0028       Elem     Sr4077     T13349     W_2079     273391     .0002	#2	.0083	0021	.0049	.0024	0002	.0031	.0007	.1387	342.4	
Stddev   0.001   5	Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
%RSD     .0464     .1189     .0488     1.313     .0840     4.440     16.20     .1124     12.76       #1     .1728     423.0     72.05     2356.     1.193     .0032    0060     11.29    0034       #2     .1727     423.7     72.00     2312.     1.195     .0034    0076     11.30    0028       Elem     Sr4077     T13349     W_2079     Zr3391     Avg     5.111     .0080     .0261    0002       Stddev     .053     .0001     .0004     .0000     .0002     .0002     .0002       %RSD     1.046     1.310     1.546     19.99       #1     5.149    0081     .0258    0002       #2     5.073    0080     .0264    0003       Int. Std.     Y_3600     Y_3710     Y_2243     In2306       Avg     119680     24401     2028.5     3882.9       %RSD     .10285     .14193     .07366     .01723       #1     119590     .24376     .2029.6     3883.3	Avg	.1727	423.4	72.03	2334.	1.194	.0033	0068	11.30	0031	
#1 1.728 423.0 72.05 2356. 1.193 .00320060 11.290034 #2 1.727 423.7 72.00 2312. 1.195 .00340076 11.300028 Elem Sr4077 T13349 W_2079 Zr3391 Avg 5.1110080 .02610002 Stddev .053 .0001 .0004 .0000 .0000 Stddev .053 .0001 .0004 .0000 .0000 .0004 .0000 .0000 .0004 .0000 .0000 .0004 .0000 .0000 .0004 .0000											
#2	%RSD	.0464	.1189	.0488	1.313	.0840	4.440	16.20	.1124	12.76	
Elem Sr4077 Ti3349 W_2079 Zr3391 Avg 5.111 -0.080 .0261 -0.002 Stddev .053 .0001 .0004 .0000  #RSD 1.046 1.310 1.546 19.99  #1 5.149 -0.081 .0258 -0.002 #2 5.073 -0.080 .0264 -0.003  Int. Std. Y_3600 Y_3710 Y_2243 In2306 Avg 119680 24401. 2028.5 3882.9 Stddev 123. 35. 1.5 .7  %RSD .10285 .14193 .07366 .01723  #1 119590. 24376. 2029.6 3883.3	#1	.1728	423.0	72.05	2356.	1.193	.0032	0060	11.29	0034	
Avg     5.111     -0.090     -0.261     -0.002       Stddev     .053     .0001     .0004     .0000       %RSD     1.046     1.310     1.546     19.99       #1     5.149     -0.081     .0258     -0.002       #2     5.073     -0.080     .0264     -0.003       Int. Std.     Y_3600     Y_3710     Y_2243     In2306       Avg     119680     24401     2028.5     3882.9       Stddev     123     35     1.5     .7       %RSD     .10285     .14193     .07366     .01723       #1     119590     .24376     .2029.6     3883.3	#2	.1727	423.7	72.00	2312.	1.195	.0034	0076	11.30	0028	
Stďdev %RSD         0.053 1.046         0.001 1.310         0.004 1.999         0.000 19.99           #1         5.149 2.003         0.028 0.0264         -0.002 0.0264         -0.003 0.003           Int. Std.         Y_3600 119680         Y_3710 24401         Y_2243 228.5         In2306 3882.9           Stddev 9RSD         123. 1.10285         35. 1.5         1.5         .7           %RSD         .10285         .14193         .07366         .01723           #1         119590.         24376.         2029.6         3883.3	Elem	Sr4077	Ti3349	W_2079	Zr3391						
%RSD         1.046         1.310         1.546         19.99           #1         5.149        0081         .0258        0002           #2         5.073        0080         .0264        0003           Int. Std.         Y_3600         Y_3710         Y_2243         In2306           Avg         119680         24401.         2028.5         3882.9           Stddev         123.         35.         1.5         .7           %RSD         .10285         .14193         .07366         .01723           #1         119590.         24376.         2029.6         3883.3	Avg	5.111	0080	.0261	0002						
#1 5.1490081 .02580002 #2 5.0730080 .02640003 Int. Std. Y_3600 Y_3710 Y_2243 In2306 Avg 119680 24401. 2028.5 3882.9 Stddev 123. 35. 1.5 .7 %RSD .10285 .14193 .07366 .01723 #1 119590 24376. 2029.6 3883.3	Stddev	.053	.0001	.0004	.0000						
#2 5.0730080 .02640003  Int. Std. Y_3600 Y_3710 Y_2243 In2306 Avg 119680 24401. 2028.5 3882.9 Stddev 123. 35. 1.5 .7 %RSD .10285 .14193 .07366 .01723  #1 119590. 24376. 2029.6 3883.3	%RSD	1.046	1.310	1.546	19.99						
Int. Std. Y_3600 Y_3710 Y_2243 In2306 Avg 119680 24401. 2028.5 3882.9 Stddev 123. 35. 1.5 .7 %RSD .10285 .14193 .07366 .01723 #1 119590 24376. 2029.6 3883.3	#1	5.149	0081	.0258	0002						
Avg     119680     24401     2028.5     3882.9       Stddev     123     35     1.5     .7       %RSD     .10285     .14193     .07366     .01723       #1     119590     .24376     .2029.6     3883.3	#2	5.073	0080	.0264	0003						
Stddev %RSD         123. .10285         35. .14193         1.5 .07366         .01723           #1         119590.         24376.         2029.6         3883.3	Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
%RSD .10285 .14193 .07366 .01723 #1 119590. 24376. 2029.6 3883.3	Avg	119680.	24401.	2028.5	3882.9						
<b>#1</b> 119590. 24376. 2029.6 3883.3	Stddev	123.	35.	1.5	.7						
	%RSD	.10285	.14193	.07366	.01723						
	#1	119590.	24376.	2029.6	3883.3						
	#2										

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JA50921 Laboratories

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◀ Zoom In ▶ Zoom Out

	Inst QC	- IV	A2466	′					<b>⋖</b> Zoom
									Zoom C
Sample N	ame: CCV	Acquire	d: 7/10/20:	10 21:23:3:	3 Type	. 00			
	ccutest1(v1		de: CONC		Factor: 1.0				
Jser: adm		tom ID1:		tom ID2:		om ID3:			
Comment		tom ib i.	Cus	ioni ibz.	Cusi	om ibs.			
Jonnhein									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.994	2.066	1.993	2.009	2.034	1.978	2.075	2.024	.2475
Stddev	.001	.003	.002	.000		.000	.002	.002	.0001
6RSD	.0683	.1201	.0770	.0152	.1488	.0109	.0815	.0751	.0408
1	1.993	2.065	1.992	2.009	2.036	1.978	2.076	2.023	.2476
2	1.995	2.068	1.994	2.009	2.032	1.979	2.074	2.025	.2474
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
Range									
lem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
lvg	2.007	2.040	1.976	2.048	2.010	1.973	1.974	39.45	40.52
Stddev	.003	.002	.005	.004	.002	.004	.004	.03	.14
6RSD	.1628	.0853	.2575	.2070	.1120	.2243	.1884	.0878	.3535
1	2.010	2.041	1.973	2.045	2.012	1.970	1.971	39.43	40.42
2	2.005	2.039	1.980	2.051	2.009	1.976	1.976	39.48	40.62
heck?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
Range									
lem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
wg	40.37	40.09	38.91	39.14	2.000	2.000	1.990	4.965	2.030
tddev	.07	.07	.05	.00	.005	.004	.002	.007	.001
6RSD	.1739	.1739	.1205	.0107	.2388	.2096	.1004	.1389	.0381
1	40.32	40.04	38.94	39.14		1.997	1.989	4.960	2.029
2	40.42	40.14	38.88	39.14	2.003	2.003	1.992	4.970	2.030
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
ange									

Raw Data	a MA2466	7 page	70 of 217			
	me: CCB			0 21:29:31	Type: QC	
User: admi	cutest1(v1	/2) Mo tom ID1:	de: CONC	Corr. Fa om ID2:	ctor: 1.000000 Custom ID3:	
Comment:	ii Cus	tom ib i.	Cusii	JIII IDZ.	Custom ibs.	
Elem	Sr4077		W_2079			
Units Avg	.0005					
Stddev	.0000					
%RSD	9.025	15.00	19.23	1.935		
#1	.0005					
#2	.0006	.0009	.0074	.0010		
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass		
High Limit Low Limit						
Int. Std. Units	Y_3600 Cts/S					
Avg	158230.					
Stddev %RSD	189. .11931		4.9 .19144			
	.11931					
#1 #2	158360. 158100.					
#2	158100.	27054.	25/9.2	3478.3		

Raw Data MA24667 page 72 of 217

Sample Name: CCV Acquired: 7/19/2010 21:23:33 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3:

ppm 1.946 .009

.4695

2512.7 2504.7

Zr3391

ppm 1.967 .001

.0257

1.967 1.968

In2306 Cts/S 5146.2 9.5 .18453

5152.9 5139.5

Sr4077 Ti3349 W\_2079

ppm 2.022 .002

.0735

Check? Chk Pass Chk Pass Chk Pass Chk Pass

 Y\_3600
 Y\_3710
 Y\_2243

 Cts/S
 Cts/S
 Cts/S

 153520.
 27148.
 2508.7

 414.
 145.
 5.6

 .26981
 .53306
 .22332

27250. 27045.

2.023 1.940 2.021 1.953

ppm 2.056 .004

.2128 2.059 2.053

153230. 153820.

Comment: Elem

Units Avg Stddev

%RSD

Value Range

Int. Std. Units Avg Stddev %RSD

#2

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									Zoom In ▶     Zoom Out
Sample Na Method: Ad	ime: CCB		d: 7/19/201 de: CONC		Type:				
User: admi Comment:		tom ID1:	Cust	om ID2:	Custo	m ID3:			
Elem Units Avg Stddev %RSD	Ba4554 ppm .0005 .0001 10.29	Be3130 ppm .0005 .0001 11.73		ppm .0003 .0004	ppm .0006 .0000	ppm .0005 .0000	.0006	ppm .0002 .0001	ppm .0000 .000
#1 #2	.0005 .0006	.0004 .0005	.0004 .0001	.0006					.0000
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm .0006 .0002 35.62	ppm .0003 .0002		ppm .0010 .0002	ppm 0002 .0007	ppm .0032 .0001		ppm	ppm .0137 .0016
#1 #2	.0007 .0004	.0004 .0001	.0012 .0009				.0009 .0017		.0126 .0148
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm .0101 .0005 5.330	Mg2790 ppm .0172 .0107 62.18		ppm .3888 .0045	ppm .0022 .0002	ppm F .0022 .0003	ppm .0003 .0012		ppm .0006 .0000
#1 #2	.0097 .0105	.0247 .0096			.0023 .0021		0006 .0011	.0021 .0017	.0006 .0006
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail .0021 0021	Chk Pass	Chk Pass	Chk Pass

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.0509

.0013

2.465

.0518

.0500

Ca3179

389.8

.0701

389.6

390.0

Sn1899

.0111

.0043

38.45

0080

-.0141

Type: Unk

Cu3247

.2479

.0012

.4816

.2471

.2488

Se1960

1.977

.3113

1.973 1.981

Mo2020 .0074

.0003

0072

.0076

Mn2576

1.382

.001

.0655

1.382

Sb2068

4938

0013

.2617

4947

.4928

Pd3404

.0116

.0068

- 0164

Ni2316

.5246

.0004

.0735

5244

.5249

Al3961

2.178

1.280

2 198

2.158

Si2124

11.36

.1043

11 35

.01

Custom ID3:

Cr2677

.2069

.0059

2.870

.2027

Pb2203

.4827

0053

1.096

4864

.4789

B\_2089

1.188

.004

.3238

1 191

**o** 

Raw Data MA24667	page 74 of 217

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Sample Name: MP53734-S2 Acquired: 7/19/2010 21:41:51

Custom ID1:

Be3130

.0503

.0003

.5973

.0500

.0505

Zn2062

.5301

0010

.1971

5309

.5294

Mg2790

432.2

.2727

433.0

431.4

Ti3349

.0000

7857

-.0016

.0017

Y 3710

26807. 12.

04528

26816.

26799

Ba4554

1.993

.003

.1530

1.991 1.996

V\_2924

4991

0009

.1903

4984

.4998

Fe2599

1.243

.007

.5431

1 248

1.239

Sr4077

5.225

.3277

5.237

5.213

Y 3600

146190. 233.

15915

146020

146350.

User: admin

Comment:

Elem

Avg Stddev

%RSD

#1 #2

#2

Elem

Stddev

%RSD

Flem

Avg Stddev

%RSD

Int. Std.

%RSD

#2

#1

#2

Avq

Elem

Avg Stddev

Method: Accutest1(v172) Mode: CONC Corr. Factor: 10.000000

Cd2288

.0486

.0004

.7855

.0488

.0483

2.023

.3561

2.028

2.018

K\_7664 91.65 .31

.3397

91.87

W 2079

.0626 .0023

3.750

.0642

.0609

Y 2243

2426.3 1.0

.04169

2425.6

Custom ID2:

Co2286

4906

.0003

.0699

.4908

.4903

TI1908

1.936

.0984

1.935 1.937

Na5895

2901

12

.4106

2910

7r3391

.0040

23.02

.0034

.0047

In2306

4971.7

06223

4973.9

									◀ Zoom Zoom (
Sample Nam	ne: MP537	34-SD1	Acquired	: 7/19/2010	21:54:13	Type:	Unk		
Method: Acc	utest1(v1	72) Mo	de: CONC		actor: 50.0				
User: admin	,	tom ID1:		om ID2:		m ID3:			
Comment:	ous	iom ib i.	Cust	JIII IDZ.	Cusic	MII 103.			
Elem	Ba4554			Co2286	Cr2677			Ni2316	Ag3280
Avg	.0577	0010	0014	0001	.0133	.0171	.8272	.0301	.0091
Stddev	.0028	.0008	.0010	.0010	.0002	.0058	.0031	.0018	.0042
%RSD	4.937	84.01	73.03	1197.	1.706	33.92	.3707	6.029	46.48
#1	.0557	0016	0007	0008	.0135	.0212		.0288	.0061
#2	.0597	0004	0021	.0006	.0132	.0130	.8250	.0313	.0120
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0118	.1325	.0132	0365	0174	.1030		.0449	349.6
Stddev	.0047	.0046	.0082	.0192	.0000	.0202	.0513	.1203	.1
%RSD	39.68	3.495	62.39	52.56	.1234	19.64	1402.	267.6	.0346
#1	.0085	.1292	.0191	0500				.1300	349.7
#2	.0151	.1357	.0074	0229	0174	.0887	.0326	0401	349.5
Elem	Fe2599			Na5895		Mo2020		Si2124	Sn1899
Avg	.2065	386.6	61.82	2824.	1.126	.0194	0151	12.05	0412
Stddev	.0561	1.3	.25		.005	.0096	.0091	.03	.0004
%RSD	27.19	.3365	.3990	.0059	.4231	49.60	59.95	.2081	.9744
#1	.1668	387.5	61.99	2824.	1.129	.0126	0216	12.04	0410
#2	.2462	385.7	61.64	2824.	1.123	.0262	0087	12.07	0415
Elem	Sr4077	Ti3349	W_2079	Zr3391					
٩vg	4.922	0036	0407	.0060					
Stddev	.009	.0011	.0255	.0002					
%RSD	.1772	30.88	62.67	3.517					
#1	4.928	0044	0226	.0058					
#2	4.915	0028	0587	.0061					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	154780.	27312.	2540.0	5339.3					
Stddev	123.	18.	.1	3.4					
%RSD	.07918	.06495	.00505	.06388					
#1	154860.	27300.	2539.9	5341.8					
	154690.	27325.	2540.1	5336.9					

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146780.

26778

2442.8

5004.1

#2

Raw Dat	ta MA2466	7 page	73 of 217						
									◀ Zoom C
									200111 0
Sample N	ame: JA5086	58-1 A	cquired: 7/	19/2010 21	:48:00	Type: Unk			
	ccutest1(v1		de: CONC		actor: 10.0				
User: adm	nin Cust	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avq	.2345	.0003	0001	0009	.0011	.0100	.8351	.0276	0001
Stddev	.0002	.0003	.0010	.0006	.0024	.0019	.0009	.0009	.0002
%RSD	.0715	83.40	795.7	67.38	207.4	19.36	.1053	3.241	343.1
#1	.2344	.0005	.0006	0005	0005	.0114	.8345	.0282	.0001
#2	.2346	.0001	0008	0014	.0028	.0086	.8357	.0269	0002
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0091	.1265	.0085	.0016	0034	.0100	0043	.1438	352.8
Stddev	.0003	.0022	.0013	.0081	.0079	.0008	.0033	.0147	.0
%RSD	2.855	1.741	15.62	499.0	233.1	7.500	75.65	10.19	.0005
#1	.0093	.1249	.0076	0041	0090	.0095	0066	.1335	352.8
#2	.0089	.1280	.0094	.0073	.0022	.0105	0020	.1542	352.8
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.1908	398.2	64.32	2795.	1.146	.0038	0144	10.54	0079
Stddev %RSD	.0121	.0	.23	18.	.004	.0020	.0033	.03	.0000
70K3D	6.366	.0073	.3569	.6573	.3670	52.36	22.64	.2439	.5045
#1	.1822	398.2	64.16	2808.	1.143	.0053	0167	10.56	0080
#2	.1993	398.1	64.48	2782.	1.149	.0024	0121	10.52	0079
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	5.101	0019	.0230	.0021					
Stddev	.001	.0002	.0097	.0012					
%RSD	.0216	11.79	42.25	58.54					
#1	5.101	0021	.0299	.0012					
#2	5.100	0017	.0161	.0030					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	147030.	26748.	2431.1	4994.9					
Stddev	115.	20.	3.5	3.1					
%RSD	.07844	.07658	.14405	.06138					
#1	147110.	26733.	2428.7	4992.7					
#2	146950.	26762.	2433.6	4997.0					

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Comment: Elem

%RSD

#1 #2

#1

Elem

Avg Stddev

%RSD

Flem

Avg Stddev

%RSD

Int. Std.

%RSD

#2

#1

Elem

Avg Stddev

Ag3280 .0013 .0001 9.208

.0012 .0014

Ca3179

20.07

20.03

Sn1899 .0001 .0004

672.3

- 0002

.0004

									■ Zoom In Zoom Ou
Sample Nam	ie: JA5035	57-3R	Acquired: 7	/19/2010 2	2:00:20	Type: Ur	ık		
Method: Acc	utest1(v17	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admin	Cust	tom ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avq	.0004	.0000	.0000	0001	.0004	.0001	.0001	.0000	.0000
Stddev	.0000	.000	.0000	.0000	.0001	.0001	.0000	.0003	.000
%RSD	2.754	81.65	89.56	2.960	17.61	86.16	12.16	783.7	261.6
#1	.0004	.0000	.0000	0001	.0004	.0001	.0001	.0002	.0000
#2	.0004	.0000	.0001	0001	.0005	.0000	.0001	0001	0001
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	0001	.0024	0003	0001	0001	.0019	.0001	.0116	.0241
Stddev	.0000	.0000	.0004	.0004	.0009	.0001	.0002	.0011	.0005
%RSD	13.04	1.199	128.4	246.9	662.4	6.299	337.4	9.679	2.048
#1	0001	.0024	0006	.0001	0008	.0020	.0002	.0124	.0237
#2	0001	.0024	.0000	0004	.0005	.0018	0001	.0108	.0244
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0093	0125	.0207	.2008	.0004	.0002	0004	.0099	0002
Stddev	.0004	.0018	.0058	.0050	.0002	.0001	.0004	.0001	.0004
%RSD	4.518	14.80	27.83	2.511	43.99	39.71	98.39	1.406	152.8
#1	.0096	0111	.0166	.2044	.0002	.0003	0001	.0100	.0000
#2	.0090	0138	.0248	.1972	.0005	.0002	0007	.0098	0005
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0000	.0000	0011	.0002					
Stddev	.000	.0000	.0001	.0001					
%RSD	51.30	68.97	8.568	84.30					
#1	.0000	.0000	0010	.0001					
#2	0001	.0000	0011	.0003					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	157890.	27671.	2559.0	5452.6					
Stddev	352.	113.	1.7	4.5					
%RSD	.22296	.41006	.06528	.08203					
#1	157640. 158130.	27751. 27591.	2560.2 2557.8	5455.7 5449.4					
#2									

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Sample Name: JA50744-1 Acquired: 7/19/2010 22:06:31 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

.0002

.0001

39.55

.0003

As1890

.0006

60.19

0003

.0008

K\_7664 15.36 .01

.0957

15 37

.0083

1.374

.0082

.0084

Y 2243

2419.3 4.5

.18654

2416.1

Co2286

.0028

.0003

10.69

.0030

.0025

TI1908

-.0027 .0004

14.73

- 0024

-.0030

Na5895 214.3

.0246

214 3

7r3391

.0092

5.337

.0096

.0089

In2306

5051.5

.02257

5050.7

Custom ID3:

Cu3247

.0552

.0001

.1547

.0553 .0552

Se1960

.0036

19.50

0031

.0041

Mo2020 .0008

.0001

0007

Mn2576

.0286

.0000

.0472

.0286 .0285

.0010

0015

.0004

Pd3404

-.0022 .0011

- 0014

Ni2316

.0059

.0001

.0060 .0058

Al3961

.1364

2.689

1338

.1390

Si2124 9.604 .018

.1916

9 591

Cr2677

.0018

.0001

4.979

.0017 .0019

Pb2203

.0028

0033

.0023

B\_2089 .0224 .0006

2.524

0228

Be3130

.0001

.0000

18.99

.0001 .0001

Zn2062

.1063

1062

.1063

Mg2790 2.832 .030

2.853

2.811

-.0067 .0002

2.965

-.0069

-.0066

Y\_3710

27547. 104.

37719

27620.

Ti3349 W\_2079

Ba4554

.0847

.0001

.0708

.0847

.0846

V\_2924

.0003

58.05

0002

.0004

Fe2599

.7613 .0045

7645

Sr4077

.0002

.2221

.0710

.0708

Y 3600

148820. 120.

148910.

08045

									◀ Zoom Zoom 0
Sample Na	me: JA508:	27 12	Acquired: 7	/10/2010 2	2-10-01	Type: Ur	ık		
						٥.	IK.		
	cutest1(v1		de: CONC		actor: 1.00				
User: admi Comment:	n Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247		Ni2316	Ag3280
Avg	.0003	.0000	.0001	.0000	.0006	.0002	.0002	0001	.0001
Stddev %RSD	.0001 20.31	.000 154.6	.0000 27.50	.000 114.4	.0004 59.09	.0000 2.937	.0000	.0001 61.48	.0001 100.6
0K3D	20.31	154.6	27.50	114.4	59.09	2.937	2.460	01.48	100.6
ŧ1	.0002	.0000	.0001	.0000	.0004	.0002	.0002	0001	.0000
2	.0003	.0000	.0001	0001	.0009	.0002	.0002	.0000	.0002
lem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
vg	0001	.0010	.0003	0004	.0000	.0014	.0009	.0038	.0803
Stddev	.0000	.0001	.0007	.0002	.000	.0008	.0005	.0028	.0026
6RSD	7.901	8.259	261.4	39.43	722.0	56.22	59.66	72.75	3.226
1	0001	.0011	0002	0003	.0000	.0009	.0013	.0018	.0785
2	0001	.0009	.0007	0005	0001	.0020	.0005	.0057	.0821
lem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
vq	.0055	0008	.0524	.3996	.0007	.0000	.0000	.0609	.0004
tddev	.0003	.0041	.0094	.0010	.0002	.0001	.0004	.0005	.0000
RSD	5.564	534.0	17.99	.2474	28.67	213.8	1872.	.8005	12.41
1	.0057	.0021	.0458	.3989	.0009	.0001	.0003	.0613	.0003
2	.0053	0037	.0591	.4003	.0006	.0000	0002	.0606	.0004
lem	Sr4077	Ti3349	W 2079	Zr3391					
vq	.0001	.0001	0068	.0000					
tddev	.0000	.0002	.0002	.000					
RSD	29.05	154.5	2.737	48.28					
1	.0001	.0003	0069	0001					
2	.0001	.0000	0067	.0000					
nt. Std.	Y_3600	Y_3710	Y_2243	In2306					
wq	158040.	27697.	2556.2	5438.0					
tddev	306.	67.	1.6	1.0					
RSD	.19348	.24232	.06257	.01764					
1	158250.	27745.	2555.1	5438.7					
2	157820.	27650.	2557.4	5437.3					

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									◀ Zoom In I
									Zoom Out
Sample N	ame: JA507	76-2 A	cquired: 7/	19/2010 22	:12:43	Type: Unk			
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm		tom ID1:		om ID2:	Custo	om ID3:			
Comment			ousi	O 10 E.	Ousi	JIII 100.			
Comment									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avg	.3867	.0000	.0004	.0047	.0066	.0592	.0290	.0097	.0062
Stddev	.0004	.0000	.0001	.0002	.0005	.0001	.0001	.0002	.0002
%RSD	.0991	1940.	17.60	4.086	7.121	.0893	.3013	2.500	3.070
701130	.0771	1740.	17.00	4.000	7.121	.0073	.5015	2.500	3.070
#1	.3870	.0000	.0004	.0046	.0070	.0592	.0289	.0099	.0060
#2	.3864	.0000	.0003	.0049	.0063	.0592	.0290	.0096	.0063
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0046	.2087	.0000	.0003	.1360	.0020	.0027	.2681	174.5
Stddev	.0000	.0001	.000	.0009	.0004	.0003	.0000	.0051	1.3
%RSD	.4791	.0687	1075.	325.3	.2819	14.41	1.796	1.918	.7313
#1	.0046	.2086	.0002	0004	.1363	.0018	.0028	.2717	173.6
#2	.0047	.2088	0002	.0009	.1358	.0022	.0027	.2644	175.4
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.9216	37.63	6.190	637.0	.1143	.0025	0033	9.962	.0792
Stďdev	.0063	.21	.028	.1	.0000	.0001	.0011	.002	.0001
%RSD	.6819	.5686	.4491	.0234	.0273	5.179	33.75	.0187	.0954
	0474	07.40					0005	0.0/4	0700
#1	.9171	37.48	6.170	636.9	.1144	.0024	0025	9.961	.0792
#2	.9260	37.78	6.210	637.1	.1143	.0026	0040	9.963	.0791
Elem	Sr4077	Ti3349	W 2079	Zr3391					
Avq	1.103	0059	.0144	.0002					
Stddev	.001	.0000	.0005	.0000					
%RSD	.0958	.1390	3.405	11.60					
701100	.0700	.1070	0.100	11.00					
#1	1.103	0059	.0140	.0002					
#2	1.104	0059	.0147	.0002					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	140260.	26549.	2311.7	4609.3					
Stddev	432.	113.	1.5	2.2					
%RSD	.30817	.42417	.06449	.04785					
#1	140570.	26629.	2312.8	4610.9					
#2	139960.	26469.	2312.6	4607.8					
" <del>"</del>	137700.	20409.	2310.0	4007.0					

94 of 151 ACCUTEST. JA50921 Laboratories

Comment: Elem

									◀ Zoom In ▶ Zoom Out
Sample Na	me: JA508!	53-1 A	cquired: 7/	19/2010 22	:25:11	Type: Unk			
	cutest1(v1		de: CONC		actor: 1.00	٥.			
User: admi	•	tom ID1:		om ID2:		om ID3:			
Comment:	11 043	IOIII ID 1.	Cusi	om ibz.	Ousid	JII 103.			
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.8214	.0002	.0013	.0003	.0024	.0032	.1743	.0018	.0021
Stddev	.0017	.0000	.0001	.0002	.0002	.0000	.0001	.0001	.0001
%RSD	.2095	3.342	4.768	50.33	10.06	.6540	.0838	2.949	3.606
#1	.8202	.0002	.0014	.0005	.0023	.0032	.1742	.0018	.0021
#2	.8226	.0002	.0013	.0002	.0026	.0033	.1744	.0019	.0022
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0043	.0092	.0019	.0000	.0038	.0038	.0006	.8840	279.9
Stddev	.0001	.0001	.0009	.0007	.0010	.0002	.0013	.0051	2.2
%RSD	2.090	1.318	48.67	1680.	26.69	4.931	203.6	.5820	.7943
#1	.0044	.0093	.0025	0004	.0031	.0039	.0016	.8803	281.5
#2	.0042	.0091	.0012	.0005	.0045	.0037	0003	.8876	278.3
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	1.143	116.5	3.510	128.6	.0224	0044	0050	10.97	0010
Stddev	.000	.8	.009	.0	.0000	.0000	.0012	.02	.0001
%RSD	.0072	.6916	.2540	.0029	.1223	1.036	23.68	.1530	12.00
#1	1.143	117.1	3.504	128.6	.0224	0043	0041	10.98	0009
#2	1.143	116.0	3.517	128.6	.0223	0044	0058	10.96	0011
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	1.406	0024	.0137	.0004					
Stddev	.000	.0001	.0010	.0000					
%RSD	.0056	4.880	7.476	6.856					
#1	1.406	0025	.0130	.0004					
#2	1.406	0023	.0144	.0004					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	145050.	26580.	2345.3	4789.5					
Stddev	118.	160.	4.6	.3					
%RSD	.08112	.60234	.19662	.00590					
#1	145140.	26467.	2342.0	4789.3					
#2	144970.	26694.	2348.6	4789.7					

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									Zoom In     Zoom Out
			ed: 7/19/20 ode: CONC Cus		Factor: 1.0				
Elem Units Avg Stddev %RSD	Ba4554 ppm 1.995 .001 .0602	ppm 2.065 .001	ppm 1.999 .004	ppm 2.015 .002	ppm 2.037 .003	ppm 1.985 .004	ppm 2.080 .002	ppm 2.031	ppm .2486 .0001
#1 #2	1.996 1.995			2.013 2.017		1.982 1.988		2.030 2.032	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm 2.012 .001 .0499	ppm 2.045 .004	ppm 1.980 .003	ppm 2.055 .005	ppm 2.016 .001	ppm 1.982 .000	ppm 1.981 .001	ppm 39.58 .04	ppm 40.32 .02
#1 #2	2.013 2.011	2.041 2.048	1.978 1.983			1.982 1.983		39.55 39.61	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm 40.34 .03 .0788	ppm 40.11 .04	ppm 39.13 .04	ppm 39.39 .05	ppm 2.008 .004	ppm 2.006 .004	ppm 2.000 .003	Si2124 ppm 4.990 .004 .0845	ppm 2.033 .003
#1 #2	40.31 40.36	40.08 40.14						4.987 4.993	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Avg Stddev %RSD	.0009 .0000 .3000	.0000 .000 2.370	.0001 .0001 61.69	.0000 .000 116.5	.0005 .0000 1.668	.0027 .0000 1.202	.0019 .0000 1.560	.0013 .0001 4.366	.0001 .0000 15.02
#1 #2	.0009	.0000	.0002 .0001	0001 .0000	.0006 .0005	.0027 .0027	.0020 .0019	.0013 .0013	.0001 .0001
Elem Avg Stddev %RSD	V_2924 0001 .0000 20.94	Zn2062 .0200 .0002 .9926	As1890 0002 .0001 56.82	TI1908 0003 .0004 109.4	Pb2203 0002 .0003 161.0	Se1960 .0013 .0004 31.37	Sb2068 .0009 .0001 8.859	Al3961 .0273 .0058 21.14	Ca3179 .8741 .0032 .3672
#1 #2	0001 0001	.0202 .0199	0003 0001	0001 0006	0004 .0000	.0015 .0010	.0010 .0009	.0314 .0232	.8764 .8718
Elem Avg Stddev %RSD	Fe2599 .0230 .0003 1.382	Mg2790 .0511 .0098 19.12	K_7664 .1084 .0131 12.09	Na5895 .7237 .0080 1.111	B_2089 .0029 .0001 4.744	Mo2020 .0001 .0001 143.1	Pd3404 0011 .0011 105.0	Si2124 .1343 .0001 .0720	Sn1899 .0007 .0004 65.14
#1 #2	.0228 .0232	.0580 .0442	.1176 .0991	.7294 .7180	.0028 .0030	.0000	0003 0018	.1343 .1342	.0004 .0010
Elem Avg Stddev %RSD	Sr4077 .0034 .0000 .7294	Ti3349 .0007 .0001 12.63	W_2079 0065 .0002 3.524	Zr3391 .0001 .0001 116.7					
#1 #2	.0035 .0034	.0007 .0008	0066 0063	.0000 .0001					
Int. Std. Avg Stddev %RSD	Y_3600 158000. 76. .04803	Y_3710 27963. 153. .54739	Y_2243 2557.3 3.4 .13347	In2306 5449.9 4.7 .08571					
#1 #2	158050. 157940.	27854. 28071.	2554.9 2559.7	5446.6 5453.2					

Custom ID3:

Cu3247 Mn2576

Ni2316

Cr2677

Sample Name: JA51165-2 Acquired: 7/19/2010 22:31:21 Type: Unk
Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Ba4554 Be3130 Cd2288 Co2286

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◀ Zoom In ▶ Zoom Out

Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Comment: Sr4077 Ti3349 W\_2079 Zr3391 ppm 2.076 .001 ppm 2.026 .002 ppm 1.829 .007 .3624 ppm 1.968 .000 Units %RSD .0310 .0814 .0122 #1 #2 2.076 2.076 2.025 2.027 1.825 1.834 Check? Chk Pass Chk Pass Chk Pass Value Range Y\_3600 Y\_3710 Y\_2243 Cts/S Cts/S Cts/S 153480. 27384. 2502.8 51. 39. 3.5 .03307 .14424 .14048 Int. Std. In2306 Cts/S 5135.8 5.3 .10256 Units Avg Stddev %RSD 27412. 27356. 153520. 2505.3 5139.5 2500.4

Sample Name: CCV Acquired: 7/19/2010 22:37:30 Type: QC

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ACCUTEST.

NUODIA

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#2

◀ Zoom In ▶

Zoom Out

Sample Name: CCB	Acquired: 7	/19/2010 2	2:43:29	Type: QC
Method: Accutest1(v	172) Mode:	CONC	Corr. Fact	or: 1.000000
User: admin Cu	stom ID1:	Custom	ID2:	Custom ID3:
Comment:				

M U

LICIII	Da4334	De3130	Cuzzoo	C02200	CIZUII	CuJZ47	WILLSTO	IVIZJIO	Ay3200
Units	ppm	ppm	ppm						
Avg	.0001	.0002	.0001	.0002	.0004	.0002	.0002	.0001	.0002
Stďdev	.0001	.0001	.0001	.0000	.0000	.0001	.0000	.0001	.0003
%RSD	93.83	38.93	133.6	4.135	4.575	67.49	4.461	65.23	173.6
#1	.0000	.0001	.0002	.0002	.0004	.0001	.0002	.0002	.0004
#2	.0001	.0001	.0002	.0002	.0004	.0003	.0002	.0002	.0000
"2	.0001	.0002	.0000	.0002	.0004	.0003	.0002	.0001	.0000

Check? Chk Pass Chk High Limit Low Limit

Flem V 2924 7n2062 As1890 TI1908 Ph2203 Se1960 Sh2068 AI3961 Ca3179 Units ppm 0001 ppm .0002 ppm .0010 ppm 0012 ppm .0001 ppm 0021 ppm .0007 ppm 0037 ppm 0800. Ava .0001 .0003 .0004 .0003 .0004 Stddev .0000 .0005 .0006 .0005 %RSD 18.51 36.46 502.4 6.428 .0005 .0040 .0002 .0006 .0024 .0077 0009 #2 .0018 .0002 .0001 .0012 .0016 .0003 .0009 .0034 .0084

Check? Chk Pass High Limit Low Limit

Elem Fe2599 Mg2790 Na5895 B\_2089 Mo2020 Pd3404 Si2124 Sn1899 K\_7664 Units ppm .0052 ppm .0074 ppm .0279 ppm 1084 ppm .0016 ppm .0003 Avg Stddev .0010 0023 .0140 0017 .0002 .0003 .0009 .0001 0003 6.910 %RSD 18.60 30.99 50.00 1.540 10.23 17.55 271.2 71.03 .0045 -.0057 .0181 .1072 .0017 .0021 -.0009 .0015 .0006 #2 .0059 .0090 .0378 1096 .0015 .0016 .0003 .0016 .0002

Check ? Chk Pass Chk High Limit Low Limit

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Acquired: 7/19/2010 22:49:39 Sample Name: JA51165-3 Type: Unk Method: Accutest1(v172) Corr. Factor: 1.000000 Mode: CONC Custom ID1: Custom ID2: Custom ID3 User: admin Comment Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 .0004 .0033 Avq .0000 .0003 -.0004 .0017 .0134 .0275 .0022 Stddev .0001 nnn .0001 0001 .0000 0001 .0001 0001 .0002 4.372 97.90 22.11 .9471 3.726 36.55 %RSD 1.514 24.68 .2767 .0034 .0001 .0004 .0003 .0017 .0135 .0274 0022 .0003 #1 #2 .0032 -.0004 .0134 .0275 .0023 .0005 .0000 .0003 .0018 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179 .0004 Ava .0736 .0002.0005.0027.0003.0000 .220752.36 Stddev 0000 0002 0001 0003 0001 0007 001 0023 12 %RSD .6430 32.07 57.87 3.102 5191 1.043 .2311 .0004 .0735 .0001 -.0003 .0027 .0008 -.0004 2223 52.27 #2 .0004 .0002 .0007 .0026 .0002 Mo2020 .0002 .0001 Fe2599 .4166 Mg2790 2.442 <\_7664 1.079 Na5895 3.429 B\_2089 .0060 Si2124 .3808 Elem Pd3404 Sn1899 Avg .0010 Stddev .003 .002 .003 .0000 .0004 .0005 .0001 %RSD .2436 1295 .1561 .0835 .0875 40.98 34.21 1222 4.529 #1 4173 2 440 1 077 3 4 2 7 0060 0002 - 0009 3811 0022 #2 .4159 2.444 3.431 .0001 -.0015 3804 .0024 1.080 .0060 Flem Sr4077 Ti3349 7r3391 W 2079 .0477 .0007 Avg Stddev .0002 .0009 %RSD .1265 2.871 34.05 1.079 .0478 .0057 -.0020 .0007 #2 .0477 .0059 -.0033 .0007 Int. Std. Y 3710 2243 Y 3600 In2306 2516.8 2.8 Avg Stddev 156130 5334.4 %RSD .10098 42254 .11042 .02425 156240. 27764 2514.8 5333.4 #2 156020 27599 2518.8 5335.3

Sample Nam	e: CCB	Acquire	d: 7/19/2010	22:43:29	Type: QC
Method: Accu	itest1(v172	2) Mo	de: CONC	Corr. Fac	ctor: 1.000000
User: admin	Custo	m ID1:	Custo	m ID2:	Custom ID3
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	

Units	ppm	ppm	ppm	ppm
Avg	.0002	.0001	0041	.0004
Stddev	.0000	.0001	.0009	.0001
%RSD	8.366	75.84	21.24	29.37
#1	.0002	.0001	0035	.0005
#2	.0002	.0002	0047	.0003

Check? Chk Pass Chk Pass Chk Pass Chk Pass High Limit Low Limit

Int Std Y 3600 Y 3710 Y 2243 In2306 Cts/S Cts/S Cts/S Units Cts/S 158580 Avg Stddev 27686 2588.6 5487.1 220 40 .13889 .14457 .02593 .01414 %RSD 27714 5486.5 158730 2588.2

158420

27657

2589.1

5487.6

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■ Zoom In ▶ Acquired: 7/19/2010 22:55:44 Sample Name: JA51165-4 Type: Unk Corr. Factor: 1.000000 Method: Accutest1(v172) Mode: CONC

Custom ID1: Custom ID2: Custom ID3 User: admin Comment: Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Avg Stddev .0136 .0000 .0015 .0007 .0169 .0350 .0205 .0123 .0011 .0004 nnn .0000 .0000 0003 .0002 .0000 .0002 .0000 2.799 270.5 %RSD 1.802 3.402 .5499 .1493 1.671 1.629 2.205 .0139 .0000 .0015 .0007 .0171 .0352 .0206 .0121 .0011 #2 .0134 .0000 .0015 .0007 .0168 .0349 .0205 .0124 .0011 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179 Ava .0011 1412 -.0009.0003.0219.0022.00071.127 4.198 Stddev 0000 0001 0000 0004 0005 0002 0002 034 114 %RSD 1.645 5.030 2.192 2.710 .0011 1413 -.0009 .0000 .0215 .0024 .0009 1.151 4.279 #2 0011 .0008 0222 .0021 1.103 4.118 Fe2599 1.913 2.7664 4.089 \_2089 .0082 Si2124 2.555 Flem Mg2790 Na5895 /02020 Pd3404 Sn1899 6.319 Avg Stddev .0026 .047 .105 .156 .0000 .0002 .0008 .007 .0002 %RSD 2.447 .8726 2.560 2.462 3129 4.248 52.74 .2655 2.966 #1 1 946 2948 4 163 6 429 0082 0037 0009 2 551 0079 #2 1.880 .2912 6.209 .0040 .0021 2.560 .0083 .0075 Ti3349 Flem Sr4077 W\_2079 7r3391 .0363 .0192 .0015 .0001 Avg Stddev .0001 %RSD 2.266 2.635 4.177 .8705

.0369 .0196 -.0015 .0102 #2 .0357 .0188 -.0016 .0101 Int. Std. Y 3600 Y 3710 Y 2243 In2306 2566.0 2.9 158100 5455.1 %RSD .37018 2.5154 .11225 .02135 157690. 2568.0 #2 158510 28779 2563.9 5456.0

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.0012

.0002

20.10

.0013

.0010

Ca3179

3.221

017

.5402

3 209

3.234

.0098

.0003

3.381

0101

Sn1899

**o** 

■ Zoom In I Zoom Out Sample Name: JA51165-5 Acquired: 7/19/2010 23:01:49 Type: Unk Mode: CONC Corr. Factor: 1.000000 Method: Accutest1(v172) User: admin Custom ID1: Custom ID2: Custom ID3 Comment: Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Avg Stddev .0008 -.0001 .0002 .0005 .0021 .0378 .0013 .0071 0005 .0000 .0000 .0000 .0001 .0002 .0002 .0000 .0001 .0000 %RSD 2.154 3.742 17.94 19.52 9.324 .4961 1.881 1.821 3.029 .0008 0000 .0003 0005 .0020 .0379 .0013 0072 0005 #1 #2 .0008 -.0001 .0002 .0004 .0022 .0377 .0014 .0070 .0005 Elem Al3961 Ca3179 V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 .0065 .0090 -.0003 .0004 .0014 .0012 .0019 .0578 .8647 .0016 Avg Stddev 0001 0001 0003 0011 0006 0005 0004 0038 1.230 85.17 252.4 44.64 37.77 19.30 6.611 .1829 #1 0065 0090 - 0005 0003 0019 0009 0016 0605 8659 #2 .0064 .0091 -.0001 -.0012 .0015 .0021 .0551 .0010 .8636 Elem Fe2599 Mg2790 K\_7664 Na5895 B\_2089 Mo2020 Pd3404 Si2124 Sn1899 .0760 .0368 1.931 77.68 .0002 .0010 Avq .0122 .0015 3.287 Stddev .0002 .0147 .011 .0004 .0002 .0002 .000 .0001 .1514 .0020 %RSD 2.858 0762 0471 1 923 77 59 0120 0014 - 0001 3 287 0010 .0758 .0264 -.0003 Flem Sr4077 T13349 W 2079 7r3391 .0034 .0005 .0025 .0003 .0014 Avg Stddev .0002 .0000 %RSD 1.017 49.72 10.43 2.909 .0034 -.0003 -.0023 .0014 #2 .0034 -.0007 -.0027 .0014 Int. Std. Y 3600 Y 3710 Y 2243 In2306 155480. 270. 2542.0 2.5 Avg Stddev 5348.6 %RSD 17365 06132 10024 03184

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Cd2288

.0025

.0000

1.153

.0025

.0025

0018

0003

0020

.0016

K\_7664

1.496

.007

.4852

1 501

1.491

.0002

132.5

-.0004

.0000

Y 2243

2524.3

02869

2523.8

2524.8

W 2079

As1890

Custom ID2:

Co2286

.0038

.0000

.3843

.0038

.0038

TI1908

.0008

0004

49.82

- 0010

-.0005

Na5895

120.8

.0451

120.9

120.8

7r3391

.0016

.0000

2.556

.0016

.0016

In2306

5271.2

04444

5269.5

5272.8

Custom ID1:

Be3130

.0000

2576.

.0000

.0000

Zn2062

1805

0002

1806

1804

.4050

.0036

4025

4076

T13349

.0200

1040

.0200

.0200

Y 3710

27714. 292.

1 0534

27920.

27507

Mg2790

.000

Ba4554

.0102

.0001

1.337

.0103

.0101

0053

0000

.3979

0053

.0053

Fe2599

1.577

.2341

1 574

Sr4077

.0000

.0027

.0239

.0239

Y 3600

154210. 127

08211

154130

154300

V\_2924

User: admin

Comment:

Elem

Avg Stddev

%RSD

#1 #2

Elem

#1

#2

Elem

Avq

Stddev

%RSD

Avg Stddev

Type: Unk

Cu3247

.1591

.0002

.1201

1592

.1590

Se1960

.0016

0001

9.309

0015

.0017

1862

.0001

1862

Mo2020

Mn2576

.0145

.0000

.2729

.0144

.0145

.0046

0001

1.379

0045

.0046

Pd3404

.0005

.0001

- 0005

Ni2316

.0129

.0001

.5910

.0130

.0129

AI3961

.6433

0089

1.383

6496

.6370

Si2124

1.566

.001

.0840

1 567

Custom ID3

Cr2677

.0070

.0001

.9762

0069

.0070

Pb2203

.0729

0010

1.360

0722

.0736

B\_2089

.0498

0001

0498

.0498

■ Zoom In ▶ Sample Name: JA51165-8 Acquired: 7/19/2010 23:20:06 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3 Comment: Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 .0459 Avg Stddev .0140 .0000 .0018 .0008 .0180 .2996 .0156 .0005 .0000 nnn .0000 .0000 0003 .0004 .0001 .0002 0002 .3232 .0142 38.69 1.542 1.424 .1484 34.04 %RSD 1.184 1.629 .2993 .2999 .0140 .0000 .0017 .0008 .0182 .0458 .0157 .0007 .0018 .0140 .0000 .0178 .0460 .0155 .0004 #2 .0008 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179 .0007 Ava .0238.5098 .0065 -.0003.0317.00291.469 9.389 Stddev 0003 0005 0000 0009 0007 0005 0003 008 009 1.177 .1066 2.327 63.22 5346 .0957 .0236 5094 .0065 .0009 .0312 .0011 .0031 1.463 9.396 #2 .5101 9.383 0322 Fe2599 2.334 Mg2790 .7217 \_7664 3.484 \_2089 .0543 Si2124 16.71 Flem Na5895 Mo2020 Pd3404 Sn1899 320.4 Avg Stddev .0120 .0002 .001 .032 7.7 .0002 .0002 .02 .0002 %RSD .0565 1.658 .9306 2,400 3877 2.631 19.08 .1432 1.679 #1 2 3 3 5 7302 3 507 325.8 0541 0074 - 0011 16.73 0091 2.333 .7133 3.461 314.9 .0544 .0076 .0009 16.70 .0088 Flem Ti3349 Sr4077 W\_2079 7r3391 .0464 .0138 Avg Stddev .0003 .0001 %RSD .1554 1.109 2.430 5.571 .0237 .0464 .0140 .0011 #2 .0465 .0240 .0136 .0010 Int. Std. Y 3600 Y 3710 2243 In2306 27518 53 5048.5 149540 2477.7 %RSD .23522 19347 .02864 .04049 149790. 27481. #2 149290 27556 2478.2 5047.1

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Comment:	Cusi	ioiii ib i.	Cusi	JIII IDZ.	Cusic	лп юз.			
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0063	.0000	.0006	.0003	.0041	.0419	.0127	.0034	.0000
Stddev	.0001	.000	.0000	.0002	.0001	.0001	.0001	.0001	.000
%RSD	1.545	254.9	1.367	69.20	2.177	.2505	.7159	1.743	412.1
#1 #2	.0064 .0063	.0000	.0006	.0002 .0004	.0041 .0040	.0420 .0418	.0126 .0128	.0033 .0034	.0001 0002
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0012	.1506	.0007	0001	.0164	.0023	.0011	.3801	3.274
Stddev	.0001	.0004	.0001	.0001	.0001	.0008	.0007	.0048	.008
%RSD	9.849	.2653	19.42	76.99	.4078	33.95	58.78	1.258	.2433
#1 #2	.0013 .0012	.1503 .1509	.0008	0001 0002	.0164 .0165	.0017 .0028	.0016 .0007	.3835 .3768	3.269 3.280
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.5661	.2846	.5132	22.67	.0077	.0058	0010	.8270	.0012
Stddev	.0015	.0116	.0219	.02	.0002	.0003	.0008	.0014	.0002
%RSD	.2612	4.077	4.265	.0824	2.135	4.839	87.17	.1666	13.51
#1	.5650	.2764	.4977	22.66	.0075	.0056	0004	.8260	.0011
#2	.5671	.2928	.5287	22.69	.0078	.0060	0015	.8280	.0013
Elem Avg Stddev %RSD	Sr4077 .0193 .0000 .0104	Ti3349 .0135 .0004 3.298	W_2079 0041 .0003 6.611	Zr3391 .0005 .0000 4.998					

.0005

.0005

In2306

5428.7

.07319

5431.6

5425.9

Raw Data MA24667 page 91 of 217

.0139

.0132

Y 3710

.31395

27764

27641

-.0043

-.0039

Y 2243 2557.9 1.7

.06470

2556.8

.0193

.0193

Y 3600

.13134

157330.

157040

157180

#2

Int. Std.

Avg Stddev

%RSD

#2

97 of 151 **ACCUTEST.** JA50921 Laboratori

Flem Avg Stddev %RSD #1 Int. Std. Avg Stddev %RSD #2 **∢** Zoom In ▶

2540.2 2543.8 5349.8

27621

155670. 155290

Sample Name: JA51165-7 Method: Accutest1(v172) Custom ID1:

Mode: CONC Corr. Factor: 1.000000

Custom ID2:

Acquired: 7/19/2010 23:14:01

Type: Unk

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Raw Data MA24667	page 93 of 217

Raw Data MA24667 page 95 of 217

rian Da	ta IVIAZ400	. pago	93 01 211						◀ Zoom In
									Zoom Ou
Sample N	lame: JA511	65-11	Acquired: 7	/19/2010 2	3:38:40	Type: Un	k		
Method: A	Accutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0011	.0000	.0002	.0000	.0004	.0037	.0018	.0015	.0001
Stddev	.0000	.000	.0000	.000	.0004	.0001	.0000	.0001	.0000
%RSD	1.379	69.60	.0222	135.5	104.0	1.497	.1650	4.598	44.28
#1	.0011	0001	.0002	.0000	.0001	.0036	.0018	.0015	.0001
#2	.0011	.0000	.0002	0001	.0006	.0037	.0018	.0016	.0001
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avq	.0000	.0296	.0000	0004	0004	.0010	.0009	.0326	.9100
Stddev	.000	.0000	.0004	.0001	.0004	.0006	.0002	.0001	.0018
%RSD	128.5	.1449	1504.	16.23	114.1	61.32	17.17	.4003	.1962
#1	.0000	.0295	.0003	0004	0001	.0006	.0010	.0325	.9087
#2	.0000	.0296	0003	0005	0007	.0014	.0008	.0327	.9113
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0199	.0502	.0960	.6426	.0028	.0002	0004	.1268	.0008
Stddev	.0018	.0041	.0089	.0023	.0001	.0001	.0003	.0012	.0002
%RSD	9.030	8.163	9.223	.3505	4.258	38.00	75.22	.9333	29.19
#1	.0212	.0473	.0897	.6410	.0029	.0003	0006	.1260	.0007
#2	.0186	.0531	.1023	.6442	.0027	.0001	0002	.1277	.0010
	0.4077	T100.40	14/ 0070	7 0004					
Elem	Sr4077		W_2079	Zr3391					
Avg Stddev	.0035	.0003	0058 .0005	.0000					
%RSD	.4108	20.24	9.167	24460.					
701K3D	.4100	20.24	7.107	24400.					
#1	.0035	.0004	0062	0001					
#2	.0035	.0003	0054	.0001					
Int. Std.	Y_3600	Y 3710	Y_2243	In2306					
Avg	158780.	27733.	2574.7	5471.0					
Stddev	340.	13.	.2	3.4					
%RSD	.21431	.04784	.00638	.06295					
#1	159020.	27724.	2574.6	5473.5					
#2	158540.	27743.	2574.0	5468.6					

Sample Nat Method: Ac User: admir Comment:	cutest1(v1		de: CONC	/19/2010 2 Corr. F om ID2:	actor: 1.00	Type: Un 00000 om ID3:	k		
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0024	.0000	.0006	.0000	.0026	.0252	.0063	.0058	.0002
Stddev	.0000	.000	.0000	.0001	.0000	.0005	.0001	.0000	.0001
%RSD	.6585	82.29	7.079	2828.	.7131	1.939	.8002	.5705	40.63
#1	.0024	.0000	.0006	.0001	.0026	.0255	.0063	.0058	.0001
#2	.0024		.0006	0001	.0026	.0248	.0064	.0057	.0002
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0005	.1006	.0001	0006	.0011	.0002	.0003	.2161	28.81
Stddev	.0000	.0002	.0001	.0003	.0003	.0002	.0008	.0028	.15
%RSD	5.441	.1841	70.87	48.52	27.16	100.7	240.5	1.296	.5147
#1	.0005	.1008	.0002	0008	.0013	.0001	.0008	.2141	28.71
#2	.0005	.1005	.0001	0004	.0009	.0003	0002	.2180	28.92
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.1609	.3039	4.742	17.78	.0160	.0006	0004	.2516	0001
Stddev	.0003	.0046	.002	.01	.0002	.0001	.0004	.0011	.0002
%RSD	.1639	1.509	.0508	.0358	1.166	18.73	95.07	.4247	169.1
#1	.1611	.3072	4.740	17.78	.0159	.0007	0006	.2508	.0000
#2	.1607	.3007	4.743	17.78	.0162	.0005	0001	.2524	0002
Elem Avg Stddev %RSD	Sr4077 .0758 .0002 .2742	Ti3349 .0053 .0000 .6877	W_2079 0043 .0005 12.44	Zr3391 .0003 .0000 2.448					
#1 #2	.0760 .0757	.0054 .0053	0046 0039	.0003 .0003					
Int. Std. Avg Stddev %RSD	Y_3600 156590. 281. .17942	Y_3710 27793. 235. .84670	Y_2243 2529.4 3.9 .15592	In2306 5357.7 2.1 .03845					
#1 #2	156390. 156790.	27960. 27627.	2532.2 2526.6	5359.2 5356.3					

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Naw Da	ta IVIAZ400	n page	34 01 21						
									◀ Zoom Zoom
Sample N	ame: CCV	Acquire	d· 7/19/20	10 23:44:5	1 Type	· OC			
	ccutest1(v1		de: CONC		Factor: 1.0				
User: adm	•	tom ID1:		tom ID2:		om ID3:			
Oser: auri Comment		NOIII ID I:	Cus	IOIII ID2:	Cusi	OIII ID3:			
Comment	:								
Flem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
Avg	1,998	2.071	1.993	2.011	2.036	1.987	2.084	2.045	.2486
Stddev	.004	.004	.004	.004	.003	.000	.004	.003	.0001
%RSD	.2001	.2096	.1908	.1746	.1555	.0114	.1659	.1541	.0535
#1	1.996	2.068	1.990	2.008		1.987	2.082		.2485
#2	2.001	2.075	1.996	2.013	2.038	1.987	2.086	2.047	.2487
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
Range									
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Jnits	ppm	ppm	ppm	ppm		ppm	ppm		ppm
Avg	2.015	2.047	1.970	2.069	2.027	1.973	1.976	39.63	40.62
Stddev	.000	.004	.002	.001	.003	.001	.001	.01	.09
%RSD	.0193	.2161	.0809	.0644		.0695	.0599	.0363	.2311
	2.014	2.044	1.0/0	2.040	2.025	1.070	1.075	20.42	40.55
#1 #2	2.014 2.015	2.044 2.050	1.969 1.971	2.069 2.070		1.972 1.974	1.975 1.977	39.62 39.64	40.55 40.68
. 2	2.013	2.030	1.971	2.070	2.029	1.974	1.977	39.04	40.00
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
Range									
lem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Jnits	ppm	ppm	ppm	ppm	ppm	ppm	ppm		ppm
Avg	40.49	40.41	39.12	39.56	2.005	2.004	2.018	4.981	2.028
Stddev	.06	.00	.02	.05	.003	.004	.001	.006	.009
6RSD	.1535	.0074	.0410	.1148	.1449	.1956	.0601	.1202	.4514
±1	40.44	40.41	39.13	39.53	2.003	2.001	2.017	4.977	2.021
‡2	40.53	40.40	39.11	39.59	2.003	2.007	2.017	4.985	2.034
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
/alue									
Range									

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◀ Zoom In ▶

				10 23:44:51	
Method: A	ccutest1(v17	<ol> <li>Mo</li> </ol>	de: CONC	Corr. Fa	ctor: 1.000000
User: adm	in Cust	om ID1:	Cus	om ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	
Units	ppm	ppm	ppm	ppm	
Avg	2.075	2.029	1.839	1.967	
Stddev	.003	.003	.007	.000	
%RSD	.1329	.1320	.4028	.0123	
#1	2.077	2.027	1.833	1.967	
#2	2.073	2.031	1.844	1.968	
"-	2.070	2.001	1.011	1.700	
Check ? Value Range	Chk Pass (	Chk Pass	Chk Pass	Chk Pass	
Int. Std.	Y 3600	Y 3710	Y 2243	In2306	
Units	Cts/S	Cts/S	Cts/S	Cts/S	
Avg	153990.	27350.		5144.7	
Stddev	16.	62.	3.2	9.7	
%RSD	.01021	.22773	.12780	.18814	
#1	153980.	27394.	2520.6	5151.6	
#2	154000.	27306.	2516.0	5137.9	

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Sample Name: CCB Acquired: 7/19/2010 23:50:50 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3 Comment: Sr4077 Ti3349 W\_2079 Zr3391 ppm .0003 .0001 Units ppm .0005 ppm .0006 ppm 0006

Avg Stddev .0001 .0004 .0000 %RSD 18.64 18.12 68.36 .2725 .0005 .0003 -.0003 .0006 #2 .0002 .0004 -.0009 .0006 Check? Chk Pass Chk Pass Chk Pass High Limit Low Limit

Y\_3600 Cts/S Y\_3710 Cts/S Y\_2243 Cts/S Int. Std. In2306 Cts/S Units Avg Stddev %RSD 158670 5487.0 27701 2596.6 167 .10504 .05099 .00133 158790 27711 2596.6 5486 3 27691. 158550.

2596.6 5487.7

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Acquired: 7/19/2010 23:50:50 Type: QC Sample Name: CCB Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 Custom ID3: User: admin

Custom ID1: Custom ID2: Comment:

Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Units ppm .0001 ppm .0003 ppm .0002 ppm .0002 ppm .0005 ppm .0003 ppm .0003 ppm .0002 ppm .0001 Avg Stddev .0001 .0000 .0000 .0000 .0002 .0003 .0000 .0000 .0001 %RSD .9258 2.035 26.53 5.221 32.79 134.4 4.397 9.364 87.01 .0001 .0003 .0002 .0002 .0004 .0000 .0003 .0001 .0002 #2 .0001 .0003 .0003 .0002 .0006 .0005 .0003 .0002 .0000

Check? Chk Pass Chk High Limit Low Limit

Flem V 2924 7n2062 As1890 TI1908 Ph2203 Se1960 Sh2068 AI3961 Ca3179 Units ppm 0002 ppm .0001 ppm .0011 ppm .0007 ppm .0001 ppm .0013 ppm .0002 ppm .0038 ppm .0091 Avg Stddev .0001 35.74 .0001 .0003 .0005 198.4 .0021 57.21 .0003 .0015 0009 .0006 25.60 %RSD 208.3 681.8 6.826 .0000 .0018 .0011 0053 .0002 .0002 .0005 .0001 .0012 .0087 #2 .0003 .0001 -.0003.0008 .0015 .0006 .0022

Check? Chk Pass High Limit Low Limit

Elem Fe2599 Mg2790 Na5895 B\_2089 Mo2020 Pd3404 Si2124 Sn1899 K\_7664 Units ppm .0064 ppm .0077 ppm .0285 ppm .0579 ppm .0017 ppm .0020 ppm .0018 Avg Stddev .0006 .0007 .0117 .0039 .0003 .0004 .0002 .0002 .0002 %RSD 10.14 9.668 41.17 6.754 16.27 19.29 24.80 13.58 78.21 .0015 .0068 -.0083 .0367 .0607 .0023 .0008 .0016 .0003 .0059 -.0072 .0202 .0552 .0019 .0017 .0005 .0019 .0001

Check ? Chk Pass Chk High Limit Low Limit

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Custom ID1:

Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Custom ID2:

✓ Zoom In ► Sample Name: MP53708-MB1 2 Acquired: 7/19/2010 23:57:01 Type: Unk

Custom ID3:

User: admin Comment: Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Avg Stddev .0003 .0000 .0000 .0001 .0000 .0021 .0001 .0006 .0001 .0001 .0000 .000 .0001 .000 0003 nnnn .0000 0002 97.63 225.7 20.51 738.0 20.51 %RSD 60.35 2.674 145.8 12.63 .0002 .0000 .0001 .0002 .0001 .0019 .0001 .0006 .0002 #2 .0003 .0000 .0000 .0001 -.0001 .0023 .0000 .0001 .0006 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179 .0006 Avg Stddev -.0001.0011 .0012.0006 .0006-.0001 .0110 .0079 0001 0000 0001 0013 0003 0004 0004 0001 0008 64.69 10.09 .0000 .0011 .0013 .0016 -.0004 .0003 .0002 .0110 .0085 #2 .0002 .0009 Mg2790 -.0057 .0043 \_2089 .0003 Flem Fe2599 Na5895 /02020 Pd3404 Si2124 Sn1899 Avg Stddev .0153 .0003 .001 .0016 .0196 .0016 .0000 .0003 .0005 %RSD 20.91 342.3 358.8 8.222 15.78 82.71 70.57 1.137 8704 #1 0088 - 0196 0151 0188 0003 0002 - 0002 0437 0004 .0066 .0081 -.0066 .0212 .0003 .0006 .0006 .0445 .0003 Flem Ti3349 Sr4077 W\_2079 7r3391 .0000 .0002 .0055 .0005 Stddev .0000 %RSD 90.12 129.1 9.870 80.91 .0001 .0003 -.0051 .0001 #2 .0000 .0000 -.0059 .0000 Int. Std. Y 3600 Y 3710 Y 2243 In2306

5573.9 9.6

.17253

5580.7

5567.1

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28063 53

.18768

28026.

28100.

.26022

2629.8

2620.1

160460

.04086

160510.

160410

%RSD

#2



Custom ID1:

Be3130

.5244

.0003

.0660

5247

.5242

Zn2062

.5180

0013

5171

.5189

Mg2790 5.446

.037

5 472

T13349

.5097 .0010

.2031

.5090

.5104

Y 3710

27635. 84.

30350

27694

2538.2

5347.6

Ba4554

.5114

.0001

.0261

.5113 .5115

V\_2924

4964

0002

.0313

4965

.4963

Fe2599

5.669

5 677

Sr4077

.0001

3.580

.0001

.0001

Y 3600

157090. 170.

10825

157210.

156960.

.012

User: admin

Comment:

Elem

Avg Stddev

%RSD

#1 #2

#1

#2

Elem

Stddev

%RSD

Avq

#2

Flem

Avg Stddev

%RSD

Int. Std.

Avg Stddev

%RSD

#2

#2

Elem

Avg Stddev

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◀ Zoom In ▶

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Sample Na Method: Ac User: admir Comment:	cutest1(v1		Acquired: de: CONC Cust		actor: 1.00	Type: Un 00000 om ID3:	k			
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	2.503	.0527	.0517	.5013	.2285	.2523	.7667	.5333	.0534	
Stddev	.001	.0000	.0001	.0002	.0023	.0007	.0038	.0001	.0002	
%RSD	.0190	.0262	.1890	.0446	.9934	.2846	.4926	.0210	.3787	
#1	2.503	.0527	.0516	.5011	.2269	.2528	.7640	.5333	.0535	
#2	2.503	.0527	.0517	.5015	.2302	.2518	.7694	.5332	.0532	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.5056	.5238	2.135	2.012	.5178	2.079	.5179	2.109	114.9	
Stddev	.0011	.0007	.001	.002	.0014	.002	.0001	.004	.1	
%RSD	.2083	.1329	.0246	.1192	.2699	.1169	.0222	.1932	.1083	
#1	.5049	.5233	2.135	2.010	.5168	2.080	.5178	2.112	115.0	
#2	.5063	.5243	2.134	2.013	.5188	2.077	.5180	2.106	114.8	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	5.494	38.28	61.23	573.6	.2048	.0005	0032	11.00	0023	
Stddev	.001	.03	.04	10.2	.0001	.0001	.0000	.01	.0000	
%RSD	.0208	.0841	.0582	1.770	.0548	11.59	.5415	.0540	.0099	
#1	5.493	38.26	61.21	566.4	.2047	.0005	0032	11.01	0023	
#2	5.495	38.30	61.26	580.8	.2049	.0004	0032	11.00	0023	
Elem Avg Stddev %RSD	Sr4077 1.425 .001 .0748	Ti3349 0094 .0003 3.226	W_2079 .0345 .0008 2.464	Zr3391 .0005 .0001 11.00						
#1 #2	1.424 1.426	0096 0092	.0339 .0351	.0005 .0004						
Int. Std. Avg Stddev %RSD	Y_3600 141950. 371. .26126	Y_3710 26525. 23. .08495	Y_2243 2361.1 .5 .02177	In2306 4696.7 2.0 .04161						
#1 #2	142210. 141680.	26509. 26541.	2361.5 2360.7	4698.1 4695.4						

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26467

26748.

2366.9

4709.4

142110.

142250.

#2

**∢** Zoom In ▶

Sample Name: JA50921-2         Acquired: 7/20/2010 0:21:14         Type: Unk           Method: Accutest1(v172)         Mode: CONC         Corr. Factor: 1.000000
Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:
Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280
Avg .4688 .0001 .00020007 .0205 .0007 .2343 .0011 .0008
Stddev         .0144         .0001         .0000         .0000         .0001         .0001         .0007         .0004         .0002           %RSD         3.069         236.2         12.71         1.438         .6903         12.99         .2802         35.65         24.14
%RSD 3.009 230.2 12.71 1.438 .0903 12.99 .2802 33.03 24.14
#1 .4587 .0000 .00020007 .0204 .0008 .2339 .0008 .0007
#2 .4790 .0002 .00030007 .0206 .0006 .2348 .0013 .0009
Elem V 2924 Zn2062 As1890 Tl1908 Pb2203 Se1960 Sb2068 Al3961 Ca3179
Avg .0001 .0048 .0033 .0013 .0021 .0013 .0009 .0533 88.28
Stddev .0001 .0000 .0001 .0004 .0009 .0006 .0008 .0072 2.75
%RSD 106.6 .7760 2.511 32.33 43.08 49.29 88.83 13.54 3.113
#1 .0002 .0048 .0032 .0010 .0027 .0009 .0014 .0482 86.33
#2 .0000 .0048 .0033 .0016 .0014 .0018 .0003 .0585 90.22
Elem Fe2599 Mq2790 K_7664 Na5895 B_2089 Mo2020 Pd3404 Si2124 Sn1899
Avg 4.374 12.88 33.89 539.4 .2056 .00150038 10.990023
Stddev .143 .48 1.05 27.9 .0004 .0001 .0006 .02 .0003
%RSD 3.267 3.746 3.110 5.172 .1930 8.045 15.75 .2116 12.93
#1 4.273 12.54 33.15 519.7 .2058 .00160043 11.010025
#2 4.475 13.22 34.64 559.1 .2053 .00140034 10.970021
Elem Sr4077 Ti3349 W 2079 Zr3391
Avg 1.4100098 .01110001
Stďdev .046 .0001 .0001 .0001
%RSD 3.244 1.493 1.068 49.44
#1 1.3780099 .01100002
#2 1.4420097 .01120001
Int. Std. Y_3600 Y_3710 Y_2243 In2306
Avg 142280. 27046. 2378.7 4775.8
Stďdev 140. 759. 2.6 .8
%RSD .09859 2.8048 .11130 .01711
<b>#1</b> 142380. 27582. 2376.8 4776.4
<b>#2</b> 142180. 26510. 2380.5 4775.2

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.0534

.7214

.0536 .0531

Ca3179

115.4

.0790

115.5

115.4

Sn1899 -.0027 .0004

- 0030

-.0024

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	inst QC	: IVI	A2400	/					4
									▼ Zoom In Zoom Ou
	ame: MP537			I: 7/20/2010		Type: L	Ink		
	ccutest1(v1	,	de: CONC		actor: 5.00				
User: adm Comment:		tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.4715	0001	0004	0022	.0213	.0023	.2342	.0032	.0011
Stddev	.0000	.0000	.0004	.0001	.0014	.0006	.0001	.0000	.0001
%RSD	.0011	11.28	99.37	5.223	6.387	25.32	.0345	1.299	12.62
#1	.4715	0001	0001	0021	.0223	.0027	.2341	.0032	.0012
#2	.4715	0001	0007	0022	.0203	.0019	.2342	.0032	.0010
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	0001	.0166	.0051	.0001	.0024	.0029	0008	.0627	89.26
Stddev	.0005	.0006	.0005	.0012	.0025	.0039	.0007	.0104	.29
%RSD	841.1	3.673	10.28	949.0	106.1	134.9	83.39	16.61	.3239
#1	0004	.0171	.0055	.0010	.0006	.0056	0003	.0701	89.05
#2	.0003	.0162	.0047	0007	.0042	.0001	0013	.0553	89.46
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	4.522	12.93	32.29	546.8	.2008	.0030	0034	10.60	0056
Stddev	.001	.05	.10	1.0	.0032	.0011	.0004	.11	.0001
%RSD	.0234	.3894	.3038	.1822	1.593	34.61	11.53	1.029	.9733
#1	4.522	12.96	32.23	546.0	.2031	.0023	0031	10.68	0057
#2	4.521	12.89	32.36	547.5	.1986	.0038	0037	10.52	0056
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	1.387	0099	0070	0003					
Stďdev	.003	.0006	.0006	.0003					
%RSD	.1827	6.551	8.951	100.0					
#1	1.385	0103	0066	0001					
#2	1.388	0094	0074	0006					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	152590.	27479.	2529.6	5270.6					
Stďdev	51.	119.	23.8	41.1					
%RSD	.03335	.43378	.94037	.78018					
#1	152550.	27563.	2512.7	5241.5					
#2	152620.	27394.	2546.4	5299.7					

Raw Data MA24667	page 105 of 217
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Raw Data MA24667 page 107 of 217

									◀ Zoom Zoom (	
Sample Nan	ne: MP537	'08-S4	Acquired:	7/20/2010	0:39:34	Type: Un	k			
Method: Acc			de: CONC		actor: 1.00		•			
User: admin		tom ID1:		om ID2:		m ID3:				
Comment:	Ous	ioni ib i.	Ousi	om ibz.	Cusic	/// ID3.				
Comment.										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	2.448	.0515	.0501	.4892	.2033	.2468	.7445	.5171	.0520	
Stddev	.002	.0002	.0000	.0007	.0000	.0003	.0016	.0016	.0001	
%RSD	.0620	.3348	.0248	.1414	.0045	.1369	.2165	.3031	.2196	
#1	2.447	.0517	.0501	.4897	.2033	.2470	.7433	.5160	.0519	
#2	2.449	.0514	.0501	.4887	.2033	.2466	.7456	.5182	.0521	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.4927	.5024	2.081	1.955	.5015	2.031	.5064	2.034	110.9	
Stddev	.0004	.0004	.002	.006	.0020	.005	.0002	.006	.0	
%RSD	.0821	.0711	.0789	.3044	.3933	.2532	.0347	.3079	.0190	
#1	.4924	.5026	2.082	1.951	.5001	2.035	.5066	2.029	110.9	
#2	.4930	.5021	2.080	1.959	.5029	2.028	.5063	2.038	110.9	
Elem	Fe2599	Mq2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	5.076	36.96	59.09	539.7	.1987	.0010	0037	10.58	0014	
Stddev	.005	.04	.02	1.6	.0009	.0001	.0011	.01	.0002	
%RSD	.0951	.1203	.0306	.2913	.4612	11.32	28.79	.1110	16.68	
#1	5.072	37.00	59.10	538.6	.1981	.0011	0044	10.59	0012	
#2	5.079	36.93	59.08	540.9	.1994	.0009	0029	10.57	0016	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	1.369	0087	.0356	.0008						
Stddev	.001	.0000	.0002	.0001						
%RSD	.0475	.4892	.4563	13.13						
#1	1.369	0086	.0358	.0007						
#2	1.368	0087	.0355	.0009						
Int. Std.	Y_3600	Y 3710	Y 2243	In2306						
Avg	141930.	26740.	2353.4	4702.6						
Stddev	8.	31.	1.6	5.6						
%RSD	.00578	.11520	.06811	.11822						
	141920.	26718.	2352.3	4706.6						
#1			2354.5	4698.7						

Raw Data MA24667	page 106 of 217

 Sample Name: MP53708-S3
 Acquired: 7/20/2010 0:33:32
 Type: Unk

 Method: Accutest1(v172)
 Mode: CONC
 Corr. Factor: 1.000000

Cd2288

.0514

.0001

.1101

.0513 .0514

As1890

2.133

2 130

2.136

K\_7664 63.66 .11

.1702

63.58

.0333

3.158

.0325

.0340

Y 2243

2351.5 2.8

.11975

2349.6

Co2286

.4994

.0001

.0220

.4993 .4995

TI1908

2.007

.0294

2.006 2.007

Na5895 556.5 1.8

.3157

557.7

7r3391

.0003

15.44

.0003

.0003

In2306

4685.6

.15830

4680.4

Custom ID3:

Cu3247

.2572

.0002

.0707

.2573 .2571

Se1960

2.080

.0335

2 079

2.080

Mo2020 .0006 .0001

0007

Mn2576

.7617

.0008

.0990

.7622 .7612

.5185

.0654

5182

.5187

Pd3404 -.0032 .0009

- 0039

Ni2316

.5317

.0007

.1335

.5312

.5322

Al3961

2.083

.6608

2 073

2.093

Si2124 10.76 .01

.1175

10.75

10.77

Cr2677

.2089

.0002

.2091 .2087

Pb2203

.5144

.1662

5150

.5138

B\_2089 .2016 .0001

2015

Be3130

.0525

.0001

.1706

.0526 .0525

Zn2062

.5142

5146

.5138

.2842

40 97

40.81

-.0092 .0004

3.831

-.0095

-.0090

Y\_3710

26709. 25.

09528

26691.

26727.

Ti3349 W\_2079

Mg2790 40.89

Ba4554

2.496

.004

2.493 2.498

V\_2924 .5043

.0005

5047

.5040

Fe2599 5.648 .001

.0229

5 647

Sr4077

1.407

.2027

1.405 1.409

Y 3600

142160. 52.

.03652

142120.

142200.

Comment: Elem

Avg Stddev

%RSD

#1 #2

#1

Elem

Avg Stddev

%RSD

Flem

Avg Stddev %RSD

Int. Std.

%RSD

#2

#1

Elem

Avg Stddev

									■ Zoom II Zoom O
									200m O
Sample Nam	ne: JA5092	21-2F	Acquired: 7	/20/2010 0	:45:37	Type: Unk			
Method: Acc			de: CONC		actor: 1.00	٥.			
User: admin	•	om ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.4732	.0000	.0003	0008	.0006	.0023	.2330	.0010	.0007
Stddev	.0014	.000	.0001	.0000	.0001	.0000	.0002	.0001	.0001
%RSD	.2906	90.87	28.01	2.864	9.428	.9797	.0698	5.087	16.51
#1	.4722	.0000	.0002	0008	.0007	.0023	.2331	.0010	.0008
#2	.4741	.0000	.0003	0008	.0006	.0023	.2329	.0010	.0006
Elem	V_2924 .0002	Zn2062 .0002	As1890 .0030	TI1908	Pb2203 .0004	Se1960 .0017	Sb2068 .0003	Al3961 .0276	Ca3179 88.24
Avg Stddev	.0002	.0002	.0030	.0010	.0004	.0017	.0003	.0003	.06
%RSD	17.55	11.32	9.267	16.49	151.2	4.483	53.38	1.066	.0690
#1	.0002	.0002	.0028	.0009	.0000	.0017	.0004	.0278	88.28
#2	.0001	.0002	.0032	.0011	.0008	.0018	.0002	.0274	88.20
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	4.157	12.90	33.97	538.4	.2032	.0013	0031	10.91	0027
Stddev	.009	.01	.09	12.4	.0001	.0002	.0001	.01	.0003
%RSD	.2190	.0931	.2631	2.309	.0396	13.90	2.960	.0608	9.765
#1	4.150	12.89	33.91	547.2	.2032	.0014	0031	10.91	0025
#2	4.163	12.91	34.03	529.6	.2031	.0012	0032	10.92	0029
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	1.417	0100	.0098	0001					
Stddev	.006	.0000	.0002	.0000					
%RSD	.4148	.3506	1.982	17.20					
#1	1.413	0099	.0097	0001					
#2	1.413	0100	.0100	0001					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	141780.	26856.	2364.1	4762.0					
Stddev	207. .14565	25. .09126	1.5 .06530	5.2 .10828					
	. 14303	.09120	.00550	.10020					
%RSD									
	141640. 141930.	26839. 26874.	2365.2 2363.0	4765.7 4758.4					

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Zoom In ▶
 Zoom Out

									◀ Zoom I Zoom O
Sample Na	ame: MP537	'08-SD2	Acquired	I: 7/20/2010	0 0:51:48	Type: L	Ink		
Method: A	ccutest1(v17	72) Mo	de: CONC	Corr F	actor: 5.00	00000			
User: adm		tom ID1:		om ID2:		om ID3:			
		tom ib i.	Cusi	om ibz.	Ousid	JIII IDJ.			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avq	.4723	0001	.0001	0029	.0009	.0066	.2344	.0014	.0006
Stddev	.0012	.0000	.0001	.0005	.0013	.0002	.0001	.0003	.0002
%RSD	.2595	17.55	199.3	15.88	143.3	3.091	.0350	22.29	36.51
#1	.4731	0001	.0000	0032	.0000	.0068	.2343	.0012	.0007
#2	.4714	0001	.0002	0026	.0018	.0065	.2345	.0012	.0004
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avq	0008	.0149	.0049	.0028	0007	.0031	.0000	.0421	88.58
Stddev	.0005	.0000	.0028	.0031	.0055	.0010	.001	.0110	.10
%RSD	60.91	.3333	57.15	112.0	814.7	33.24	2674.	26.23	.1183
#1	0012	.0149	.0029	.0006	0046	.0039	0010	.0343	88.51
#2	0005	.0148	.0069	.0050	.0032	.0024	.0009	.0499	88.66
Elem	Fe2599	Mq2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avq	4.184	13.01	32.25	544.7	.2033	.0010	0029	10.61	0049
Stddev	.005	.13	.01	.2	.0019	.0006	.0075	.02	.0001
%RSD	.1145	.9641	.0452	.0345	.9145	62.40	258.7	.2327	2.983
#1	4.187	12.93	32.26	544.6	.2046	.0014	0083	10.59	0048
#2	4.180	13.10	32.24	544.8	.2020	.0006	.0024	10.62	0050
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avq	1.391	0093	0122	0002					
Stďdev	.001	.0015	.0018	.0004					
%RSD	.0918	15.67	14.67	287.6					
#1	1.390	0083	0109	.0002					
#2	1.392	0103	0134	0005					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	152440.	27464.	2509.2	5234.4					
Stddev	105.	55.	3.8	.6					
%RSD	.06917	.20116	.15151	.01104					
#1	152370.	27503.	2511.9	5234.8					
#2	152520.	27425.	2506.5	5234.0					

Raw Data MA24667	page 109 of 217
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Sample Name	e: CCV	Acquire	d: 7/20/201	0 0:57:58	Type: QC
Method: Accu	itest1(v17	2) Mo	de: CONC	Corr. Fa	actor: 1.000000
User: admin	Custo	om ID1:	Custo	m ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	

Avg	2.076	2.036	1.864	1.981
Stddev	.002	.003	.005	.002
%RSD	.0851	.1611	.2745	.0908
#1	2.075	2.034	1.860	1.982
#2	2.077	2.038	1.868	1.980
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Check ?	CHK Pass	CHK Pass	CHK Pass	CHK Pass
Value				
Range				

Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S	Y_2243 Cts/S	In2306 Cts/S
Avg	153370.	27604.	2495.2	5118.4
Stddev %RSD	258. .16809	84. .30333	1.2 .04773	5.8 .11414
#1	153550.	27663.	2496.1	5122.5
#2	153190.	27545.	2494.4	5114.2

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	stom ID1:	Cus	tom ID2:	Cust	om ID3:			
Ba4554 ppm 2.012 .002 .1044	ppm 2.078 .001		ppm 2.023 .000	ppm 2.036 .007	ppm 2.006 .002	ppm 2.087 .005	ppm 2.045 .002	Ag328 ppr .249 .000 .268
2.014 2.011	2.077 2.078	2.006 2.007	2.023 2.023	2.030 2.041	2.007 2.005	2.083 2.090	2.044 2.046	.250 .249
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pas
_	ppm 2.047 .000		ppm 2.067 .001	ppm 2.026 .000	ppm 1.996 .000	ppm 1.995 .000	ppm 39.67	ррі 40.4 .1
2.018 2.023		1.989 1.990	2.067 2.068	2.027 2.026	1.996 1.996	1.995 1.995	39.64 39.70	
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pas
Fe2599 ppm 40.47 .04 .1075	ppm 39.92 .21	K_7664 ppm 39.17 .08 .2091	39.56 .00	2.024	ppm 2.018 .002	ppm 2.028 .000	5.029 .002	
40.44 40.50		39.11 39.23	39.56 39.56	2.023 2.026	2.017 2.019	2.027 2.028	5.028 5.031	2.03 2.03
	Ba4554 ppm 2.012 .002 .1044 2.011 Chk Pass  V_2924 ppm 2.020 .003 .1622 2.018 2.023 Chk Pass  Fe2599 ppm 40.47 .04 .1075 40.44	Ba4554 Ba3130 ppm ppm 2.012 2.078 .002 .0011 2.078 2.014 2.077 2.011 2.078 Chk Pass Pass Pass Pass Pass Pass Pass Pas	Ba4554 Be3130 Cd2288 ppm ppm ppm ppm 2.012 2.078 2.007 .002 .001 .001 .1044 0.295 .0258 2.014 2.077 2.006 2.011 2.078 2.007 Chk Pass Chk Pass Chk Pass  V_2924 Zn2062 As1890 ppm ppm ppm ppm 2.020 2.047 1.990 .003 .000 .001 .1622 .0149 .0322 2.018 2.046 1.989 2.023 2.047 1.990 Chk Pass Chk Pass Chk Pass  Fe2599 Mg2790 K_7664 ppm ppm ppm du.47 3.992 39.17 .044 2.1 .08 .1075 .5372 .2091 40.44 3.9.77 3.9.11	Ba4554 Be3130 Cd2288 Co2286 ppm ppm ppm ppm ppm 2.012 2.078 2.007 2.023 .002 .001 .001 .001 .1044 .0295 .0258 .0178 2.014 2.077 2.006 2.023 2.011 2.078 2.007 2.023 Chk Pass Chk Pass Chk Pass Chk Pass  V_2924 Zn2062 As1890 T11908 ppm ppm ppm ppm ppm ppm ppm 2.020 2.047 1.990 2.067 .003 .000 .001 .001 .1622 .0149 .0322 .0324 2.018 2.046 1.989 2.067 2.023 2.047 1.990 2.068 Chk Pass Chk Pass Chk Pass Chk Pass  Fe2599 Mg2790 K_7664 Na5895 ppm ppm ppm ppm 40.47 39.92 39.17 39.56 .04 2.1 .08 .00 .1075 .5372 .2091 .0039 40.44 39.77 39.11 39.56	Ba4554 Be3130 Cd2288 Co2286 Cr2677 ppm ppm ppm ppm ppm ppm ppm ppm 2.012 2.078 2.007 2.023 2.036 .002 .001 .001 .000 .007 .1044 .0295 .0258 .0178 .3630 2.014 2.077 2.006 2.023 2.030 2.011 2.078 2.007 2.023 2.041  Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass  V_2924 Zn2062 As1890 T11908 Pb2203 ppm	Ba4554         Be3130         Cd2288         Co2286         Cr2677         Cu3247           ppm         ppm	Ba4554         Be 3130         Cd2288         Co2286         Cr2677         Cu3247         Mn2576           ppm         ppm	Ba4554         Be3130         Cd2288         Co2286         Cr2677         Cu3247         Mn2576         NI2316           ppm         ppm

#### Raw Data MA24667 page 110 of 217

									◀ Zoom In ▶
									200III Out
Sample Na	me: CCB	Acquire	d: 7/20/201	0 1:03:56	Type: C	2C			
Method: Ac	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	0000			
User: admi Comment:	n Cus	tom ID1:	Custo	om ID2:	Custo	m ID3:			
Elem Units Avg Stddev %RSD	Ba4554 ppm .0002 .0001 30.30	ppm .0003 .0000	ppm .0003 .0001	Co2286 ppm .0002 .0003 166.1		Cu3247 ppm .0003 .0001 49.91	Mn2576 ppm .0004 .0000 9.883	Ni2316 ppm .0003 .0003 77.59	Ag3280 ppm .0001 .0002 372.9
#1 #2	.0003 .0002	.0003 .0004	.0004 .0003	.0004 .0000	.0006 .0004	.0002 .0003	.0003 .0004	.0005 .0002	0001 .0002
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass					
Elem Units Avg Stddev %RSD	V_2924 ppm .0003 .0001 27.71	Zn2062 ppm .0001 .0000 25.25	As1890 ppm .0015 .0006 39.54	TI1908 ppm .0009 .0008 86.62	ppm 0005 .0009		ppm .0004 .0007	Al3961 ppm .0032 .0022 70.53	Ca3179 ppm .0111 .0000 .0241
#1 #2	.0002 .0003	.0001 .0001	.0011 .0020	.0015 .0004	.0002 0011	.0018 .0014	0001 .0009	.0048 .0016	.0111 .0111
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass					
Elem Units Avg Stddev %RSD	Fe2599 ppm .0084 .0007 7.872	Mg2790 ppm .0007 .0074 1128.	K_7664 ppm .0614 .0115 18.73	Na5895 ppm .1520 .0034 2.236	B_2089 ppm .0021 .0000 1.242	Mo2020 ppm F .0022 .0004 19.70	Pd3404 ppm .0004 .0002 52.10	Si2124 ppm .0024 .0003 10.94	Sn1899 ppm .0002 .0000 19.04
#1 #2	.0089 .0079	.0059 0046	.0695 .0533	.1544 .1496	.0022 .0021	.0025 .0019	.0006	.0022 .0026	.0002 .0003
Check ? High Limit Low Limit	Chk Pass	Chk Fail .0021 0021	Chk Pass	Chk Pass	Chk Pass				

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ppm .0014

.0000

2.726

.0014

.0014

Ca3179

ppm 372.3

.1939

372.8

Sn1899

.0013

17.02

-.0085

-.0067

User: admin

Comment: Elem

Units

Avg Stddev

%RSD

Check?

Units

Avg Stddev %RSD

Check?

High Limit Low Limit Elem

Units

Avg Stddev

%RSD

Check ?

High Limit Low Limit

Zoom In ▶
 Zoom Out

#2

High Limit Low Limit Flem

#2

Sample Name: ICSA Acquired: 7/20/2010 1:10:09 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

ppm .0024 .0000

1.660

.0023

.0024

As1890

.001

-.0005

.0005

K\_7664

ppm .0821 .0188

22.94

.0688

.0954

.0000

Custom ID2:

Co2286

ppm .0007

.0002

34.12

.0008

.0005

TI1908

ppm -.0016

.0009

-.0009

Na5895

ppm 1.163 .013

1.100

1.154

1.172

Custom ID3:

Cu3247

ppm .0004 .0000

7.594

.0004

.0004

Se1960

ppm -.0023

.0034

.0002

-.0047

Mo2020

.0004

80.42

.0008

.0002

Mn2576

ppm -.0006

.0000

5.076

-.0006

-.0006

Sh2068

ppm .0016

.0007

.0011

Pd3404

.0003

.6053

-.0541

-.0537

Ni2316

ppm -.0043 .0004

9.139

-.0045

-.0040

Al3961

ppm 480.2 1.9

.3951

478.8

Si2124

ppm -.0010

.0001

4.962

-.0011

-.0010

Cr2677

ppm .0020

.0003

15.26

.0018

.0023

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Pb2203

ppm .0019

.0014 75.74

.0029

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

B\_2089

ppm .0003

.0002

48.60

.0002

.0004

Chk Pass Chk

Custom ID1:

Be3130

ppm .0001

.0000

22.28

.0001

.0000

ppm -.0059

.0002

-.0058

Mg2790

ppm 512.1

.1648

512.7

511.5

Ba4554

ppm -.0039

.0000

.3017

-.0039

-.0039

ppm -.0009

.0001

-.0010

-.0008

Fe2599

ppm 190.1 1.8

.9636

191.4

188.8

V\_2924 Zn2062

Sample Name: CCB Acquired: 7/20/2010 1:03:56 Type: QC											
Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000											
User: admin Custom ID1: Custom ID2: Custom ID3:											
Comment:											
Elem	Sr4077	Ti3349	W_2079	Zr3391							
Units	ppm	ppm	ppm	ppm							
Avg	.0004			.0007							
Stddev	.0000			.0000							
%RSD	6.496	7.913	15.18	2.167							
#1	.0004	.0005	.0029	.0007							
#2	.0004	.0005	.0024	.0007							
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass							
High Limit											
LOW LITTIL											
Int. Std.	Y_3600	Y_3710	Y_2243	In2306							
Units	Cts/S	Cts/S	Cts/S								
Avg	158050.	27814.									
Stddev	4.	127.		6.9							
%RSD	.00241	.45599	.08613	.12612							
#1	158050.	27724.	2578.8	5472.7							
#2	158050.	27903.	2575.7	5463.0							

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Method: Ad		2) Mo	de: CONC	Corr. F	actor: 1.000000
User: admi	n Cust	om ID1:	Cusi	om ID2:	Custom ID3:
Comment:					
Elem Units Avg Stddev %RSD		ppm .0039 .0003	ppm	ppm .0019 .0002	
#1 #2	.0008 .0009	.0037 .0041	.0350 .0360		
Check ? High Limit Low Limit	Chk Pass (	Chk Pass	Chk Pass	Chk Pass	
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 140700. 129. .09180	Cts/S 26331. 133.	Cts/S 2283.5 .0	Cts/S 4509.1 .7	
#1 #2	140610. 140790.		2283.5 2283.5		

Daw Data MAGACCT	name 44E of 247

Raw Da	ta MA2466	67 page	114 of 2	17						
nan Da		o. pago							<b>∢</b> Zoon	
									Zoom	0
Sample N	lame: ICSAE	B Acqui	ired: 7/20/2	2010 1:16:2	28 Тур	e: QC				
Method: A	Accutest1(v1		de: CONC		Factor: 1.0	00000				
User: adn		stom ID1:	Cus	tom ID2:	Cust	om ID3:				
Comment	t:									
Elem	Ba4554		Cd2288							
Units	ppm									
Avg Stddev	.4979	.4880	1.039		.4692		.4877			
%RSD	.1051									
#1	.4976		1.041	.4682						
#2	.4983	.4884	1.038	.4680	.4711	.4687	.4890	.9975	1.040	
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value										
Range										
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	_ ppm	ppm	ppm	ppm			ppm	ppm	ppm	
Avg	.4611	.9149		1.001	.9916					
Stddev %RSD	.0006 .1195				.0040					
70K3D	.1173	.0033	.1774	.0730	.4074	.0000	.3000	.3770	.4307	
#1	.4607		1.056							
#2	.4615	.9149	1.053	1.001	.9945	1.001	1.040	495.5	377.3	
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value	Orine i dos	OTHER GOS	OTHER GOS	OTIK T GOO	011111 000	011101 000	OTHER GOO	0111(1 000	OTHER GOOD	
Range										
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Units	ppm		ppm							
Avg	185.4	505.0	.1053	1.219	.0101					
Stddev %RSD	.3		.0032							
%K3D	.1607	.4965	3.022	1.121	2.243	.0367	.3444	6.535	2.540	
#1	185.6	503.2	.1075	1.210						
#2	185.2	506.8	.1030	1.229	.0102	.5045	.5028	.0095	0079	
Check ? Value	Chk Pass	Chk Pass	None	None	None	Chk Pass	Chk Pass	None	None	
Range										

Raw Data MA24667 page 116 of 217



Comment:

Value Range

◀ Zoom In ▶ Zoom Out

						Zoom O
Sample Name	e: ICSAB	Acquir	ed: 7/20/20	10 1:16:28	Type: QC	
Method: Accu	utest1(v17	(2) Mo	de: CONC	Corr. Fa	ctor: 1.000000	
User: admin	Cust	om ID1:	Custo	m ID2:	Custom ID3:	
Comment:						
Elem	Sr4077	Ti3349	W_2079	Zr3391		
Units	ppm	ppm	ppm	ppm		
Avg	.0019	.0039	.4607	.4851		
Stddev	.0000	.0003	.0022	.0012		
%RSD	1.741	7.784	.4769	.2542		
#1	.0020	.0041	.4591	.4842		
#2	.0020	.0037	.4622	.4860		
π <sub>2</sub>	.0019	.0037	.4022	.4000		
Check?	None	None	Chk Pass (	Chk Pass		
Value						
Range						
		1/ 0740	14 0040			
	Y_3600	Y_3710	Y_2243	In2306		
Units Avg	Cts/S 139810.	Cts/S 26221.	Cts/S 2241.0	Cts/S 4435.1		
Stddev	855.	95.	241.0	37.0		
%RSD	.61171	.36144	1.1112	.83385		
7011GB	.01171	.00111		.00000		
#1	140420.	26288.	2223.4	4408.9		
#2	139210.	26154.	2258.6	4461.2		

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		2) Mo	de: CONC		actor: 1.000000
Elem Units Avg Stddev %RSD	Sr4077 ppm 2.098 .001 .0262	ppm 2.062 .003	ppm 1.925 .007	ppm 2.014 .001	
#1 #2	2.098 2.099	2.061 2.064	1.920 1.930	2.014 2.013	
Check ? Value Range	Chk Pass (	Chk Pass	Chk Pass	Chk Pass	
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 153060. 329. .21470	Y_3710 Cts/S 27219. 50. .18354	Cts/S 2503.4 3.0	Cts/S 5123.1 .7	
#1 #2	153290. 152820.	27254. 27184.	2501.2 2505.5	5123.5 5122.6	

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Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm								
Avg	2.033	2.108	2.026	2.044	2.072	2.022	2.118	2.072	.2526
Stddev	.001	.000	.003	.001	.004	.000	.003	.004	.0001
%RSD	.0244	.0042	.1539	.0233	.1943	.0037	.1417	.2036	.0488
#1	2.033	2.108	2.028	2.044	2.069	2.022	2.116	2.069	.2527
#2	2.033	2.108	2.023	2.043	2.075	2.022	2.120	2.075	.2525
Check ? Value Range	Chk Pass								
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm								
Avg	2.050	2.077	2.006	2.095	2.054	2.008	2.010	40.22	41.31
Stddev	.001	.001	.004	.002	.001	.001	.003	.01	.02
%RSD	.0314	.0268	.1889	.1010	.0600	.0703	.1415	.0360	.0451
#1	2.049	2.078	2.009	2.093	2.053	2.007	2.012	40.20	41.30
#2	2.050	2.077	2.003	2.096	2.054	2.009	2.008	40.23	41.32
Check ? Value Range	Chk Pass								
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Units	ppm								
Avg	41.19	40.86	39.54	40.05	2.039	2.040	2.044	5.058	2.062
Stddev	.04	.11	.04	.01	.002	.002	.001	.004	.002
%RSD	.0981	.2803	.0951	.0375	.0773	.1067	.0364	.0898	.1110
#1	41.22	40.78	39.51	40.04	2.040	2.038	2.043	5.061	2.063
#2	41.16	40.94	39.56	40.06	2.038	2.041	2.044	5.055	2.060

Check? Chk Pass 
Sample Name: CCV Acquired: 7/20/2010 1:22:45 Type: OC
Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:

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										◀ Zoom In
ethod: Accutest1(v172)										Zoom Ou
ethod: Accutest1(v172)										
Custom ID1:   Custom ID2:   Custom ID3:	Sample Na	me: CCB	Acquire	d: 7/20/201	0 1:28:44	Type: C	2C			
Ba4554   Be3130   Cd2288   Co2286   Cr2677   Cu3247   Mn2576   Ni2316   Ag3280   Nils   Ag3280   Ag3	Method: Ad	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	0000			
Ba4554   Be3130   Cd2288   Co2286   Cr2677   Cu3247   Mn2576   Ni2316   Ag3280   Nils   Ag3280   Ag3	User: admi	n Cus	tom ID1:	Custo	om ID2:	Custo	m ID3:			
em Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 nits ppm ppm ppm ppm ppm ppm ppm ppm ppm pp										
nilts         ppm         ppm </td <td>Comment.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Comment.									
nilts         ppm         ppm </td <td>Flom</td> <td>Doveev</td> <td>Do2120</td> <td>C42300</td> <td>C02204</td> <td>Cr2477</td> <td>Cu2247</td> <td>Mn2E74</td> <td>NII 2214</td> <td>Aa2200</td>	Flom	Doveev	Do2120	C42300	C02204	Cr2477	Cu2247	Mn2E74	NII 2214	Aa2200
vg         .0002         .0001         .0002         .0001         .0002         .0001         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0002         .0003         .0002         .0003         .0002         .0003         .0002         .0003         .0004         .0002         .0001         .0002         .0001         .0004         .0002         .0001         .0002         .0004         .0002         .0001         .0002         .0004         .0002         .0001         .0002         .0004         .0002         .0001         .0002         .0004         .0004           deck ? gh Limit         Chk Pass	Units									
adder         .0002         .0001         .0000         .0004         .0002         .0000         .0003         .0003         .0003         .0003         .0003         .0003         .0003         .0004         .0002         .0000         .0002         .0003         .0002         .0001         .0001         .0001         .0001         .0001         .0001         .0001         .0002         .0002         .0001         .0001         .0001         .0018         .0007         .0079         .0141         .0004         .0003         .0001         .0001         .0001         .0001         .0001         .0001         .0001         .0001         .0001         .0001 <th< td=""><td>Ava</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	Ava									
RSD 94.23 46.83 7.791 278.0 62.15 11.93 17.68 78.59 161.0 1										
heck ? Chk Pass Chk P	70K3D	94.23	40.83	7.791	278.0	02.15	11.93	17.08	78.59	101.0
Chk Pass	#1	.0001	.0001	.0001	.0004	.0002	.0001	.0002	.0004	.0004
Page	#2									
Page										
March   Marc	Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Page	High Limit									
nilts         ppm         ppm </td <td>Low Limit</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Low Limit									
nilts         ppm         ppm </td <td></td>										
vg         .0003         .0002         .0015         .0015         .0001         .0018         .0007         .0079         .014 rd           ddev         .0002         .0001         .0004         .0008         .0000         .0008         .0000         .0001         .0011         .0001         .0000         .0008         .0000         .0011         .0011         .0001         .0001         .0001         .0001         .0001         .0001         .0002         .0007         .0036         .0084           ebck ?         .0002         .0002         .0017         .0021         .0000         .0012         .0007         .0123         .0198           ebck ?         .0002         .0002         .0017         .0021         .0000         .0012         .0007         .0123         .0198           ebck ?         .0002         .0002         .0017         .0021         .0000         .0012         .0007         .0123         .0198           ebck Pass         .004 Pass         .004 Pass         .004 Pass         .0007         .0014         .0014         .0020         .0014         .0014         .0014         .0020         .0014         .0014         .0014         .0023         .0001         .0	Elem									
adder         .0002         .0001         .0004         .0008         .0000         .0008         .0000         .0061         .0081           RSD         55.97         22.99         25.59         51.06         59.34         47.35         4.403         77.03         57.42           1         .0004         .0003         .0012         .0010         .0001         .0002         .0007         .0036         .0084           2         .0002         .0002         .0017         .0021         .0000         .0012         .0007         .0123         .0198           eheck ? gh Limit         Chk Pass	Units									
RSD	Avg									
	Stddev									
2	%RSD	55.97	22.99	25.59	51.06	59.34	47.35	4.403	77.03	57.42
2	#1	0004	0002	0012	0010	0001	0000	0007	0027	0004
check?         Chk Pass         <	#1									
rem Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Pd3404 Si2124 Sn1899 Nils ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	#2	.0002	.0002	.0017	.0021	.0000	.0012	.0007	.0123	.0198
rem Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Pd3404 Si2124 Sn1899 Nils ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
w Limit  em Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Pd3404 Si2124 Sn1899 nits ppm ppm ppm ppm ppm ppm ppm ppm ppm pp		OTIK I d33	OTIK I doo	OTIK I dos	Olik i dasa	Olik i dasa	Olik i doo	Olik i dasa	Olik i dasa	Onk i doo
em         Fe2599         Mg2790         K_7664         Na5895         B_2089         Mo2020         Pd3404         SI2124         Sn1899           nlls         ppm	Low Limit									
nits         ppm         ppm <td>LOW LITTIE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	LOW LITTIE									
vg         .0076         .0056         .0363         .0789         .0016         F .0023         .0001         .0014         .0002           ddev         .0029         .0005         .0014         .0003         .0003         .0005         .0005         .0007         .0003           RSD         37.57         9.025         3.891         .4234         20.19         23.50         .752.2         48.98         192.1           1         .0056         .0053         .0353         .0791         .0019         .0027         .0003         .0019         .0004           2         .0097         .0060         .0372         .0786         .0014         .0019        0004         .0004         .0009        0001           heck?         Chk Pass	Elem	Fe2599	Ma2790	K 7664	Na5895	B 2089	Mo2020	Pd3404	Si2124	Sn1899
vg	Units	mag	mag	mag	mag	npm	ppm	mag	ppm	mag
ddev         .0029         .0055         .0014         .0003         .0003         .0005         .0005         .0007         .0003           RSD         37.57         9.025         3.891         .4234         20.19         23.50         752.2         48.98         192.1           1         .0056         .0053         .0353         .0791         .0019         .0027         .0003         .0019         .0004           2         .0097         .0060         .0372         .0786         .0014         .0019         .0004         .0009        0001           heck ?         Chk Pass	Avg									
RSD 37.57 9.025 3.891 .4234 20.19 23.50 752.2 48.98 192.1  1 .0056 .0053 .0353 .0791 .0019 .0027 .0003 .0019 .0004 2 .0097 .0060 .0372 .0786 .0014 .0019 .0004 .0009 .0001  heck? Chk Pass Chk P	Stddev	.0029	.0005	.0014	.0003	.0003	.0005	.0005	.0007	.0003
2 .0097 .0060 .0372 .0786 .0014 .00190004 .00090001 heck? Chk Pass ch	%RSD									
2 .0097 .0060 .0372 .0786 .0014 .00190004 .00090001 heck? Chk Pass ch										
heck ? Chk Pass Chk P	#1									
igh Limit .0021	#2	.0097	.0060	.0372	.0786	.0014	.0019	0004	.0009	0001
igh Limit .0021	011-0	Ohli De	Ohli De	Ohli Di	Ohli Di	Ohli Di	ONLE "	Ohli De	Ohli De	Ohli Des
		Cnk Pass	CNK Pass	CNK Pass	CNK Pass	CNK Pass		CNK Pass	CNK Pass	Cnk Pass
w Limit0021										
	Low Limit						0021			

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.0006

8.367

.0006

Ca3179

62.04

.2942

62.16 61.91

Sn1899 -.0020 .0002

10.73

- 0021

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		<u> </u>					◀ Zoom In I Zoom Out
Sample Na Method: A User: admi Comment:	ccutest1(v17 in Cust		d: 7/20/201 de: CONC Custo		Type: QC actor: 1.000000 Custom ID3	i:	
Elem Units Avg Stddev %RSD	Sr4077 ppm .0001 .0001 100.1	Ti3349 ppm .0004 .0001 33.67	W_2079 ppm .0114 .0014 12.45	Zr3391 ppm .0008 .0000 1.736			
#1 #2	.0000 .0002	.0003 .0005	.0124 .0104	.0008 8000.			
Check ? High Limit Low Limit		Chk Pass	Chk Pass	Chk Pass			
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 157820. 98. .06217	Y_3710 Cts/S 27624. 71. .25883	Y_2243 Cts/S 2584.5 4.0 .15308	In2306 Cts/S 5467.8 2.6 .04697			
#1 #2	157890. 157750.	27675. 27573.	2581.7 2587.3	5466.0 5469.6			

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		- 1 5							
									Zoom In ▶  Zoom Out
									Zoom Out
Sample N	lame: JA5023	36-2 A	cquired: 7/2	20/2010 1:4	11:04 7	Type: Unk			
Method: A	Accutest1(v1)	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm		tom ID1:	Cust	om ID2:	Custo	om ID3:			
		tom ib i.	Cusi	om ibz.	Cusic	JIII IDJ.			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0328	.0001	.0000	.0004	.0027	.0036	.3822	.0023	.0004
Stddev	.0002	.0000	.0000	.0001	.0005	.0003	.0002	.0000	.0001
%RSD	.5650	7.470	102.0	15.99	18.01	7.498	.0401	.4501	19.89
#1	.0327	.0001	.0001	.0003	.0030	.0038	.3823	.0023	.0005
#2	.0329	.0001	.0000	.0004	.0023	.0035	.3821	.0023	.0004
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0028	.0099	0008	0003	.0018	.0012	0002	1.355	45.23
Stddev	.0000	.0000	.0004	.0003	.0001	.0007	.0008	.005	.03
%RSD	1.343	.3988	47.59	105.8	3.145	60.59	515.4	.3787	.0771
#1	.0028	.0099	0011	0001	.0019	.0018	0007	1.352	45.26
#2	.0028	.0100	0005	0006	.0018	.0007	.0004	1.359	45.21
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avq	3.283	10.67	5.279	13.28	.0391	.0056	0025	8.142	0023
Stddev	.004	.02	.026	.01	.0001	.0000	.0007	.013	.0001
%RSD	.1284	.1731	.4939	.0457	.2173	.0585	26.97	.1570	5.617
#1	3.280	10.68	5.261	13.28	.0392	.0056	0030	8.133	0022
#2	3.286	10.66	5.298	13.29	.0390	.0056	0020	8.151	0024
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avq	.1739	.0326	.0123	.0016					
Stddev	.0004	.0000	.0002	.0000					
%RSD	.2039	.1050	1.352	2.630					
#1	.1737	.0326	.0124	.0016					
#2	.1742	.0326	.0122	.0016					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	155950.	27644.	2520.0	5306.6					
Stddev	108.	39.	7.6	9.5					
%RSD	.06927	.14180	.29973	.17888					
#1	156030.	27616.	2525.4	5313.3					
#2	155870.	27671.	2514.7	5299.9					

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 Sample Name: JA50236-1
 Acquired: 7/20/2010 1:34:57
 Type: Unk

 Method: Accutest1(v172)
 Mode: CONC
 Corr. Factor: 1.000000

Cd2288

.0001

.0000

1.952

.0001

As1890

-.0016 .0001

5.340

- 0016

-.0017

K\_7664 2.775 .002

.0815

2 776

.0158

.6710

.0157

.0159

Y 2243

2474.9

.04260

2474.2

Custom ID2:

Co2286

-.0004

.0000

5.586

-.0004 -.0004

TI1908

-.0001 .0008

0005

-.0003

Na5895 103.5

.1410

103.6

103.4

7r3391

.0009

4.444

.0009

.0010

In2306

5145.3

.05698

5143.2

Custom ID3:

Cu3247

.0015

.0000

.4082

.0015 .0015

Se1960

.0007

127.2

0014

.0001

.0000

0009

Mo2020 .0008

Mn2576

.9318

.0007

.0727

.9323 .9313

.0003

0009

-.0002

Pd3404 -.0018 .0001

- 0017

Ni2316

.0072

.0001

1.105

.0072

.0073

Al3961

.1682

0020

.1668 .1696

Si2124 7.716 .004

.0455

7.714 7.719

Cr2677

.0027

.0002

7.857

.0025 .0028

Pb2203

.0008

9.066

0009

.0008

B\_2089 .0468

.0002

.3370

0467

.0469

Custom ID1:

Be3130

.0000

.0001

.0001

Zn2062

.0022

0021

.0023

.11

.6566

16 97

-.0026 .0003

12.39

-.0024

-.0028

Y\_3710

27260. 132.

48462

27167.

27354.

Ti3349 W\_2079

Mg2790 16.90

Ba4554

.0288

.0000

.1048

.0288

.0288

.0004

38.59

0003

.0005

Fe2599 .3435

> 3423 .3447

Sr4077

.1780

.3466

.1784

.1775

Y 3600 151290. 8.

.00543

151290.

151280.

V\_2924

User: admin

Comment: Elem

%RSD

#1 #2

#1

#2

Elem

Avg Stddev

%RSD

Flem

Avg Stddev %RSD

Int. Std.

%RSD

#2

#1

Elem

Avg Stddev

									▼ Zoom II Zoom O
Sample Na	me: JA502	36-3 A	cquired: 7/2	20/2010 1:4	17:11 T	Гуре: Unk			
Method: Ad	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admi	n Cust	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Comment.									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0002	.0000	.0000	0001	.0001	.0005	.0002	0001	.0000
Stddev	.0001	.000	.0000	.0000	.0000	.0001	.0000	.0001	.000
%RSD	63.09	298.4	556.8	64.27	26.01	22.40	4.301	141.1	656.6
#1	.0001	.0000	.0000	0001	.0001	.0006	.0002	0001	0002
#2	.0003	.0000	.0000	.0000	.0001	.0004	.0002	.0000	.0001
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0000	.0013	0003	0002	.0005	.0013	.0006	.0074	.0374
Stddev	.000	.0000	.0005	.0002	.0001	.0002	.0003	.0036	.0019
%RSD	228.6	1.652	180.8	75.73	28.92	14.36	49.14	48.44	5.157
#1	.0000	.0013	.0001	0001	.0006	.0011	.0004	.0099	.0388
#2	0001	.0013	0006	0004	.0004	.0014	.0008	.0048	.0361
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0053	.0007	.0439	.0734	.0002	.0004	0008	.0140	.0001
Stddev	.0002	.0038	.0036	.0029	.0003	.0000	.0002	.0004	.0002
%RSD	3.424	549.2	8.249	3.934	132.1	7.218	25.59	2.864	240.5
#1	.0054	0020	.0465	.0754	.0005	.0004	0006	.0137	0001
#2	.0052	.0034	.0414	.0713	.0000	.0004	0009	.0143	.0003
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0000	.0001	.0006	.0002					
Stddev	.0000	.0000	.0003	.0000					
%RSD	65.14	7.489	52.97	.8009					
#1	.0000	.0001	.0008	.0002					
#2	.0000	.0001	.0004	.0002					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	158290.	27696.	2568.1	5462.8					
Stddev	80.	17.	4.3	5.3					
%RSD	.05062	.05990	.16923	.09790					
	158230.	27684.	2571.2	5466.6					
#1	158340.	27707.	2565.0	5459.1					

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.0012

.0001

5.404

.0012

.0013

Ca3179

158.5

.7579

159 3

157.7

Sn1899 -.0028

.0000

1.644

- 0028

**o** 

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Sample Name: JA50236-5 Acquired: 7/20/2010 1:59:36 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

.0004

.0001

22.36

.0003 .0004

As1890

-.0028

0006

22.18

0032

-.0024

K\_7664

2.302

2 300

2.304

.0003

1.700

.0169

.0165

Y 2243

2417.5 1.3

05337

2418.4

2416.6

W 2079

Custom ID2:

Co2286

-.0002

.0001

49.45

-.0003

-.0001

TI1908

-.0007

0001

19.79

- 0008

-.0006

Na5895

69.88

.0093

69.87

7r3391

.0005

14.00

.0005

.0004

In2306

5017.9

05723

5019.9

5015.8

.01

Custom ID3:

Cu3247

.0011

.0002

15.81

.0010

.0012

Se1960

.0011

79.46

0018

.0005

.0000

- 0027

-.0027

Mo2020 -.0027

Mn2576

.2791

.0002

.0892

.2793

.2790

Sb2068

-.0002

0003

152.3

0000

-.0005

Pd3404

.0028

.0004

- 0030

Ni2316

.0019

.0000

1.326

.0019

.0019

Al3961

.1485

0084

5.637

1545

.1426

Si2124 13.91

.00

.0202

13 91

Cr2677

-.0001

.0001

197.3

.0001

Pb2203

.0009

0002

23.85

0010

.0007

B\_2089

.0275

.0004

1.632

0272

Custom ID1:

Be3130

.0000

86.29

.0000

.0000

Zn2062

.0015

0001

0014

.0015

Mg2790

41.78

.4624

41 92

Ti3349

.0005

5.462

-.0088

-.0081

Y 3710

27038. 204.

75600

26893.

27182

.19

.000

Ba4554

.0546

.0002

.3004

.0545

.0547

0010

0000

.2416

0010

.0010

2848

.0010

.3675

2855

Sr4077

.3028

.0124

.3028

.3029

Y 3600

149320. 117

07811

149240.

149400.

Fe2599

V\_2924

User: admin

Comment:

Elem

Avg Stddev

%RSD

#1 #2

#1

#2

Elem

%RSD

Flem

Avg Stddev

%RSD

Int. Std.

%RSD

#2

#1

#2

Avq Stddev

Elem

Avg Stddev

									◀ Zoom Zoom C
Sample Na	me: JA502	367 A	cauired: 7/	20/2010 2:1	11.55 7	Гуре: Unk			
						J.			
	ccutest1(v1		de: CONC		actor: 1.00				
User: admi	in Cusi	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avg	.1554	.0000	.0001	0007	.0004	.0018	.0856	.0006	.0008
Stddev	.0002	.000	.0002	.0001	.0000	.0000	.0001	.0001	.0002
%RSD	.1102	326.9	142.6	7.848	.8475	1.277	.0774	24.35	22.28
#1	.1553	.0000	.0000	0008	.0004	.0018			.0009
#2	.1556	.0000	.0003	0007	.0004	.0018	.0856	.0007	.0007
Elem	V_2924	Zn2062	As1890	TI1908		Se1960		Al3961	
Avg	.0007	.0024	0019	.0000	.0000	.0005	.0004	.1504	93.70
Stddev	.0000	.0000	.0001	.000	.0002	.0007	.0009	.0023	.39
%RSD	1.364	1.644	6.766	1527.	342.1	144.5	197.9	1.497	.4144
#1	.0007	.0024	0018	0003	.0002	.0000		.1520	
#2	.0007	.0024	0020	.0002	0001	.0010	0002	.1488	93.42
Elem	Fe2599		K_7664	Na5895	B_2089			Si2124	
Avg	.2715	25.04	2.362	90.70	.0517	0016	0016	9.302	0020
Stddev	.0010	.08	.022	.03	.0005	.0003	.0007	.012	.0002
%RSD	.3580	.3027	.9456	.0319	.9496	16.07	44.51	.1260	10.37
#1	.2708	25.09		90.72	.0521				
#2	.2722	24.99	2.377	90.68	.0514	0014	0021	9.310	0021
Elem	Sr4077	Ti3349		Zr3391					
Avg	.1755	0038	.0097	.0003					
Stddev	.0002	.0000	.0001	.0000					
%RSD	.1384	.4467	.6092	8.163					
#1	.1753	0038	.0097	.0003					
#2	.1757	0038	.0097	.0004					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	151160.	27134.	2456.7	5100.1					
Stddev	185.	160.		4.8					
%RSD	.12234	.58992	.12741	.09503					
#1	151030.		2458.9	5103.5					
#2	151290.	27247.	2454.5	5096.7					

Raw Da	ta MA2466	7 page	125 of 21	7					
									◀ Zoom I Zoom C
									200111 0
Sample N	ame: JA502	36-6 A	cquired: 7/2	20/2010 2:0	05:49	ype: Unk			
Method: A	Accutest1(v17	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	nin Cust	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avq	.0222	.0000	.0002	0008	.0004	.0011	.3089	.0016	.0005
Stddev	.0000	.000	.0001	.0000	.0002	.0002	.0001	.0001	.0000
%RSD	.2199	120.9	49.43	2.593	58.01	15.91	.0442	7.128	1.188
#1	.0222	.0000	.0001	0008	.0005	.0013	.3088	.0015	.0005
#2	.0221	.0000	.0002	0007	.0002	.0010	.3090	.0017	.0005
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0001	.0010	0017	.0003	.0008	.0002	.0010	.0351	76.32
Stddev	.0001	.0001	.0001	.0000	.0007	.0010	.0000	.0023	.44
%RSD	64.12	5.920	5.088	7.913	89.97	605.3	2.804	6.605	.5782
#1	.0001	.0009	0016	.0003	.0003	0005	.0010	.0368	76.64
#2	.0002	.0010	0017	.0003	.0014	.0009	.0009	.0335	76.01
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0331	20.52	4.645	23.41	.0364	.0125	0018	8.267	0025
Stddev %RSD	.0006 1.671	.17 .8197	.022 .4718	.03	.0003	.0000 .1725	.0001 4.206	.003	.0003 11.76
70R3D	1.0/1	.0197	.4718	.1094	.7304	.1725	4.206	.0344	11.70
#1	.0335	20.64	4.660	23.43	.0362	.0126	0018	8.265	0027
#2	.0327	20.40	4.629	23.39	.0366	.0125	0019	8.269	0023
Elem	Sr4077		W_2079	Zr3391					
Avg	.1691	0072	.0095	.0004					
Stddev	.0001	.0001	.0005	.0000					
%RSD	.0541	1.500	5.648	6.378					
#1	.1692	0072	.0099	.0004					
#2	.1690	0071	.0091	.0005					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	152950.	27295.	2485.0	5217.8					
Stddev %RSD	10. .00642	253. .92542	.0 .00052	.5 .01026					
/₀K2D	.00042	.92542	.00052	.01026					
#1	152960.	27116.	2485.0	5217.5					
#2	152940.	27473.	2485.0	5218.2					

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									■ Zoom In Zoom Out
Sample Nam	e: IA5023	36-8 A	auired: 7/	20/2010 2:1	8·01 T	ype: Unk			
Method: Acci			de: CONC		actor: 1.00				
User: admin		om ID1:		om ID2:		m ID3:			
	Cusi	OH ID I:	Cusi	UIII ID2:	Cusic	III ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.4855	.0017	.0012	.0224	.0455	.0631	2.334	.0635	.0011
Stddev	.0002	.0000	.0001	.0000	.0000	.0001	.004	.0002	.0001
%RSD	.0489	.2781	10.29	.2155	.0039	.1436	.1894	.3272	10.95
#1	.4856	.0017	.0011	.0224	.0455	.0631	2.337	.0636	.0011
#2	.4853	.0017	.0013	.0224	.0455	.0632	2.330	.0633	.0012
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0435	.1252	.0009	.0004	.0236	.0002	.0009	15.81	167.4
Stddev	.0000	.0002	.0011	.0006	.0006	.0006	.0002	.00	.2
%RSD	.0075	.1737	127.7	137.0	2.463	410.4	23.40	.0266	.0932
#1	.0435	.1254	.0017	.0009	.0232	0003	.0011	15.81	167.3
#2	.0435	.1250	.0001	.0000	.0240	.0006	.0008	15.81	167.6
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	28.63	42.87	6.286	91.48	.0281	0025	0138	27.20	0061
Stddev	.02	.15	.051	.10	.0003	.0001	.0002	.03	.0003
%RSD	.0816	.3490	.8108	.1070	1.202	2.066	1.389	.0920	4.344
#1	28.61	42.76	6.250	91.41	.0283	0025	0140	27.22	0059
#2	28.64	42.97	6.322	91.55	.0278	0026	0137	27.19	0063
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	1.126	.0898	.0338	.0031					
Stďdev	.002	.0001	.0000	.0001					
%RSD	.1744	.0985	.1221	2.669					
#1	1.125	.0898	.0338	.0031					
#2	1.128	.0897	.0338	.0030					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
	155360.	28108.	2516.8	4948.8					
Stďdev	151.	72.	1.2	6.9					
%RSD	.09692	.25509	.04627	.13905					
#1	155250.	28159.	2515.9	4953.7					
#2									

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									■ Zoom	ln
									Zoom C	)ut
	ame: JA507		cquired: 7/2			ype: Unk				
	ccutest1(v1	,	de: CONC		actor: 1.00					
User: adm		tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment	:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg Stddev	.0743	.0001	.0004	.0028	.0062	.0484	.1028	.0245	.0002	
%RSD	.5134	9.877	10.71	2.393	1.802	.5172	.1330	.6017	133.8	
#1	.0746	.0001	.0005	.0029	.0063	.0482	.1029	.0246	.0000	
#2	.0741	.0001	.0004	.0028	.0061	.0485	.1027	.0244	.0005	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0004	.1388	.0013	0004	.0032	.0023	.0002	1.123	8.746	
Stddev	.0001	.0000	.0002	.0001	.0003	.0004	.0001	.003	.015	
%RSD	23.38	.0040	18.67	27.76	9.181	18.09	64.12	.2770	.1694	
#1	.0003	.1388	.0011	0005	.0034	.0026	.0001	1.125	8.736	
#2	.0005	.1388	.0014	0003	.0030	.0020	.0003	1.121	8.757	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	4.149	2.416	4.565	50.80	.0679	.0001	0027	2.413	0006	
Stddev	.008	.021	.009	.00	.0000	.0003	.0002	.002	.0000	
%RSD	.1960	.8909	.1855	.0007	.0312	237.3	8.003	.0640	.3645	
#1	4.155	2.401	4.571	50.80	.0679	0001	0028	2.412	0006	
#2	4.143	2.431	4.559	50.80	.0679	.0003	0025	2.414	0006	
Elem	Sr4077	Ti3349		Zr3391						
Avg Stddev	.0742	0016 .0001	.0010	.0005						
%RSD	.0294	5.533	63.23	12.15						
701COD	.0274	3.333	05.25	12.13						
#1	.0742	0016	.0006	.0005						
#2	.0742	0017	.0015	.0006						
Int. Std.	Y_3600	Y_3710	Y 2243	In2306						
Avg	156860.	27905.	2545.6	5323.4						
Stddev	256.	118.	.4	3.5						
%RSD	.16325	.42315	.01459	.06558						
#1	156680.	27988.	2545.4	5325.8						
#2	157040.	27821.	2545.9	5320.9						

	nme: JA5076 ccutest1(v13 in Cusi		de: CONC	20/2010 2:2 Corr. F om ID2:	actor: 1.00	ype: Unk 00000 om ID3:			
Elem Avg Stddev %RSD	Ba4554 .0801 .0002 .2013	Be3130 .0001 .0000 34.84	Cd2288 .0002 .0001 39.36	Co2286 .0024 .0000 .5811	Cr2677 .0002 .0001 32.88	Cu3247 .1056 .0005 .4565	Mn2576 .0757 .0002 .2105	Ni2316 .0023 .0001 5.331	Ag3280 0001 .0001 67.34
#1 #2	.0802 .0800	.0002 .0001	.0002 .0003	.0024 .0024	.0002 .0003	.1053 .1060	.0758 .0755	.0024 .0022	0001 0001
Elem Avg Stddev %RSD	V_2924 .0000 .000 238.9	Zn2062 .1456 .0000 .0235	As1890 .0015 .0008 51.03	TI1908 0006 .0008 140.6	Pb2203 .0044 .0001 1.384	Se1960 .0019 .0007 38.22	Sb2068 .0000 .0004 1917.	Al3961 .6333 .0022 .3512	Ca3179 8.948 .017 .1948
#1 #2	.0000	.1456 .1455	.0020	.0000 0012	.0044	.0024 .0014	.0003 0003	.6349 .6317	8.960 8.935
Elem Avg Stddev %RSD	Fe2599 1.628 .001 .0795	Mg2790 2.359 .008 .3440	K_7664 3.525 .012 .3340	Na5895 45.52 .04 .0775	B_2089 .0576 .0000 .0158	Mo2020 .0000 .0000 153.8	Pd3404 0017 .0008 46.81	Si2124 2.220 .004 .1661	Sn1899 0007 .0002 36.46
#1 #2	1.629 1.627	2.365 2.353	3.533 3.516	45.55 45.50	.0576 .0575	.0000	0022 0011	2.217 2.223	0005 0008
Elem Avg Stddev %RSD	Sr4077 .0766 .0003 .3554	Ti3349 0018 .0001 3.489	W_2079 .0010 .0002 24.72	Zr3391 .0006 .0001 9.260					
#1 #2	.0767 .0764	0018 0019	.0008 .0012	.0006 .0006					
Int. Std. Avg Stddev %RSD	Y_3600 157700. 234. .14847	Y_3710 28190. 120. .42701	Y_2243 2568.0 3.8 .14782	In2306 5347.1 1.6 .03004					
#1 #2	157540. 157870.	28105. 28275.	2570.7 2565.3	5348.2 5346.0					

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								◀ Zoom Zoom
								200111
me: CCV	Acquire	d: 7/20/20	10.2:36:24	Type:	OC.			
				٠.				
	,							
043		045	.0111102.	ous	J 150.			
Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
ppm				ppm	ppm	ppm	ppm	ppm
								.2539
								.0004
.2634	.0298	.0688	.0169	.2034	.1263	.1462	.2035	.1459
2.042			2.055	2.073	2.031			
2.034	2.113	2.040	2.056	2.079	2.028	2.128	2.083	.2536
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
2.056	2.088	2.019	2.101	2.062	2.021	2.021	40.34	41.31
								.02
.0207	.1158	.0388	.2747	.1085	.1828	.0174	.0328	.0370
2.055			2.097	2.061				
2.056	2.090	2.019	2.105	2.064	2.023	2.022	40.33	41.30
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
ppm		ppm	ppm	ppm	ppm	ppm		ppm
								2.071
								.001
.0736	.2765	.0240	.0114	.0788	.1423	.1068	.0225	.0647
41.23	40.81	39.61	40.18	2.048	2.045	2.052	5.089	2.070
41.19	40.97	39.62	40.18	2.051	2.049	2.055	5.091	2.072
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
	Ba4554 ppm 2.038 .005 .2634 2.042 2.034 Chk Pass  V_2924 ppm 2.056 .000 .0207 2.055 Chk Pass  Fe2599 ppm 41.21 .03 .0736 41.23 41.19	Ba4554 Be3130 ppm 2.038 2.113 .005 .001 .2634 .0298 2.042 2.114 2.034 2.113 .Chk Pass Chk Pass  V_2924 Zn2062 ppm 2.056 .000 .0207 .1158 .000 .002 .0207 .1158 .000 .002 .0207 .1158 .000 .002 .0207 .1158 .000 .002 .00	Ba4554 Be3130 Cd2288 ppm ppm ppm ppm 2.038 2.113 2.039 .005 .001 .001 .2634 0.298 .0688 2.042 2.114 2.038 2.034 2.113 2.040 Chk Pass Chk Pass Chk Pass  V_2924 Zn2062 As1890 ppm	Ba4554   Be3130   Cd2288   Cozent   Coustom   ID1:   Custom   ID2:	Ba4554 Be3130 Cd2288 Co2286 Cr2677 ppm	Ba4554   Be3130   Cd2288   Co2286   Cr2677   Cu3247	Ba4554	Ba4554   Be3130   Cd2288   Co2286   Cr2677   Cu3247   Mn2576   Nl2316   N

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			d: 7/20/201 de: CONC Custo		Type: QC actor: 1.000000 Custom ID3	:	
Elem Units Avg Stddev %RSD	Sr4077 ppm 2.103 .002 .1110	Ti3349 ppm 2.069 .001 .0314					
#1 #2	2.102 2.105	2.068 2.069	1.925 1.941	2.015 2.018			
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass(	Chk Pass			
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 152770. 273. .17860	Y_3710 Cts/S 27259. 12. .04463	Cts/S 2497.0 .9	In2306 Cts/S 5111.8 3.7 .07201			
#1 #2	152960. 152580.	27268. 27251.	2497.7 2496.4	5114.4 5109.2			

## Raw Data MA24667 page 133 of 217

Method: Ad		72) Mo		Corr. Fa	actor: 1.000000
Comment:	n Cusi	IOM ID1:	Custo	om ID2:	Custom ID3
Elem Units	Sr4077 ppm	Ti3349 ppm			
Avg	.0004				
Stddev %RSD	.0000 8.272	.0002 29.75	.0007 7.751	.0001 11.13	
70113D	0.272	27.73	7.751	11.13	
#1	.0004	.0004	.0090		
#2	.0003	.0006	.0080	.0011	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Int. Std.	Y_3600				
Units	Cts/S 157770.	Cts/S 27593.			
Avg Stddev	219.	27593. 26.	25/6.8		
%RSD	.13863	.09593			
#1	157930.	27574.	2574.6	5464.6	
#2	157620.	27612.	2579.1	5465.2	

Paw Data MA24667	page 135 of 217

Sample Name: CCB										Zoom Out
Units	Method: Ac User: admir	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	0000			
#2	Units Avg Stddev	ppm .0003 .0001	ppm .0004 .0000	ppm .0002 .0000	ppm .0003 .0002	ppm .0005 .0002	ppm .0003 .0001	ppm .0003 .0000	ppm .0001 .0001	ppm .0001 .0001
High Limit   Low Limit   Elem   V_2924   Zn2062   As1890   Ti11908   Pb2203   Se1960   Sb2068   Al3961   Ca3179   Units   ppm   pp										
Units	High Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass					
#2	Units Avg Stddev	ppm .0003 .0002	ppm .0002 .0001	ppm .0013 .0007	.0008 .0006	ppm .0001 .0000	ppm .0019 .0007	ppm .0004 .0010	ppm .0135 .0025	ppm .0160 .0013
High Limit   Low Limit   Elem   Fe2599   Mg2790   K_7664   Na5895   B_2089   Mo2020   Pd3404   Si2124   Sn1899   Units   ppm   ppm										
Units         ppm         ppm </td <td>High Limit</td> <td>Chk Pass</td>	High Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass					
	Units Avg Stddev	ppm .0094 .0006	ppm .0126 .0133	ppm .0371 .0212	ppm .0344 .0016	ppm .0013 .0007	ppm F .0022 .0007	ppm .0003 .0000	ppm .0021 .0005	ppm 0002 .0000

Check? Chk Pass Chk P

#### Raw Data MA24667 page 134 of 217

◀ Zoom In ▶ Zoom Out

Zoom In ▶
 Zoom Out

									◀ Zoom In Zoom Ou
									200111 011
Sample Nam	e: JA5076	52-3 A	cquired: 7/2	20/2010 2:4	18:35 T	ype: Unk			
Method: Acc	utest1(v17	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admin	Cust	om ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.3824	.0011	.0009	.0143	.0005	.0336	.2636	.0542	0006
Stddev	.0002	.0000	.0000	.0002	.0001	.0002	.0005	.0001	.0000
%RSD	.0476	1.437	3.549	1.141	29.75	.6661	.1820	.1039	3.949
#1	.3823	.0011	.0008	.0142	.0006	.0335	.2632	.0542	0006
#2	.3825	.0011	.0009	.0144	.0004	.0338	.2639	.0541	0006
Elem	V_2924	Zn2062	A-1000	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ce2170
Avq	0001	.6362	As1890 .0077	.0005	.0106	.0013	.0003	1.632	Ca3179 12.57
Stddev	.0001	.0008	.0002	.0003	.0001	.0003	.0003	.004	.01
%RSD	174.8	.1248	2.048	37.71	.6489	18.40	112.3	.2548	.1094
					.0407		112.5		.1074
#1	0002	.6368	.0076	.0004	.0107	.0015	.0001	1.635	12.58
#2	.0000	.6357	.0078	.0007	.0106	.0012	.0006	1.629	12.56
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.8213	3.068	5.093	45.49	.1878	.0003	0063	15.84	0023
Stddev	.0003	.001	.001	.07	.0003	.0001	.0005	.00	.0003
%RSD	.0380	.0405	.0265	.1647	.1698	41.58	7.596	.0203	11.67
#1	.8211	3.069	5.092	45.55	.1876	.0002	0060	15.84	0025
#2	.8215	3.067	5.094	45.44	.1880	.0004	0067	15.84	0021
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.1625	0152	.0226	.0027					
Stddev	.0001	.0001	.0002	.0027					
%RSD	.0493	.5144	.9157	1.943					
#4	1/05	0151	0007	0007					
#1 #2	.1625 .1626	0151 0152	.0227 .0224	.0027 .0027					
#2	.1020	0132	.0224	.0027					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	172500.	30819.	2816.6	5339.0					
Stddev	159.	27.	.2	2.8					
	.09244	.08882	.00711	.05197					
%RSD				5341.0					
%RSD #1	172620.	30799.	2816.5	3341.0					

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.0006 .0002 27.90

.0005 .0007

86.10 86.42

Sn1899 -.0026

◀ Zoom In ▶

									▼ Zoom In ▶ Zoom Out
Sample Nam Method: Acci User: admin Comment:	utest1(v17		de: CONC		actor: 1.00	Type: Unk 00000 om ID3:			
Elem Avg Stddev %RSD	Ba4554 .0754 .0003 .3700	Be3130 .0001 .0000 70.88	Cd2288 .0001 .0000 23.97	Co2286 0005 .0001 25.40	Cr2677 .0034 .0000 .8016	Cu3247 .0007 .0001 10.44	Mn2576 1.603 .003 .1761	Ni2316 .0003 .0001 18.48	Ag3280 .0003 .0000 1.753
#1 #2	.0756 .0752	.0000	.0001 .0001	0004 0006	.0034 .0034	.0007 .0006	1.605 1.601	.0003	.0003 .0003
Elem Avg Stddev %RSD	V_2924 .0076 .0002 2.420	Zn2062 .0028 .0002 6.670	As1890 .0014 .0005 34.46	TI1908 .0004 .0003 73.83	Pb2203 .0015 .0007 43.98	Se1960 .0002 .0007 434.6	Sb2068 .0002 .0002 61.37	Al3961 .1341 .0037 2.729	Ca3179 44.24 .07 .1571
#1 #2	.0078 .0075	.0030 .0027	.0010 .0017	.0002 .0007	.0019 .0010	0003 .0006	.0004 .0001	.1367 .1315	44.19 44.29
Elem Avg Stddev %RSD	Fe2599 .8108 .0051 .6347	Mg2790 39.43 .13 .3202	K_7664 21.98 .00 .0200	Na5895 133.5 .0 .0309	B_2089 .6528 .0004 .0556	Mo2020 .0005 .0001 27.60	Pd3404 0021 .0001 3.845	Si2124 7.220 .002 .0219	Sn1899 0023 .0001 4.534
#1 #2	.8072 .8145	39.35 39.52	21.98 21.97	133.5 133.5	.6525 .6530	.0004 .0006	0020 0021	7.219 7.222	0022 0023
Elem Avg Stddev %RSD	Sr4077 .4087 .0006 .1408	Ti3349 0006 .0002 37.77	W_2079 .0133 .0000 .1781	Zr3391 .0010 .0000 .0182					
#1 #2	.4083 .4091	0005 0008	.0133 .0133	.0010 .0010					
Int. Std. Avg Stddev %RSD	Y_3600 150360. 99. .06609	Y_3710 27228. 32. .11855	Y_2243 2455.5 3.0 .12120	In2306 5074.1 6.7 .13281					
#1 #2	150430. 150290.	27251. 27205.	2457.6 2453.4	5078.9 5069.4					

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									Zoom (	Dı
Sample N	ame: JA509:	21-4 A	cquired: 7/2	20/2010 3:0	06:55 7	Type: Unk				
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
User: adm	in Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment										
Comment										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	A ~ 2 2 0 0	
Avq	.0005	.0000	.0000	.0000	.0000	.0003	.0003	.0001	Ag3280 .0001	
Stddev	.0001	.000	.000	.000	.000	.0001	.0000	.0000	.0002	
%RSD	14.64	65.29	1714.	409.6	33.44	19.27	2.800	20.37	170.8	
#1	.0004	.0000	.0001	.0000	.0000	.0003	.0003	.0002	.0000	
#2	.0005	.0000	0001	.0000	.0000	.0002	.0003	.0001	.0003	
		7 00/0		T14000	DI 0000	0.40/0	01.0070	*100/4	0.0470	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0000	.0016	.0026	0001 .0009	0007 .0002	.0021	.0012	.0064	.0462	
Stddev %RSD	133.1	3.988	1.302	703.6	23.56	.0010 45.81	44.51	82.68	.0003 .6694	
70K3D	133.1	3.900	1.302	703.0	23.30	43.01	44.31	02.00	.0094	
#1	.0001	.0016	.0026	.0005	0009	.0014	.0016	.0026	.0460	
#2	.0000	.0017	.0025	0008	0006	.0028	.0008	.0101	.0464	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	.0065	0001	.0490	.1341	.0008	.0013	0009	.0613	.0058	
Stddev	.0009	.0041	.0003	.0012	.0002	.0000	.0005	.0004	.0001	
%RSD	13.31	7805.	.5985	.9055	25.69	2.260	58.11	.6590	1.421	
#1	.0071	0029	.0492	.1350	.0007	.0013	0013	.0616	.0058	
#2	.0059	.0028	.0488	.1333	.0009	.0013	0006	.0610	.0057	
·-										
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0001	.0002	0003	.0002						
Stddev	.0000	.0000	.0003	.0001						
%RSD	2.447	7.956	110.7	27.15						
#1	.0001	.0003	0001	.0003						
#2	.0001	.0003	0001	.0003						
πZ	.0001	.0002	0003	.0002						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg	157820.	27724.	2559.9	5440.9						
Stddev	239.	25.	2.1	4.2						
%RSD	.15164	.08867	.08078	.07743						
41	157000	27744	2550.4	E442.0						
#1	157990.	27741.	2558.4	5443.9						
#2	157650.	27707.	2561.3	5438.0						

Avg Stddev %RSD	4.521 .000 .0094	12.38 .13 1.028	33.18 .05 .1466	525.2 4.2 .8017	.1977 .0000 .0111	.0017 .0003 15.46	0025 .0009 36.96	10.65 .01 .0865	0026 .0000 .5713
#1 #2	4.521 4.521	12.29 12.47	33.14 33.21	522.3 528.2	.1977 .1977	.0016 .0019	0019 0032	10.65 10.66	0026 0026
Elem Avg Stddev %RSD	Sr4077 1.366 .002 .1189	Ti3349 0095 .0001 1.024	W_2079 .0142 .0001 .8383	Zr3391 .0003 .0001 27.44					
#1 #2	1.365 1.368	0096 0095	.0141 .0143	.0004 .0003					
Int. Std. Avg Stddev %RSD	Y_3600 142170. 194. .13665	Y_3710 26666. 164. .61547	Y_2243 2377.4 2.3 .09794	In2306 4775.1 4.2 .08786					
#1 #2	142030. 142310.	26782. 26550.	2379.0 2375.7	4778.0 4772.1					

Custom ID3:

Cu3247 Mn2576

.2243

.0008

.3601

.2248 .2237

-.0005 .0002

- 0003

-.0003

Pd3404 -.0025

.0005 .0000 5.401

.0005 .0005

Se1960

.0012

11.80

.0013 .0011

Mo2020 .0017

Ni2316

.0012 .0000 2.279

.0012

.0012

Al3961

.0367

8.031

.0347

.0347

Si2124 10.65

Cr2677

.0149

.0001

.0148 .0149

Pb2203

.0019

10.11

0021

.0018

B\_2089 .1977

.0003

8.842

.0003

As1890

.0027 .0010

35.51

0020

.0034

K\_7664 33.18

Co2286

-.0009

.0001

10.19

-.0008 -.0010

TI1908

.0000

2939.

- 0006

.0007

Na5895 525.2

.4427

.0008

.1720

.4433

.4422

V\_2924

.0002

67.57

0003

.0003

Fe2599 Mg2790 4.521 12.38

Ba4554 Be3130 Cd2288

.0000

.000

.0000

Zn2062

.0023

7.660

.0025 .0022

Comment: Elem

Avg Stddev

%RSD

#1 #2

#1

#2 Elem

◀ Zoom In ▶

Elem

Avg Stddev

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									Zoom Out
Sample Na	me: JA5092	21-1F	Acquired: 7	/20/2010 3	:13:06	Type: Unk			
Method: Ac	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admi	n Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0751	.0000	.0001	0005	.0023	.0003	1.643	.0003	.0007
Stddev %RSD	.0003 .4530	.0000 96.66	.0001 152.9	.0001 12.50	.0001 2.931	.0002 51.54	.003 .1820	.0001 44.74	.0000 6.109
	.4330		132.9		2.931	31.34			0.109
#1	.0748	.0000	.0002	0006	.0024	.0002	1.645	.0004	.0007
#2	.0753	.0000	.0000	0005	.0023	.0004	1.641	.0002	.0007
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0059	.0014	.0008	.0004	.0003	.0000	.0001	.0484	44.85
Stddev %RSD	.0002 3.603	.0001 4.812	.0000 3.075	.0007 193.9	.0005 139.8	.000 3250.	.0001 110.0	.0031	.07 .1584
/0K3D	3.003	4.012	3.073	173.7	137.0	3230.	110.0	0.320	.1304
#1	.0060	.0015	.0008	0001	.0006	0001	.0000	.0506	44.90
#2	.0057	.0014	.0008	.0009	.0000	.0001	.0002	.0463	44.80
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.8133	40.17	22.37	135.9	.6675	.0003	0017	7.247	0022
Stddev	.0001	.06	.00	.1	.0001	.0001	.0007	.007	.0005
%RSD	.0131	.1422	.0146	.0620	.0115	22.81	39.05	.0976	23.90
#1	.8133	40.13	22.37	135.8	.6676	.0003	0012	7.252	0025
#2	.8134	40.21	22.37	135.9	.6675	.0002	0022	7.242	0018
Elem	Sr4077	Ti3349		Zr3391					
Avg	.4165	0044	.0104	.0007					
Stddev	.0013	.0000	.0007	.0001					
%RSD	.3200	.5621	6.443	7.559					
#1	.4156	0044	.0108	.0007					
#2	.4175	0045	.0099	.0007					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	149940.	27244.	2453.4	5062.6					
Stddev	3.	75.	3.9	.4					
%RSD	.00178	.27709	.15899	.00726					
#1	149940.	27191.	2450.6	5062.3					
#2	149930.	27298.	2456.1	5062.8					

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.0001

.0002

270.4

.0001

-.0002

Ca3179

.0376

0020

5.422

0361

.0390

Sn1899 -.0002

.0000

- 0003

.0002

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Sample Name: JA50921-4F Acquired: 7/20/2010 3:25:26 Type: Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

.0001

.0001

158.9

.0000

As1890

-.0004

0017

434.7

0008

-.0016

K\_7664

0504

.0145

28.78

0607

.0402

.0003

15.43

-.0023

-.0018

Y 2243

05121

2556.9

W 2079

Custom ID2:

Co2286

.0001

.0000

23.96

.0001

.0001

TI1908

-.0007

0005

74.79

- 0010

-.0003

Na5895

.1635

.0025

1653

1618

7r3391

.0000

3.243

.0002

.0002

In2306

5432.9

12774

5428.0

Custom ID1:

Be3130

.0000

.000

.0000

.0000

Zn2062

.0073

0000

.6630

0074

.0073

.0061

.0063

- 0017

-.0106

Ti3349

.0002

16.88

.0002

.0002

Y 3710

27569. 92.

33234

27633.

27504

Mg2790

Ba4554

.0012

.0001

7.970

.0011

.0012

0000

0001

146.2

0000

.0001

Fe2599

.0094

.0006

6.038

0090

.0098

Sr4077

.0001

5.407

.0001

.0001

Y 3600

155570. 3813.

2 4508

158270

152880

V\_2924

User: admin

Comment:

Elem

Avg Stddev

%RSD

#1 #2

#2

Elem

Avq Stddev

%RSD

Flem

Avg Stddev

%RSD

Int. Std.

%RSD

#2

#1

#2

Elem

Avg Stddev

Type: Unk

Cu3247

.0002

.0002

101.2

.0001

.0004

Se1960

.0014

22.57

0016

.0012

Mo2020 .0004

.0002

0003

Mn2576

.0002

.0000

4.837

.0002

.0002

.0003

202.1

0001

.0008

Pd3404

.0005

.0000

- 0005

Ni2316

.0017

.0001

5.790

.0017

.0018

Al3961

.0174

0049

28.27

0139

.0209

Si2124

.0627

.0007

0632

Custom ID3:

Cr2677

-.0001

.0001

224.2

.0000

-.0001

Pb2203

-.0006

0003

40.45

0005

-.0008

B\_2089

.0008

.0000

0008

.0007

									▼ Zoom I Zoom C	
Sample Nam				20/2010 3:3		ype: Unk				
Method: Acc	•		de: CONC		actor: 1.00					
User: admin Comment:	Cust	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Elem Avg Stddev %RSD	Ba4554 .0766 .0001 .1619	Be3130 .0000 .0000 92.97	Cd2288 .0003 .0001 34.09	Co2286 0007 .0002 22.58	Cr2677 .0021 .0003 13.98	Cu3247 .0012 .0002 16.01	Mn2576 .0223 .0000 .0342	Ni2316 .0006 .0000 4.003	Ag3280 .0010 .0001 11.49	
#1 #2	.0765 .0767	.0000	.0003 .0004	0006 0009	.0019 .0023	.0011 .0014	.0223 .0224	.0005 .0006	.0011 .0010	
Elem Avg Stddev %RSD	V_2924 .0029 .0002 8.099	Zn2062 0015 .0001 9.162	As1890 0006 .0004 61.61	TI1908 .0009 .0009 104.5	Pb2203 .0005 .0001 21.76	Se1960 .0021 .0009 40.60	Sb2068 0005 .0004 89.54	Al3961 .0480 .0012 2.404	Ca3179 123.2 .1 .0876	
#1 #2	.0030 .0027	0016 0014	0009 0003	.0002 .0015	.0004 .0005	.0015 .0027	0002 0007	.0488 .0472	123.3 123.1	
Elem Avg Stddev %RSD	Fe2599 .4042 .0002 .0524	Mg2790 112.1 .0 .0121	K_7664 65.72 .06 .0854	Na5895 1063. .0233	B_2089 3.432 .004 .1008	Mo2020 .0006 .0001 17.46	Pd3404 0027 .0009 34.03	Si2124 8.005 .012 .1538	Sn1899 0017 .0004 22.02	
#1 #2	.4040 .4043	112.1 112.1	65.68 65.76	1062. 1063.	3.430 3.435	.0005 .0007	0020 0033	7.997 8.014	0014 0019	
Elem Avg Stddev %RSD	Sr4077 1.533 .002 .1482	Ti3349 0057 .0002 3.699	W_2079 .0139 .0009 6.291	Zr3391 .0024 .0001 3.111						
#1 #2	1.531 1.535	0055 0058	.0145 .0133	.0025 .0024						
Int. Std. Avg Stddev %RSD	Y_3600 133240. 184. .13773	Y_3710 25878. 17. .06713	Y_2243 2254.6 2.2 .09836	In2306 4420.6 .1 .00336						
#1	133370.	25865.	2256.2	4420.7						

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Sample Name: JA50232-5F
Sample Name: JA50232-5F         Acquired: 7/20/2010 3:31:37         Type: Unk           Method: Accutest1(v172)         Mode: CONC         Corr. Factor: 1.000000           User: admin         Custom ID1:         Custom ID2:         Custom ID3:           Comment:           Elem         Ba4554         Be3130         Cd2288         Co286         Cr2677         Cu3247         Mn2576         NI2316         Ag3288           Avg         .0426         .0000         .0002        0007         .0330         .0056         .0025         .0009           Stddev         .0003         .000         .0001         .0001         .0002         .0000         .0001         .0001         .0002         .0001         .0001           %RSD         .6029         18.13         18.36         17.77         .2757         3.163         .3693         4.756         7.847           #1         .0424         .0000         .0002        0008         .0329         .0058         .0026         .0024         .0010           #2         .0428        0001         .0003
Method: Accutest1(v172)         Mode: CONC         Corr. Factor: 1.000000           User: admin         Custom ID1:         Custom ID2:         Custom ID3:           Comment:         Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 N0256 .0056
Method: Accutest1(v172)         Mode: CONC         Corr. Factor: 1.000000           User: admin         Custom ID1:         Custom ID2:         Custom ID3:           Comment:         Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 N0256 .0056
Comments           Ellem         Ba4554         Be3130         Cd2288         Co2286         Cr2677         Cu3247         Mn2576         Ni2316         Ag3280           Avg         .0426         .0000         .0002         .0007         .0330         .0056         .0056         .0025         .0009           Slddev         .0003         .000         .0000         .0001         .0001         .0002         .0000         .0001         .0001           %RSD         .6029         18.13         18.36         17.77         .2757         3.163         .3693         4.756         7.847           #1         .0424         .0000         .0002        0008         .0329         .0058         .0056         .0024         .0010           #2         .0428        0001         .0003        0006         .0331         .0055         .0056         .0026         .0096
Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 Avg .0426 .0000 .0002 .0007 .0330 .0056 .0056 .0055 .0009 Stddev .0003 .000 .0000 .0001 .0001 .0002 .0000 .0001 .0001 .0001 .0002 .0000 .0001
Avg         0.426         .0000         .0002        0007         .0330         .0056         .0056         .0025         .0009           Siddev         .0003         .000         .0001         .0001         .0001         .0002         .0000         .0001         .0001           %RSD         .6029         18.13         18.36         17.77         .2757         3.163         .3693         4.756         7.847           #1         .0424         .0000         .0002        0008         .0329         .0058         .0056         .0024         .0010           #2         .0428        0001         .0003        0006         .0331         .0055         .0056         .0026         .0009
Avg         0.426         .0000         .0002        0007         .0330         .0056         .0056         .0025         .0009           Siddev         .0003         .000         .0001         .0001         .0001         .0002         .0000         .0001         .0001           %RSD         .6029         18.13         18.36         17.77         .2757         3.163         .3693         4.756         7.847           #1         .0424         .0000         .0002        0008         .0329         .0058         .0056         .0024         .0010           #2         .0428        0001         .0003        0006         .0331         .0055         .0056         .0026         .0009
Stddev         .0003         .000         .0000         .0001         .0001         .0002         .0000         .0001         .0001           %RSD         .6029         18.13         18.36         17.77         .2757         3.163         .3693         4.756         7.847           #1         .0424         .0000         .0002        0008         .0329         .0058         .0056         .0024         .0010           #2         .0428        0001         .0003        0006         .0331         .0055         .0056         .0026         .0009
%RSD .6029 18.13 18.36 17.77 .2757 3.163 .3693 4.756 7.847 #1 .0424 .0000 .00020008 .0329 .0058 .0056 .0024 .0010 #2 .04280001 .00030006 .0331 .0055 .0056 .0026 .0009
#1 .0424 .0000 .00020008 .0329 .0058 .0056 .0024 .0010 #2 .04280001 .00030006 .0331 .0055 .0056 .0026 .0009
#2 .04280001 .00030006 .0331 .0055 .0056 .0026 .0009
Flem V 2924 7n2062 As1890 TI1908 Ph2203 Se1960 Sh2068 Al3961 Ca3179
Elell V_2724 Elizotz 7/31070 111700 1 b2203 3c1700 3b2000 7/13701 Cd3177
Avg .0105 .0081 .00140002 .0004 .0035 .0006 .5814 117.8
Stddev .0002 .0002 .0008 .0001 .0002 .0013 .0002 .0036 .0
%RSD 2.202 1.920 59.04 58.94 41.21 36.20 32.76 .6146 .0009
#1 .0104 .0082 .00200004 .0005 .0026 .0007 .5788 117.8
#2 .0107 .0080 .00080001 .0003 .0044 .0004 .5839 117.8
Elem Fe2599 Mg2790 K_7664 Na5895 B_2089 Mo2020 Pd3404 Si2124 Sn1899
Avg .0929 .0140 33.74 97.83 .0032 .03270028 6.0850016
Studev .0013 .0018 .01 .04 .0004 .0001 .0007 .000 .0000
%RSD 1.397 12.65 .0301 .0362 13.98 .4211 22.99 .0043 2.758
#1 .0938 .0153 33.73 97.80 .0029 .03260033 6.0850015
#2 .0919 .0128 33.75 97.85 .0035 .03280024 6.0850016
Elem Sr4077 Ti3349 W 2079 Zr3391
Avg 2.0920049 .0130 .0005
Stddev .001 .0001 .0005 .0001
%RSD .0416 1.717 3.809 18.88
#1 2.0920049 .0133 .0004
#2 2.0910050 .0126 .0005
Int. Std. Y_3600 Y_3710 Y_2243 In2306 Avg 150100. 27161. 2449.8 5082.3
Avg 150100. 27161. 2449.8 5082.3 Stddev 762 3.3
%RSD .05034 .00062 .00710 .06416
#1 150050, 27161, 2449.9 5080.0
#1 150050. 27161. 2449.9 5080.0 #2 150160. 27161. 2449.6 5084.6
#Z 150100. Z/101. Z447.0 5004.0

**110 of 151** ACCUTEST. JA50921 Laboratories

									◀ Zoom In ▶ Zoom Out
									200III Out
Sample Nam	ie: JA5023	37-1 A	cquired: 7/2	20/2010 3:4	13:59 T	ype: Unk			
Method: Acc			de: CONC		actor: 3.00	00000			
User: admin		om ID1:	Custo	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0729	.0001	.0002	0021	.0025	.0026	.0219	.0015	.0013
Stddev	.0000	.0000	.0005	.0001	.0005	.0005	.0002	.0008	.0015
%RSD	.0572	29.93	311.7	4.060	21.45	19.67	.8003	49.88	120.5
<b>#1</b>	.0729	.0000	0002	0022	.0029	.0029	.0220	.0021	.0024
<b>‡</b> 2	.0729	.0001	.0005	0020	.0021	.0022	.0218	.0010	.0002
Iem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0033	.0163	.0003	0008	0021	.0009	.0008	.0669	120.0
Stddev	.0003	.0001	.0015	.0002	.0021	.0014	.0016	.0069	.4
6RSD	8.344	.8907	445.2	31.11	97.16	156.2	193.4	10.32	.3014
1	.0035	.0164	.0014	0010	0036	.0018	0003	.0620	120.3
2	.0031	.0162	0007	0006	0007	0001	.0019	.0717	119.8
lem	Fe2599	Mg2790	K_7664		B_2089		Pd3404	Si2124	Sn1899
vg	.4256	106.8	60.33	1054.	3.294	.0004	0061	7.449	0034
tddev	.0030	.3	.21	8.	.001	.0006	.0015	.005	.0006
SRSD	.7165	.2449	.3402	.7485	.0250	134.3	24.11	.0616	17.06
¥1	.4278	106.6	60.18	1060.	3.295	.0000	0050	7.446	0030
2	.4235	107.0	60.47	1049.	3.294	.0008	0071	7.453	0038
lem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	1.463	0054	.0037	.0020					
Stddev	.007	.0007	.0006	.0002					
6RSD	.4630	13.60	16.63	9.294					
<b>#1</b>	1.458	0049	.0041	.0022					
2	1.468	0059	.0033	.0019					
nt. Std.	Y_3600		Y_2243	In2306					
Avg	145010.		2418.7	4899.7					
Stddev	221.	113.	1.5	.3					
%RSD	.15259	.42373	.06005	.00650					
<sup>‡</sup> 1	145170.	26517.	2419.7	4899.9					
#2	144860.	26677.	2417.7	4899.5					

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Sample Nam	e: CCV	Acquire	d: 7/20/2010	3:50:15	Type: QC
Method: Accu	utest1(v17	2) Mo	de: CONC	Corr. Fa	actor: 1.000000
User: admin	Custo	om ID1:	Custo	m ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	

Avg	2.109	2.075	1.944	2.024
Stddev	.000	.001	.014	.001
%RSD	.0005	.0664	.6962	.0638
#1	2.109	2.074	1.935	2.023
#2	2.109	2.076	1.954	2.025
Check ?	Chk Pass C	hk Pass (	Chk Pass	Chk Pass

Check Value Range

Int. Std.	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	152750.	27117.	2492.1	5104.1
Stddev	108.	103.	1.0	3.1
%RSD	.07068	.37852	.04101	.05982
#1	152670.	27045.	2492.8	5106.3
#2	152830.	27190.	2491.4	5101.9

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									200111 0
			de: CONC	10 3:50:15 Corr. tom ID2:	Factor: 1.0				
Elem Units Avg Stddev %RSD	Ba4554 ppm 2.046 .004 .2009	ppm 2.123 .001		ppm 2.063 .005	ppm 2.083 .003	ppm 2.040 .001	ppm 2.129 .002	ppm 2.087 .004	ppm .2546 .0005
#1 #2	2.043 2.049		2.045 2.050			2.041 2.039			
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm 2.063 .004 .1799	ppm 2.096 .007	ppm 2.026 .001		ppm 2.068 .005	ppm 2.029 .003	ppm 2.032 .000	ppm 40.51 .03	ppm 41.55 .05
#1 #2	2.065 2.060		2.025 2.026	2.106 2.112		2.027 2.031	2.032 2.032		
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm 41.44 .00 .0027	ppm 41.07 .19		ppm 40.18 .04	ppm 2.062 .003	ppm 2.056 .004	ppm 2.059 .002	ppm 5.110 .002	ppm 2.079 .005
#1 #2	41.44 41.44		39.82 39.81	40.16 40.21	2.060 2.064	2.053 2.059		5.109 5.111	
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

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◀ Zoom In ▶ Zoom Out

									◀ Zoom In I
									Zoom Out
Sample Na			d: 7/20/201	0 3:56:13	Type: C	ΩC			
Method: Ac	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	0000			
User: admi	n Cus	tom ID1:	Custo	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554		Cd2288						
Units Ava	.0005	.0005	.0002				ppm .0007		
Stddev	.0005	.0005	.0002	.0003		.0004			
%RSD	1.941	2.241	14.06	73.87					91.70
#1	.0005	.0005	.0003	.0005	.0009	.0009	.0007	.0002	.0000
#2	.0005	.0005	.0003	.0003	.0008	.0004	.0007	.0002	.0002
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm		ppm
Avg	.0006	.0002	.0012	.0012	.0003		.0010		
Stddev %RSD	.0000 6.731	.0002 99.94	.0009 72.71	.0003 25.07			.0004 36.28		
#1 #2	.0006	.0004	.0018	.0010	.0005	.0025	.0013	.0139	.0189 .0209
#2	.0000	.0001	.0000	.0014	.0001	.0020	.0006	.0193	.0209
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Units	ppm	ppm		ppm			ppm		
Avg	F .0127	.0163	.0649				.0001		
Stddev %RSD	.0005 3.878	.0041 25.27	.0189 29.16			.0005 18.18	.0000 39.52		
#1	.0123	.0134	.0515	.1277	.0034	.0028	.0001	.0040	.0002
#2	.0130	.0193	.0783	.1295	.0028		.0001	.0017	.0002
Check ? High Limit Low Limit	Chk Fail .0114 0114	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail .0021 0021	Chk Pass	Chk Pass	Chk Pass

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◀ Zoom In ▶

						■ Zoom in i
						Zoom Out
Sample Na	mo: CCB	Acquire	d: 7/20/201	0.3-54-13	Type: QC	
					J.	
Method: Ac		,	de: CONC		actor: 1.000000	
User: admir	n Cusi	tom ID1:	Custo	om ID2:	Custom ID3:	
Comment:						
Elem	Sr4077	Ti3349	W_2079	Zr3391		
Units	ppm	ppm	ppm	ppm		
Avg	.0006	.0008	.0091	.0012		
Stddev	.0000	.0001	.0012	.0001		
%RSD	2.130	12.96	12.98	7.985		
#1	.0005	.0007	.0100	.0011		
#1	.0005	.0007	.0083	.0011		
#2	.0006	.0008	.0083	.0012		
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass		
High Limit						
Low Limit						
Int. Std.	Y_3600			In2306		
Units	Cts/S	Cts/S		Cts/S		
Avg	157910.	27488.	2577.1			
Stddev	87.	90.	3.6	3.6		
%RSD	.05483	.32656	.13857	.06552		
#1	157850.	27551.	2579.6	5457.6		
#2	157970.	27424.	2574.6	5452.6		
<del>-</del>			_37 1.0	2.02.0		

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Raw Da	la WAZ400	r page	149 01 21	1					
									◀ Zoom In ▶
									Zoom Out
Sample N	ame: JA502	37-3 A	cquired: 7/2	20/2010 4:0	08:39 7	ype: Unk			
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0006	.0000	.0000	.0001	.0004	.0001	.0002	.0001	.0000
Stddev	.0000	.000	.0000	.0000	.0001	.0001	.0000	.0001	.0001
%RSD	5.940	37.44	17.30	68.97	28.01	89.90	10.84	104.6	862.1
									0004
#1 #2	.0006	.0000	.0000	.0001	.0005	.0000	.0002	.0000	.0001
#2	.0006	.0000	.0000	.0000	.0003	.0001	.0002	.0001	0001
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0000	.0014	.0003	0010	0002	.0010	.0006	.0045	.0300
Stďdev	.000	.0000	.0005	.0003	.0000	.0010	.0006	.0007	.0001
%RSD	560.9	3.129	159.4	27.50	10.51	95.01	104.9	15.87	.3614
#1	.0000	.0013	.0007	0012	0002	.0017	.0011	.0040	.0299
#1	.0000	.0013	.0007	0012	0002	.0003	.0001	.0040	.0299
π <b>∠</b>	.0000	.0014	.0000	0000	0003	.0003	.0002	.0031	.0300
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0118	.0021	.0701	.1218	.0016	.0006	.0005	.0138	0002
Stddev	.0001	.0006	.0002	.0010	.0003	.0003	.0001	.0001	.0003
%RSD	1.177	30.25	.3391	.7870	15.79	55.85	13.40	1.010	120.6
#1	.0117	.0017	.0702	.1212	.0014	.0008	.0006	.0139	0004
#2	.0117	.0026	.0699	.1225	.0014	.0003	.0005	.0137	.0000
"-	.01.7	.0020	.0077		.0010	.0000	.0000	.0107	.0000
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0001	.0003	.0012	.0002					
Stddev	.0000	.0001	.0005	.0000					
%RSD	11.64	25.23	44.59	16.22					
#1	.0001	.0002	.0016	.0003					
#2	.0001	.0002	.0008	.0003					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	157640.	27716.	2559.6	5440.6					
Stddev	275.	116.	4.1	4.0					
%RSD	.17475	.41908	.15912	.07432					
#1	157450.	27798.	2556.8	5437.7					
#2	157840.	27634.	2562.5	5443.4					

User: adm Comment:		72) Mo tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem Avg Stddev %RSD	Ba4554 .0567 .0003 .4687	Be3130 .0000 .0000 518.4	Cd2288 .0005 .0001 10.50	Co2286 0004 .0001 40.38	Cr2677 .0063 .0001 1.904	Cu3247 .0017 .0001 3.593	Mn2576 1.000 .001 .0496	Ni2316 .0049 .0003 6.757	Ag328 .001 .000 4.28
#1 #2	.0569 .0565	.0000	.0004 .0005	0003 0005	.0063 .0064	.0018 .0017	1.001 1.000	.0051 .0047	.001 .001
Elem Avg Stddev %RSD	V_2924 .0060 .0002 2.834	Zn2062 .0007 .0001 10.36	.0091	TI1908 .0008 .0005 64.06	Pb2203 .0003 .0008 247.6	Se1960 .0012 .0008 69.05	Sb2068 .0008 .0004 45.75	Al3961 .0618 .0058 9.387	Ca317 133.
#1 #2	.0058 .0061	.0006 .0007	.0095 .0087	.0004 .0012	0003 .0009	.0017 .0006	.0005 .0010	.0577 .0659	133 133
Elem Avg Stddev %RSD	Fe2599 .3061 .0014 .4496	Mg2790 40.72 .04 .0998	K_7664 94.01 .02 .0252	Na5895 272.4 .6 .2313	B_2089 .4040 .0008 .1915	Mo2020 .0067 .0001 2.078	Pd3404 0032 .0000 1.330	Si2124 11.14 .01 .0478	Sn189 002 .000 26.8
#1 #2	.3052 .3071	40.69 40.75	93.99 94.02	272.8 271.9	.4045 .4034	.0066			001 002
Elem Avg Stddev %RSD	Sr4077 .9829 .0007 .0670	Ti3349 0069 .0003 4.126	W_2079 .0209 .0004 2.031	Zr3391 .0026 .0001 5.081					
#1 #2	.9825 .9834	0071 0067	.0212 .0206	.0025 .0027					
Int. Std. Avg Stddev %RSD	Y_3600 144550. 198. .13722	Y_3710 26694. 22. .08417	2376.3	In2306 4820.1 3.2 .06671					
#1 #2	144410. 144690.	26710. 26678.		4822.3 4817.8					

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									Zoom Out
Comple No		27.4 A	omuleod. 7/	20/2010 4.5	14.50 7	Fumo. I Ink			
	me: JA502 cutest1(v1		cquirea: //2 de: CONC	20/2010 4:1 Corr F	actor: 1.00	Type: Unk			
User: admi	,	tom ID1:		om ID2:		om ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0251	.0000	.0001	.0000	.0204	.0018	.0915	.0013	.0154
Stddev	.0000	.000	.0001	.0000	.0001	.0001	.0001	.0001	.0001
%RSD	.1127	5.865	100.9	56.20	.2973	4.400	.0768	5.597	.4656
#1	.0251	.0000	.0002	.0000	.0203	.0018	.0914	.0013	.0154
#2	.0251	.0000	.0000	.0000	.0204	.0017	.0915	.0012	.0153
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0021	.0013	0016	0001	.0005	.0011	.0001	.0594	30.63
Stddev %RSD	.0000 1.469	.0000 2.434	.0013 78.29	.0006 515.3	.0012 230.2	.0002 15.10	.0001 159.7	.0028 4.736	.02 .0740
70K3D	1.409	2.434	70.29	313.3	230.2	13.10	139.7	4.730	.0740
#1	.0021	.0013	0007	.0003	0003	.0013	.0000	.0574	30.61
#2	.0021	.0013	0025	0006	.0014	.0010	.0002	.0614	30.65
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.2352	35.28	28.86	394.1	.4188	.0006	.0009	7.659	0012
Stddev %RSD	.0001 .0459	.01 .0355	.05 .1824	8.8 2.236	.0011 .2527	.0000 1.349	.0004 39.42	.006 .0739	.0002 20.49
70K3D	.0439	.0333	.1024	2.230	.2321	1.349	39.42	.0739	20.49
#1	.2351	35.29	28.83	387.9	.4195	.0006	.0012	7.663	0014
#2	.2352	35.27	28.90	400.4	.4180	.0006	.0007	7.655	0010
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.3331	0045	.0085	.0009					
Stddev %RSD	.0006 .1704	.0003 6.856	.0006 6.693	.0000 2.347					
70K3D	.1704	0.630	0.093	2.347					
#1	.3335	0043	.0089	.0009					
#2	.3327	0048	.0081	.0009					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	144760.	26888.	2413.7	4870.3					
Stddev %RSD	187. .12912	19. .07120	3.7 .15168	.00600					
#1 #2	144630. 144890.	26901. 26874.	2411.1 2416.3	4870.5 4870.1					
#2	144890.	26874.	2416.3	4870.1					
		_		-					





	Inst QC	: IV	A2466	1						
									◀ Zoom Ir	
									Zoom Ou	Ιt
Sample N	Name: MP537	05-MB1C	ONF A	cquired: 7/2	20/2010 4:2	21:03	ype: Unk			
Method:	Accutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
User: adr		tom ID1:		om ID2:	Custo	om ID3:				
Commen			oust	O 1D.E.	Ousi	, i.bo.				
Commen	it.									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.0004	.0000	0001	0002	.0002	.0004	.0004	.0007	.0001	
Stddev	.0001	.000	.0001	.0001	.0001	.0001	.0001	.0000	.0001	
%RSD	14.15	.4637	96.71	93.33	36.01	27.24	11.87	2.670	140.6	
#1	.0004	.0000	0001	0003	.0002	.0003	.0004	.0007	.0001	
#2	.0003	.0000	.0000	0001	.0002	.0004	.0005	.0007	.0000	
""	.0003	.0000	.0000	.0001	.0005	.0004	.0003	.0007	.0000	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0002	.0154	0001	.0001	.0005	.0003	.0002	.0088	.1448	
Stddev	.0000	.0001	.0002	.0004	.0002	.0003	.0005	.0002	.0012	
%RSD	4.247	.5474	218.8	324.9	41.34	94.03	262.9	2.088	.8545	
#1	.0001	.0155	.0000	.0004	.0006	.0005	.0006	.0090	.1457	
#2	.0002	.0154	0002	0002	.0004	.0001	0002	.0087	.1440	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	.0322	.0003	.0724	.2248	.0009	.0003	0002	.0163	.0001	
Stddev	.0013	.0024	.0089	.0004	.0001	.0000	.0008	.0000	.0003	
%RSD	3.908	754.4	12.28	.1715	11.80	18.26	491.3	.2523	298.7	
#1	.0331	.0020	.0661	.2245	.0010	.0002	0008	.0163	0001	
#2	.0313	0014	.0787	.2251	.0008	.0003	.0004	.0162	.0003	
	0.4077	T100.40	144 0070	7.0004						
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0004	.0003	0014	.0002						
Stddev	.0000	.0001	.0003	.0001						
%RSD	4.000	43.39	23.61	51.33						
#1	.0004	.0002	0016	.0001						
#2	.0004	.0002	0012	.0001						
"-	.0001	.0001	.0012	.0002						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg	157860.	27421.	2571.1	5444.8						
Stddev	115.	124.	3.9	2.1						
%RSD	.07262	.45352	.15053	.03885						
"4	157040	27500	2572.0	E444.0						
#1	157940.	27509.	2573.8	5446.3						
#2	157780.	27333.	2568.3	5443.3						

	ime: JA502: ccutest1(v1: n Cusi		cquired: 7/2 de: CONC Custo		actor: 1.00	ype: Unk 00000 om ID3:			
Elem Avg Stddev %RSD	Ba4554 .0270 .0001 .3126	Be3130 .0000 .000 16.08	Cd2288 .0001 .0001 98.44	Co2286 .0000 .0002 1711.	Cr2677 .0255 .0003 1.034	Cu3247 .0008 .0000 3.197	Mn2576 .0950 .0003 .3278	Ni2316 .0012 .0001 9.051	Ag3280 .0003 .0002 61.20
#2	.0271	.0000	.0001	.0002	.0257	.0008	.0952	.0013	.0005
Elem Avg Stddev %RSD	V_2924 .0020 .0000 1.705	Zn2062 .0009 .0001 6.727	As1890 0006 .0000 3.642	TI1908 0005 .0005 109.5	Pb2203 .0008 .0009 109.7	Se1960 .0012 .0008 64.25	Sb2068 .0004 .0003 66.95	Al3961 .0740 .0040 5.457	Ca3179 32.27 .01 .0309
#1 #2	.0020 .0020	.0009 .0010	0006 0006	0001 0008	.0002 .0014	.0018 .0007	.0006 .0002	.0769 .0712	32.26 32.27
Elem Avg Stddev %RSD	Fe2599 .2584 .0019 .7377	Mg2790 37.16 .01 .0163 37.16	K_7664 30.98 .01 .0274 30.97	Na5895 423.6 .2 .0381 423.7	B_2089 .4419 .0004 .0916	Mo2020 .0007 .0000 1.081	Pd3404 0010 .0004 35.65 0008	Si2124 8.089 .004 .0504 8.092	Sn1899 0018 .0003 15.11 0020
#2 Elem Avg Stddev %RSD	.2597 Sr4077 .3531 .0007 .1882	37.17 Ti3349 0045 .0000 .3191	30.98 W_2079 .0082 .0005 6.179	423.5 Zr3391 .0010 .0000 1.414	.4416	.0007	0013	8.086	0016
#1 #2	.3536	0045 0045	.0086	.0010					
Int. Std. Avg Stddev %RSD	Y_3600 144340. 351. .24322	Y_3710 26755. 7. .02531	Y_2243 2407.9 .2 .00776	In2306 4856.6 4.6 .09485					
#1 #2	144590. 144090.	26759. 26750.	2407.8 2408.1	4853.3 4859.8					

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									■ Zoom In
									Zoom Ou
Sample Nar	ne: JA5023	37-6 A	cquired: 7/2	20/2010 4:3	33:26	ype: Unk			
Method: Aco	cutest1(v1)	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admir		tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment:	. 045		ousi	O 10 E.	Ousi	JIII 100.			
Comment.									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	NUODIA	A ~ 2 2 0 0
Avq	.1167	.0000	.0017	0006	.0046	.0011	.8384	Ni2316 .0013	Ag3280 .0005
Stddev	.0001	.0000	.0000	.0000	.0046	.0001	.0011	.0013	.0003
%RSD									
70R3D	.0534	270.4	.2051	5.514	2.330	6.977	.1255	17.41	10.36
#1	.1168	.0000	.0017	0006	.0046	.0012	.8377	.0015	.0006
#2	.1167	.0000	.0017	0006	.0045	.0010	.8391	.0012	.0005
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0005	.0121	.0006	0001	.0005	.0003	.0001	.0270	61.37
Stďdev	.0001	.0001	.0008	.0006	.0005	.0000	.0006	.0044	.16
%RSD	11.29	.8597	120.6	784.4	100.1	13.05	703.3	16.37	.2635
#1	.0004	.0121	.0012	0005	.0001	.0003	.0005	.0239	61.49
#2	.0005	.0120	.0001	.0003	.0008	.0004	0004	.0301	61.26
E1	F-2500	14-0700	1/ 7//4	N-5005	D 2000	14-2020	D-10404	C104.04	C-1000
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	1.923	8.824	27.06	82.57	.0456	0009	0023	5.829	0014
Stddev	.001	.051	.05	.15	.0000	.0000	.0009	.002	.0003
%RSD	.0410	.5807	.1907	.1860	.0593	.7527	40.80	.0408	24.00
#1	1.924	8.860	27.03	82.46	.0456	0009	0016	5.831	0017
#2	1.923	8.788	27.10	82.68	.0456	0009	0030	5.828	0012
	1.720	0.700	27.10	02.00	.0100	.0007	.0000	0.020	.0012
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avq	.8748	0047	.0071	.0006					
Stddev	.0022	.0001	.0004	.0000					
%RSD	.2555	2.242	5.192	2.031					
#1	.8732	0048	.0068	.0006					
#2	.8763	0046	.0074	.0006					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	151770.	27430.	2467.7	5131.0					
Stddev	92.	125.	1.8	5.7					
%RSD	.06045	.45663	.07216	.11174					
/UK3D	.00045	.45003	.07210	.111/4					
#1	151840.	27341.	2466.4	5135.1					
#2	151710.	27518.	2469.0	5127.0					
	.0.,.0.	2,0.0.	2.07.0	0.27.0					

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									◀ Zoom I
									Zoom C
Sample Nam			Acquired:			Type: Unl	(		
Method: Acc	•	,	de: CONC		actor: 1.00				
User: admin	Cust	om ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.4487	.0006	.0027	.0310	.0018	.0218	2.618	.0162	.0004
Stddev	.0006	.0000	.0001	.0001	.0002	.0002	.000	.0001	.0002
%RSD	.1398	5.209	1.942	.4226	12.10	.9781	.0048	.6422	37.01
#1	.4483	.0006	.0027	.0309	.0019	.0220	2.618	.0161	.0005
#2	.4492	.0005	.0026	.0311	.0016	.0217	2.618	.0162	.0003
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	0011	.3416	.0031	0050	.3228	.0040	.0010	.6658	77.72
Stddev	.0001	.0004	.0001	.0006	.0009	.0002	.0001	.0084	.26
%RSD	4.665	.1112	2.115	11.75	.2696	4.110	12.09	1.261	.3322
#1	0011	.3413	.0032	0054	.3234	.0038	.0009	.6717	77.91
#2	0012	.3418	.0031	0046	.3222	.0041	.0010	.6598	77.54
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0931	3.704	8.374	1054.	.0836	0016	0024	4.682	0012
Stddev	.0000	.025	.058	15.	.0003	.0001	.0000	.004	.0001
%RSD	.0462	.6638	.6899	1.390	.3617	3.313	1.712	.0955	7.100
#1	.0931	3.721	8.415	1064.	.0838	0016	0024	4.685	0011
#2	.0932	3.687	8.333	1044.	.0833	0017	0025	4.679	0012
Elem	Sr4077	Ti3349		Zr3391					
Avg	.3133	0040	.0098	.0013					
Stddev	.0005	.0001	.0003	.0000					
%RSD	.1549	3.055	3.315	1.134					
#1	.3136	0041	.0100	.0013					
#2	.3129	0039	.0095	.0013					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	142590.	27783.	2400.8	4518.5					
Stddev	71.	125.	1.3	2.1					
%RSD	.04996	.44970	.05340	.04572					
	142540.	27695.	2399.9	4517.0					
#1 #2	142640.	27872.	2401.7	4520.0					

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.0002 .0002 101.1

.0001

Ca3179

.0527 .0012

2.305

0535

.0518

Ni2316

.0005

1.665

.0005 .0005

.0007

64.23

0004

.0011

.0004 .0001 13.45

.0005 .0004

.0078

46.41

0104

.0052

									◀ Zoom Zoom
									200111
Sample Nan	no: IA5121	26.1 A.	cauired: 7/	20/2010 4:4	IE-113 T	ype: Unk			
						٠.			
Method: Acc		,	de: CONC		actor: 1.00				
User: admin	Cust	tom ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.4493	.0008	.0025	.0314	.0062	.0045	3.053	.0894	.0013
Stddev	.0002	.0000	.0000	.0002	.0000	.0001	.005	.0000	.0002
%RSD	.0552	.6528	.4862	.5312	.8023	1.270	.1725	.0413	19.39
#1	.4494	.0008	.0024	.0313	.0062	.0044	3.049	.0894	.0014
#2	.4491	.0008	.0025	.0316	.0063	.0045	3.057	.0894	.0011
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	0010	.3975	.0169	0036	.0277	.0035	.0027	.3852	180.7
Stddev	.0000	.0001	.0001	.0005	.0009	.0007	.0003	.0001	1.0
%RSD	4.087	.0377	.6472	13.18	3.424	20.65	10.24	.0277	.5262
#1	0010	.3976	.0168	0039	.0283	.0030	.0025	.3851	180.0
#2	0009	.3974	.0169	0032	.0270	.0040	.0029	.3852	181.4
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	12.62	25.53	16.42	1110.	.1238	0031	0063	9.633	0024
Stddev	.03	.04	.05		.0005	.0001	.0006	.016	.0000
%RSD	.2132	.1683	.3345	.0264	.3887	4.572	8.949	.1632	.2345
#1	12.60	25.56	16.38	1111.	.1235	0032	0067	9.622	0023
#2	12.64	25.50	16.46	1110.	.1241	0030	0059	9.644	0024
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.8439	0075	.0199	.0004					
Stďdev	.0007	.0003	.0002	.0001					
%RSD	.0803	4.432	.8720	24.02					
#1	.8443	0073	.0198	.0003					
#2	.8434	0078	.0201	.0004					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	134780.	26060.	2256.6	4432.5					
Stďdev	94.	102.	3.9	4.3					
%RSD	.06991	.39216	.17354	.09657					
#1	134850.	26132.	2259.3	4435.5					
#2	134720.	25988.	2253.8	4429.5					
# 4	134720.	23988.	2233.8	4429.3					

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									◀ Zoom In
									Zoom Out
			ed: 7/20/20 ode: CONC Cus		Type: Factor: 1.0 Cust				
Elem Units Avg Stddev %RSD	Ba4554 ppm 2.049 .003 .1630	Be3130 ppm 2.129 .004 .1690	ppm 2.049 .001	Co2286 ppm 2.066 .002 .0816	ppm 2.100 .002	Cu3247 ppm 2.038 .003 .1476	Mn2576 ppm 2.145 .002 .0791	ppm 2.099	Ag3280 ppm .2555 .0002 .0964
#1 #2	2.046 2.051	2.131 2.126		2.065 2.067		2.040 2.036			.2556 .2553
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm 2.074 .001 .0616		ppm 2.033 .002	TI1908 ppm 2.119 .008 .3594	ppm 2.078 .001	ppm 2.033 .001		ppm 40.61 .04	Ca3179 ppm 41.58 .14 .3264
#1 #2	2.073 2.075	2.104 2.107		2.113 2.124	2.078 2.077	2.033 2.034	2.032 2.031	40.59 40.64	41.68 41.49
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm 41.50 .11 .2741	Mg2790 ppm 41.31 .20 .4883	ppm 39.91 .06	Na5895 ppm 40.29 .01 .0344	ppm 2.064 .004	ppm 2.060 .002	ppm 2.065 .003	ppm 5.119 .002	Sn1899 ppm 2.081 .000 .0146
#1 #2	41.58 41.42	41.46 41.17		40.30 40.28		2.059 2.062	2.062 2.067	5.118 5.120	2.081 2.080
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Elem Avg Stddev %RSD	Fe2599 .0295 .0011 3.679	Mg2790 .0093 .0090 96.51	K_7664 .0910 .0185 20.30	Na5895 .6222 .0242 3.885	B_2089 .0001 .0002 149.9	Mo2020 .0000 .0001 126.7	Pd3404 0009 .0005 54.80	Si2124 .0096 .0002 1.687	Sn1899 .0004 .0002 63.99
#1 #2	.0288 .0303	.0157 .0030	.0779 .1040	.6393 .6051	.0003	.0000 .0001	0012 0005	.0095 .0097	.0002 .0006
Elem Avg Stddev %RSD	Sr4077 .0001 .0000 23.85	Ti3349 .0001 .0000 32.13	W_2079 0037 .0004 11.57	Zr3391 .0000 .0000 261.8					
#1 #2	.0001 .0001	.0001 .0001	0041 0034	.0001					
Int. Std. Avg Stddev %RSD	Y_3600 158110. 416. .26304	Y_3710 27465. 3. .00937	Y_2243 2583.6 1.0 .03909	In2306 5457.6 2.2 .04078					
#1 #2	157810. 158400.	27467. 27463.	2584.3 2582.9	5459.2 5456.0					

Sample Name: MP53683-MB1CONF Acquired: 7/20/2010 4:51:59 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

.0000

.000

.0001 -.0001

As1890

.0002

73.37

0003

.0003

Co2286

.0000

.000

.0000

.0001

757.3

- 0003

.0003

Custom ID3:

.0000 .0003 10790.

.0002 -.0002

Pb2203

.0002

10.06

0002

.0002

Cr2677 Cu3247 Mn2576

.0003 .0001 39.74

.0004

Se1960

.0001

431.6

0005

-.0003

Ba4554 Be3130 Cd2288

.0000

.000 753.6

.0000

Zn2062

.0080

1.519

0081

.0079

.0001 .0001 183.3

.0001

V\_2924 -.0001 .0000

51.26

- 0001

.0000

Comment: Elem

Avg Stddev %RSD

#1 #2

#2

Elem

Avg Stddev

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4	Zoon	ı In ▶
- 2	Zoom	Out

Elem Sr4077 Ti3349 W_2079 Zr3391 Units ppm ppm ppm ppm ppm ppm 2.027 Stddev .003 .001 .009 .000 %RSD .1333 .0302 .4574 .0170 #1 2.116 2.088 1.945 2.027 #2 2.120 2.087 1.957 2.027 Check? Chk Pass Chk Pa
#2 2.120 2.087 1.957 2.027  Check? Chk Pass Chk Pass Chk Pass Chk Pass Value Range  Int. Std. Y_3600 Y_3710 Y_2243 In2306 Units Cts/S Cts/S Cts/S Cts/S Avg 152970. 27247. 2501.9 5112.2 Stddev 120. 626 .6
Value Range Int. Std. Y_3600 Y_3710 Y_2243 In2306 Units Cts/S Cts/S Cts/S Cts/S Cts/S Avg 152970. 27247. 2501.9 5112.2 Stddev 120. 626 .6
Units Cts/S Cts/S Cts/S Cts/S Avg 152970. 27247. 2501.9 5112.2 Stddev 120. 626 .6
%RSD .07875 .22723 .02415 .01246
#1 153060. 27203. 2501.5 5112.7 #2 152890. 27291. 2502.3 5111.8

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4 Zoom ( Zoom ( ) Type: QC . Factor: 1.000000 Custom ID3:
. Factor: 1.000000
. Factor: 1.000000
. Factor: 1.000000
36 Cr2677 Cu3247 Mn2576 Ni2316 Aq3280
m ppm ppm ppm ppm ppm
04 .0007 .0004 .0005 .0005 .0002
.0002 .0001 .0000 .0001 .0002
33 25.34 29.71 5.416 15.72 117.7
.0008 .0005 .0005 .0004 .0004
.0000 .0000 .0000 .0000 .0000
ss Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass
25 OTHER 455 OTHER 455 OTHER 455 OTHER 455
08 Pb2203 Se1960 Sb2068 Al3961 Ca3179
m ppm ppm ppm ppm ppm
00001 .0016 .0010 .0143 .0210
.0001 .0005 .0006 .0017 .0012
06 129.7 30.08 59.22 11.99 5.918
0 .0000 .0012 .0014 .0155 .0202
00001 .0019 .0006 .0131 .0219
ss Chk Pass Chk Pass Chk Pass Chk Pass
95 B 2089 Mo2020 Pd3404 Si2124 Sn1899
m ppm ppm ppm ppm ppm
33 .0018 F.0027 .0002 .0025 .0001
18 .0001 .0006 .0003 .0002 .0001
8 5.249 23.07 133.6 8.507 226.8
16 .0019 .0031 .0004 .0024 .0002
21 .0018 .0023 .0000 .0027 .0000

Chk Fail Chk Pass Chk

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Check ? High Limit Low Limit

Naw Da	ta IVIAZ400	r page	101 01 21	1					
									◀ Zoom In ▶
									Zoom Out
Sample N	ame: MP537	52-MB1 2	Acquir	ed: 7/20/20	10 5:10:23	Type:	Unk		
Method: A	Accutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avq	.0001	.0001	0001	.0001	.0002	.0001	.0002	.0003	.0001
Stddev	.0001	.0000	.0001	.0001	.0001	.0001	.0000	.0000	.0001
%RSD	50.97	35.35	61.41	99.40	50.06	114.9	16.62	7.051	93.31
#1	.0002	.0001	0001	.0000	.0003	.0002	.0002	.0003	.0002
#2	.0001	.0001	0002	.0002	.0001	.0000	.0001	.0002	.0000
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avq	.0000	.0011	.0006	.0021	.0001	0001	0006	.0164	.0486
Stddev	.0001	.0001	.0005	.0006	.0005	.0003	.0006	.0043	.0002
%RSD	1563.	7.756	74.49	31.08	779.9	227.4	99.32	26.12	.3621
#1	.0000	.0011	.0009	.0016	0003	0004	0002	.0133	.0487
#2	.0001	.0010	.0003	.0016	.0003	.0004	0002	.0194	.0485
""	.0001	.0010	.0003	.0023	.0004	.0001	.0010	.0174	.0403
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	.0129	0015	.0231	.0549	.0008	.0004	0006	0040	.0018
Stddev	.0005	.0089	.0037	.0043	.0001	.0000	.0001	.0001	.0003
%RSD	3.692	608.0	16.18	7.778	10.58	2.385	17.55	1.386	18.81
#1	.0126	.0048	.0204	.0579	.0007	.0004	0007	0040	.0021
#2	.0132	0077	.0257	.0519	.0008	.0004	0005	0039	.0016
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0004	.0005	0024	.0000					
Stddev	.0000	.0001	.0002	.0000					
%RSD	13.90	29.86	7.324	40.97					
#1	.0004	.0006	0023	.0001					
#2	.0003	.0004	0025	.0000					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	161230.	28250.	2648.1	5614.2					
Stddev	277.	47.	9.1	18.4					
%RSD	.17192	.16706	.34480	.32782					
#1	161420.	28283.	2654.6	5627.2					
#2	161030.	28216.	2641.6	5601.2					

Sample Na	me: CCB	Acquire	d: 7/20/201	0 5:04:10	Type: QC
Method: Ad	cutest1(v1	72) Mo	de: CONC	Corr. Fa	actor: 1.000000
User: admi	n Cus	tom ID1:	Custo	om ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	
Units	ppm	ppm	ppm	ppm	
Avg	.0005	.0004	.0094	.0010	
Stddev	.0001	.0004		.0001	
%RSD	11.63	106.1	11.99	12.11	
#1	.0005	.0007	.0102	.0011	
#2	.0006	.0001	.0086	.0010	
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
High Limit	011101 0000	OTIK I GSS	OTHER GOOD	Ome i ass	
Low Limit					
lest Ctri	V 2/00	V 2710	V 2242	1-000/	
Int. Std. Units	Y_3600 Cts/S	Y_3710 Cts/S			
Avg	157970.	27507.	2582.7		
Stddev	387.	15.	.5	5.4	
%RSD	.24489	.05337	.01979		
#1	158240.	27517.			
#2	157690.	27496.	2582.3	5460.4	

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									◀ Zoom
									Zoom
S N	- MDE07	F0 D4	A manufactural C	7/20/2010	- 1/ 04	Town 100	1.		
Sample Nam				7/20/2010 !		Type: Un	K		
Method: Acc	•	,	de: CONC		actor: 1.00				
User: admin	Cust	om ID1:	Custo	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avq	3.925	.1015	.0959	.9868	.4014	.4731	1.034	1.006	.0928
Stddev	.000	.0001	.0002	.0008	.0014	.0002	.001	.001	.0002
%RSD	.0074	.1084	.1767	.0818	.3460	.0337	.0718	.0921	.2318
#1	2.025	1014	0050	00/2	.4005	4722	1.024	1.007	.0926
#1 #2	3.925 3.925	.1014 .1016	.0958 .0961	.9862 .9873	.4005	.4732 .4730		1.006 1.007	.0926
Elem		Zn2062	As1890	TI1908	Pb2203			Al3961	
Avg	.9575	1.000	3.858	3.943	.9784	3.775	.9629	51.60	12.36
Stddev	.0007	.001	.004	.005	.0011	.005	.0008	.01	.01
%RSD	.0763	.0937	.0896	.1306	.1116	.1223	.0863	.0269	.1165
#1	.9570	.9996	3.855	3.939	.9791	3.772	.9623	51.61	12.37
#2	.9580	1.001	3.860	3.947	.9776	3.778	.9635	51.59	12.35
Elem	Fe2599	Mg2790	K_7664	Na5895	B 2089	Mo2020	Pd3404	Si2124	Sn1899
Avq	52.47	11.96	11.79	11.92	.9245	1.004	.8264	1.937	1.010
Stddev	.02	.01	.01	.02	.0011	.002	.0001	.005	.001
%RSD	.0308	.0774	.0847	.1608	.1147	.1928	.0114	.2471	.1373
#1	52.48	11.96	11.78	11.93	.9237	1.003	.8264	1.933	1.011
#2	52.46	11.95	11.80	11.91	.9252		.8263		1.009
Elem	Sr4077	T13340	W_2079	Zr3391					
Ava	1.057	1.036	.0690	.0098					
Stddev	.002	.000	.0004	.0004					
%RSD	.1509	.0133	.6046	4.179					
#1	1.058	1.036	.0693	.0101					
#1	1.056		.0687	.0095					
Int. Std.	Y_3600		Y_2243	In2306					
Avg	156380.	27601.	2534.7	5255.0					
Stddev	91.	53.	.0	2.8					
%RSD	.05840	.19059	.00062	.05260					
	156320. 156450.		2534.7	5253.1					
#1 #2		27638.	2534.7	5257.0					

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	mst QC	. 10	A2400	•					◀ Zoom In ▶
									Zoom Out
Sample N	ame: MP537	52-S1	Acquired:	7/20/2010	5:22:30	Type: Un	k		
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: adm	nin Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:			
Comment	:								
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	3.834	.0988	.0919	.9547	.4301	.5015	1.755	.9881	.0890
Stddev	.002	.0000	.0004	.0001	.0012	.0007	.002	.0004	.0003
%RSD	.0494	.0309	.4862	.0125	.2763	.1393	.1368	.0417	.3781
#1	3.836	.0988	.0916	.9546	.4309	.5011	1.757	.9878	.0887
#2	3.833	.0988	.0922	.9548	.4293	.5020	1.754	.9883	.0892
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.9590	1.010	3.699	3.792	.9570	3.616	.7959	75.79	12.84
Stddev	.0008	.001	.007	.002	.0043	.002	.0012	.01	.01
%RSD	.0834	.0756	.1834	.0386	.4498	.0523	.1509	.0189	.0973
#1	.9595	1.011	3.704	3.790	.9601	3.614	.7967	75.78	12.84
#2	.9584	1.010	3.694	3.793	.9540	3.617	.7950	75.80	12.85
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	79.68	14.17	13.31	11.68	.8884	.9581	.7173	3.180	.9518
Stddev	.01	.02	.02	.01	.0006	.0005	.0012	.003	.0008
%RSD	.0086	.1492	.1644	.0563	.0634	.0511	.1740	.0822	.0801
#1	79.68	14.15	13.29	11.68	.8888	.9578	.7164	3.182	.9523
#2	79.69	14.18	13.32	11.67	.8880	.9585	.7182	3.179	.9513
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	1.026	1.860	.0697	.0151					
Stddev	.002	.001	.0004	.0002					
%RSD	.1669	.0375	.6234	1.269					
#1	1.027	1.861	.0700	.0152					
#2	1.025	1.860	.0694	.0150					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	156830.	27751.	2541.8	5227.2					
Stddev	207.	31.	1.2	.9					
%RSD	.13209	.11275	.04916	.01697					
#1	156690.	27773.	2541.0	5226.5					
#2	156980.	27729.	2542.7	5227.8					

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									◀ Zoom Zoom C	
									200111	·ut
	me: JA512			/20/2010 5		Type: Unk				
Method: Ad	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
User: admi	in Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.0522	.0008	.0001	.0122	.0312	.0365	.7187	.0195	.0005	
Stddev	.0002	.0000	.0001	.0000	.0002	.0001	.0012	.0000	.0000	
%RSD	.4490	.8012	131.2	.0966	.6955	.2713	.1632	.1563	6.272	
#1	.0520	.0008	.0002	.0122	.0314	.0364	.7196	.0195	.0005	
#2	.0523	.0008	.0000	.0122	.0310	.0365	.7179	.0195	.0005	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0229	.0379	.0086	.0040	.0131	.0011	.0002	18.84	1.334	
Stddev	.0001	.0002	.0002	.0001	.0001	.0001	.0005	.01	.007	
%RSD	.6141	.5096	2.339	2.547	.6304	10.01	289.4	.0500	.5055	
#1	.0230	.0377	.0084	.0040	.0131	.0011	0002	18.83	1.330	
#2	.0238	.0380	.0087	.0039	.0131	.0010	.0002	18.85	1.339	
π2	.0220	.0300	.0007	.0037	.0132	.0010	.0003	10.03	1.337	
Elem	Fe2599	Mg2790	K 7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avq	22.40	1.852	1.160	.2889	.0047	.0028	0062	.7739	.0078	
Stddev	.07	.000	.010	.0000	.0002	.0002	.0004	.0004	.0005	
%RSD	.3241	.0157	.8531	.0018	4.427	6.542	6.999	.0532	6.700	
		4.050	4.450	0000	00.10		00//	77.40	0074	
#1	22.34	1.852	1.153	.2889	.0048	.0030	0066	.7742	.0074	
#2	22.45	1.852	1.167	.2889	.0045	.0027	0059	.7737	.0081	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0103	.5676	.0009	.0070						
Stddev	.0000	.0012	.0009	.0001						
%RSD	.1377	.2150	88.17	.9525						
701CJD	.1377	.2130	00.17	.7323						
#1	.0103	.5685	.0014	.0071						
#2	.0103	.5667	.0003	.0070						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg	160830.	28217.	2631.2	5489.0						
Stddev	89.	207.	7.6	7.0						
%RSD	.05546	.73233	.28765	.12690						
#1	160760.	28363.	2636.5	5494.0						
#1 #2	160760.	28070.	2625.8	5484.1						
π∠	100070.	20070.	2020.8	J404. I						

Sample Nam Method: Acc User: admin Comment:	utest1(v17		Acquired: de: CONC Custo		actor: 1.00	Type: Un 00000 om ID3:	k		
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	3.964	.1020	.0956	.9872	.4538	.5154	2.018	1.035	.0925
Stddev	.008	.0001	.0000	.0006	.0104	.0047	.032	.002	.0002
%RSD	.1907	.1008	.0499	.0615	2.281	.9153	1.580	.1902	.2522
#1	3.969	.1020	.0956	.9868	.4611	.5121	2.041	1.036	.0927
#2	3.959	.1021	.0956	.9877	.4464	.5187	1.996	1.033	.0923
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.9895	1.034	3.827	3.923	.9893	3.750	.7956	76.87	13.71
Stddev	.0090	.003	.003	.000	.0006	.006	.0002	.07	.02
%RSD	.9122	.2576	.0675	.0112	.0656	.1501	.0280	.0948	.1506
#1	.9959	1.032	3.829	3.922	.9888	3.754	.7957	76.92	13.70
#2	.9831	1.036	3.826	3.923	.9897	3.746	.7954	76.82	13.72
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	85.75	15.02	13.65	12.08	.9170	.9878	.7120	2.693	.9806
Stddev	.01	.04	.05	.02	.0025	.0003	.0021	.007	.0001
%RSD	.0062	.2871	.3630	.2037	.2680	.0350	.2898	.2464	.0090
#1	85.76	14.99	13.68	12.10	.9188	.9881	.7105	2.698	.9807
#2	85.75	15.05	13.61	12.06	.9153	.9876	.7134	2.688	.9806
Elem Avg Stddev %RSD	Sr4077 1.053 .001 .1258	Ti3349 1.908 .013 .6764	W_2079 .0696 .0002 .2791	Zr3391 .0148 .0001 .4298					
#1 #2	1.054 1.052	1.917 1.899	.0697 .0695	.0148 .0148					
Int. Std. Avg Stddev %RSD	Y_3600 156630. 1527. .97478	Y_3710 27663. 29. .10624	Y_2243 2531.3 14.0 .55497	In2306 5205.0 20.4 .39276					
#1 #2	157710. 155550.	27684. 27642.	2521.4 2541.3	5190.6 5219.5					

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									■ Zoom
									Zoom C
Commis N	a. MDE27	E2 CD1	A country	. 7/20/2014	E-40-27	Tuno II	ml.		
Sample Nam				: 7/20/2010		Type: U	nk		
Method: Acc		,	de: CONC		actor: 5.00				
User: admin	Cust	tom ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avg	.0536	.0007	0004	.0122	.0315	.0369	.7253	.0200	.0002
Stddev	.0001	.0000	.0001	.0001	.0013	.0007	.0013	.0004	.0001
%RSD	.1226	5.819	14.74	.5222	4.015	2.009	.1760	2.141	46.58
#1	.0537	.0007	0004	.0123	.0307	.0374	.7244	.0203	.0002
#2	.0536	.0006	0004	.0122	.0324	.0363	.7262	.0197	.0001
Elem	V_2924	Zn2062	As1890	TI1908		Se1960	Sb2068	Al3961	Ca3179
Avg	.0226	.0422	.0127	.0066	.0113	.0062	.0028	18.93	1.402
Stddev	.0007	.0002	.0023	.0016	.0016	.0001	.0011	.02	.003
%RSD	2.925	.4561	17.87	23.73	13.83	2.287	38.99	.1123	.2362
#1	.0222	.0424	.0143	.0055	.0124	.0061	.0036	18.94	1.405
#2	.0231	.0421	.0111	.0077	.0102	.0063	.0020	18.91	1.400
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	22.70	1.855	1.243	.3855	.0097	.0051	0082	.9928	.0064
Stddev	.05	.021	.015	.0067	.0003	.0009	.0009	.0044	.0002
%RSD	.2136	1.161	1.218	1.748	3.304	16.89	11.49	.4450	3.743
#1	22.73	1.840	1.233	.3807	.0099	.0057	0075	.9960	.0062
#2	22.66	1.870	1.254	.3903	.0094	.0045	0089	.9897	.0065
Elem	Sr4077	Ti3349		Zr3391					
Avg	.0097	.5780	0112	.0072					
Stddev	.0001	.0007	.0003	.0002					
%RSD	1.242	.1290	2.614	3.008					
#1	.0096	.5775	0114	.0074					
#2	.0098	.5785	0110	.0071					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	159180.	27702.	2605.4	5477.2					
Stddev	51.	8.	4.4	3.5					
%RSD	.03232	.02910	.16696	.06319					
#1	159140.	27697.	2608.5	5479.6					
#1	159210.	27708.	2602.3	5474.7					

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◀ Zoom In ▶

									Zoom C	
Sample N										
	ccutest1(v17	,	de: CONC							
User: adm		tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment	:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280	
Avg	.6513	.0065	.0128	.0262	.2634	.2866	.6302	.1136	.0009	
Stddev	.0016	.0001	.0002	.0000	.0001	.0010	.0004	.0002	.0000	
%RSD	.2527	.9649	1.183	.0042	.0391	.3336	.0565	.1366	5.347	
#1	.6502	.0066	.0129	.0262	.2635	.2873	.6300	.1135	.0008	
#2	.6525	.0065	.0127	.0262	.2633	.2859	.6305	.1137	.0009	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.1337	1.412	.0327	.0054	.1702	.0030	.0027	45.18	34.07	
Stddev %RSD	.0005	.001	.0006	.0012	.0002	.0006	.0010	.11	.12 .3569	
70K3D	.3397	.0538	1.900	21.82	.1440	20.64	35.60	.2369	.3309	
#1	.1334	1.413	.0332	.0062	.1704	.0034	.0020	45.26	34.15	
#2	.1340	1.412	.0323	.0045	.1701	.0025	.0034	45.11	33.98	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	86.92	18.30	5.241	.6772	.0655	.0155	0266	1.855	.0147	
Stddev	.26	.17	.017	.0011	.0002	.0003	.0007	.004	.0004	
%RSD	.2949	.9558	.3235	.1600	.3725	1.623	2.803	.2280	2.930	
#1	87.10	18.43	5.253	.6764	.0653	.0154	0261	1.852	.0144	
#2	86.74	18.18	5.229	.6779	.0657	.0157	0271	1.858	.0150	
Elem	Sr4077	Ti3349		Zr3391						
Avg	.1206	1.530	.0252	.0544						
Stddev	.0000	.001	.0017	.0001						
%RSD	.0227	.0894	6.616	.2462						
#1	.1206	1.529	.0240	.0545						
#2	.1205	1.531	.0263	.0544						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg	159180.	28176.	2586.7	5311.7						
Stddev	157.	138.	7.0	10.8						
%RSD	.09852	.49048	.26922	.20295						
#1	159070.	28079.	2591.6	5319.3						
#2	159300.	28274.	2581.8	5304.0						

Sample Na	me: JA5129	90-1 A	cquired: 7/2	20/2010 5:5	52:36 T	Type: Unk			
Method: Ac	cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000			
User: admi	n Cus	tom ID1:	Custo	om ID2:	Custo	om ID3:			
Comment:									
Elem	Ba4554	Be3130		Co2286	Cr2677			Ni2316	
Avg	.0783	.0005	.0002	.0044	.1645	.1271	.2250	.0118	.0003
Stddev	.0000	.0000	.0001		.0005	.0007	.0005	.0001	
%RSD	.0583	4.591	35.75	5.805	.2954	.5356	.2009	.5675	58.47
#1	.0783	.0005	.0002	.0042	.1649	.1267	.2247	.0118	.0005
#2	.0783	.0006	.0001	.0046	.1642	.1276		.0119	.0002
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avq	.0142	.1134		.0028	.0544	.0011	.0012	6.721	3.573
Stddev	.0002	.0006		.0005	.0001	.0004		.018	.001
%RSD	1.177	.5059			.2313	35.55			.0139
		4400	00.10		05.40			. 700	0.570
#1 #2	.0141	.1130			.0543				
#2	.0143	.1138	.0045	.0024	.0545	.0009	.0016	6.734	3.573
Elem	Fe2599	Mg2790		Na5895		Mo2020		Si2124	
Avg	22.89	1.620		1.116	.0037	.0026	0067	.8175	.0835
Stddev	.04	.005			.0000			.0011	
%RSD	.1879	.2921	.2167	.3233	1.335	3.812	17.27	.1388	.0373
#1	22.86	1.624	1.393	1.119	.0037	.0026	0076	.8183	.0834
#2	22.92	1.617	1.398	1.114	.0038	.0027	0059		.0835
Elem	Sr4077	Ti3349	W 2070	Zr3391					
Avq	.0220	.5221		.0051					
Stddev	.0000	.0013		.0000					
%RSD	.0548	.2527		.2054					
		5040		0050					
#1	.0220	.5212		.0052					
#2	.0220	.5231	.0000	.0051					
Int. Std.	Y_3600	Y_3710							
Avg	159620.	28069.	2610.1						
Stddev	630.	11.	.3						
%RSD	.39471	.03895	.01337	.11699					
#1	160060.	28062.	2610.3	5477.4					
#2	159170.	28077.		5468.3					

#### Raw Data MA24667 page 169 of 217

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									Zoom O	IL
Sample Na	ame: JA512	90-2 A	cquired: 7/2	20/2010 5:5	58:41 T	Гуре: Unk				
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
User: adm Comment:		tom ID1:	Cust	om ID2:	Custo	om ID3:				
Elem Avg Stddev %RSD	Ba4554 .0585 .0001 .2190	Be3130 .0003 .0000 8.493	Cd2288 .0001 .0000 62.37	Co2286 .0030 .0001 1.762	Cr2677 .2616 .0005 .1953	Cu3247 .1329 .0005 .3778	Mn2576 .1417 .0002 .1248	Ni2316 .0117 .0001 .6968	Ag3280 .0006 .0002 24.59	
#1 #2	.0586 .0584	.0003	.0000 .0001	.0030	.2612 .2619	.1332 .1325	.1416 .1418	.0118 .0116	.0007 .0005	
Elem Avg Stddev %RSD	V_2924 .0143 .0001 .5059	Zn2062 .0736 .0002 .2045	As1890 .0046 .0001 1.722	TI1908 .0022 .0000 2.196	Pb2203 .1072 .0004 .3391	Se1960 .0007 .0001 18.56	Sb2068 .0008 .0001 16.14	Al3961 4.769 .004 .0827	Ca3179 1.299 .007 .5380	
#1 #2	.0142 .0143	.0735 .0737	.0045 .0047	.0021 .0022	.1070 .1075	.0006 .0008	.0007 .0008	4.772 4.766	1.304 1.294	
Elem Avg Stddev %RSD	Fe2599 22.70 .05 .2296	Mg2790 1.145 .003 .2375	K_7664 1.211 .020 1.638	Na5895 .4361 .0047 1.084	B_2089 .0028 .0003 9.689	Mo2020 .0181 .0003 1.517	Pd3404 0070 .0002 2.950	Si2124 .6503 .0017 .2538	Sn1899 .0471 .0002 .4450	
#1 #2	22.73 22.66	1.143 1.147	1.225 1.197	.4328 .4395	.0030 .0027	.0179 .0183	0069 0072	.6491 .6515	.0470 .0473	
Elem Avg Stddev %RSD	Sr4077 .0159 .0000 .0539	Ti3349 .4585 .0013 .2813	W_2079 0004 .0002 52.54	Zr3391 .0092 .0000 .4250						
#1 #2	.0159 .0159	.4576 .4594	0005 0002	.0092 .0092						
Int. Std. Avg Stddev %RSD	Y_3600 159150. 238. .14948	Y_3710 27965. 47. .16645	Y_2243 2600.2 3.7 .14339	In2306 5475.0 5.2 .09504						
#1 #2	159320. 158980.	27933. 27998.	2602.8 2597.6	5478.7 5471.4						

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									■ Zoom Ir
									Zoom O
Sample Nam			cquired: 7/2			ype: Unk			
Method: Acc	,	,	de: CONC		actor: 1.00	00000			
Jser: admin	Cust	tom ID1:	Custo	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avg	.0618	.0003	.0001	.0051	.6254	.1804	.3120	.0409	.0007
Stddev	.0002	.0000	.0001	.0001	.0019	.0003	.0001	.0002	.0000
%RSD	.3951	6.804	164.1	2.150	.2998	.1536	.0183	.5744	.2514
#1	0417	0002	0000	0052	4247	1004	2120	0407	0007
#1 #2	.0617	.0003	.0000	.0052 .0051	.6267 .6241	.1806 .1802	.3120 .3121	.0407 .0410	.0007 .0007
"-	.0020	.0003	.0002	.0031	.0241	.1002	.3121	.0410	.0007
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0279	.0827	.0067	.0014	.0950	.0001	.0014	5.033	1.513
Stďdev	.0001	.0000	.0003	.0002	.0007	.0003	.0002	.010	.000
%RSD	.2347	.0559	5.144	14.79	.7734	298.1	11.67	.1898	.0296
#1	.0280	.0828	.0070	.0016	.0945	0001	.0013	5.040	1.513
#2	.0279	.0827	.0065	.0013	.0956	.0003	.0016	5.027	1.513
	.0277	.0027	.0000	.0010	.0700	.0000	.0010	0.027	1.010
Elem	Fe2599	Mg2790	K_7664	Na5895		Mo2020	Pd3404	Si2124	Sn1899
Avg	44.11	1.118	1.251	.6229	.0047	.1240	0118	.7573	.0546
Stddev	.04	.005	.018	.0054	.0001	.0008	.0006	.0065	.0003
%RSD	.0907	.4189	1.431	.8690	1.306	.6220	5.440	.8618	.5033
#1	44.08	1.115	1.263	.6191	.0047	.1235	0114	.7527	.0544
#2	44.13	1.122	1.238	.6267	.0046	.1246	0123	.7619	.0548
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.0146	.4446	.0034	.0107					
Stddev	.0001	.0007	.0002	.0002					
%RSD	.5487	.1561	5.109	2.111					
#1	.0147	.4451	.0035	.0106					
#2	.0146	.4441	.0033	.0109					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	159310. 180.	28166. 34.	2599.3 4.5	5464.5 7.9					
Stddev %RSD	.11275	.12236	.17137	.14471					
/UCJU	.112/5	.12230	.1/13/	.144/1					
# <b>4</b>	159430.	28190.	2602.4	5470.0					
#1	159180.	28141.	2596.1	5458.9					

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%RSD

Check?

High Limit Low Limit

1.358

.0151 .0154

.0114

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5.331

.0143 .0155

7.817

.0497

.0445

Chk Fail Chk Pass Chk Pass Chk Pass Chk Pass

13.04

.0204

.0245

10.46

.0019

13.03

.0031

.0025

.0021

4.104

.0004

Chk Fail Chk Pass Chk Pass Chk Pass

13.85

.0020

29.58

.0005

◀ Zoom In ▶ Zoom Out

	Inst QC	: N	A2466	7					
									▼ Zoom Zoom C
•			d: 7/20/20 <sup>-</sup> de: CONC Cus		Type: Factor: 1.0 Cust				
Elem Jnits Avg Stddev	Ba4554 ppm 2.055 .000	Be3130 ppm 2.134 .001	Cd2288 ppm 2.051 .000	Co2286 ppm 2.067 .000	ppm 2.098	Cu3247 ppm 2.051 .003	Mn2576 ppm 2.146 .004	2.105	Ag3280 ppm .2563 .0005
6RSD	.0003	.0633	.0203	.0043		.1599			.1887
±1 ±2	2.055 2.055	2.133 2.135	2.051 2.051	2.067 2.067	2.094 2.102	2.054 2.049	2.143 2.149		.2560 .2567
Check ? /alue Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Jnits Avg Stddev 6RSD	V_2924 ppm 2.078 .001 .0366	Zn2062 ppm 2.100 .001 .0340	As1890 ppm 2.027 .001 .0445	TI1908 ppm 2.127 .005 .2293	ppm 2.082 .003	Se1960 ppm 2.035 .001 .0254	Sb2068 ppm 2.037 .002 .0722	ppm 40.76 .04	Ca3179 ppm 41.79 .03 .0688
£1 £2	2.078 2.079	2.101 2.100	2.026 2.028	2.124 2.131	2.080 2.084	2.035 2.034	2.038 2.036	40.73 40.78	41.81 41.76
Check ? /alue Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
lem	Fe2599		K_7664	Na5895					
Jnits Avg	ppm 41.65	ppm 41.49	ppm 40.06	ppm 40.59	ppm 2.069	ppm 2.062	ppm 2.077	ppm 5.132	ppm 2.081
Stddev	.02	.02	.04	.01	.002	.003	.000	.006	.002
6RSD	.0522	.0447	.0968	.0310	.0952	.1465	.0165	.1186	.0943
1 2	41.67 41.64	41.48 41.50	40.03 40.09	40.58 40.60	2.067 2.070	2.060 2.064	2.077 2.076	5.128 5.136	2.083 2.080
Check ? /alue Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Raw Data MA24667	page 174 of 21
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Sample Name: CCV Acquired: 7/20/2010 6:10:51 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Ti3349 W\_2079

ppm 1.961 .010

.5015

1.954 1.968

2503.1 2506.9

ppm 2.091 .004

.1914

2.088 2.094

 Y\_3600
 Y\_3710
 Y\_2243

 Cts/S
 Cts/S
 Cts/S

 153110.
 27202.
 2505.0

 22.
 18.
 2.7

 .01461
 .06505
 .10848

27190. 27215.

Chk Pass Chk Pass Chk Pass Chk Pass

Zr3391

ppm 2.031 .001

.0475

2.030 2.031

In2306 Cts/S 5113.1

.01109

5113.5 5112.7

Custom ID3:

Sr4077

ppm 2.126 .005

.2448

2.123 2.130

153120. 153090.

Comment: Elem

Units Avg Stddev

%RSD

#2 Check?

Value Range

Int. Std.

Units Avg Stddev %RSD

#1 #2

◀ Zoom In ▶ Zoom Out

Raw Data	a MA2466	7 page	174 of 21	7		
			de: CONC		Type: QC actor: 1.000000 Custom ID3:	
Elem Units Avg Stddev %RSD	Sr4077 ppm .0006 .0001 13.34	Ti3349 ppm .0007 .0001 8.718	W_2079 ppm .0097 .0015 15.25	ppm .0010 .0000		
#1 #2	.0005 .0006	.0007 .0007	.0107 .0086			
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass		
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 157970. 257. .16260	Cts/S 27439. 98.	Cts/S 2594.7 1.0	Cts/S 5469.7 .0		
#1 #2	158150. 157790.					

Sample Na Method: Ad User: admi Comment:	ccutest1(v1		d: 7/20/201 de: CONC Custo		Type: C actor: 1.00 Custo					
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0005	.0006	.0003	.0003	.0007	.0007	.0006	.0004	.0001	
Stddev	.0001	.0000	.0001	.0001	.0003	.0001	.0000	.0001	.0001	
%RSD	21.10	7.758	19.88	22.59	47.07	16.77	7.426	36.55	99.63	
#1 #2	.0005 .0006	.0006	.0003	.0002	.0009	.0008	.0007	.0005	.0000 .0002	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	.0007	.0003	.0014	.0013	0003	.0016	.0009	.0168	.0193	
Stddev	.0000	.0001	.0001	.0001	.0001	.0016	.0004	.0009	.0005	
%RSD	2.731	25.60	9.825	6.155	34.60	99.37	45.85	5.376	2.585	
#1	.0006	.0003	.0015	.0014	0002	.0028	.0011	.0161	.0197	
#2	.0007	.0002	.0013	.0012	0004	.0005	.0006	.0174	.0190	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Avg	F .0153	.0149	.0471	.0224	.0018	F .0028	.0004	.0018	.0007	
Stddev	.0002	.0008	.0037	.0029	.0002	.0004	.0000	.0002	.0002	

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118 of 151 **ACCUTEST.** JA50921 Laboratories

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Ag3280 .0007 .0002 21.90

.0006 8000.

Ca3179

.8891

0021

.2379

8906

.8876

Sn1899 .0044 .0000

0044

.0044

	Inst QC	: IV	A2466	1						
									◀ Zoom Ir Zoom Oi	
Sample	Name: JA5129		cquired: 7/2		23:02 7	Гуре: Unk				
Method:	Accutest1(v17	,	de: CONC		actor: 1.00					
User: ac		om ID1:	Cust	om ID2:	Custo	om ID3:				
Comme	nt:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.0491	.0004	.0003	.0040	.1667	.1135	.2167	.0107	.0009	
Stddev	.0000	.0001	.0001	.0000	.0009	.0000	.0000	.0003	.0000	
%RSD	.0208	12.16	28.92	.9081	.5376	.0392	.0084	2.380	4.349	
#1	.0491	.0005	.0004	.0039	.1673	.1136	.2167	.0105	.0010	
#2	.0491	.0004	.0003	.0040	.1660	.1135	.2167	.0109	.0009	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0307	.0851	.0099	.0014	.0872	.0005	.0009	5.167	4.894	
Stddev %RSD	.0002 .7858	.0001 .0722	.0009 9.241	.0006 39.29	.0003	.0013 250.1	.0002 21.42	.016	.001 .0109	
%K3D	./636	.0722	9.241	39.29	.3901	250.1	21.42	.3002	.0109	
#1	.0309	.0852	.0105	.0018	.0869	.0014	.0010	5.178	4.895	
#2	.0305	.0851	.0092	.0010	.0874	0004	.0007	5.156	4.894	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	41.85	1.549	1.008	.7420	.0035	.0089	0111	.8319	.0779	
Stddev %RSD	.08	.020 1.310	.011 1.069	.0065 .8757	.0003 7.341	.0003	.0004	.0010	.0010	
%K3D	.1994	1.310	1.069	.8757	7.341	3.460	3.161	.1212	1.241	
#1	41.79	1.534	1.016	.7466	.0036	.0092	0114	.8326	.0786	
#2	41.91	1.563	1.001	.7374	.0033	.0087	0109	.8312	.0773	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0278	.6081	.0053	.0108						
Stddev %RSD	.0000	.0014	.0005 8.569	.0000 .1984						
%K3D	.0000	.2313	8.309	.1984						
#1	.0278	.6091	.0056	.0108						
#2	.0278	.6071	.0050	.0108						
Int. Std.		Y_3710	Y_2243	In2306						
Avg	159260.	28061.	2606.5	5470.0						
Stddev %RSD	116. .07264	64. .22653	9.0 .34658	9.5 .17317						
	.07204		.54050							
#1	159340.	28106.	2612.9	5476.7						
#2	159180.	28016.	2600.1	5463.3						

Daw Data MAGAGGZ	470 -f 047

 Sample Name: JA51290-5
 Acquired: 7/20/2010 6:29:07
 Type: Unk

 Method: Accutest1(v172)
 Mode: CONC
 Corr. Factor: 1.000000

Cd2288

.0003

.0000

18.88

.0002

As1890

.0149

.8186

0150

.0148

K\_7664 5.966 .022

.3748

5.950

W\_2079

.0102 .0007

6.474

.0107

.0098

Y 2243

.04272

2630.0

2628.4

Custom ID2:

Co2286

.0193

.0000

.1456

.0193 .0193

.0029

0025

.0023

Na5895 .3342

.0041

3371

7r3391

.0128

.0729

.0127

.0128

In2306

5407.9

.13410

5402.7

Custom ID3:

Cu3247

.0444

.0002

.5313

.0446 .0443

Se1960

.0022

9.433

0020

.0023

.0000

0054

.0055

Mo2020 .0055

Mn2576

.7380

.0003

.0365

.7378 .7382

.0009

0013

.0006

Pd3404

-.0162 .0000

- 0162

Ni2316

.0454

.0005

1.197

.0458 .0450

Al3961

50.78

.0894

50.75

50.82

Si2124

1.310

1.311

Cr2677

.0803

.0003

.3352

.0804 .0801

Pb2203

.0017

.8058

.0216 .0218

B\_2089 .0055 .0002

2.889

0054

Custom ID1:

Be3130

.0015

.0000

.0015 .0015

Zn2062

.1179

.1181 .1177

Mg2790 6.764

.015

6.775

Ti3349

1.818

.0397

1.818 1.817

Y\_3710

28125. 57.

20113

28085.

28165.

Ba4554

.1316

.0000

.0258

.1316

V\_2924 .0807

0002

.2088

0808

.0805

Fe2599 61.41

.02

.0296

61.40

61.43

Sr4077

.0111

.0784

.0111

.0111

Y 3600

160320. 21.

.01299

160340.

160310.

User: admin

Comment: Elem

Avg Stddev

%RSD

#1 #2

Elem

Avg Stddev

#1

#2

Elem

Avg Stddev

%RSD

Flem

Avg Stddev %RSD

Int. Std.

%RSD

#2

◀ Zoom In ▶

#1

									Zoom C	)u
	lame: JA512		cquired: 7/2 de: CONC		35:11 T actor: 1.00	Type: Unk 00000				
User: adn Comment		tom ID1:	Cust	om ID2:	Custo	om ID3:				
Elem Avg Stddev %RSD	Ba4554 .1314 .0002 .1220	Be3130 .0032 .0000 1.242	Cd2288 .0008 .0000 5.653	Co2286 .0203 .0003 1.299	Cr2677 .0753 .0002 .2395	Cu3247 .0527 .0004 .6970	Mn2576 1.010 .000 .0322	Ni2316 .0456 .0002 .4728	Ag3280 .0005 .0004 88.36	
#1 #2	.1313 .1315	.0031 .0032	.0008 .0007	.0205 .0201	.0754 .0752	.0525 .0530	1.010 1.011	.0455 .0458	.0002 .0007	
Elem Avg Stddev %RSD	V_2924 .0937 .0001 .1530	Zn2062 .1301 .0004 .3019	As1890 .0309 .0003 .9937	TI1908 .0017 .0006 37.25	Pb2203 .0249 .0004 1.607	Se1960 .0024 .0002 10.42	Sb2068 .0017 .0001 3.699	Al3961 27.62 .02 .0624	Ca3179 .7480 .0002 .0221	
#1 #2	.0936 .0938	.1304 .1299	.0307 .0311	.0022 .0013	.0251 .0246	.0022 .0025	.0017 .0018	27.60 27.63	.7482 .7479	
Elem Avg Stddev %RSD	Fe2599 165.7 2.0 1.201	Mg2790 3.150 .004 .1388	K_7664 2.885 .009 .3109	Na5895 .2230 .0037 1.654	B_2089 .0021 .0001 4.202	Mo2020 .0072 .0003 3.981	Pd3404 0407 .0002 .3776	Si2124 1.178 .001 .1208	Sn1899 .0030 .0003 11.44	
#1 #2	164.3 167.1	3.147 3.153	2.892 2.879	.2204 .2256	.0022 .0021	.0070 .0074	0409 0406	1.177 1.179	.0032 .0027	
Elem Avg Stddev %RSD	Sr4077 .0115 .0000 .3735	Ti3349 1.189 .002 .2007	W_2079 .0153 .0003 1.634	Zr3391 .0136 .0001 .9214						
#1 #2	.0115 .0115	1.187 1.190	.0151 .0155	.0135 .0137						
Int. Std. Avg Stddev %RSD	Y_3600 158740.	Y_3710 28425. 110. .38614	Y_2243 2601.0 6.2 .23814	In2306 5405.4 8.5 .15723						
#1 #2	158740. 158740.	28503. 28348.	2605.4 2596.6	5411.4 5399.4						

Raw Da	ta MAZ400	7 page	178 01 21	1						
									◀ Zoom I	
									Zoom O	ut
	14540			2010040 /						
	ame: JA512		cquired: 7/2			ype: Unk				
	ccutest1(v1		de: CONC		actor: 1.00					
User: adm		tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment	:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg Stddev	.0479	.0009	.0001	.0138	.0842	.0347	.4355	.0163	.0004	
%RSD	.1805	.5764	13.65	1.136	.1613	.0928	.0568	1.023	10.35	
#1	.0478	.0009	.0001	.0137	.0841	.0347	.4353	.0165	.0004	
#2	.0480	.0009	.0002	.0139	.0843	.0348	.4356	.0162	.0005	
Elem	V 2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0344	.0344	.0160	.0024	.0137	.0013	.0008	18.35	.4241	
Stddev	.0000	.0003	.0004	.0004	.0007	.0004	.0010	.01	.0005	
%RSD	.1046	.7503	2.650	15.33	4.920	31.13	126.1	.0276	.1072	
#1	.0344	.0342	.0163	.0027	.0132	.0010	.0014	18.36	.4244	
#2	.0344	.0342	.0157	.0027	.0132	.0015	.00014	18.35	.4238	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	37.41	1.276	.8437	.1417	.0021	.0131	0107	.7271	.0077	
Stddev %RSD	.06 .1727	.002 .1275	.0091 1.079	.0027 1.893	.0003 16.58	.0002 1.850	.0012 11.55	.0004	.0002 3.064	
701130	.1727	.1275	1.077	1.075	10.50	1.050	11.55	.0000	3.004	
#1	37.45	1.277	.8501	.1398	.0023	.0129	0116	.7268	.0075	
#2	37.36	1.275	.8373	.1436	.0018	.0133	0098	.7275	.0078	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0091	.5248	.0019	.0087						
Stddev	.0000	.0005	.0000	.0000						
%RSD	.1277	.0978	.7822	.3164						
#1	.0091	.5252	.0019	.0087						
#2	.0091	.5244	.0019	.0087						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg Stddev	160140. 139.	28346. 73.	2626.4 5.0	5476.2 9.5						
%RSD	.08709	.25595	.19157	.17290						
701130	.00707	.23373	.17137	.17270						
#1	160240.	28294.	2629.9	5482.8						
#2	160040.	28397.	2622.8	5469.5						
Bow Do	60 MA2466	7 2220	190 of 21	7						

Raw Data MA24667	page 180 of 217

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Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0404	.0009	.0000	.0061	.0286	.0246	.3126	.0127	.0008
Stddev	.0001	.0000	.0001	.0002	.0005	.0001	.0000	.0000	.0000
%RSD	.1685	2.973	629.0	3.083	1.892	.5517	.0071	.3096	1.200

Stddev	.0001	.0000	.0001	.0002	.0005	.0001	.0000	.0000	.0000
%RSD	.1685	2.973	629.0	3.083	1.892	.5517	.0071	.3096	1.200
#1	.0404	.0009	.0001	.0063	.0290	.0247	.3127	.0126	.0008
#2	.0403		0001	.0060	.0282	.0245	.3126	.0127	8000.
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0298	.0333	.0112	.0017	.0115	.0013	.0004	18.29	.3325
Stddev	.0002	.0001	.0002	.0012	.0004	.0005	.0006	.02	.0008
%RSD	.7897	.2286	1.894	71.00	3.606	36.05	162.1	.0980	.2419

#1 0297 0333 0114 0026 0112 0010 - 0001 18 30 3319 #2 .0300 .0017 .0334 .0111 .0009 .0118 .0008 18.28 .3330 Fe2599 37.98 Elem Mg2790 K\_7664 Na5895 B\_2089 Mo2020 Pd3404 Si2124 Sn1899 7941 . 7857 .0016 .0020 .0109 .0075 Avq 1329 .7166 .0000 .0014 Stddev .09 .0174 0005 .0006 .0000 .0007 .0001 .2428 3927

1333

0021

0019

-0114

7166

37.91 Flem Sr4077 T13349 W 2079 7r3391 .0066 .5411 .0014 .0066 Avg Stddev %RSD .0487 .0817 35.71 .8609 .0066 .5414 .0010 .0066 #2 .0066 .5408 .0067 Int. Std. Y 3710 Y 3600 Y 2243 In2306 159750. 45. 28307. 80. 2620.0 3.4 5463.5 10.8 Avg Stddev

7931

7734

38.04

%RSD 02827 28317 13013 19851 159780. 28251 159720. 28364 2617.6 5455.9

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Sample Name: JA51290-11 Acquired: 7/20/2010 6:59:35 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

User: admin Custom ID1: Custom ID2: Custom ID3: Comment:

W\_2079

.0061 .0003

5.448

7r3391

.0115

Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	.0568	.0020	.0002	.0160	.0656	.0385	.5329	.0258	.0008
Stddev	.0001	.0000	.0000	.0000	.0002	.0000	.0008	.0003	.0000
%RSD	.2062	.1909	4.354	.0874	.2736	.1169	.1554	1.049	3.596
#1	.0569	.0020	.0002	.0161	.0655	.0386	.5323	.0257	.0008
#2	.0567	.0020	.0002	.0160	.0657	.0385	.5334	.0260	8000.
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	.0559	.0642	.0368	.0027	.0194	.0015	.0009	25.31	.7175
Stddev	.0003	.0001	.0003	.0007	.0002	.0002	.0002	.03	.0007
%RSD	.5740	.2061	.7294	24.09	.8851	11.78	18.11	.1129	.0993
#1	.0557	.0642	.0366	.0023	.0195	.0014	.0008	25.29	.7170
#2	.0562	.0643	.0369	.0032	.0193	.0016	.0011	25.33	.7180
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	85.21	1.216	1.014	.1531	.0040	.0047	0212	.9016	.0059
Stddev	.02	.004	.000	.0028	.0001	.0000	.0002	.0026	.0000
%RSD	.0240	.2841	.0396	1.824	1.934	.0450	1.140	.2867	.4166
#1	85.20	1.218	1.014	.1511	.0041	.0047	0211	.9034	.0059
#2	85.23	1.214	1.014	.1551	.0040	.0047	0214	.8998	.0059

.0178 .5975 .0115 .0064 #2 .0177 .5988 .0059 .0116 Y 3710 Int. Std. Y 3600 Y 2243 In2306 159120 59 28036 Avg Stddev 2608.1 5441.4 %RSD .03701 .02927 .16030 .15646

Ti3349

.5982

.1471

Sr4077

.0178

.1789

Flem

Avg Stddev

%RSD

159080. 28042 #2 159160. 28031 2605.2 5435.3

Raw Data MA24667 page 183 of 217

Sample Name: JA51290-9 Acquired: 7/20/2010 6:53:32 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 Custom ID1: User: admin Custom ID2: Custom ID3: Comment:

Elem Ba4554 Be3130 Cd2288 Co2286 Cr2677 Cu3247 Mn2576 Ni2316 Ag3280 .2052 .0019 .0004 .0244 1199 .0529 1.085 .0534 .0010 .0007 .0000 .0002 .0004 .0006 .0003 .001 .0000 .0002 %RSD .3411 1.934 53.14 1.783 .4923 .5135 .0665 17.00 .1195 .2047 .0019 .0006 .0527 1.085 .0534 .0011 #1 #2 .0531 .2057 .0019 .0003 .0240 .1203 1.084 .0534 .0009 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Al3961

Ca3179 1139 .1724 0307 .0026 .0962 .0015 .0007 69.09 29.59 Avg Stddev 0002 0004 0005 0005 13 03 .1849 .1412 1.685 43.20 .5041 54.15 .0920 1138 1721 0303 0018 0965 0021 0009 69.00 29.61 .0034 .0004 29.58 .1141 .1726 .0311 .0958 .0009 69.18 K\_7664 Mo2020 .0149 Si2124 1.956 Elem Fe2599 Mg2790 Na5895 B\_2089 Pd3404 Sn1899 82.16 10.87 3.940 .7970 .0162 .0057 Avq .0227 Stddev .003 .03 .03 .019 .0052 .0006 .0002 .0007 .0002 .0318 .2468

8006

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Flem Sr4077 Ti3349 W 2079 7r3391 .0146 .0003 2.264 Avg Stddev .0005 .0000 %RSD .2642 .1659 2.079 .2068 #1 .1781 2.266 .0148 .0184 .1788 2.261 .0144 .0184 Int. Std. Y 3710 Y 3600 Y 2243 In2306 159510. 48. 28470. 25. 5302.3

10.89

3 9 2 7

82 15

%RSD 03006 08768 08061 14515 159540. 5307.7 159470. 28452 2587.7 5296.8

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Acquired: 7/20/2010 7:05:39 Sample Name: JA51290-12 Type: Unk Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 Custom ID1: Custom ID2:

Comment:										
Elem Avg Stddev %RSD	Ba4554 .0397 .0000 .0629	Be3130 .0009 .0000 .5846	Cd2288 .0002 .0001 32.97	Co2286 .0096 .0000 .1363	Cr2677 .0730 .0001 .1170	Cu3247 .0365 .0002 .4163	Mn2576 .3378 .0002 .0584	Ni2316 .0208 .0001 .2936	Ag3280 .0003 .0002 60.73	
#1 #2	.0397 .0397	.0009	.0001 .0002	.0096 .0097	.0731 .0730	.0364 .0366	.3380 .3377	.0208 .0207	.0002 .0004	
Elem Avg Stddev %RSD	V_2924 .0322 .0001 .2242	Zn2062 .0471 .0002 .4756	As1890 .0171 .0004 2.248	TI1908 .0014 .0000 .8546	Pb2203 .0117 .0011 9.236	Se1960 .0010 .0003 26.90	Sb2068 .0009 .0005 55.25	Al3961 21.60 .05 .2195	Ca3179 .9330 .0051 .5515	
#1 #2	.0323 .0322	.0470 .0473	.0173 .0168	.0014 .0014	.0125 .0109	.0008 .0012	.0006 .0013	21.64 21.57	.9366 .9294	
Elem Avg Stddev %RSD	Fe2599 39.12 .08 .1976	Mg2790 .9995 .0064 .6411	K_7664 .8667 .0107 1.231	Na5895 .2032 .0027 1.339	B_2089 .0033 .0000 1.123	Mo2020 .0147 .0003 1.718	Pd3404 0103 .0001 .8853	Si2124 .9072 .0012 .1314	Sn1899 .0083 .0001 1.407	
#1 #2	39.18 39.07	.9950 1.004	.8742 .8591	.2013 .2051	.0033 .0033	.0145 .0149	0102 0103	.9080 .9063	.0082 .0084	
Elem Avg Stddev %RSD	Sr4077 .0102 .0001 .6077	Ti3349 .4879 .0008 .1636	W_2079 .0017 .0003 16.42	Zr3391 .0075 .0001 .6764						
#1 #2	.0102 .0101	.4873 .4884	.0018 .0015	.0075 .0074						
Int. Std. Avg Stddev %RSD	Y_3600 159200. 216. .13572	Y_3710 28240. 199. .70537	Y_2243 2610.8 3.0 .11469	In2306 5455.0 2.3 .04242						
#1	159350.	28100.	2612.9	5456.7						

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2608.7

5453.4

159040.



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ppm 41.44

.1174

41.47

41.40

.05

.05

.1297

41.78

Raw Data MA24667 page 187 of 217

Units

Avg Stddev

%RSD

Check ?

Value Range

ppm 40.11

.06

.1393

40.15

40.07

ppm 40.83

.0052

40.83

40.82

.00

ppm 2.072

.000

.0187

2.072

2.073

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

ppm 2.066

.005

2380

2.063

2.070

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Sample Na Method: A User: adm Comment:	.ccutest1(v1 in Cus		ed: 7/20/20 ode: CONC Cus		Type: Factor: 1.0 Cust					
Elem Units Avg Stddev %RSD	Ba4554 ppm 2.062 .000 .0009	Be3130 ppm 2.140 .002 .0848	Cd2288 ppm 2.049 .005 .2312	Co2286 ppm 2.068 .004 .1827	Cr2677 ppm 2.110 .002 .0812	Cu3247 ppm 2.050 .001 .0593	Mn2576 ppm 2.162 .002 .0818	Ni2316 ppm 2.124 .002 .0740	ppm .2575 .0002	
#1 #2	2.062 2.062	2.141 2.138	2.045 2.052	2.066 2.071	2.108 2.111	2.051 2.049	2.160 2.163	2.123 2.125	.2577 .2574	
Check ? Value Range	Chk Pass	Chk Pass								
Elem Units Avg Stddev %RSD	V_2924 ppm 2.090 .001 .0661	Zn2062 ppm 2.106 .005 .2435	As1890 ppm 2.027 .005 .2473	TI1908 ppm 2.154 .003 .1193	Pb2203 ppm 2.101 .004 .2130	Se1960 ppm 2.032 .005 .2601	Sb2068 ppm 2.041 .001 .0683	Al3961 ppm 40.76 .02 .0419	41.81	
#1 #2	2.089 2.091	2.102 2.110	2.023 2.031	2.152 2.155	2.098 2.104	2.028 2.035	2.040 2.042	40.77 40.75	41.89 41.73	
Check ? Value Range	Chk Pass	Chk Pass								
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	

ppm 2.092 .001

.0437

2.093

2.091

ppm 5.142 .004

.0729

5.140 5.145

ppm 2.080 .004

.1756

2.077

Sample Nan Method: Acc User: admin Comment:	cutest1(v1		Acquired: 7. de: CONC Custo		actor: 1.00	Type: Unk 00000 om ID3:			
Elem Avg Stddev %RSD	Ba4554 .1118 .0001 .0775	Be3130 .0011 .0000 2.480	Cd2288 .0007 .0001 16.24	Co2286 .0126 .0002 1.494	Cr2677 .1113 .0001 .0798	Cu3247 .1863 .0000 .0211	Mn2576 .5195 .0005 .0870	Ni2316 .0342 .0003 .8028	Ag3280 .0016 .0002 13.61
#1 #2	.1119 .1117	.0011 .0010	.0006 .0008	.0125 .0127	.1113 .1112	.1862 .1863	.5198 .5192	.0344 .0341	.0014 .0017
Elem Avg Stddev %RSD	V_2924 .0505 .0001 .0991	Zn2062 .2262 .0004 .1705	As1890 .0144 .0008 5.303	TI1908 .0027 .0000 1.095	Pb2203 .0963 .0006 .6656	Se1960 .0009 .0004 41.11	Sb2068 .0010 .0015 150.4	Al3961 26.61 .03 .1242	Ca3179 8.439 .025 .3018
#1 #2	.0505 .0504	.2265 .2259	.0138 .0149	.0027 .0027	.0959 .0968	.0011	0001 .0020	26.63 26.59	8.457 8.421
Elem Avg Stddev %RSD	Fe2599 52.63 .12 .2344	Mg2790 6.740 .029 .4338	K_7664 2.394 .018 .7382	Na5895 .2838 .0022 .7722	B_2089 .0042 .0006 13.60	Mo2020 .0098 .0003 3.073	Pd3404 0146 .0002 1.353	Si2124 1.186 .001 .0554	Sn1899 .0078 .0004 4.825
#1 #2	52.71 52.54	6.720 6.761	2.382 2.407	.2854 .2823	.0046 .0038	.0096 .0100	0147 0144	1.186 1.187	.0075 .0080
Elem Avg Stddev %RSD	Sr4077 .0329 .0000 .0653	Ti3349 1.179 .000 .0072	W_2079 .0060 .0001 2.024	Zr3391 .0100 .0001 .8417					
#1 #2	.0329 .0329	1.179 1.179	.0059 .0061	.0101 .0100					
Int. Std. Avg Stddev %RSD	Y_3600 159930. 54. .03388	Y_3710 28211. 44. .15692	Y_2243 2605.0 5.2 .19901	In2306 5416.5 7.7 .14284					
#1 #2	159970. 159890.	28180. 28243.	2608.6 2601.3	5421.9 5411.0					

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Sample Name: CCV

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Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 Custom ID1: User: admin Custom ID2: Comment: Sr4077 Ti3349 W\_2079 Zr3391 ppm 2.137 .001 ppm 2.103 .003 .1297 ppm 1.967 .011 .5594 ppm 2.039 .001 Units %RSD .0572 .0299 2.101 2.105 1.959 1.975 2.039 2.038 2.136 2.137 #2 Check? Chk Pass Chk Pass Chk Pass Value Range Int. Std. Y\_3600 Cts/S Y\_3710 Cts/S 27349. Y\_2243 Cts/S 2516.4 In2306 Units Cts/S 5114.9 152870. Avg Stddev %RSD 4.9 .10189 .35894 #1 152760 27279 2517 7 5118 3 152980. 27418. 2515.1 5111.4

Acquired: 7/20/2010 7:23:53

Type: QC

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CI- N-	000	A!	-1 7/20/201	0.7.00.50	T 6				
Sample Na			d: 7/20/201		Type: C				
	ccutest1(v1	,	de: CONC		actor: 1.00				
User: admi	in Cus	tom ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Units	ppm	ppm		ppm		ppm	ppm	ppm	ppm
Avg	.0006	.0006	.0003	.0005		.0006	.0006	.0004	.0002
Stddev	.0000	.0001	.0000	.0000		.0001	.0001	.0000	.0001
%RSD	2.607	9.024	14.47	4.130	4.766	22.50	17.18	8.996	55.37
#1	.0006	.0005	.0003	.0005	.0007	.0007	.0007	.0004	.0003
#2	.0006	.0006	.0003	.0006	.0008	.0005	.0005	.0004	.0001
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Units	ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
Avg	.0006	.0004	.0018	.0015	.0000	.0013	.0008	.0189	.0183
Stddev	.0000	.0001	.0009			.0001	.0003	.0008	.0013
%RSD	5.433	23.98	50.05	25.09	1193.	11.15	34.25	4.045	6.921
#1	.0007	.0003	.0025	.0012		.0012	.0009	.0194	.0174
#2	.0006	.0005	.0012	.0017	.0003	.0014	.0006	.0183	.0192
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem	Fe2599	Mg2790					Pd3404	Si2124	Sn1899
Units	ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
Avg	F .0176	.0101	.0426	.0000		F .0026	.0004	.0021	.0005
Stddev	.0007	.0062	.0055	.0000		.0004		.0005	.0000
%RSD	4.032	61.37	12.80	39.51	4.708	16.49	9.164	23.39	2.575
#1	.0171	.0057	.0464	.0000	.0020	.0029		.0017	.0005
#2	.0181	.0145	.0387	.0000	.0018	.0023	.0004	.0024	.0005

Chk Fail Chk Pass Chk

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Check ? High Limit Low Limit

									◀ Zoom C	
	ame: MP536			cquired: 7/2			Type: Unk			
Method: A	.ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	00000				
User: adm	in Cus	tom ID1:	Cust	om ID2:	Custo	om ID3:				
Comment:										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.0002	.0000	.0000	.0003	.0442	.0005	.0020	.0009	.0003	
Stddev	.0001	.0000	.0000	.0001	.0001	.0000	.0000	.0000	.0002	
%RSD	48.56	60.05	37.90	25.46	.2018	4.195	1.140	.2688	65.78	
#1	.0003	.0000	.0000	.0003	.0443	.0006	.0020	.0009	.0004	
#2	.0001	.0000	.0000	.0002	.0442	.0005	.0020	.0009	.0002	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	.0098	.0019	.0008	.0007	.0002	.0016	.0004	.1204	.4456	
Stddev	.0001	.0000	.0009	.0004	.0002	.0000	.0000	.0002	.0015	
%RSD	1.036	.1891	108.1	60.51	117.0	.9071	3.013	.1791	.3461	
#1	.0098	.0019	.0015	.0010	.0003	.0016	.0005	.1202	.4445	
#2	.0097	.0019	.0002	.0004	.0000	.0015	.0004	.1205	.4467	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	.1515	.0463	.0280	0007	.0016	.0009	0005	.0343	.0226	
Stddev	.0005	.0066	.0049	.0032	.0001	.0000	.0005	.0006	.0000	
%RSD	.3342	14.34	17.39	442.4	4.703	2.067	88.86	1.802	.0717	
#1	.1519	.0510	.0314	.0016	.0016	.0009	0002	.0339	.0226	
#2	.1512	.0416	.0245	0030	.0015	.0010	0009	.0348	.0227	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.0006	.0035	.0034	.0010						
Stddev	.0000	.0001	.0005	.0000						
%RSD	3.502	3.064	15.53	.2642						
#1	.0006	.0034	.0038	.0010						
#2	.0006	.0036	.0030	.0010						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg	158630.	28085.	2587.3	5472.7						
Stddev	295.	46.	5.7	5.5						
%RSD	.18596	.16527	.22139	.10071						
#1	158840.	28118.	2591.3	5476.6						
#2	158420.	28053.	2583.2	5468.8						

Sample Na	ame: CCB	Acquire	d: 7/20/201	0.7:29:52	Type: QC
	ccutest1(v1		de: CONC		actor: 1.000000
	•	,			
User: admi	in Cus	tom ID1:	Custo	om ID2:	Custom ID3:
Comment:					
Elem	Sr4077	Ti3349	W_2079	Zr3391	
Units	ppm	ppm	ppm	ppm	
Avg	.0006	.0007	.0103	.0011	
Stddev	.0000	.0001	.0012	.0001	
%RSD	7.367	11.36	11.80	7.192	
#1	.0005	.0008	.0112	.0012	
#2	.0006	.0007	.0095	.0011	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Int. Std.	Y_3600	Y_3710	Y_2243	In2306	
Units	Cts/S		Cts/S		
Avg	158080.		2603.1		
Stddev	63.	23.	2.6	2.0	
%RSD	.04013	.08224	.10162	.03616	
#1	158130.	27733.	2601.2	5475.7	
#2	158040.	27701.	2605.0	5472.9	

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									Zoom Out
Sample Nam	no: MP536	38-51	Acquired:	7/20/2010	7-42-16	Type: Un	k		
Method: Acc			de: CONC		actor: 1.00	٥.	K		
User: admin	,	tom ID1:		om ID2:		m ID3:			
Comment:									
Elem Avg	Ba4554 4.129	Be3130 .0840	Cd2288 .1010	Co2286 1.467	Cr2677 39.52	Cu3247 1.143	Mn2576 4.713	Ni2316 3.220	Ag3280 .0932
Stddev	.012	.0000	.0001	.001	.22	.001	.021	.004	.0000
%RSD	.2809	.0099	.0709	.0558	.5458	.1118	.4521	.1342	.0094
#1	4.137	.0840	.1010	1.467	39.37	1.144	4.728	3.216	.0932
#2	4.121	.0840	.1009	1.468	39.67	1.142	4.698	3.223	.0932
Elem	V_2924 4.089	Zn2062	As1890 3.678	TI1908 3.315	Pb2203	Se1960 3.501	Sb2068 .5498	Al3961 181.7	Ca3179 362.6
Avg Stddev	.002	3.369	.008	.004	2.360	.007	.0018	.1	2.8
%RSD	.0478	.0225	.2190	.1301	.0038	.1884	.3187	.0555	.7746
#1	4.087	3.369	3.672	3.312	2.359	3.497	.5510	181.8	360.6
#2	4.090	3.370	3.683	3.318	2.360	3.506	.5485	181.6	364.6
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg Stddev	428.0 3.3	236.5 1.6	15.04 .01	16.97 .04	.0542	.0016	1319 .0015	6.266	.0977 .0011
%RSD	.7684	.6665	.0565	.2510	.1160	44.61	1.126	.0992	1.131
#1	425.7	235.4	15.04	17.00	.0541	.0021	1308	6.262	.0985
#2	430.3	237.6	15.05	16.94	.0542	.0011	1329	6.271	.0969
Elem	Sr4077	Ti3349		Zr3391					
Avg	.4255	9.451	.1815	.0534					
Stddev %RSD	.0014	.011 .1147	.0005 .2490	.0001					
#1 #2	.4265 .4245	9.443 9.459	.1811 .1818	.0533 .0534					
Int. Std. Avg Stddev	Y_3600 144590. 138.	Y_3710 26742. 303.	Y_2243 2186.2 1.3	In2306 4604.9					
%RSD	.09569	1.1336	.06007	.00045					
#1 #2	144490. 144690.	26957. 26528.	2187.1 2185.3	4604.9 4604.9					
#2	144690.			4604.9					

Raw Data MA24667 page 192 of 217



Sample N

User: admin

Comment: Elem

Ag3280

.0075

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**∢** Zoom In ▶

lame: N	IP53638-S2	Acqu	ired: 7/20	0/2010	7:48:43	Type: Unk	
Accutes	t1(v172)	Mode: C	ONC	Corr.	Factor: 1.00	0000	
nin	Custom ID	1:	Custom	ID2:	Custo	m ID3:	

Method: A User: adm Comment:

Commons										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	4.207	.0845	.1054	1.637	41.72	1.064	5.339	3.776	.0945	
Stddev	.001	.0001	.0004	.001	.22	.003	.006	.002	.0003	
%RSD	.0305	.1360	.4100	.0319	.5166	.2330	.1084	.0598	.3256	
#1	4.206	.0846	.1057	1.637	41.87	1.062	5.343	3.774	.0943	
#2	4.208	.0844	.1051	1.637	41.57	1.066	5.335	3.777	.0947	
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Avg	4.926	3.538	3.772	3.385	2.394	3.573	.5299	187.4	391.4	
Stddev	.005	.005	.003	.002	.001	.006	.0035	.2	.4	
%RSD	.0927	.1333	.0729	.0466	.0495	.1570	.6550	.0979	.1142	
#1	4.929	3.534	3.770	3.386	2.393	3.577	.5274	187.2	391.1	
#2	4.923	3.541	3.774	3.384	2.395	3.569	.5323	187.5	391.8	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Avg	487.5	282.0	14.91	16.49	.0571	0006	1521	3.532	.0807	
Stddev	2.1	1.2	.02	.01	.0002	.0004	.0014	.006	.0001	
%RSD	.4253	.4126	.1639	.0532	.3435	62.88	.9171	.1606	.1278	
#1	486.0	281.2	14.90	16.50	.0573	0009	1511	3.536	.0806	
#2	488.9	282.9	14.93	16.49	.0570	0003	1531	3.528	.0807	
Elem Avg Stddev %RSD	Sr4077 .4188 .0002 .0379	Ti3349 11.55 .02 .1631	W_2079 .1944 .0019 .9653	Zr3391 .0474 .0001 .2932						
#1 #2	.4187 .4189	11.56 11.53	.1930 .1957	.0473 .0475						
Int. Std. Avg Stddev %RSD	Y_3600 144010. 42. .02945	Y_3710 26722. 128. .48049	Y_2243 2170.2 .3 .01181	In2306 4579.9 2.1 .04492						

4581.3

4578.4

#### .0019 .0001 .0002 .0005 .08 .0013 .015 .001 .0008 %RSD .2339 4.359 2.499 .0635 .1450 .3041 10.16 #1 #2 .8047 -.0013 -.0014 .0097 .0093 43.01 .8663 5.086 3.186 .0081 .0070 .8074 .8564 42.90 .8646 5.064 3.187 Elem V\_2924 Zn2062 As1890 TI1908 Pb2203 Se1960 Al3961 Ca3179 Avg Stddev 3.875 3.101 .0642 .0090 2.156 -.0191 .0009 .1556 .0015 154.5 1 377.3 1.6 003 .0668 3.093 .0267 4.501 .0773 .4363 3.877 3.873 3.103 3.098 154.6 154.4 #1 0628 0083 2 155 - 0185 1545 378 5 .0097 2.156 -.0197 376.2 .0656 .1566 K\_7664 4.698 .029 Na5895 5.738 .006 Si2124 3.462 .005 Elem B\_2089 .0451 Mo2020 .0013 Sn1899 .0984 Fe2599 Mg2790 Pd3404 296.9 1.9 486.4 Avg Stddev .0004 4.2 .0002 .0002 .0003 %RSD .8585 .6507 .1076 .2714 489 4 0450 0014 - 1533 298.3 4 677 5 734 3 466 0986 483.5 .0453 .0012 3.459 Flem Sr4077 W 2079 7r3391 Ti3349 .0478 .4798 .0009 12.33 .1622 .0000 Avg Stddev %RSD .1823 .3164 .0190 .9525 #1 .4792 12.30 .0481 .1622 .4805 12.35 .1623 .0475 Int. Std. Y\_3710 Y 3600 Y 2243 In2306 144640. 41. 27043. 221. 4610.2 02866 %RSD 81893 06356 07757 144670. 144610. 27200. 2173.2 4607.7

 Sample Name: JA50695-1
 Acquired: 7/20/2010 7:55:10
 Type: Unk

 Method: Accutest1(v172)
 Mode: CONC
 Corr. Factor: 1.000000

Cd2288

.0095

Custom ID2:

Co2286

.8568

Custom ID3:

Cu3247

.8655

Mn2576

5.075

Ni2316

3.186

Cr2677

42.96

Custom ID1:

Be3130

-.0013

Ba4554

.8061

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144040.

143980.

26813.

26632

2170.1

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Raw Data MA24667 page 194 of 217

									Zoom (	Ĵι
Sample Na	ame: MP536	38-SD1	Acquired	: 7/20/2010	0.8:01:38	Type: L	Ink			
	ccutest1(v1		de: CONC		actor: 5.00					
User: adm		tom ID1:	Cust			om ID3:				
Comment:		IOIII ID I.	Ousi	om ibz.	Ousid	JII 103.				
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280	
Avg	.7974	0016	.0067	.8480	48.58	.8172	5.574	3.271	.0226	
Stddev	.0006	.0001	.0003	.0009	.00	.0022	.000	.004	.0000	
%RSD	.0781	4.621	4.851	.1074	.0046	.2660	.0002	.1374	.1358	
#1	.7970	0015	.0065	.8486	48.58	.8187	5.574	3.268	.0226	
#2	.7979	0017	.0069	.8473	48.58	.8156	5.574	3.275	.0226	
Elem Avg	V_2924 3.989	Zn2062 3.186	As1890 .0679	TI1908 .0201	Pb2203 2,209	Se1960 .0090	Sb2068 .1026	Al3961 150.6	Ca3179 406.9	
Stddev	.003	.004	.0045	.00201	.007	.0036	.0002	.1	.1	
%RSD	.0833	.1320	6.553	9.795	.3164	39.74	.2330	.0851	.0206	
#1	3.986	3.189	.0711	.0187	2.204	.0115	.1024	150.5	406.8	
#2	3.991	3.183	.0648	.0215	2.214	.0065	.1027	150.7	407.0	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089			Si2124	Sn1899	
Avg	562.2	292.3	4.531	5.470	.0436	.0012	1566	3.384	.0891	
Stddev	.3	.4	.064	.035	.0009	.0014	.0004	.006	.0042	
%RSD	.0564	.1449	1.408	.6356	2.100	118.5	.2321	.1825	4.750	
#1	562.0	292.0	4.576	5.446	.0442	.0022	1563	3.388	.0921	
#2	562.4	292.6	4.485	5.495	.0429	.0002	1568	3.380	.0861	
Elem	Sr4077	Ti3349	W_2079	Zr3391						
Avg	.4747	12.90	.1692	.0530						
Stddev	.0004	.00	.0026	.0003						
%RSD	.0836	.0002	1.518	.5577						
#1	.4744	12.90	.1710	.0528						
#2	.4750	12.90	.1674	.0532						
Int. Std.	Y_3600	Y_3710	Y_2243	In2306						
Avg Stddev	153720.	27560.	2479.1	5159.5 .7						
%RSD	119. .07756	36. .12906	3.6 .14465	.01285						
#1	153640.	27585.	2476.5	5160.0						
#2	153810.	27535.	2481.6	5159.1						

User: adm	ccutest1(v1	tom ID1:	de: CONC	Corr. F om ID2:	Cucto	m ID3:			
Comment:		ו עו וווטו:	Cusi	JIII ID2:	Cusic	JIII ID3:			
Elem	Ba4554		Cd2288	Co2286	Cr2677	Cu3247		Ni2316	
Avg	4.098	.0845	.0962	1.462	41.70	1.103	4.966	3.274	.0970
Stddev	.062	.0014		.001	.09	.000	.004	.002	.0010
%RSD	1.509	1.707	.1281	.0527	.2179	.0371	.0839	.0444	1.030
<b>#1</b>	4.054	.0835	.0963	1.462	41.77	1.103		3.275	.096
<sup>‡</sup> 2	4.142	.0855	.0961	1.461	41.64	1.102	4.963	3.273	.097
Elem	V_2924		As1890		Pb2203			Al3961	
Avg	4.162	3.398	3.553	3.430	2.401	3.403	.5106	178.1	373.4
Stddev %RSD	.003	.002	.009	.002	.002	.000	.0008	2.8	5.9
%RSD	.0718	.0503	.2585	.0475	.1016	.0061	.1531	1.588	1.57
#1	4.164	3.399		3.429					
<sup>‡</sup> 2	4.160	3.397	3.559	3.431	2.399	3.403	.5100	180.1	377.
Elem	Fe2599		K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	456.0	233.1	14.56	16.51	.0532	.0013	1346	6.115	.0943
Stddev	5.2	3.9	.23	.25	.0010			.005	.001
%RSD	1.147	1.665	1.571	1.523	1.836	52.42	.0488	.0887	1.18
#1	452.3	230.4	14.40	16.33	.0525	.0008		6.119	.093
#2	459.7	235.9	14.72	16.69	.0539	.0018	1346	6.111	.0951
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avg	.4195	9.767	.1781	.0558					
Stddev	.0062	.007	.0009	.0002					
%RSD	1.489	.0718	.4938	.4263					
#1	.4150	9.772	.1775	.0556					
#2	.4239	9.762	.1787	.0559					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	149510.	27482.	2352.4	4895.1					
Stddev	99.	370.	.3	1.9					
%RSD	.06620	1.3473	.01409	.03955					
#1	149440.	27743.	2352.6	4896.5					
#2	149580.	27220.	2352.1	4893.8					

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**123 of 151** ACCUTEST. JA50921 Laboratories

.0162

3.573

.0166 .0158

Ca3179

397.2 1.4

.3469

396.2 398.2

Sn1899 .0975 .0017

0963

.0987

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									▼ Zoom In I Zoom Out
Sample N	ame: MP536	38-S2	Acquired:	7/20/2010	8:14:03	Type: Un	k		
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 2.00	00000			
User: adm		tom ID1:		om ID2:		om ID3:			
Comment									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
Avg	4.202	.0858	.0995	1.625	44.09	1.021	5.595	3.834	.0993
Stddev	.002	.0001	.0001	.002	.32	.003	.010	.005	.0009
%RSD	.0514	.1347	.0513	.1439	.7252	.3105	.1802	.1274	.8994
<b>#1</b>	4.204	.0858	.0995	1.623	44.32	1.023	5.588	3.838	.0986
<b></b>	4.201	.0857	.0995	1.627	43.86	1.018	5.602	3.831	.0999
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	4.986	3.567	3.626	3.502	2.432	3.454	.4875	184.7	404.0
Stddev	.006	.000	.003	.001	.004	.008	.0039	.2	1.0
%RSD	.1131	.0033	.0877	.0192	.1545	.2292	.8020	.1141	.2536
¥1	4.982	3.567	3.624	3.502	2.434	3.448	.4847	184.8	404.7
2	4.990	3.567	3.629	3.501	2.429	3.459	.4903	184.5	403.3
Iem	Fe2599		K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
wg	520.4	279.3	14.49	16.13	.0555	0015	1539	3.394	.0762
Stddev	1.2	.2	.01	.03	.0009	.0003	.0000	.001	.0010
%RSD	.2308	.0653	.0847	.2009	1.655	17.87	.0119	.0289	1.275
#1	519.5	279.4	14.50	16.15	.0548	0013	1539	3.393	.0755
2	521.2	279.2	14.49	16.11	.0561	0017	1539	3.395	.0769
lem	Sr4077	Ti3349	W_2079	Zr3391					
۸vg	.4159	11.83	.1926	.0506					
Stddev	.0009	.02	.0000	.0001					
6RSD	.2170	.1335	.0225	.2633					
¥1	.4166	11.82	.1926	.0505					
₹2	.4153	11.84	.1925	.0507					
nt. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	149370.	27225.	2346.6	4873.7					
Stddev		17.	4.4	1.2					
%RSD	.00024	.06069	.18800	.02477					
¥1	149370.	27214.	2349.7	4874.6					
#2	149370.	27237.	2343.5	4872.9					

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									◀ Zoom C	
	lame: MP536 Accutest1(v17		Acquired	: 7/20/2010	0 8:26:41 Factor: 10.0	Type: U	Ink			
User: admin Custom ID1: Comment:			om ID2:		om ID3:					
Elem Avg Stddev %RSD	Ba4554 .8057 .0018 .2262	Be3130 0017 .0000 .0289	Cd2288 .0052 .0010 19.37	Co2286 .8513 .0016 .1910	Cr2677 49.23 .16 .3315	Cu3247 .8198 .0007 .0812	Mn2576 5.637 .016 .2827	Ni2316 3.312 .001 .0326	Ag3280 .0283 .0031 10.88	
#1 #2	.8070 .8044	0017 0017	.0044 .0059	.8502 .8525	49.12 49.35	.8194 .8203	5.626 5.648	3.311 3.312	.0305 .0261	
Elem Avg Stddev %RSD	V_2924 4.016 .005 .1379	Zn2062 3.237 .002 .0499	As1890 .0694 .0022 3.130	TI1908 .0293 .0028 9.715	Pb2203 2.245 .006 .2849	Se1960 .0154 .0009 5.850	Sb2068 .1045 .0017 1.667	Al3961 150.9 .1 .0850	Ca3179 414.0 .0 .0060	
#1 #2	4.013 4.020	3.238 3.235	.0679 .0710	.0273 .0313	2.249 2.240	.0148 .0160	.1033 .1058	150.8 151.0	414.0 414.0	
Elem Avg Stddev %RSD	Fe2599 577.6 .4 .0729	Mg2790 294.2 .7 .2506	K_7664 4.524 .080 1.762	Na5895 5.275 .040 .7643	B_2089 .0385 .0005 1.182	Mo2020 .0018 .0014 80.04	Pd3404 1581 .0001 .0734	Si2124 3.259 .001 .0420	Sn1899 .0920 .0011 1.206	
#1 #2	577.3 577.9	294.7 293.6	4.581 4.468	5.246 5.303	.0382 .0388	.0027 .0008	1582 1580	3.258 3.260	.0928 .0912	
Elem Avg Stddev %RSD	Sr4077 .4782 .0007 .1377	Ti3349 12.97 .02 .1319	W_2079 .1524 .0040 2.620	Zr3391 .0529 .0001 .1917						
#1 #2	.4787 .4778	12.96 12.98	.1552 .1496	.0529 .0530						
Int. Std. Avg Stddev %RSD	Y_3600 156300. 31. .01993	Y_3710 27612. 16. .05629	Y_2243 2544.3 2.6 .10393	In2306 5302.0 3.3 .06312						
#1 #2	156320. 156280.	27623. 27601.	2546.2 2542.5	5304.4 5299.7						

Daw Data MAGACCT	name 400 of 247

Raw Data MA24667	nage 198 of 217

Cd2288

.0082

.0005

5.731

.0079 .0085

As1890

.0632

.6147

0635

.0629

K\_7664 4.642 .014

4 652

W\_2079

.1641 .0014

.8351

.1631

.1651

Y 2243

2349.0

.26399

2353.4

2344.6

Co2286

.8540

.0010

.1229

.8533 .8547

TI1908

.0156

14.29

0140

.0172

Na5895 5.639 .006

5 635

5.643

7r3391

.0497

.4309

.0498

.0495

In2306

4889.1

.11603

4885.1

Custom ID3:

Cu3247

.8372

.0004

.0445

.8370

.8375

Se1960

-.0024 .0008

32.56

- 0018

-.0029

Mo2020 .0025 .0003

13.67

0022

.0027

Mn2576

5.424

.1098

5.429 5.420

Sb2068

.1330

.1339

.1321

Pd3404 -.1554 .0008

- 1548

Ni2316

3.267

.002

3.268

Al3961

153.6

.2527

153.3

153.9

Si2124 3.327 .005

3 323

3.330

Cr2677

45.90 .07 .1492

45.85 45.95

Pb2203

2.219

2.216

2.221

B\_2089 .0441 .0020

0455

.0427

Custom ID1: Custom ID2:

Be3130

-.0018

.0000

.2882

-.0018 -.0018

Zn2062

3.153

3.151 3.155

Mg2790 300.0

2.0

298.6

T13349

12.82 .01

.0761

12.83

12.82

Y\_3710

27226. 134.

.49210

27321.

27132.

User: admin

Ba4554

.8043

.0000

.0055

.8043 .8044

V\_2924 3.970 .001

.0349

3.971 3.969

Fe2599 530.9

.0956

531.2

530.5

Sr4077

.4813 .0008

.1586

.4807

.4818

Y 3600

149710.

149710.

149710.

.00134

Comment: Elem

Avg Stddev

%RSD

#1 #2

#1

Elem

Avg Stddev

%RSD

Flem

Avg Stddev

%RSD

Int. Std.

%RSD

#2

#1

Elem

Avg Stddev

									<b>∢</b> Zoom
									Zoom
Sample N	ame: CCV	Δcauire	d: 7/20/20	IN 8-32-45	Type:	OC			
	ccutest1(v1		de: CONC		Factor: 1.0				
Jser: adm	•	tom ID1:		om ID2:		om ID3:			
Comment:		tom ib i.	Ous	om ibz.	Ousi	om ibs.			
Jonninent.									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Jnits	ppm	ppm	ppm		ppm				ppm
Avg	2.061	2.137	2.037	2.061	2.108		2.161	2.133	.2572
Stddev	.001	.002	.001	.001	.001		.004	.003	.0008
%RSD	.0434	.1062	.0253	.0313	.0241	.0387	.2091	.1332	.3206
#1	2.060	2.136	2.037	2.061	2.108	2.050	2.164	2.135	.2578
#2	2.061	2.139	2.037	2.060	2.108	2.052	2.158	2.131	.2566
Check?	Chl Dace	Chl Dacc	Chl Dacc	Chl Dace	Chk Dace	Chk Dace	Chk Dace	Chk Pass	Chl Dace
Value	CIR Pass	CIIK Pass	CIIK Pass	CIIK Fass	CIIK Fass	CIIK Fass	CIIK Fass	CIIK Fass	CIIK Pass
Range									
-1	14 2024	700/0	4-1000	T11000	DI- 2202	C-10/0	Chan/a	A120/1	0-0170
Elem Jnits	V_2924 ppm	Zn2062	As1890	TI1908 ppm	Pb2203				Ca3179
Ava	2.092	ppm 2.098	ppm 2.014	2.158	ppm 2.104		ppm 2.038		ppm 41.89
Stddev	.001	.003	.002	.003	.004	.005	.000	.05	.13
%RSD	.0343	.1433	.0961	.1384	.1657	.2406	.0183	.1321	.2990
#1	2.092	2.100	2.012	2.155	2.106	2.019	2.038	40.75	41.81
#2	2.091	2.096	2.012	2.160	2.100				41.98
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value Range									
turige									
Elem	Fe2599				B_2089				
Jnits	ppm	ppm	ppm	ppm	ppm			ppm	ppm
Avg Stddev	41.80	41.67	39.96	40.72	2.065	2.065	2.107	5.117	2.070
%RSD	.1752	.5684	.1706	.0088	.1192				.0964
#1	41.74	41.51	39.92	40.73	2.063		2.107	5.112	2.072
#2	41.85	41.84	40.01	40.72	2.067	2.068	2.107	5.122	2.069
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
√alue									
Range									

Raw Data MA24667 page 200 of 217



Ag3280

ppm .0003

.0002

57.69

.0002

.0004

Ca3179

ppm .0075

.0025

.0057

.0092

Sn1899

.0005

.0007

.0001

**O** 

Sample N	ame: CCV	Acquire	d: 7/20/201	0 8:32:45	Type: QC		
Method: A	ccutest1(v17	72) Mo	de: CONC	Corr. F	actor: 1.0000	00	
User: adm	nin Cust	om ID1:	Custo	om ID2:	Custom	ID3:	
Comment	:						
Elem	Sr4077	Ti3349	W_2079	Zr3391			
Units	ppm	ppm	ppm	ppm			
Avg Stddev	2.144	2.106	1.962 .010	2.035			
%RSD	.0382	.0150	.5180	.0578			
#1 #2	2.143 2.145	2.106 2.106	1.955 1.969	2.036 2.034			
#2	2.145	2.106	1.969	2.034			
Check? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass			
Kange							
Int. Std.	Y_3600	Y_3710		In2306			
Units	Cts/S 153690.	Cts/S 27375.	Cts/S 2534.1	Cts/S 5135.6			
Avg Stddev	231.	134.	2534.1	.6			
%RSD	.15034	.48832	.10677	.01135			
#1	153530.	27470.	2536.0	5136.0			
#2	153850.	27281.	2532.2	5135.2			

Zoom In ▶
 Zoom Out

User: admin

Comment: Elem

Units

Avg Stddev

%RSD

Check?

Units

Avg Stddev %RSD

Check?

High Limit

Low Limit Elem

Units

Avg Stddev

%RSD

Check ?

High Limit Low Limit

#2

High Limit Low Limit Flem

#2

Sample Name: CCB Acquired: 7/20/2010 8:38:44 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Custom ID2:

Co2286

ppm .0002

.0003

103.6

.0004

.0001

TI1908

ppm .0015

.0010

.0008

Na5895

.0004

1.737

-.0243

-.0237

Cd2288

ppm .0002

.0002

123.4

.0003

.0000

As1890

ppm .0015

.0009

.0008

K\_7664

ppm .0186

.0090

48.33

.0122

.0250

Chk Pass Chk Pass Chk Pass Chk Pass

Custom ID3:

Cu3247

ppm .0006 .0003

41.05

.0008

.0004

Se1960

ppm 0030

.0004

.0032

Mo2020

.0003

14.99

.0025

.0020

.0021 -.0021

Mn2576

ppm .0005

.0000

7.186

.0005

.0004

Sh2068

ppm -.0004

.0005

.0001

-.0008

Pd3404

.0001

14.28

.0005

.0006

Chk Fail Chk Pass Chk Pass Chk Pass

Ni2316

ppm .0001

.0001

66.30

.0002

.0001

AI3961

ppm .0028

.0042

.0058

-.0002

Si2124

.0003

22.32

.0016

.0012

Cr2677

ppm .0010

.0001

14.37

.0009

.0011

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Pb2203

ppm -.0004

.0008

-.0010

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

B\_2089

.0004

21.79

.0019

.0014

Custom ID1:

Be3130

ppm .0002 .0001

34.97

.0001

.0002

7n2062

ppm .0001

.0001

.0001

Mg2790

ppm .0004 .0044

1144.

.0035

-.0027

Ba4554

ppm .0001

.0001

93.43

.0000

.0002

V\_2924

ppm .0005

.0000

.0005

Fe2599

ppm .0060

.0027

44.98

.0041

.0079

### Raw Data MA24667 page 201 of 217

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	ime: CCB ccutest1(v17 n Cusi		de: CONC		Type: QC actor: 1.000000 Custom ID3:
Elem Units Avg Stddev %RSD	Sr4077 ppm .0002 .0002 99.10	ppm .0006 .0002	ppm .0104 .0016	ppm .0010 .0000	
#1 #2	.0001 .0003	.0005	.0115 .0092	.0009 .0010	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 158490. 131. .08278	Cts/S 27813.	Cts/S 2612.3 .8	Cts/S 5487.1 4.4	
#1 #2	158580. 158390.	27768. 27859.	2612.9 2611.7	5490.2 5484.0	

Raw Dat	a MA2466	7 page	202 of 2	17					
									◀ Zoom I Zoom O
									200111 0
Method: Ad User: admi			de: CONC	110 8:44:57 Corr. tom ID2:	Factor: 1.0				
Comment:									
Elem Units Avg Stddev %RSD	Ba4554 ppm 0040 .0001 2.755	Be3130 ppm .0001 .0000 22.34	ppm .0023	ppm .0003 .0002	ppm .0020 .0001	Cu3247 ppm .0004 .0003 68.37	ppm 0001 .0001	Ni2316 ppm 0048 .0003 6.640	ppm .0029 .0000
#1 #2	0041 0039	.0001 .0001	.0023 .0022		.0021 .0019	.0006 .0002		0045 0050	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	V_2924 ppm 0012 .0001 9.925	Zn2062 ppm 0054 .0000 .4012	ppm .0015 .0016	ppm 0004 .0023	ppm .0001 .0022	Se1960 ppm 0007 .0021 283.8	ppm .0033 .0006	Al3961 ppm 480.6 5.7 1.190	ppm 375.7 .8
#1 #2	0013 0011	0054 0054	.0026 .0004	0021 .0012		0022 .0007	.0029 .0037	484.6 476.5	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Elem Units Avg Stddev %RSD	Fe2599 ppm 190.5 .0 .0146	Mg2790 ppm 523.5 .3 .0589	ppm .0324 .0028	ppm .8803 .0023	ppm 0001 .0001	Mo2020 ppm .0010 .0002 20.54	ppm 0583 .0001		ppm 0070 .0004
#1 #2	190.5 190.5	523.3 523.7	.0304 .0344	.8819 .8786		.0009 .0012		0022 0024	
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass

Raw Data MA24667 \_page 204 of 217

Naw Data MAZ4001	paye 204 01 211	

	12	25	0	f	1	5	1
<b>AC</b>	C	U'	П	$\equiv$	5	1	0
JA50921	La	0 0	ra	t o	r i	е	S

-.0080

None

Sample Name: ICSA Acquired: 7/20/2010 8:44:57 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Custom ID3: Comment: Elem Sr4077 Ti3349 W\_2079 Zr3391 ppm .0010 .0001 ppm .0039 .0003 ppm .0407 .0010 Units ppm .0021 Avg Stddev .0001 %RSD 9.163 8.383 2.419 3.427 .0009 .0037 .0414 .0021 #2 .0011 .0041 .0400 .0022 Check? Chk Pass Chk Pass Chk Pass High Limit Low Limit Y\_3710 Cts/S 26350. Y\_2243 Cts/S 2304.2 Y\_3600 Cts/S Int Std In2306 Cts/S 4514.0 Units 140930. Avg Stddev %RSD 233. .10577 .03518 .00457

2303.7

2304.8

4514.1

4513.8

Raw Data MA24667 page 205 of 217

Units

140770.

141100.

26330.

26369.

Sample Name: ICSAB Acquired: 7/20/2010 8:51:15 Type: QC Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000 User: admin Custom ID1: Custom ID2: Comment: Sr4077 Ti3349 W\_2079 Zr3391

ppm .0021 .0000 ppm .0041 .0001 ppm .4799 .0027 ppm 4872 Avg Stddev .0016 %RSD 1.269 3.452 .5544 .3347 #1 #2 .0021 .0042 .4780 .4817 .4860 .4883 Check? None Chk Pass Chk Pass None Value Range Y\_3710 Cts/S 26481. Int. Std. Y\_3600 Cts/S 141040. Y\_2243 Cts/S 2301.8 In2306 Cts/S 4497.1 Units Avg Stddev %RSD 6.4 52 .03680 .21350 141080 26451. 2305.3 4501.6 141000. 26511. 2298.3

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									Zoom	Jut
Sample N	lame: ICSAE	B Acqui	ired: 7/20/2	2010 8:51:1	5 Type	e: QC				
Method: A	Accutest1(v1	72) Mc	de: CONC	Corr.	Factor: 1.0	00000				
User: adm	,	tom ID1:	Cus	tom ID2:	Cust	om ID3:				
Comment										
Comment										
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280	
Units	ppm		ppm	ppm			ppm		ppm	
Avq	.4998	.4896	1.037	.4683	.4757			1.016	1.050	
Stddev	.0001	.0003	.002	.0008	.0008	.0011	.0010	.002	.002	
%RSD	.0220	.0586	.2195	.1784	.1735	.2377	.2047	.2176	.2066	
#1	.4998	.4898	1.035	.4677	.4751	.4711	.4926	1.014	1.049	
#1 #2	.4998	.4894	1.035	.4677		.4711	.4926	1.014	1.049	
#2	.4997	.4894	1.039	.4089	.4703	.4121	.4940	1.018	1.052	
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value										
Range										
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179	
Units	ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm	
Avg	.4675	.9215	1.054	1.023	1.010		1.044	494.9		
Stddev	.0014	.0026	.002	.000	.002	.002	.000	8.1	.0	
%RSD	.2912	.2835	.1912	.0210	.1882	.1489	.0158	1.641	.0127	
#1	.4665	.9197	1.053	1.023	1.009	1.007	1.044	489.2	377.0	
#1 #2	.4684	.9197	1.055	1.023	1.009	1.007	1.044	500.7	376.9	
72	.4004	.9234	1.055	1.023	1.012	1.009	1.044	300.7	370.9	
Check?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	
Value										
Range										
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899	
Units	ppm	ppm	ppm	ppm			ppm	ppm	ppm	
Avg	186.1	511.2	.0401	.9234	.0094	.5062	.5089	.0080	0077	
Stddev	.3	.0	.0012	.0112				.0002	.0004	
%RSD	.1499	.0063	2.871	1.218		.0493	.0510	2,448	5.015	
#1	186.3	511.2	.0409	.9155	.0093	.5060	.5087	.0079	0075	

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185.9

Chk Pass Chk Pass

Check ?

Value Range

◀ Zoom In ▶ Zoom Out

511.3

.0393

None

.9314

None

.0096

.5064

None Chk Pass Chk Pass

.5091

.0082

None

									■ Zoom In Zoom Out
									200111 Out
	ame: JA5069 Accutest1(v1		cquired: 7/2 de: CONC		7:30 Tactor: 1.00	ype: Unk 00000			
User: adm Comment		tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem Avg Stddev %RSD	Ba4554 .2483 .0002 .0888	Be3130 0174 .0009 5.197	Cd2288 .0051 .0004 8.094	Co2286 .5991 .0098 1.640	Cr2677 101.1 .8 .7840	Cu3247 .3300 .0007 .2259	Mn2576 4.477 .003 .0763	Ni2316 2.051 .031 1.500	Ag3280 .0000 .000 695.1
#1 #2	.2485 .2482	0168 0180	.0048 .0054	.5922 .6061	100.6 101.7	.3295 .3306	4.474 4.479	2.030 2.073	0002 .0001
Elem Avg Stddev %RSD	V_2924 26.86 .00 .0002	Zn2062 1.449 .021 1.435	As1890 .0430 .0004 .9005	TI1908 .0608 .0090 14.89	Pb2203 .3037 .0059 1.955	Se1960 0097 .0006 6.654	Sb2068 .5631 .0220 3.903	Al3961 317.8 .4 .1111	Ca3179 1035. 12. 1.145
#1 #2	26.86 26.86	1.434 1.464	.0433 .0427	.0672 .0544	.2995 .3079	0101 0092	.5475 .5786	317.6 318.1	1027. 1044.
Elem Avg Stddev %RSD	Fe2599 316.1 .2 .0661	Mg2790 137.3 .8 .5747	K_7664 .5598 .0083 1.488	Na5895 15.30 .01 .0635	B_2089 .0289 .0012 4.275	Mo2020 0390 .0014 3.463	Pd3404 1171 .0019 1.588	Si2124 2.723 .050 1.839	Sn1899 .0106 .0009 8.804
#1 #2	316.3 316.0	136.7 137.9	.5657 .5539	15.30 15.31	.0298 .0280	0381 0400	1184 1158	2.687 2.758	.0099 .0112
Elem Avg Stddev %RSD	Sr4077 1.583 .000 .0065	Ti3349 7.285 .001 .0062	W_2079 .2287 .0006 .2675	Zr3391 .0300 .0002 .5431					
#1 #2	1.583 1.583	7.285 7.286	.2282 .2291	.0301 .0299					
Int. Std. Avg Stddev %RSD	Y_3600 137700. 57. .04173	Y_3710 26404. 120. .45312	Y_2243 1921.0 31.1 1.6199	In2306 4399.3 58.3 1.3257					
#1 #2	137740. 137660.	26489. 26320.	1943.0 1899.0	4440.5 4358.1					

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1.882

.0207

.0212

Ca3179

1629. 10

.6114

1622

1636.

Sn1899 -.0171 .0026

15.12

- 0153

◀ Zoom In ▶

User: admin

Comment: Elem

Avg Stddev

%RSD

#1 #2

#1

Elem

Avg Stddev

%RSD

Flem

Avg Stddev %RSD

Int. Std.

%RSD

#1

Elem

Avg Stddev

 Sample Name: JA50695-3
 Acquired: 7/20/2010 9:10:05
 Type: Unk

 Method: Accutest1(v172)
 Mode: CONC
 Corr. Factor: 10.00000

Cd2288

-.0013

.0010

79.23

-.0006 -.0020

As1890

.0345

10.25

0320

.0370 K\_7664 .4379 .0144

4277

.4481

.2364 .0022

.9469

2348

.2379

Y 2243

2455.1 11.7

47762

2463.4

2446.8

W\_2079

Custom ID2:

Co2286

.4238

.0002

.0590

.4240

TI1908

.0053

0059

.0047

Na5895 48.02

.01

.0179

48.01

7r3391

.0217

1.389

.0220

.0215

In2306

5140.0 12.8

24982

5130.9

Custom ID3:

Cu3247

.0867

.0006

.7019

.0863 .0871

Se1960

.0106 .0013

11.84

.0114 .0097

Mo2020 -.0281

.0033

- 0304

-.0258

Mn2576

2.632

.002

2.633 2.631

Sb2068

.3416 .0178

3290

.3541

Pd3404

.0831

- 0823

Ni2316

3.352

.001

3.351 3.352

Al3961

121.7

.2203

121.5

121.8

Si2124 1.872 .007

.3851

1 867

1.877

Cr2677

149.7

.1150

149.9

149.6

Pb2203

.0223

3.949

0229

.0217

B\_2089 .0237 .0015

6.180

0226

.0247

Custom ID1:

Be3130

-.0011

.0001

-.0011 -.0012

Zn2062

.6708

.6710 .6706

Mg2790

233.6

.3587

233.0

T13349

2.156

.0843

2.158 2.155

Y\_3710

27551. 40.

.14681

27579.

27522.

Ba4554

.1540

.0014

.9010

.1530 .1550

V\_2924

1.174

1.171 1.176

Fe2599 230.9

.1574

230.7

231.2

Sr4077

1.407

.0597

1.406 1.407

Y 3600

153140. 61.

04006

153190.

153100.

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**o** 

									◀ Zoom C
									200111 0
	1450/								
	me: JA506					ype: Unk			
Method: Ac	cutest1(v17	,			actor: 10.0	000000			
User: admir	n Cust	om ID1:	Cust	om ID2:	Custo	m ID3:			
Comment:									
Elem	Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Aq3280
Avq	.2400	0192	.0012	.5342	117.5	.3097	4.706	2.048	.0125
Stddev	.0005	.0004	.0015	.0031	.3	.0022	.009	.003	.0015
%RSD	.2030	2.316	123.9	.5716	.2304	.7098	.1958	.1397	
701100	.2000	2.010	120.7	.0710	.2001	.,,,,	,00		12.07
#1	.2397	0196	.0002	.5321	117.3	.3081	4.700	2.046	.0114
#2	.2404	0189	.0023	.5364	117.7	.3112	4.713	2.050	.0136
Elem	V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
Avg	27.33	1.378	.0411	.0577	.3016	.0069	.2316	296.3	1147.
Stddev	.04	.001	.0020	.0043	.0063	.0093	.0042	.3	2.
%RSD	.1306	.0748	4.818	7.535	2.087	134.6	1.814	.1027	.1351
#1	27.31	1.378	.0425	.0546	.3060	.0003	.2345	296.1	1146.
#2	27.36	1.377	.0397	.0607	.2971	.0135	.2286	296.5	1148.
	27.00	1.077	.0077	.0007		.0100	LLCC	270.0	
Elem	Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
Avg	346.8	134.3	.5349	13.96	.0247	0387	1164	2.250	0042
Stďdev	.3	.0	.1174	.02	.0031	.0006	.0064	.000	.0014
%RSD	.0748	.0284	21.95	.1421	12.38	1.632	5.504	.0051	33.58
#1	346.6	134.2	.4519	13.95	.0226	0382	1210	2.250	0032
#2	347.0		.6179	13.98	.0269	0302	1119	2.250	0052
72	347.0	134.3	.0177	13.70	.0207	0371	5,1117	2.230	0033
Elem	Sr4077	Ti3349	W_2079	Zr3391					
Avq	1.508	7.086	.2641	.0416					
Stddev	.001	.017	.0031	.0005					
%RSD	.0539	.2347	1.181	1.088					
#1	1.507	7.074	.2663	.0413					
#2	1.508	7.098	.2619	.0419					
Int. Std.	Y_3600	Y_3710	Y_2243	In2306					
Avg	155110.	27622.	2494.6	5215.3					
Stddev	264.	1.	2.4	6.1					
%RSD	.17014	.00329	.09735	.11687					
#1	155290.	27622.	2496.3	5219.6					
#2	154920.	27621.	2492.8	5211.0					

	Raw Data MA24667	page 210 of 217
◀ Zoom In ▶		
Zoom Out		

									Zoom Out										Zoom Ou
Sample Nai Method: Ac User: admir Comment:	cutest1(v17		cquired: 7/2 de: CONC Cust		actor: 2.00	Type: Unk 00000 om ID3:					me: JA5151 cutest1(v17 n Cust		de: CONC	20/2010 9:2 Corr. F om ID2:	actor: 2.00	ype: Unk 10000 nm ID3:			
Elem Avg Stddev %RSD	Ba4554 6.027 .007 .1167	Be3130 .0332 .0002 .5570	Cd2288 .0938 .0001 .0540	Co2286 .2436 .0003 .1260	Cr2677 1.321 .003 .2179	Cu3247 6.904 .031 .4497	Mn2576 4.772 .011 .2318	Ni2316 1.389 .003 .1877	Ag3280 .0322 .0003 1.011	Elem Avg Stddev %RSD	Ba4554 10.12 .05 .5078	Be3130 .0462 .0001 .2410	Cd2288 .0162 .0005 3.112	Co2286 .2608 .0001 .0552	Cr2677 1.325 .004 .3213	Cu3247 .6140 .0015 .2429	Mn2576 2.759 .009 .3161	Ni2316 .5638 .0010 .1697	Ag3280 0116 .0021 17.80
#1 #2	6.022 6.032	.0330 .0333	.0938 .0938	.2434 .2439	1.319 1.323	6.926 6.882	4.764 4.780	1.387 1.391	.0320 .0324	#1 #2	10.15 10.08	.0463 .0461	.0166 .0159	.2609 .2607	1.322 1.328	.6151 .6129	2.753 2.765	.5631 .5644	0102 0131
Elem Avg Stddev %RSD	V_2924 .5017 .0005 .1058	Zn2062 28.28 .04 .1280	As1890 .1377 .0028 2.029	TI1908 .0054 .0018 32.61	Pb2203 13.08 .02 .1233	Se1960 .0241 .0010 4.148	Sb2068 .0828 .0011 1.315	Al3961 72.63 .08 .1071	Ca3179 42.89 .12 .2814	Elem Avg Stddev %RSD	V_2924 1.034 .003 .3070	Zn2062 43.16 .05 .1178	As1890 .0821 .0005 .6541	TI1908 .0057 .0004 6.960	Pb2203 .9056 .0035 .3866	Se1960 0019 .0008 42.49	Sb2068 .0244 .0012 4.947	Al3961 607.7 .0 .0045	Ca3179 198.6 .5 .2399
#1 #2	.5013 .5021	28.26 28.31	.1357 .1396	.0042 .0067	13.07 13.09	.0234 .0248	.0835 .0820	72.57 72.68	42.81 42.98	#1 #2	1.032 1.036	43.13 43.20	.0825 .0817	.0060 .0054	.9031 .9081	0013 0024	.0235 .0252	607.6 607.7	198.9 198.2
Elem Avg Stddev %RSD	Fe2599 284.2 2.0 .6918	Mg2790 26.55 .13 .4886	K_7664 8.643 .018 .2021	Na5895 2.068 .004 .1951	B_2089 .1994 .0005 .2635	Mo2020 .1553 .0008 .5331	Pd3404 0763 .0000 .0344	Si2124 4.011 .019 .4770	Sn1899 1.911 .001 .0471	Elem Avg Stddev %RSD	Fe2599 738.5 9.6 1.305	Mg2790 37.47 .11 .2979	K_7664 86.20 .14 .1584	Na5895 22.15 .03 .1204	B_2089 .5238 .0006 .1154	Mo2020 .0626 .0008 1.349	Pd3404 2638 .0001 .0358	Si2124 1.223 .005 .3736	Sn1899 .0202 .0003 1.370
#1 #2	282.8 285.5	26.45 26.64	8.631 8.655	2.065 2.071	.1990 .1998	.1547 .1559	0763 0763	4.025 3.998	1.910 1.911	#1 #2	745.3 731.7	37.55 37.39	86.30 86.11	22.17 22.13	.5243 .5234	.0620 .0632	2637 2638	1.226 1.220	.0200 .0204
Elem Avg Stddev %RSD	Sr4077 .3784 .0001 .0277	Ti3349 3.192 .003 .0803	W_2079 .3825 .0006 .1621	Zr3391 .0609 .0001 .1103						Elem Avg Stddev %RSD	Sr4077 6.388 .022 .3472	Ti3349 24.78 .11 .4557	W_2079 .5150 .0015 .2945	Zr3391 .5514 .0022 .3990					
#1 #2	.3784 .3785	3.191 3.194	.3829 .3820	.0608 .0609						#1 #2	6.403 6.372	24.70 24.86	.5160 .5139	.5499 .5530					
Int. Std. Avg Stddev %RSD	Y_3600 157830. 85. .05415	Y_3710 28351. 162. .57189	Y_2243 2576.2 .2 .00657	In2306 5299.8 5.4 .10132						Int. Std. Avg Stddev %RSD	Y_3600 161180. 311. .19287	Y_3710 29924. 111. .37172	Y_2243 2639.2 1.6 .05887	In2306 4910.1 .7 .01515					
#1 #2	157770. 157890.	28465. 28236.	2576.3 2576.1	5303.6 5296.0						#1 #2	161400. 160960.	29845. 30002.	2638.1 2640.3	4910.6 4909.6					

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**127** of 151 ACCUTEST. JA50921 Laboratories

Ag3280

ppm .2580

.0001

.0349

.2581

.2579

Ca3179

ppm 41.68

.03

41.66 41.70

Sn1899

.003

.1425

2.064

2.068

									▼ Zoom In J Zoom Out
Sample N	ame: JA515	12-19	Acquired: 7	/20/2010 9	:28:49	Type: Unk			
Method: A	ccutest1(v1	72) Mo	de: CONC	Corr. F	actor: 3.00	00000			
User: adm Comment:		tom ID1:	Cust	om ID2:	Custo	om ID3:			
Elem Avg Stddev %RSD	Ba4554 11.78 .01 .0596	Be3130 .0505 .0002 .3356	Cd2288 .0191 .0004 2.152	Co2286 .2760 .0005 .1897	Cr2677 1.456 .005 .3564	Cu3247 1.399 .005 .3391	Mn2576 3.404 .004 .1275	Ni2316 .6490 .0020 .3053	Ag3280 0099 .0008 7.888
#1 #2	11.77 11.78	.0504 .0506	.0194 .0188	.2763 .2756	1.460 1.452	1.395 1.402	3.407 3.401	.6504 .6476	0105 0094
Elem Avg Stddev %RSD	V_2924 1.133 .001 .0865	Zn2062 57.76 .03 .0579	As1890 .1010 .0050 4.931	TI1908 .0164 .0017 10.64	Pb2203 1.116 .001 .0692	Se1960 .0104 .0063 60.89	Sb2068 .0298 .0001 .4332	Al3961 658.3 .3 .0522	Ca3179 218.3 .0 .0221
#1 #2	1.134 1.133	57.74 57.79	.0975 .1046	.0152 .0176	1.115 1.116	.0059 .0148	.0297 .0299	658.5 658.1	218.3 218.3
Elem Avg Stddev %RSD	Fe2599 850.1 6.3 .7362	Mg2790 40.49 .13 .3206	K_7664 89.70 .01 .0120	Na5895 25.19 .01 .0373	B_2089 .5982 .0009 .1501	Mo2020 .0659 .0008 1.271	Pd3404 2817 .0004 .1450	Si2124 2.364 .002 .0704	Sn1899 .0371 .0015 4.140
#1 #2	845.6 854.5	40.58 40.40	89.71 89.69	25.20 25.18	.5975 .5988	.0665 .0653	2814 2820	2.365 2.363	.0382 .0360
Elem Avg Stddev %RSD	Sr4077 6.908 .041 .5952	Ti3349 27.88 .01 .0504	W_2079 .6428 .0032 .4982	Zr3391 .5887 .0011 .1848					
#1 #2	6.879 6.937	27.87 27.89	.6405 .6450	.5879 .5895					
Int. Std. Avg Stddev %RSD	Y_3600 159950. 34. .02108	Y_3710 29237. 32. .10820	Y_2243 2623.2 .4 .01532	In2306 5023.2 3.0 .05988					
#1 #2	159930. 159970.	29215. 29259.	2623.4 2622.9	5021.1 5025.4					

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Sample Na	me: CCV	Acquire	d: 7/20/20	10 9:35:06	Type: QC	
Method: Ac	cutest1(v17	2) Mo	de: CONC	Corr. F	actor: 1.000000	
User: admi	n Custo	m ID1:	Cus	tom ID2:	Custom ID3:	
Comment:						
Elem	Sr4077	Ti3349	W_2079	Zr3391		
Units	ppm	ppm	ppm	ppm		
Avg	2.152	2.110	1.971	2.042		
Stddev	.004	.002	.013	.002		
%RSD	.1621	.0962	.6685	.1010		
#1	2.155	2.111	1.961	2.044		
#2	2.150	2.108	1.980	2.041		
Check?	Chk Pass C	hk Pass	Chk Pass	Chk Pass		

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Sample Name: CCV Acquired: 7/20/2010 9:35:06

Be3130

ppm 2.134 .000

.0060

2.134 2.134

7n2062

ppm 2.094

.005

2.090 2.097

Mg2790

ppm 41.39

.2630

41.31

41.46

.11

Custom ID1:

Ba4554

ppm 2.068

.000

.0191

2.068

2.068

V\_2924

ppm 2.094

.000

2.094 2.093

Fe2599

ppm 41.72 .04

.0950

41.70

41.75

User: admin

Comment: Elem

Units

Avg Stddev

%RSD

Check?

Value Range Flem

Units

Avg Stddev

%RSD

#2 Check?

Value Range Elem

Units

Avg Stddev

%RSD

Check ?

Value Range

Zoom In ▶
 Zoom Out

#2

Method: Accutest1(v172) Mode: CONC Corr. Factor: 1.000000

Cd2288

ppm 2.036 .005

.2626

2.033

2.040

As1890

ppm 2.016

.003 .1572

2.014 2.018

K\_7664

ppm 39.63 .00

.0091

39.62

39.63

Custom ID2:

Co2286

ppm 2.063

.006

.2896

2.058

2.067

TI1908

ppm 2.168

.009

2.162 2.175

Na5895

ppm 40.56

.01

.0246

40.55

40.56

Type: QC

Cr2677

ppm 2.109 .005

.2442

2.113

2.106

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

Pb2203

ppm 2.108

.005

2.104 2.111

Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass Chk Pass

B\_2089

ppm 2.075

.007

.3276

2.070

2.079

Chk Pass Chk

Custom ID3:

Cu3247

ppm 2.056 .003

.1542

2.054

2.058

Se1960

ppm 2.026

.007

2.021 2.032

Mo2020

.007

.3499

2.067

2.077

Mn2576

ppm 2.165 .003

.1168

2.166

2.163

Sh2068

ppm 2.048

.010 .4707

2.041 2.054

Pd3404

ppm 2.116 .001

.0458

2.117

Ni2316

ppm 2.140

.003

.1248

2.138 2.142

Al3961

ppm 40.77

.03

40.74

Si2124

ppm 5.139

.013

.2477

5.130

5.148

I WAZ400								
								◀ Zoom In Zoom Ou
me: CCB	Acquired	d: 7/20/201	0 9:41:04	Type: C	!C			
cutest1(v1	72) Mo	de: CONC	Corr. F	actor: 1.00	0000			
n Cus	tom ID1:	Custo	om ID2:	Custo	m ID3:			
Ba4554	Be3130	Cd2288	Co2286	Cr2677	Cu3247	Mn2576	Ni2316	Ag3280
ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
								.0003
								.0002
1.739	26.25	36.13	38.53	4.394	37.81	17.76	62.04	56.68
.0001	.0001	.0006	.0005	.0006	.0005	.0004	.0006	.0004
.0001	.0002	.0004	.0003	.0006	.0009	.0005	.0002	.0002
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
V_2924	Zn2062	As1890	TI1908	Pb2203	Se1960	Sb2068	Al3961	Ca3179
ppm	ppm	ppm					ppm	ppm
								.0063
								.0028
13.99	63.08	60.75	66.38	81.63	48.73	61.75	150.7	43.96
.0005	.0015	.0019	.0017	.0007	.0015	.0016	0002	.0043
.0004	.0006	.0007	.0006	.0002	.0030	.0006	.0068	.0082
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Fe2599	Mg2790	K_7664	Na5895	B_2089	Mo2020	Pd3404	Si2124	Sn1899
ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
								.0005
								.0009
42.36	96.23	116.1	3.330	19.90	18.88	6/8.5	21.68	185.7
.0042	0008	.0045	0321	.0023	.0032	0001	.0031	.0012
.0079	0043	.0459	0307	.0018	.0024	.0002	.0023	0002
Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
	me: CCB cutest1(v1:  1	me: CCB Acquirec cutest1 (v172) Mo n Custom ID1:  Ba4554 Be3130 ppm ppm 0001 0002 0000 1.739 26.25 0001 0001 0002 Chk Pass Chk Pass Chk Pass  V_2924 Zn2062 ppm ppm 0005 0011 0007 13.099 63.08 0005 0015 0006 Chk Pass Chk Pass Chk Pass  Fe2599 Mg2790 ppm ppm 0060 0026 0025 42.36 96.23 0043 00043	me: CCB	me: CCB	me: CCB	me: CCB	me: CCB	me: CCB

.0021

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Check? High Limit Low Limit



Elem Units Avg Stddev %RSD	Sr4077 ppm 2.152 .004 .1621	Ti3349 ppm 2.110 .002 .0962	W_2079 ppm 1.971 .013 .6685	
#1 #2	2.155 2.150	2.111 2.108	1.961 1.980	2.044 2.041
Check ? Value Range	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 153130. 189. .12312	Y_3710 Cts/S 27644. 37. .13482	Y_2243 Cts/S 2528.9 6.7 .26300	In2306 Cts/S 5126.9 9.0 .17566
#1 #2	153000. 153270.	27671. 27618.	2533.6 2524.2	

							Zoom Out
	cutest1(v1		de: CONC	0 9:41:04 Corr. Fa om ID2:	Type: QC actor: 1.000000 Custom IE		
Elem Units Avg Stddev %RSD	Sr4077 ppm .0002 .0001 71.36		W_2079 ppm .0124 .0016 13.08	Zr3391 ppm .0010 .0001 10.24			
#1 #2	.0001 .0002	.0008	.0136 .0113	.0009 .0011			
Check ? High Limit Low Limit	Chk Pass	Chk Pass	Chk Pass	Chk Pass			
Int. Std. Units Avg Stddev %RSD	Y_3600 Cts/S 158360. 174. .10960	Cts/S 27969. 5.	Cts/S 2600.8	In2306 Cts/S 5474.5 6.5 .11959			
#1 #2	158240. 158490.	27966. 27972.	2601.6 2600.1	5479.1 5469.8			

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Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit
Ba 455.403 { 74}		2	Mg	0.000007	0.000000	No
			Al	0.000002	0.000000	No
Be 313.042 {108}		10	V	0.002230	0.000000	No
			Мо	-0.000037	0.000000	No
		<b></b>	Ti	-0.000570	0.000000	No
			Mn D-	-0.000033	0.000000	No
			Ba	0.000015	0.000000	No
			Co	0.000010	0.000000	No
		·	Ni	0.000004	0.000000	No
		ļ	Ca Cu	0.000000	0.000000	No No
		<b></b>	Zn	-0.000034	0.000000	No
Cd 228.802 {448}	×	13	As	0.016600	0.000000	No
04 220.002 (110)	<u> </u>	ļ	Ni	0.000081	0.000000	No
			Fe	0.000008	0.000000	No
			V	0.000061	0.000000	No
			Ba	-0.000047	0.000000	No
·····		å	Со	-0.004947	0.000000	No
		İ	Sr	-0.000006	0.000000	No
		·····	Ca	-0.000003	0.000000	No
			Mn	-0.000021	0.000000	No
			Cr	0.000025	0.000000	No
			Si	-0.000005	0.000000	No
			Cu	-0.000026	0.000000	No
	<u></u>	ļ	W	-0.000550	0.000000	No
Co 228.616 {448}		8	Fe	0.000015	0.000000	No
		ļ	Cr	-0.000049	0.000000	No
		ļ	Mo	-0.001430	0.000000	No
		ļ	Ni Ti	0.000356	0.000000	No
				0.001862	0.000000	No
			Ba W	0.000080	0.000000	No
			Cd	0.000660 -0.000060	0.000000	No No
Cr 267.716 {126}	<b>M</b>	13	Mn	0.000202	0.000000	No
C1 207.710 (120)		13	V	-0.000202	0.000000	No
		ļ	Mo	0.000018	0.000000	No
			Fe	-0.000011	0.000000	No
			W	0.000253	0.000000	No
			Cd	-0.000050	0.000000	No
			Al	0.000000	0.000000	No
			Ca	-0.000001	0.000000	No
			Mg	0.000000	0.000000	No
			Ti	0.000100	0.000000	No
		<u> </u>	Sn	0.000000	0.000000	No
		Į	Ba	-0.000005	0.000000	No
		ļ	Cu	0.000100	0.000000	No
Cu 324.754 {104}2	X	13	Cr	-0.000171	0.000000	No
		ļ	V	-0.000183	0.000000	No
		ļ	Mo T:	0.000744	0.000000	No
		ļ	Ti	-0.000182	0.000000	No
		ļ	Fe	-0.000102	0.000000	No
		ļ	Al Sn	0.000000	0.000000	No No
		ł	Sn Zn	0.000203 -0.000004	0.000000	No No
			Co	-0.000004	0.000000	No
		ļ	Zr	-0.000100	0.000000	No
		<u> </u>	Si	0.000020	0.000000	No
		İ	Mn	0.000000	0.000000	No
		å	Se	0.000850	0.000000	No
Mn 257.610 {131}	X	3	Fe	-0.000067	0.000000	No
			Si	0.000050	0.000000	No
		1	Ba	0.000100	0.000000	No



Use?	# IECs	IEC	k1	k2	Calc-in-fit?
X	15	Fe	0.000040	0.000000	No
		Zn	0.000079	0.000000	No
	<u> </u>	Be	-0.000087	0.000000	No
	ļ		0.000359	0.000000	No
			0.000209	0.000000	No
					No
					No
					No
	<b></b>				No
					No No
	å				No
	ļ				No
	ļ				No
					No
M	O				No
	ł				No
					No
	<u> </u>				No
	å				No
					No
	å		······ ф ····· · · · · · · · · · · · ·		No
		W	0.000030	0.000000	No
	İ	Ca			No
X	6	Ti			No
<del></del>	ð	Мо	-0.009610	0.000000	No
		Fe	0.000034	0.000000	No
	·····	Sr	-0.000100	0.000000	No
	İ	Cr	-0.001944	0.000000	No
		Mn	-0.000200	0.000000	No
Ø	12	Cr	-0.001450	0.000000	No
		Мо	-0.000070	0.000000	No
		Fe	0.000038	0.000000	No
		Al	-0.000005	0.000000	No
		Si	-0.000035	0.000000	No
		Mn	0.000205	0.000000	No
		Ba	-0.000010	0.000000	No
		Na	0.000003		No
		Ca	0.000012	0.000000	No
		Sr	-0.000833	0.000000	No
		Sn	0.000255	0.000000	No
	ļļ	Cu	0.000056	0.000000	No
	20	Al	0.000013	0.000000	No
	ļl				No
	ļ				No
					No
	ļ				No
					No
	ł				No No
	ļ				No
	ł				No
	ļ				No No
					No
					No
	<u> </u>				No
	ļ				No
	<u> </u>				No
	<b></b>	Zn	-0.000234	0.000000	No
		<b>-</b> 11	10.000100	10.000000	1110
	<u> </u>	Sr	-0 000680	0 000000	No
		Sr Pd	-0.000680 0.035230	0.000000	No No
		9	15   Fe	15   Fe   0.000040   Zn   0.000079   Be   -0.000087   Co   0.000359   Ti   0.000004   Mg   0.000004   Mg   0.0000050   V   -0.000032   Cu   -0.000050   Se   0.000100   Al   -0.000001   Al   -0.000001   Si   -0.000000   Si   -0.000000   Si   -0.000000   Si   -0.000000   Mn   0.000000   Si   -0.000000   Si   -0.000100   Fe   -0.000100   Fe   -0.000165   V   -0.000880   Zr   0.001542   Zn   0.000152   W   0.000030   Ca   -0.000008   Si   -0.000010   Fe   -0.000100   Fe   -0.000100   Fe   -0.000100   Fe   -0.000100   Si   -0.000000   Si   -0.000000   Si   -0.000000   Si   -0.000000   Si   -0.000000   Si   -0.000000   Si   -0.0000000    Si   -0.00000000   Si   -0.0000000000000000000000000000000000	15   Fe



Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
TI 190.856 {477}	×	22	Cr	0.000380	0.000000	No
			Mo	-0.004690	0.000000	No
			Al	0.000001	0.000000	No
			Fe	-0.000110	0.000000	No
			V	-0.024440	0.000000	No
			Mn	0.001147	0.000000	No
			Si	0.000006	0.000000	No
			Ca T:	-0.000003	0.000000	No
			Ti	-0.001911	0.000000	No No
			Na Mg	0.000000 -0.000001	0.000000	No
			Co	0.002590	0.000000	No
			Sr	-0.002370	0.000000	No
			В	0.0000374	0.000000	No
			Ва	-0.000011	0.000000	No
			Zn	0.000217	0.000000	No
			As	-0.000047	0.000000	No
		å	W	-0.034400	0.000000	No
			Ni	0.000056	0.000000	No
			Cu	0.000022	0.000000	No
			Zr	-0.002000	0.000000	No
			Pd	-0.000500	0.000000	No
Pb 220.353 {453}	X	22	Al	-0.000123	0.000000	No
	<del></del>		Fe	0.000061	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	0.000063	0.000000	No
			Zn	-0.000036	0.000000	No
			Mo	-0.002150	0.000000	No
			Ni	0.000082	0.000000	No
			Cu	0.000960	0.000000	No
			V	-0.000088	0.000000	No
			Со	-0.000087	0.000000	No
			Ti	-0.000043	0.000000	No
			Si	0.000095	0.000000	No
			Ba	-0.000030	0.000000	No
			Sb	-0.000200	0.000000	No
			K Sr	0.000000	0.000000	No
				-0.000060	0.000000	No
			W	-0.008650	0.000000	No
			Mg Cd	0.000002 -0.000018	0.000000	No No
			Cr	0.000018	0.000000	No
			Pd	0.000022	0.000000	No
			Zr	-0.000500	0.000000	No
Se 196.090 {472}	M	20	Al	-0.000003	0.000000	No
	V.N		Ca	0.000003	0.000000	No
			Mn	0.000523	0.000000	No
			Мо	0.000081	0.000000	No
			Fe	-0.000196	0.000000	No
			Co	0.000114	0.000000	No
			V	0.000007	0.000000	No
			Sr	-0.000125	0.000000	No
			Cu	-0.000007	0.000000	No
			W	0.010290	0.000000	No
			Si	0.000011	0.000000	No
			TI	0.000204	0.000000	No
			Be	-0.000143	0.000000	No
		Į	Zn	-0.000130	0.000000	No
			В	-0.000125	0.000000	No
		Į	Pd	-0.001182	0.000000	No
			Ti	-0.000200	0.000000	No
		:	Cd	-0.000210	0.000000	No



Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit
			Zr	-0.000400	0.000000	No
		ō	Ва	-0.000160	0.000000	No
Sb 206.833 {463}	X	13	Fe	-0.000009	0.000000	No
		å	Al	0.000005	0.000000	No
			Ca	-0.000001	0.000000	No
		å	Ni	-0.001323	0.000000	No
			Cr	0.010673	0.000000	No
		1	V	-0.002344	0.000000	No
	•••••		Zn	0.000188	0.000000	No
		ô	Мо	-0.001190	0.000000	No
		İ	Ti	0.000220	0.000000	No
	••••••	8	Sn	-0.018000	0.000000	No
			W	-0.006080	0.000000	No
		å	Mg	-0.000001	0.000000	No
			Zr	-0.001300	0.000000	No
Al 396.152 { 85}	X	4	Si	0.000976	0.000000	No
	KNI.		Ca	-0.000680	0.000000	No
		ò	Mo	0.035910	0.000000	No
		<u> </u>	Zr	-0.031182	0.000000	No
Ca 317.933 {106}	M	13	Fe	0.000350	0.000000	No
		ļ	Ti	0.000560	0.000000	No
		å	W	0.023000	0.000000	No
			TI	0.004950	0.000000	No
			Be	-0.003800	0.000000	No
			Ba	-0.003500	0.000000	No
		<b></b>	Cu	0.001200	0.000000	No
			Cd	0.001200	0.000000	No
			Ni	-0.005000	0.000000	No
			Pd	0.097700	0.000000	No
		·	Mn	0.000000	0.000000	No
			В	0.021790	0.000000	No
			Se		0.000000	No
Fe 259.940 {130}	M	13		0.017000	0.000000	No
re 239.940 [130]	M	10	Co Si	0.000004		
			TI	-0.001181	0.000000	No
		·····		-0.002602		No
		ļ	Se	0.000000	0.000000	No
			Cr	-0.000566	0.000000	No
			Mn	0.000000	0.000000	No
			V	-0.000064	0.000000	No
			Cu	0.000953	0.000000	No
			K	-0.001830	0.000000	No
			Zn	0.007900	0.000000	No
		ļ	Ti	-0.000631	0.000000	No
		ļļ	Ca	0.000020	0.000000	No
Ma 270 070 (121)	N	ļ	Ba	0.001000	0.000000	No
Mg 279.079 {121}	XI.	3	Mo	-0.010250	0.000000	No
		ļ	W	-0.006578	0.000000	No
1/7// 400///	F-7	ļ	Mn	-0.005360	0.000000	No
K 766.490 { 44}	XI.	11	Fe	-0.000340	0.000000	No
		Į	Al	-0.000023	0.000000	No
			Ca	0.000179	0.000000	No
		ļ	Mn	0.001430	0.000000	No
		ļ	Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Pd	0.004000	0.000000	No
			Sn	-0.004700	0.000000	No
			Na	-0.004000	0.000000	No
		<u>[</u>	Ba	0.007300	0.000000	No
		ļ	Мо	-0.000850	0.000000	No
Na 589.592 { 57}	X	4	K	-0.000560	0.000000	No
			Ва	0.000900	0.000000	No
		I	Ca	-0.001200	0.000000	No



	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
 				Al	-0.000800	0.000000	No
	B 208.959 {462}	<u> </u>	1	Мо	0.017990	0.000000	No
	Mo 202.030 {467}	X	5	Со	0.000600	0.000000	No
ļ				Al	0.000016	0.000000	No
ļ				Fe	-0.000010	0.000000	No
ļ				Mg Ca	-0.000026 0.000028	0.000000	No No
ļ	Pd 340.458 { 99}	M	7	Ti	-0.000339	0.000000	No
ļ	1 4 540.430 ( 77)	<u> </u>	······································	V	0.000132	0.000000	No
ļ			· · · · · · · · · · · · · · · · · · ·	Sn	-0.000006	0.000000	No
ļ				Fe	0.000026	0.000000	No
				Мо	-0.001720	0.000000	No
				Zr	-0.137300	0.000000	No
ļ				Co	-0.003300	0.000000	No
ļ	Si 212.412 {459}	M	11	Sr	0.000366	0.000000	No
ļ				Ni	0.000106	0.000000	No
ļ	ļ		·····	Mo V	0.014750 -0.000260	0.000000	No No
ļ			<u> </u>	<u>v</u> Ti	0.004730	0.000000	No No
ļ				Al	-0.000027	0.000000	No
ļ				Cd	0.001043	0.000000	No
ļ				Ва	0.000170	0.000000	No
				Fe	0.000044	0.000000	No
ļ				Sn	0.005721	0.000000	No
ļ				Zn	0.000385	0.000000	No
ļ	Sn 189.989 {478}	N N	5	Ti	-0.000590	0.000000	No
ļ				Mo	0.000071	0.000000	No
ļ			<u> </u>	Fe Mn	0.000043	0.000000	No No
ļ				Si	0.000301	0.000000	No
ļ	Sr 407.771 { 83}	Ø	2	Fe	0.000000	0.000000	No
·····		K-M		Ca	0.000020	0.000000	No
	Ti 334.904 {101}	X	3	Cr	0.000189	0.000000	No
				Мо	0.001417	0.000000	No
ļ		<u></u>		Si	0.000965	0.000000	No
ļ	Y 360.073 { 94}*	<u> </u>	None				
ļ	Y 371.030 { 91}* Y 224.306 {451}*	<u> </u>	None None				
ļ	In 230.606 {446}*	M M	None				
L	W 207.911 {462}	M	25	Al	-0.000018	0.000000	No
·····		V3		Si	-0.000900	0.000000	No
ļ				Ca	-0.000026	0.000000	No
[				Fe	-0.000077	0.000000	No
ļ			ļ	As	-0.005400	0.000000	No
ļ	ļ		ļ	Mg	-0.000006	0.000000	No
ļ				Mn	-0.000900	0.000000	No
ļ			ł	Mo Ti	-0.000900 -0.002000	0.000000	No No
ļ				Sr	-0.002000	0.000000	No
ļ				۷	-0.001300	0.000000	No
ļ			\$	Cd	-0.000650	0.000000	No
				Cr	-0.000880	0.000000	No
[				Zn	0.006121	0.000000	No
ļ				Pd	-0.011600	0.000000	No
ļ	ļ			Sn	-0.000500	0.000000	No
ļ			ļ	Zr	0.005930	0.000000	No
ļ			ļ	B	-0.001000	0.000000	No
ļ	ļ		<b></b>	Sb Co	-0.001000	0.000000	No No
ļ			ļ	Ni	-0.001000 -0.001000	0.000000	No
ļ			ł	Be	-0.001000	0.000000	No
<b></b>	₫····································		÷	Se	-0.001100	0.000000	No



	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Cu		0.000000	No
				Ba	-0.001000	0.000000	No
	Zr 339.198 { 99}	X	3	Мо	0.000700	0.000000	No
				Ti	-0.000100	0.000000	No
[				Fe	-0.000060	0.000000	No



**ž** ,

OUP 2 Sample ID:

VIS 1 Sample ID: 1, 2





Aqueous Digestion Log MP Batch ID:

CP DIGESTION METHOD: SW846 3010A

reating Method:	Digestion Block	
Viethod Blank ID:	IMP5370	08   Prep Date: 7/14/10

\_ab Control/Spike Blank ID: Start Time: എത്ര Start Temp: 92+6-92 Thermometer ID #: 142 \_ab Control Source:

End Time: 3.00 End Temp: 95+0=93

**DUP 1 Sample ID:** Acceptable temperature Ranges:

**EPA 200.7** 

SW846 3010A, 3020A, 3050B

90 to 95 deg. C 90 to 95 deg. C

VIS 2 Sample ID: 34 JA 50921 -2F

•		Initial	Final	Acids Use	ed	Spikes Used	i	
	Pres	Sample	Volume	Amount and	Added -		Added -	
Sample ID	Y/N	Volume	in ML	Name	Y or N	Amount and Name	Y or N	Comments
MP 53708 -MB_	Ν	50	SO	3.0 ml conc. HNO3	7			
MP 5370Y-LC_1	¥	\$	50	5.0 ml 1:1 HCL	4			
MP53708 -S12		j	1			0.50 ml SP, 0.50 ml MIN1	~/	
MP53708 -S3,4				;		0.50 ml SP, 0.50 ml MIN1	-/	-
1P 53708 -SD 1,2								
/IP -B		1						
1JA50236-1								
2 -2								
3								
1 -4								
5 - 5					I			
5 ~ G								
7  7								
3 4 - 8				·				
JA 50921-1	and Filling on the man	. Paris and desired	1		44	nite o <u>n itar</u> para 1965 de de 1966 de	14 Marie 1911	
10 1 -2								
11 -3								
2 -4								
12 -4 13 -1F							1	
14 - 00		1 1 1						
15 – <b>२</b> ६								
16 V -4F								
17 JA50762-1		1						- · <del>- · · · · · · · · · · · · · · · · ·</del>
18			1 1	,				
19 √ - <u>3</u>		1	T.	1				
20						<u> </u>		
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		Ţ			T			1991

Kowais Kan - 7/14/10 QC Reviewer:

Form AA018C-01 Rev. Date: 01/15/10





# General Chemistry

# QC Data Summaries

# Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC



### METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA50921 Account: HUNDIM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GN39697	0.010	0.0	mg/l	.15	0.15	100.0	90-110%

Associated Samples: Batch GN39697: JA50921-1, JA50921-1F, JA50921-2, JA50921-2F, JA50921-3, JA50921-3F, JA50921-4, JA50921-4F (\*) Outside of QC limits

### DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA50921 Account: HUNDIM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent Chromium, Hexavalent	GN39697 GN39697	JA50921-2F JA50921-2	mg/l mg/l	0.0	0.0	0.0	0-20% 0-20%

Associated Samples:
Batch GN39697: JA50921-1, JA50921-1F, JA50921-2, JA50921-2F, JA50921-3, JA50921-3F, JA50921-4, JA50921-4F
(\*) Outside of QC limits

# MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA50921 Account: HWINJM - Honeywell International Inc. Project: HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN39697	JA50921-2F	mg/l	0.0	.15	0.14	93.3	85-115%
Chromium, Hexavalent	GN39697	JA50921-2	mg/l		.15	0.12	80.0N(a)	85-115%

### Associated Samples:

Batch GN39697: JA50921-1, JA50921-1F, JA50921-2, JA50921-2F, JA50921-3, JA50921-3F, JA50921-4, JA50921-4F

- (\*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (a) Spike recovery indicates possible matrix interference. Good pH adjusted post spike recovery (96.7%)





# General Chemistry

Raw Data



# Hexavalent Chromium

Bottle ID	Sample # ·* Test\Title:	Sample Absorbance XCr	BKGRD Abs	Analyzed Times	Y Values Corr Sample Absorbance 1	X Values Conc(mg/l)	Final Vol. (ml)	Sam Vol. (ml) Method:	Dilution SW846 719	Final Conc. 96A	Units	MDL	RDL
	GN Batch:	GN39697											
	Analyst:	RICKY				Noto: Hea/	t for CLE	list noin	ter. 1 for i	reg. List pointe	r.		
	Prep Date:	NA 7/8/2010				NOIS. USC -	7 101 OL	nst pom	,	-g/ p			
	Analysis Date: Instrument ID:	F E											
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									Corr. Coef:	0.99999		
	Cal. Blk.	0.000	NA_	19:23	0.000	0.0000				81	0.8875		
	STD1	0.008	NA	NA NA	0.008	0.0100				Slope:	0.0070		
	STD2	0.045	NA NA	NA NA	0.045	0.0300				Y Intercept:	0.0009		
	STD3 STD4	0.091	NA NA	NA NA	0.269	0.3000							
	STD5	0.447	NA NA	NA	0.447	0.5000							
	STD6	0.708	NA	NA	0.708	0.8000		Sam. Vol.			11	MADI	RDL
	STD7	0.889	NA	19:29	0.889	1.0000	(mi)	(ml)	<u>Dilution</u>	Final Conc.	<u>Units</u>	MDL 0.002	0.010
	CCV	0.445	NA.	20:17	0.445	0.5004	NA NA	NA NA	NA NA	NA NA	mg/l	0.002	0.010
	CCB	0.000	NA 0.000	20:18	0.000	-0.0011 -0.0011	NA 50.0	50.0	1	-0.001	mg/l	0.002	0.010
<u> </u>	GN39697-MB1 GN39697-B1	0.000	0.000	20:29	0.000	0.1466	50.0	50.0	1	0.147	mg/l	0.002	0.010
<del></del>	GN39697-S1	0.134	0.001	20:29	0.133	0.1488	50.0	50.0	1	0.149	mg/l	0.002	0.010
	GN39697-D1	0.002	0.001	20:29	0.001	0.0001	50.0	50.0	1	0.000	mg/l	0.002	0.010
4	JA50871-1	0.002	0.001	20:29	0.001	0.0001	50.0	50.0	1 10	0.000	mg/l	0.002	0.010
	GN39697-S2	0.377	0.000	20:29	0.377	0.4237	50.0	50.0	10 5	4.237 1.257	mg/l mg/l	0.020 0.010	0.050
L	GN39697-D2	0.225	0.001	20:29	0.224	0.2513 -0.0011	50.0 50.0	50.0	1	-0.001	mg/l	0.010	0.010
2	JA50880-1	>3.372	OVR	20:29	FALSE FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
- 2	JA50880-2	1,119	OVR	20.29	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
	ccv	0.445	NA NA	20:29	0.445	0.5004	NA.	NA .	NA	NA .	mg/l	0.002	0.010
<u> </u>	ССВ	0.000	NA	20:30	0.000	ىے 0.0011-	NA	NA	NA	NA NA	mg/l	0.002	0.010
	JA50880-1	0.392	0.002	20:44	0.390	0.4384	50.0	50.0	25	10.959	mg/l	0.050 0.010	0.250 0.050
	JA50880-2	0.225	0.001	20:44	0.224	0.2513	50.0	50.0	5	0.002	mg/l mg/l	0.002	0.030
<u> </u>	GN39697-S3	0.022	0.019	20:44	0.003	-0.0023	50.0 50.0	50.0 50.0	1	-0.002	mg/l	0.002	0.010
<u> </u>	GN39697-D3	0.019 >2.775	0.019 OVR	20:44	FALSE	-0.0011	50.0	50.0	1 1	-0.001	mg/l	0.002	0.010
3	JA50781-4 JA50781-5	0.000	0.000	20:44	0.000	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
3	JA50781-6	0.018	0.018	20:44	0.000	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
	JA50781-4	0.230	0.014	20:44	0.216	0.2423	50.0	50.0	50	12.116	mg/l	0.100	0.500
	JA50781-6phadjpsco	r 0.026	0.013	20:44	0.013	0.0136	50.0	50.0	1 1	0.014	mg/l	0.002	0.010
	JA50781-6	0.005	0.003	20:44	0.002	0.0012	50.0	50.0 NA	5 NA	0.006 NA	mg/l mg/l	0.002	0.010
	CCV	0.445	NA NA	20:44	0.445	-0.0011	NA NA	NA NA	NA NA	NA NA	mg/l	0.002	0.010
	LCB_	0.000	I NA	20.40	FALSE	-0.0011	50.0	50.0	1_1_	-0.001	mg/l_	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1 1	-0.001	mg/l	0.002	0.010
			<u> </u>	1	FALSE	-0.0011	50.0 50.0	50.0 50.0	1 1	-0.001	mg/l mg/l	0.002	0.010
<u> </u>	4	+	<del> </del>	<del>                                     </del>	FALSE FALSE	-0.0011 -0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
			1	+	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
$\vdash$	1	<u> </u>		1	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
	<u> </u>	1			FALSE.	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
	CCV	0.444	NA	21:40	0.444	0.4992 -	T NA	NA NA	NA NA	NA NA	mg/l	0.002	0.010
	ССВ	0.000	NA NA	21:41	0.000	-0.0011 /	NA 50.0	50.0	NA 1	0.001	mg/l mg/l	0.002	0.010
4	JA50921-1F	0.004	0.002	21:53	0.002	0.0012	50.0 50.0	50.0	1	0.001	mg/l	0.002	0.010
12	JA50921-2F JA50921-3F	0.006	0.004	21:53	0.002	-0.0012	50.0	50.0	1	-0.001	mg/l	0.002	0.010
4	JA50921-3F	0.003	0.001	21:53	0.000	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
3	JA50921-1	0.007	0.007	21:53	0.000	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
7	JA50921-2	0.009	0.008	21:53	0.001	0.0001	50.0	50.0	1	0.000	mg/l	0.002	0.010
3	JA50921-3	0.026	0.025	21:53	0.001	0.0001	50.0	50.0	1 1	-0.000	mg/l mg/l	0.002	0.010
3	JA50921-4	0.000	0.000	21:53	0.000	-0.0011 0.1432	50.0 50.0	50.0 50.0	1	0.143	mg/l	0.002	0.010
-	GN39697-S4	0.132	0.004	21:53 21:53	0.128	0.1432	50.0	50.0	1 1	0.001	mg/l	0.002	0.010
-	GN39697-D4 CCV	0.006	0.004 NA	21:53	0.444	0.4992	NA NA	NA_	NA.	NA	mg/l	0.002	0.010
	CCB	0.000	NA NA	21:54	0.000	-0.0011	NA	NA	NA NA	NA	mg/l	0.002	0.010
L	GN39697-S5	0.115	0.008 -	21:59	0.107	0.1195	50.0	50.0	1	0.120	mg/l	0.002	0.010
	GN39697-D5	0.008	0.008	21:59	0.000	-0.0011	50.0	50.0	1 1	-0.001 0.145	mg/l mg/l	0.002	0.010
	JA50921-2PHADJPSC		0.018	21:59	0.130	-0.0011	50.0 50.0	50.0	5	-0.005	mg/l	0.002	0.050
L	JA50921-2	0.005	0.005	21:59	1 0.000	1 -0.0011	30.0	1 00.0	<del> `</del>	1	1		



QO IVEP		33031											
		1		1	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del></del>				<u> </u>	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del></del>	4				FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
			-		FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del> </del>		-		<u> </u>	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
	CCV 1	0.444	NA NA	21:59	0.444	0.4992	NA NA	NA	NA .	NA NA	mg/l	0.002	0.010
<b>——</b>	( CCB	0.000	NA NA	22:00	0.000	-0.0011	NA	NA	NA	NA NA	mg/l	0.002	0.010
-		-			FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
	CCV		NA NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
	ССВ		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1 .	-0.001	mg/l	0.002	0.010
				ļ	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del></del>		+	ļ	ļ	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<b></b>		1		ļ	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/i	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
h		<del></del>			FALSE	-0.0011	50.0	50.0	11	-0.001	mg/l	0.002	0.010
			<del> </del>	·	FALSE FALSE	-0.0011	50.0	50.0	1	-0.001 -0.001	mg/l	0.002 0.002	0.010
					FALSE	-0.0011 -0.0011	50.0 50.0	50.0 50.0	1	-0.001	mg/l	0.002	0.010
		+			FALSE	-0.0011	50.0	50.0	1	-0.001	mg/i mg/l	0.002	0.010
	CCV		NA NA		TALOL	#VALUE!	NA NA	NA	NA	NA NA	mg/l	0.002	0.010
	ССВ		NA NA			#VALUE!	NA NA	NA NA	NA	NA NA	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<u> </u>		<u> </u>			FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
ļ		<u> </u>			FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<u> </u>	CCV		NA NA			#VALUE!	NA	NA	NA	NA NA	mg/l	0.002	0.010
<b>├</b> ──-	ССВ	<del>-</del>	NA			#VALUE!	NA	NA	NA	NA NA	mg/l	0.002	0.010
<b></b>					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<b></b>					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del></del>			-		FALSE FALSE	-0.0011 -0.0011	50.0 50.0	50.0	1	-0.001 -0.001	mg/l	0.002	0.010
$\vdash$		+-	<del> </del>		FALSE	-0.0011	50.0	10.0		7 7 1	mg/l	0.002	0.010
<del>-</del>					FALSE	-0.0011	50.0	0.0	1/	0.001	mg/l mg/l	0.002	0.010
<del> </del> -			·		FALSE	-0.0011	\$0.0	50.0	7	0.004	mg/i	0.002	0.010
			<u> </u>		FALSE	0.0011	50.0	50.0	1	8.0V1	mg/l	0.002	0.010
					FALSE	-0,0011	50.0	50.0	1	0.901	mg/l	0.002	0.010
			İ		FALSE	-0.0011	50.0	/se.o	1	(f0,001 V	mg/l	0.002	0.010
	CCV	<u> </u>	NA			#VALUE!	NA (	NA	NA	NA	mg/l	0.002	0.010
	ССВ		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
					FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
					FALSE	-0,001/1	50.0	50.0	1	-0.001	mg/l	0.002	0.010
			ļ <u> </u>		FALSE	-q.00x1	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<b></b>					FALSE	-0.0011	50.0	50.0	11	-0.001	mg/l	0.002	0.010
		<b></b>	ļ <u>.</u>	<b></b>	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
$\vdash$		ļ			FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
$\vdash$			ļ	-	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del></del>		<u> </u>		<del>                                     </del>	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del>                                     </del>		<del></del>		<del></del>	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
$\vdash$	CCV	+	NA NA	-	FALSE	-0.0011	50.0	50.0	1	-0.001	mg/l	0.002	0.010
<del>     </del>	CCB	+	NA NA	<del>                                     </del>	-	#VALUE! #VALUE!	NA NA	NA NA	NA NA	NA NA	mg/l	0.002	0.010
<u> </u>	000		14/1		<u> </u>	I #YALUE!	I INA	INA	L INA	I INA	mg/l	0.002	0.010

Co	m	m	^	nŧ	•



Test: Hexavalent Chromium  Product: XCr  Method: SW846 7196A (NJDEP mod)  Digestion Batch QC Summary  Method Blank ID: MB/ Date: 7/8//0 Result: 8 RDL: 0.010 < RDL: 45/  Spike Blank ID: 81 Date: 4 Result: 0.777 Spike: 0.150%Rec.: 98/  Duplicate ID: 57 J J 5087/-/ Samp. Result: 6 MS Result: 0.779 Spike: 0.150 %Rec: 99.3 /.	
Digestion Batch QC Summary         Units = mg/l           Method Blank ID:         MB/         Date: 7/8/10 Result: 8 RDL: 0.010 < RDL: 45/           Spike Blank ID:         B1         Date: 1 Result: 0.77         Spike: 0.150%Rec.: 98/           Duplicate ID(0) JA 5087/-/ Samp, Result: 0 Dup, Result: 4 RPD: 4         Dup, Result: 4 MRPD: 4	
Method Blank ID:	
Spike Blank ID:	-
Dunlicate ID(6) JA 5087/-/ Samp. Result: # Dup. Result: # %RPD: #	l l
Duplicate ID: (6) JA 5087/-/ Samp. Result: $\theta$ Dup. Result: $\theta$ %RPD: $\theta$	
(a) / 4 A NO Decide 0./49 College 0./10 0/10 0/10 0/10 0/10 0/10 0/10 0/1	- 1
MS ID: (37)	
Diluted Sample ID: D JAN986-2 Samp. Result: / 2/7 Dil. Result: / 2/5 %RPD:	
pH adj. PS ID: (S1)	5/
Analysis Batch QC Summary Units = mg/l	
CCV: 1/8/10 Result: 0. 100 TV: 0. 100 %Rec.: 100/.	
CCV: Result: 0. 500 TV: %Rec.:	
CCV: Result:	
CCV: Result: <u>6 · 499</u> TV: %Rec.:	
CCV:	
CCV: Result: 0- Y99 TV: %Rec.:	
CCB: 1/8// Result: <00/0 RDL: 0.010 <rdl: th="" ves<=""><th></th></rdl:>	
CCB: Result: RDL: <rdl:< th=""><th></th></rdl:<>	
CCB: Result: RDL: RDL: C	
Reagent Reference Numbers: SEE ATTACHED.	
Initial Calibration Source:	
Continuing Calibration Source:	
Outside Same at the same at th	
Analyst: Date:	
Comments:	

Form: GN-076 Rev. Date: 6/7/07



ACCUTE	57.				040 (03
est: Hexavalent Cl Product: XCr		RDL:	= 0.002 mg/l = 0.010 mg/l		\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Method: SW846 719 Digestion Batch QC			= mg/l		
•	=		-	/ 6 A/A	/
Method Blank ID:	Date	:	Result:	/ RDL: 0.010 <f Spike: 0.10%Re</f 	c.:
Dunticato ID: 10	70078/-6samp	Result:	Dup. Resu	ıt: 🗡 %RPI	D: <del>-0</del> _
ouplicate ib. (6)	) Samp Besult	MS MS	Result 0.002	Spike: 0.170 %Re	1.33 %
$\sim$	- Samp. Result	C Decuti	A Dil S	Result: < 0. 0/0 %	GRPD. O
Diluted Sample ID:	<del></del>	Samp. Result.	DII. 1	0.014 Spike: 0.17	0 0/Pag: 9. 33
pH adj. PS ID:	C Samp	o. Result:	MS Result:	Spike:	76Rec
Analysis Batch QC S	ummary	Units = mg/l			
CCV :	Result:	TV:_0. TO	%Rec.:		
CCV :		TV:	%Re[c.:	/	
CCV:	Result:	TV:	%Rec.:	_/	
CCV :			%}\hod:	_	
CCV :			%Rec.:		
CCV :	Result:	TV:	%Rec.: <del></del>	<u> </u>	
		22/00	1D - DDU		
CCB:		BBL: O .V	<rdl: <rdl:< td=""><td></td><td></td></rdl:<></rdl: 		
CCB:		RDL:			
ССВ:				<del></del>	
CCB:			<rdl;< td=""><td></td><td></td></rdl;<>		
CCB:			<rdl:< td=""><td></td><td></td></rdl:<>		
CCB:	Result:	KDL,	<rdl:< td=""><td></td><td></td></rdl:<>		
Reagent Reference	o Numbers:	SEE	ATTACHED	•	45-
Reagent Reference	e Numbers.		777 - 17 - 02	<del></del>	
Initial Calibration	Source:				
Continuing Calibr					
<u></u>					
Analyst:	<u></u> A Date:	7/8/10			
Comments:					

Form: GN-076 Rev. Date: 6/7/07



Test: Hexavalent Chr	omium		= 0.002 mg/l = 0.010 mg/l	GNBatch ID: Date:	54,39,697 7/8/P
Product: XCr Method: SW846 7196.	A (N IDED mod)	KDL.	- 0.0 to mg/i	Date	
Digestion Batch QC S		Linits	= mg/l	· · · · · · · · · · · · · · · · · · ·	
Digestion Daten QC (			~	A	
Method Blank ID:	Date:		Result:	RDL: 0.010	<rdl:< th=""></rdl:<>
Spike Blank ID:	Date:	F	Result:/	_ Spike: <u>0.150</u> %[	Rec.:
Duplicate ID: (DV) JA	<b>√792/-2/</b> §amp. R	esult:< ٥、	002 Dup. Result	: <u> &lt; 0.062</u> %R	PD:
MS ID: (5)	∕ Samp. Result: <u></u>	0.002 MS	Result: 0.743	_ Spike: <u>0./10</u> %	Rec: 95.3%
Diluted Sample ID:	/ Sa	mp. Result:	Dil. R	esult:/	%RPD:/
pH adj. PS ID:	Samp. R	tesult:	MS Result:	Spike:	%Rec:
Analysis Batch QC Sur	nmary	Units = mg/l			
CCV :	Result:	TV: 0. 500	) %Rec.:	_ /	
CCV:	Result:			_/	
ccv:	Result:		, <b>%</b> Rec.:	_	
CCV:			Rec		
ccv:	_	_ TV:	%Rec.:		
ccv:		TV:	%Rec.:	<u> </u>	
CCB:	Result:	BDL: 0.0	0 <rdl:< th=""><th></th><th></th></rdl:<>		
CCB:		RDL:	<rdl:< th=""><th></th><th></th></rdl:<>		
CCB:		RDL:	<rdl:< th=""><th><del></del></th><th></th></rdl:<>	<del></del>	
CCB:		RDL:	<rdl:< th=""><th></th><th></th></rdl:<>		
CCB:	Result:	_ RDL:	<rdl:< th=""><th></th><th></th></rdl:<>		
CCB:			<rdl:< th=""><th></th><th></th></rdl:<>		
		CE #	A		7-
Reagent Reference	Numbers:	SEE	ATTACHED.		
			<u></u>		<u> </u>
					<u> </u>
Initial Calibration S					
Continuing Calibrat	tion Source:				
		, ,			
Analyst: <u>RA</u>	Date: <del>-)</del> ,	/g //o			
	<del></del>				
Comments:					
				<del></del>	

Form: GN-076 Rev. Date: 6/7/07



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					CN 396	9 <del>)</del>
Test: Hexavalent Chrom	ium		0.002 mg/l	GNBatch ID:	GN 396	
Product: XCr	N IDED mod)	KDL =	0.010 mg/l	Date:	<del>. 7/*//-</del>	_
Method: SW846 7196A (		Units =	ma/l·			
Digestion Batch QC Sur	_		_			ļ
Method Blank ID:	Date:	/ R	tesult:	_RDL:_ 0.010	<rdl:< th=""><th></th></rdl:<>	
Spike Blank ID:	Date:	Re	esult:	_ Spike: <u>⊘∵I⊊O</u>	%Rec.:	
Duplicate ID: DV JAVE	92 /- 2 <sub>Samp.</sub> Re	sult: <del>0</del>	Dup. Result	: %	6RPD:	
MS ID:	Samp. Result:	<u>-Ø</u> MSF	Result: 0 /20	_ Spike:_0./17	%Rec: <i>80</i> /·	
Diluted Sample ID:	San	np. Result:	<del>0</del> bil. R	esult: <del>-0</del>	%RPD: <del>**</del>	_ ,
pH adj. PS ID:	Samo Re	esult: <del>0</del>	MS Result:	5./W Spike:	0-/50 %Rec: 96	6.7 1.
pri adj. 1 0 10	Ou.np. 110				···	
Analysis Batch QC Summ	ary L	Jnits = mg/l		***		
ccv:	Result:	TV: 0. 500	_ %Rec.:	4 -	/	
ccv :				<b>J</b>		
	Result:			/		
ccv :	Result:	TV:		_		
ccv:	Result:			<del>}</del> }		
ccv:	Result:	. TV:		#		
CCB:	Result:	RDL: 0.01	O <rdl:< th=""><th></th><th></th><th></th></rdl:<>			
	Result:	RDL:	<rdl:< th=""><th></th><th></th><th></th></rdl:<>			
	Result:		<rdl:< th=""><th></th><th></th><th></th></rdl:<>			
CCB:	Result		<rdl:< th=""><th></th><th></th><th></th></rdl:<>			
ссв:	Result:	RDL:	<rdl:< th=""><th></th><th></th><th></th></rdl:<>			
CCB:	Result:	RDL:	<rdl:< th=""><th></th><th></th><th></th></rdl:<>			
Reagent Reference Nu	ımbers:	SEE	ATTACHED	•		
Initial Calibration Sou		WAR.				
Continuing Calibratio	n Source:					
Analyst: 12 A	Date: <del>_)</del> /	/g //¤				
· <del></del>		<i>,</i> —				
Comments:						

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Form: GN-076 Rev. Date: 6/7/07



# Hexavalent Chromium pH Adjustment Log Method: SW846 7196A (NJDEP mod)

pH adj. start time:	1942	 pH Adjust. Date:	7/8/10
pH adj. end time:	1009	GN Batch ID:	BN 39697

,			•		_,,,		<u></u>	<b>,</b>
Sample ID	Initial Sample Volume (ml)	Final Volume (ml)	pH after H2SO4	bkg pH after H2SO4	Spike Info	Comments		at A
ccv	¥	10	1.89	-	J-ML	5 ppm	ULTRA	
ccv	/		7.07		7 7.5	1 ///	vic vic.	
ccv								
ccv								
ССВ	75	10	1.94					
ССВ		-						
ССВ								
ССВ								1
MS (S) JA (1087/ -/	74	10	2.06	1,85	/ ML	7.5 DOM	ABSOLUTE	
DUP (D)	1	1	1.98	1.83		//	7,72	i -
SB			2.01	1.80	) ML	7. 5 DIM	ABSOLUTE	1
PB			1.94	1.75		<i>*************************************</i>		1
1. JAND871-1			1.95	<i>l</i> , <del>&gt;7</del>				1
2. (SA JAV0880-2			1. 93	183	1:10	DIL) 0.13	ML OF 150 p	PM ABSOUTE
3. <b>(2</b> )			1.91	1.81	<u> </u>	1: 5- 1		ľ
4. JAVOBBO-1			1.87	OUR				
5. 1 -2			1.89	OVIL				
6. ~/			1.92	1.85		1:25	21L.	1
7. 4 -2			1.95	1.91		1: \	50K.	
8. <b>53 7</b> 7 <b>17078/-6</b> 9. <b>1</b> 35 L			1.93	1.92		<u> </u>		1
9. <b>(</b> )3) \( \( \alpha \)			1.99	1.92				1 .
10. 77 107 6.1-4			2.12		MRBID	FILTEMEN	) N/ O. YJ ym	AFTER HOSOY PH.
11. ] -5			1.90	1.87	TURB 10	. FILTENER	NO. YTura	AFTER HUSDY PH
126			1.95	1.80	1		, , ,	1
13. JA 10+B1 - 4	1		196	1.79		1: 10	DIL	1
14.								
15.								1
16.								1
17.								1
18.								1
19.								1
20.						_		1
PS JAJO481- 6	X	1.0	1.89	1- 75	/p# =	8. Y7) / M	11 7.5 ppm	ABSOUTE
DIL L	75	50	1.93	1.79		·	7	1
DIL								]
								-

DIL				
Reagent Information	n: (SEF ;	ATTACKED.		_
Analyst: RA	Date: <del></del>	/8/1- QC Reviewer:_	Date:	
Form: GN-077	/	•		

Rev. Date: 2/11/99





# Hexavalent Chromium pH Adjustment Log Method: SW846 7196A (NJDEP mod)

pH adj. start time:	2/10		pH Adjust. Date:	7/8/10
pH adj. end time;	2/3/	·	GN Batch ID:	5139699

Samala ID	Initial Sample Volume (ml)	Final Volume	pH after H2SO4	bkg pH after H2SO4	0-11 1-6-	
Sample ID	```	(ml)		H25U4		Comments
CCV	<u> </u>	75	1.86		JML	I ppm ALTRA
CCV						, , , , , , , , , , , , , , , , , , ,
ccv						
ccv		la constant	4 00			
ССВ	X	25	1.92	-		
ССВ						
CCB						
CCB	<u> </u>					
MS (5) J= 10921-24		10	1.87	1.82	1 MC	7.5 ppm ABSOUTE
DUP DY L	L	L	1.90	1.80		/
SB						
PB			La			
1. JAJD921-1F	77	20	1.83	1.79		
2. ~2F			2.0/	1.75		
3. <i>-3F</i>			1.96	1.76		
4 YF			1.92	人 83		
5 /		L [	1.93	1.82		
62		ľ	1.95	1.84		
7 3 8 4			1.91	1.81		
			1.92	/. <del>} }</del>		
9. 55 JA 50921-2			1.89	1.79	1 ML	7. J PPM ABSOLUTE
10. OS L	-		1-95	1.82		//
11.		-				
12.					***	
13.						
14.						
15.						
16.					<u> </u>	
17.						
18.						
19.					<u> </u>	
20.						
PS JA 5092 /- 2	44	1.0	1.83	1.79	1011	B. 48) IML 7. 5 PPM
DIL L	X-	गुर	1.87	1.80	( / " =	1. J. J.
DIL	/٧	3-	1.07	/* 8*		/ \
			L	<u> </u>	<u> </u>	<u> </u>

ABJOUTE

Reagent Info	ormation:	SEE	ATTACHED.		
Analyst:	RA	Date:_	7/8/13	QC Reviewer:	Date:

Form: GN-077 Rev. Date: 2/11/99 9AGE 2

Hexavale	ent Chromium pH Adjustment Log
Method:	SW846 7196A (NJDEP mod)

7/8/10 GN 39697 pH adj. start time: pH Adjust. Date: pH adj. end time: GN Batch ID: Initial Sample Final Volume Volume pH after Sample ID (ml)(ml)H2SO4 Comments Spike Info. Calibration Blank 45 50 2 -at 2-01 0.010 mg/l standard PPM ABSOUTE 0.10 mi of 5 mg/l to 50 ml FV 1.99 0.050 mg/l standard 0.50 ml of 5 mg/l to 50 mL FV 0.100 mg/l standard 2-11 1.00 ml of 5 mg/l to 50 mL FV 0.300 mg/l standard 1.96 3.00 ml of 5 mg/l to 50 mL FV 0.500 mg/l standard 2.01 5.00 ml of 5 mg/l to 50 mL FV 1.93 0.800 mg/l standard 8.00 ml of 5 mg/l to 50 mL FV 1.00 mg/l standard 2.04 W 10.0 ml of 5 mg/l to 50 mL FV 2.00 mg/l standard 20.0 ml of 5 mg/l to 50 mL FV Reagent Information: ATTACHED.





GN 39697

# Reagent Information Log - XCR - water - 7196A

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium, 1000 mg/L Stock	1/20/2013	Absolute Grade Lot# 012010
Calibration Checks: Hexavalent Chromium, 1000 mg/L Stock	7/31/2015	Ultra Scientific Lot# J00509
External Check	N/A	N/A
Spiking Solution Source	1/20/2013	Absolute Grade Lot# 012010
Diphenyl carbazide Solution	8/7/2010	GNE7-25500-XCR
Sulfuric Acid, 10%	12/9/2010	gne6-25226-xcr

Form: GN087A-23 Rev. Date: 10/3/05



Page 1

To: Ed Gaven/Vanthuy Lieu, MACTEC Engineering and Consulting, Inc.

From: Christina Jensen, Validata, LLC, Re: Honeywell Hudson County Data Validation

Date: August 15, 2010

This memorandum discusses the results of the data validation of analytical data in Sample Delivery Group (SDG) JA48997 provided by Accutest Laboratory, located in Dayton, New Jersey, for samples collected as part of the Honeywell Hudson County project. No samples were rejected as a result of the data validation process. Appendix A contains the Sample Summary Table, Appendix B contains a list of the State of New Jersey Department of Environmental Protection (NJDEP) data validation footnotes, and Appendix C contains copies of the completed data validation report forms.

The validation for samples in this SDG was performed by Christina Jensen, Validata, LLC. The following table lists the samples that were included in this SDG.

## Samples

Table 1-1. Sample cross-reference list

Field Sample ID	Lah Sample ID	Sample Analyses
· · · · · · · · · · · · · · · · · · ·	•	E376.1, SM2540G
-,		•
		E376.1, SM2540G
	0000.	E376.1, SM2540G
		E376.1, SM2540G
079-SB-034-0506A	JA48997-7	E376.1, SM2540G
079-SB-035-0405A	JA48997-8	E376.1, SM2540G
079-SB-035-0607A	JA48997-10	E376.1, SM2540G
079-SB-036-0405A	JA48997-15	ASTM D1498, SM2540G, SW9045
079-SB-036-0405A	JA48997-15AR	SW7199
079-SB-036-0506A	JA48997-16	ASTM D1498, SM2540G, SW9045
079-SB-036-0506A	JA48997-16A	SW7199
079-SB-036-0607A	JA48997-17	ASTM D1498, SM2540G, SW9045
079-SB-036-0607A	JA48997-17A	SW7199
079-SB-036-0708A	JA48997-18	ASTM D1498, SM2540G, SW9045
079-SB-036-0708A	JA48997-18A	SW7199
079-SB-036-0809A	JA48997-19	ASTM D1498, SM2540G, SW9045
079-SB-036-0809A	JA48997-19AR	SW7199
079-SB-036-0001	JA48997-11	ASTM D1498, SM2540G, SW9045
079-SB-036-0001	JA48997-11A	SW7199
079-SB-036-0102	JA48997-12	ASTM D1498, SM2540G, SW9045
079-SB-036-0102	JA48997-12A	SW7199
079-SB-036-0203	JA48997-13	ASTM D1498, SM2540G, SW9045
079-SB-036-0203	JA48997-13A	SW7199
079-SB-036-0304	JA48997-14	ASTM D1498, SM2540G, SW9045
•,•		SW7199
	079-SB-035-0607A 079-SB-036-0405A 079-SB-036-0405A 079-SB-036-0506A 079-SB-036-0506A 079-SB-036-0607A 079-SB-036-0607A 079-SB-036-0708A 079-SB-036-0708A 079-SB-036-0809A 079-SB-036-0809A 079-SB-036-0001 079-SB-036-0001 079-SB-036-0102 079-SB-036-0102 079-SB-036-0203	079-SB-035-0506A       JA48997-9         079-SB-029-0506A       JA48997-1         079-SB-029-0809A       JA48997-2         079-SB-030-0001A       JA48997-3         079-SB-030-0405A       JA48997-4         079-SB-034-0203A       JA48997-5         079-SB-034-0405A       JA48997-6         079-SB-035-0405A       JA48997-7         079-SB-035-0405A       JA48997-10         079-SB-036-0405A       JA48997-15         079-SB-036-0405A       JA48997-15AR         079-SB-036-0506A       JA48997-16A         079-SB-036-0506A       JA48997-16A         079-SB-036-0506A       JA48997-17A         079-SB-036-0607A       JA48997-17A         079-SB-036-0708A       JA48997-18A         079-SB-036-0809A       JA48997-19AR         079-SB-036-0809A       JA48997-11A         079-SB-036-0001       JA48997-11A         079-SB-036-0102       JA48997-12A         079-SB-036-0203       JA48997-13         079-SB-036-0203       JA48997-13         079-SB-036-0203       JA48997-14

Page 2

### Validation Level

The level of validation for this SDG is level V for hexavalent chromium. The remaining sulfide was validated to level III.

### References

The samples collected for the project were analyzed in accordance with the following methods:

USEPA 1986. Test Methods for Evaluating Solid Waste, SW-846, 3<sup>rd</sup> Edition, USEPA, Washington, D.C.

The data validation procedures were consistent with those specified in the NJDEP validation guidelines listed below:

- •
- NJDEP. 2001. Standard Operating Procedure for the Completion of the Data Validation Report Forms and the Preparation of the Final Data Validation Report, SOP No. 5.A.15, Trenton, New Jersey;
- NJDEP. 2005. Standard Operating Procedure for Analytical Data Validation of Hexavalent Chromium, SOP No. 5.A.10, Revision 2, Trenton, New Jersey; and
- NJDEP. 2001. Standard Operating Procedure for the Completion of the Hexavalent Chromium Data Validation Report Forms and the Preparation of the Final Data Validation Report, SOP No. 5.A.09 Trenton, New Jersey.

### Sample Summary Table

The Sample Summary Table provided in Appendix A contains only detected and/or qualified data. Results that were non-detect for an analyte were not included in the table.

### Validation Footnotes

Appendix B contains the footnotes used for this project and shall remain consistent throughout the validation. The footnote(s) assigned will not be sequential. Specific footnote(s) used during the validation will be provided in Appendix B.

### **Chain-of-Custody Documentation**

The custody documentation was complete for this SDG.

### **Major Deficiencies**

There were no major deficiencies identified with the data.

### **Minor Deficiencies and Completeness**

Minor deficiencies identified during validation are summarized per analytical method as follows:

### Sulfide by E376.1

No qualification to the data was made. Data usability is the number of usable (non-rejected) sample results divided by the total number of sample results for each type of analysis times 100. Data usability has been determined to be 100%.

Page 3

### Hexavalent Chromium by SW7199

Samples in batch gp54481 were qualified as estimated and assigned footnote H8 to indicate laboratory duplicate precision exceedance. Data usability is the number of usable (non-rejected) sample results divided by the total number of sample results for each type of analysis times 100. Data usability has been determined to be 100%.

## **Data Assessment Summary**

Overall, the laboratory performed the analyses in accordance with the requirements set forth in the methods.

### **Data Usability**

Based on the validation of data, it has been determined that 100% of the data are usable as qualified. The analytical data are of sufficient quality to be used for qualitative and quantitative purposes.

# APPENDIX A

**Sample Summary Table** 

# TARGET AND NON-TARGET ANALYTE SUMMARY

Sampling Date 6/13/10 Fraction: Wet Chemistry, Inorganics SDG: JA48997 NJDEP SRP No.

Honeywell Hudson County

Accutest

DEP SRP No.	atrix: Soil	

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NJDEP Footnote			-									- Arthur and Arthur an									£ 2															완								
QA Decision																					Qualified															Qualified								
Q.A Reported	11.4	51.5	38.2	459	87.7	8.07	0.74	426	72.5	7.89	396	87	8.02	398	86.2	7.44	1.1	400	80.8	7.26	66.5J	421	82.1	7.73	13.5	421	83	66.7	00.0	6 to 2	7.56	57.1	416	79.5	7.39	16.2J	81.9	89.3	89.1	86.2	59.2	84.1	72.7	64.9
Lab Concentration & Qualifiers	11.4	51.5	38.2	459	87.7	8.07	0.74	426	72.5	7.89	396	87	8.02	398	86.2	7.44	1.1	400	80.8	7.26	66.5	421	82.1	7.73	13.5	421	333	Cd. /	02.0	4 0 4	7.56	57.1	416	79.5	7.39	16.2	81.9	89.3	89.1	86.2	59.2	84.1	72.7	64.9
Method Blank Result	4.0U	NA A	AA	Y.	NA NA	Y.	0.088	¥	AA	AA.	A V	A A	¥:	NA:	¥.	NA S	0.048	AA	A	AN.	0.4 UU	¥.	NA:	AN.	0.088	Y :	Æ	NA	0.000	¥ ×	Z V	0.088	W	ΑN	NA	0.4 UU	ΑĀ	¥	NA	ΑĀ	ΑĀ	AN:	Y S	₹
Units	mg/kg	%	%	ΛШ	%	s.u.	mg/kg	AM.	%	s.u.	ΔM	%	s.u.	υM	%	S.u.	mg/kg	υΛ	%	s.u.	mg/kg	, m	%	s.u.	mg/kg	mv	%	S.U.	mg/kg	AII/o	0/ 1/3	ma/ka	λШ	%	s.u.	mg/kg	%	%	%	%	%	%	%	%
Parameter	Sulfide, Neutral Extraction	Solids, Percent	Solids, Percent	Redox Potential Vs H2	Solids, Percent	Hď	Chromium, Hexavalent	Redox Potential Vs H2	Solids, Percent	Hd	Redox Potential Vs H2	Solids, Percent	Hd	Redox Potential Vs H2	Solids, Percent	Hd	Chromium, Hexavalent	Redox Potential Vs H2	Solids, Percent	Hd	Chromium, Hexavalent	Redox Potential Vs H2	Solids, Percent	Hd	Chromium, Hexavalent	Redox Potential Vs H2	Solids, Percent	Hd	Chromium, Hexavalent	Redox Potential VS HZ	Solids, relicelli	Chromium Hexavalent	Redox Potential Vs H2	Solids, Percent	Hd	Chromium, Hexavalent	Solids, Percent	Solids, Percent	Solids, Percent	Solids, Percent	Solids, Percent	Solids, Percent	Solids, Percent	Solids, Percent
Laboratory Sample ID	JA48997-1	JA48997-1	JA48997-10	JA48997-11	JA48997-11	JA48997-11	JA48997-11A	JA48997-12	JA48997-12	JA48997-12	JA48997-13	JA48997-13	JA48997-13	JA48997-14	JA48997-14	JA48997-14	JA48997-14A	JA48997-15	JA48997-15	JA48997-15	JA48997-15AR	JA48997-16	JA48997-16	JA48997-16	JA48997-16A	JA48997-17	JA48997-17	JA48997-17	JA48997-17A	JA48997-18	1440997-10	IA48997-18A	JA48997-19	JA48997-19	JA48997-19	JA48997-19AR	JA48997-2	JA48997-3	JA48997-4	JA48997-5	JA48997-6	JA48997-7	JA48997-8	JA48997-9
Field Sample ID	079-SB-029-0506A	079-SB-029-0506A	079-SB-035-0607A	079-SB-036-0001	079-SB-036-0001	079-SB-036-0001	079-SB-036-0001	079-SB-036-0102	079-SB-036-0102	079-SB-036-0102	079-SB-036-0203	079-SB-036-0203	079-SB-036-0203	079-SB-036-0304	079-SB-036-0304	079-SB-036-0304	079-SB-036-0304	079-SB-036-0405A	079-SB-036-0405A	079-SB-036-0405A	079-SB-036-0405A	079-SB-036-0506A	079-SB-036-0506A	079-SB-036-0506A	079-SB-036-0506A	079-SB-036-0607A	079-SB-036-0607A	079-SB-036-0607A	079-SB-036-0607A	079-SB-036-0708A	079-5B-036-0708A	079-SB-036-0708A	079-SB-036-0809A	079-SB-036-0809A	079-SB-036-0809A	079-SB-036-0809A	079-SB-029-0809A	079-SB-030-0001A	079-SB-030-0405A	079-SB-034-0203A	079-SB-034-0405A	079-SB-034-0506A	079-SB-035-0405A	079-SB-035-0506A
<b>Dilution</b> Factor	-	-	-	-	-	-	-	-	-	_	_	_	-	1	1	-	-	-	-	-	5	-	-	-	1	1	-	-	2			- LC	) <del>-</del>		-	-	_	-	-	-	-	1	1	
Fraction	E376.1	SM2540G	SM2540G	ASTM D1498	SM2540G	SW9045	SW7199	ASTM D1498	SM2540G	SW9045	ASTM D1498	SM2540G	SW9045	ASTM D1498	SM2540G	SW9045	SW7199	ASTM D1498	SM2540G	SW9045	SW7199	ASTM D1498	SM2540G	SW9045	SW7199	ASTM D1498	SM2540G	SW9045	SW7199	ASTM D1498	SM2540G	SW9045	ASTM D1498	SM2540G	SW9045	SW7199	SM2540G							

# APPENDIX B

# **NJDEP Qualifiers**

Reason Code	
	In the Duplicate Sample Analysis, Hexavalent Chromium fell outside the control
lн8	llimits of + 20 percent or + 2ppm. Therefore, the result was qualified.

# APPENDIX C

NJDEP Validation Forms, Other Validation Forms.

# DATA DELIVERABLE REQUIREMENTS for HEXAVALENT CHROMIUM

SKF	' NO			+14.			
Site Name_Honeywell Hudson County_ Location Edison, NJ			SDGEd Gaven/Maria Kaouris				
	<b>—</b>	-	Site	ivianageiLu Gaven/ivian	a Naouris		
Lab	oratory Name_ Accutest						
				d Division/BureauNJDEP			
Reviewer_Christina Jensen_			MethodologySW3060_7196_(7199)				
	e of Review 8//6/10						
	0//0//						
GFI	NERAL REQUIREMENTS: Circle	YES or NO	) and	l list the deviations at th	e bottom:	us.	
			_	Mathadalana Daviera	(Venne		
Α.	Permanently Bound Ye	ś(No/)	Ġ.	Methodology Review	(Yes)No		
		The same of the sa					
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F.	Non-conformance Ye	s No					
	Summary						
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***************************************		1				-	
Describe any deviations from the requirements							
		•	-,			<b>_</b>	

# **HOLDING TIMES**

			<b>D</b>		11 11		1
Samp			Date of	Hex Chrome	Holding	QA	
Field o	r(Lab)'∣	Matrix	Sample	Analysis	Time	Decision	ŀ
			Collection	Date	Exceeded		
17 A US	997111	(5	Ce 1316	1029110	NO	non	] 0
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3	12/1			100000			line
4	190	1		62910			line
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6	154	-		02910			R =
7	15 PM	2		7/2/0			1,
8	162			(0 3010			line
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15		-					_
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17		,					
18							_
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20							

List any	samples	that	exceeded	the	holding	time,	the i	number	of o	days	exceede	ed by a	and QA	A decis	ion.	
																_

# INSTRUMENT CALIBRATION CURVE and CALIBRATION CHECK STANDARD (CCS)

ASSC	OCIATED SAMPLES	
1.	Was the instrument properly standardized? If no, explain and list action.	Yes No
2.	Was the CCS analyzed at the proper frequency? If no, explain and list action.	Yes No
3.	Was the same CCS concentration used throughout the and If no, list action.	alysis? (Xes No
4.	Does the CCS standard meet the QC requirements of 90-1	10% recovery ? es No
5.	Show calculation for the % recovery of Hexavalent Chrome.	nium in the CCS standard. Lab value
	· W/. W. /.	DPFSR/BEMQA

OCTOBER 2001

# **CALIBRATION BLANKS**

\SS(	OCIATED SAMPLES
•	Was the calibration blank analyzed before the instrument's initial calibration standards?  Yes No
	If no, list action.
•	Was a calibration blank analyzed after the calibration check standard? Yes No If no, list associated samples and action.
	Was the value of Hexavalent Chromium for the continuing calibration blank below the M

# PREPARATION/REAGENT BLANK SUMMARY

Preparation/Reagent I	Blank ID 9751	1306,	Spiso	1307 Pypis4481	
Sample matrix. Soil Units: mg/k	Water ug/L				
Does the frequency of	of the preparation/reag	gent blank	analysis	meet method requirements?	
If no, explain and not	e action				
ANALYTE	CONCENTRATION	< MDL	>IDL	COMMENTS / ACTION	
. 0					
ASSOCIATED SAMP	LES				

	PREDIGEST	TON SPIKE ANALYSIS
	TAU 899	7-15A,15AR 80.8
Spike	TAU899 e Analysis performed on sample YY 8993	1/4 Solids 87.7
	ple matrix: Soil	Units: mg/kg)
ASS	OCIATED SAMPLES	
1.	Was the predigestion spike analysis perf	ormed at the correct frequency? (Yes) No
	If no, note deviations and action	
		·
2.	Was the predigestion spike analysis perf	ormed on a field sample?
camr	If no, reject all associated	
Sairik	oles	
3.	Was the predigestion spike analysis perf	AND AND AND AND AND AND AND AND AND AND
	If no, qualify the associated samples	Yes No
4.	Did the % recovery for hexavalent chror	nium meet the criteria of 75-125 % ?
	If no, list action. <u>All Delow</u>	Yes (No)
	<del></del>	
5.	Show calculation for predigestion spike	recovery of Hexavalent Chromium.
R	< 15A 0 30	Lab value
- <b>1</b> -2	(15A 0 30 (15An -167,89	
	·	1610 - 81/50=0
(m)	(m 114 95 97.85	
U'	1) 0/1 0)	DPFSR/BEMQA

OCTOBER 2001

# Post Verification Spike (PVS) performed on sample Water % Solids Sample matrix: Units: mg/kg ug/L ASSOCIATED SAMPLES Was PVS analysis performed at the correct frequency and proper concentration? 1. Yes No If no, list action. No Was PVS analysis performed on a field sample? 2. If no, list action a. Does the PVS recovery meet the criteria of 85-115%? Yes No 3. If no, list action b. If the PVS recovery was less than 85%, did the laboratory reanalyze the sample? If no, list action Show the calculation for % recovery for PVS. 4. Lab value 10 1.08/1 =1.08

POST VERIFICATION SPIKE ANALYSIS

DPFSR/BEMQA OCTOBER 2001

	DUPLICATE ANALYSIS
	icate Analysis performed on sample MANAY Solids  ple matrix: Soil Water
Jnits	
ASS	OCIATED SAMPLES
1.	Was the Duplicate analyses performed at the correct frequency Yes No If no, list action.
2.	Was the duplicate analysis performed on a field sample? Yes No If no, reject all associated samples.
3.	Does the duplicate analysis meet the QC control limits?  If no, qualify the associated samples.  And And And The Analysis meet the QC control limits?
4.	Show the calculation for RPD for Hexavalent Chromium.
	Lab value
	.7473

DPFSR/BEMQA OCTOBER 2001

# LABORATORY CONTROL SAMPLE

Sam	ole matrix: Soil Water	
Unit	: (mg/kg ug/L	
ASS	OCIATED SAMPLES	
1.	Was the laboratory control sample performed at the correct frequency?  Yes No  If no, list action.	
2.	Does the LCS meet the QC limit of 80-120 %  If no, list the % recovery and actionRange Used	
3.	Show the calculation for the LCS % recovery for hexavalent chromium.  Lab Value	
	Range =	

# SAMPLE RESULT VERIFICATION

ASS	OCIATED SAMPLES
1.	Were all samples reported within the calibration range?
	If no, list affected samples and action.
2.	Was the raw data free of any anomalies?
	If no, list affected samples and action
3.	Was the data package free of any computational or transcription errors?  Yes No  If no, list affected samples and action.
4.	Were both 3060 & 7196A pH readings provided and within method requirements  (Yes) No N/A  If no, list affected samples and action.
5.	Were the hotplate temperatures provided and within method requirements?
J.	If no, list affected samples and action.  14-7-W-43 = 5.64  74-86 - 20.43 = 87
6. Al 7.	Show the calculation for % solids for one sample.  N/A  Lab value  Show the calculation for a nonaqueous sample.  Lab value  DPFSR/BEMQA OCTOBER 2001
	18/6 X (00 = 172 Z.55 X.877
	Z.55 X.877

LEVEL III VALIDATION WORKSHEET
Sulfide, Menhal Exp.

Method:

Date Reviewed: Sample Collection Dates:

Sample Identification	1	7	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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	18/	111																}			
	18	9-									A										
Validation	7	,																			
Criteria Completeness of Analyses	A	-									و										
Holding Times	4										3										
Initial Calibration	NH	1		-							س										
Continuing Calibration	/V/	4																			
Method Blanks	1										<u>)</u>										
LCS Surrogate %R	/T										<u> -</u> )`										
MS/MSD:  MS/MSD:  Reporting	17 An			-							<u></u>										
Limits	4										<b>→</b>										
Completeness of Analyte List	A	_									<b>→</b>									,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Field Duplicate Pair: Equip		-								-114.002											
/Field Blank Note:X = Criteria	were	eva	luate	d and	not me	. A = 0	Criteria	ı were e	evaluate	ed and	met. N	= Data	a was n	ot avai	lable fo	or revie	w. NA	= Not	applica	able	
Comments:																			иррпос	1010.	
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Page 1

To: Ed Gaven/Vanthuy Lieu, MACTEC Engineering and Consulting, Inc.

From: Christina Jensen, Validata, LLC Re: Honeywell Hudson County Data Validation

Date: August 27, 2010

This memorandum discusses the results of the data validation of analytical data in Sample Delivery Group (SDG) JA50921 provided by Accutest Laboratory, located in Dayton, New Jersey, for samples collected as part of the Honeywell Hudson County project. No samples were rejected as a result of the data validation process. Appendix A contains the Sample Summary Table, Appendix B contains a list of the State of New Jersey Department of Environmental Protection (NJDEP) data validation footnotes, and Appendix C contains copies of the completed data validation report forms.

The validation for samples in this SDG was performed by Christina Jensen, Validata, LLC. The following table lists the samples that were included in this SDG.

#### Samples

Table 1-1. Sample cross-reference list

Sampling Date	Field Sample ID	Lab Sample ID	Sample Analyses
7/8/2010	079-FB-070810	JA50921-4	SW6010, SW7196
7/8/2010	079-FB-070810F	JA50921-4F	SW6010, SW7196
7/8/2010	079-MW-1	JA50921-2	SW6010, SW7196
7/8/2010	079-MW-1DP	JA50921-3	SW6010, SW7196
7/8/2010	079-MW-1DP-F	JA50921-3F	SW6010, SW7196
7/8/2010	079-MW-1F	JA50921-2F	SW6010, SW7196
7/8/2010	079-MW-2A-070810	JA50921-1	SW6010, SW7196
7/8/2010	079-MW-2A-070810	JA50921-1F	SW6010, SW7196

### Validation Level

The level of validation for this SDG is level V for hexavalent chromium and level IV for chromium. The remaining analyses were not validated per the MACTEC project manager.

#### References

The samples collected for the project were analyzed in accordance with the following methods:

USEPA 1986. Test Methods for Evaluating Solid Waste, SW-846, 3<sup>rd</sup> Edition, USEPA, Washington, D.C.

The data validation procedures were consistent with those specified in the NJDEP validation guidelines listed below:

- NJDEP. 2002. Standard Operating Procedure (SOP) entitled Quality Assurance Data Validation of Analytical Deliverables for Inorganics (based on EPA SW-846 Methods), SOP No. 5.A.16. Trenton, New Jersey;
- NJDEP. 2001. Standard Operating Procedure for the Completion of the Data Validation Report Forms and the Preparation of the Final Data Validation Report, SOP No. 5.A.15, Trenton, New Jersey;
- NJDEP. 2005. Standard Operating Procedure for Analytical Data Validation of Hexavalent Chromium, SOP No. 5.A.10, Revision 2, Trenton, New Jersey; and

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 NJDEP. 2001. Standard Operating Procedure for the Completion of the Hexavalent Chromium Data Validation Report Forms and the Preparation of the Final Data Validation Report, SOP No. 5.A.09 Trenton, New Jersey.

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#### Chain-of-Custody Documentation

The custody documentation was complete for this SDG.

## **Major Deficiencies**

There were no major deficiencies identified with the data.

#### **Minor Deficiencies and Completeness**

Minor deficiencies identified during validation are summarized per analytical method as follows:

## Total Chromium by SW6010

No qualification to the data was made. Data usability is the number of usable (non-rejected) sample results divided by the total number of sample results for each type of analysis times 100. Data usability has been determined to be 100%.

#### Hexavalent Chromium by SW7196

Samples in batch gn39697 were qualified as estimated and assigned footnote H8 to indicate laboratory duplicate precision exceedance. Data usability is the number of usable (non-rejected) sample results divided by the total number of sample results for each type of analysis times 100. Data usability has been determined to be 100%.

#### **Data Assessment Summary**

Overall, the laboratory performed the analyses in accordance with the requirements set forth in the methods.

#### **Data Usability**

Based on the validation of data, it has been determined that 100% of the data are usable as qualified. The analytical data are of sufficient quality to be used for qualitative and quantitative purposes.

# APPENDIX A

**Sample Summary Table** 

Honeywell Hudson County

Sampling Date 7/08/10 Fraction: Wet Chemistry, Inorganics

SDG: JA50921 NJDEP SRP No. Matrix: Water

# TARGET AND NON-TARGET ANALYTE SUMMARY

Fraction	Dilution	Field Sample ID	Laboratory Sample ID	Parameter	Units	Method Blank Result	Method Blank Lab Concentration Result & Qualifiers	QA Reported	QA Decision	NJDEP Footnote
	רמכנט									
CM7406	-	079-MW-2A-070810	JA50921-1	Chromium, Hexavalent	l/gm	0.010U	0.010U	0.010UJ	Qualified	H12
2001	-		0 7000141		//211	101	20.5	20.5		
SW6010	Υ-	079-MW-1	JA50921-2	Chromium	ng/I	001	50.3	20.0		9,11
C14/7406		079-MW-1	JA50921-2	Chromium, Hexavalent	l/gm	0.010U	0.010U	0.010UJ	Qualified	H12
2001	-	070 800 400	1450024.3	Chromina	1/011	100	14.9	14.9		
SW6010	_	U/ 9-IVIVV-1 D.F	0-1360CVC		5	- 1070	1000	111010	Ouslified	112
CM/7106		079-MW-1DP	JA50921-3	Chromium, Hexavalent	mg/-	0.0100	0.0100	0.0100	Kuaillicu	7111
201780	-	070070 070070	1 A ECODS 4	Chromium Havavalant	/bm	0.0101	0.010U	0.010UJ	Qualified	H12
SW7196	_	0/8-FB-0/0010	JA20321-4	CINOLINAIN, HEXAVAICIN	6	201010				

# APPENDIX B

**NJDEP Qualifiers** 

Reason

Description Code

The non-detected value was qualified (UJ) because the PVS recovery was less than 85 percent. The possibility of a false negative exists.

H12

# APPENDIX C

NJDEP Validation Forms, Other Validation Forms.

# DATA DELIVERABLE REQUIREMENTS

Site	Name_Honeywell Hudson Co	Job Code <u> </u>
Loc	ation SAS Sife 079	Date of Review 8/27/10
Lab	oratory Name_Accutest	Lead Division/BureauNJDEP
Rev	iewerChristina Jensen	Methodology Review <u>W 200, 7</u>
Site	e/Case ManagerEd Gaven/Maria Kaouris	
***************************************	GENERAL REQUIREMENTS: Circle YES	or NO and list the deviations at the bottom:
A.	Permanently Bound Yes No	G. Methodology Review (Yes) No
В.	Paginated Yes No	H. Uninitialed Strikeovers Yes No
c.	Title Page Yes No	I. Legible Photocopies (Yes) No
D.	Table of Contents Yes No	J. Consistent Dates Yes No
E.	Chain of Custody (Yes No	K. Digestion Log
F.	Non-conformance Summary Yes No	
De	scribe any deviations from the requirements	S
-		

# **HOLDING TIMES FOR METALS**

Matrix: Aqueous	(/) or	Nonaqueou	ıs ( )		
SAMPLE ID	DATE of	ICP	MERCURY	FURNACE	HOLDING
FIELD or/LAB	SAMPLE	ANALYSIS	<b>ANALYSIS</b>	ANALYSIS	TIME
	COLLECTIO	DATE	DATE	DATE	EXCEEDED
	N				
1-17/100921.1	78/0	7 20/0		4.50	10
2 1901 1	7 0,				
3 1 7					
4 7/					
5 3					
6 7					
7 4					
8 9	1				4)
9	•	1			
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

COMMENTS					
COOLER	TEMP ろ	o C			_
PRESERVATION	ise: Tub	Stample	" All Sand	les received	
HANDLING TIME	Zamo da	siar por		•	
HANDLING TIME	give way		presured	as applicable	
	, .		/		

MAY 2002

		IT CALIBRATION, INITIAL CALIBRATION CHECK (ICC) and INITIAL CALIBRATION VERIFICATION (ICV)  ED SAMPLES			Part 1 of 2
1.		Was the ICP instrument (6010B) properly standardized?  If no, explain and list action.		No	N/A
	b.	Was the AA instrument (7000 Methods) properly standardized? Y	'es	No (N	VA)
		Was the instrument used for Mercury properly standardized?  If no, explain and list action.	'es	No	NYA.
2.		the ICV/ICC analyzed immediately after the systems were calibrate		Yes	No
3.	Was	the ICV/ICC analyzed for every analyte?  o, explain and list action.	(	Yes	No
4.		all ICV/ICC analytes meet the QC requirements for % recovery?	Yes) actio		
5.	a.	Show calculation for the % recovery of one ICV analyte analyzed I			1_
		1040/1065/	DPFSI	R/BEIV	1 <b>0</b> A

# INSTRUMENT CALIBRATION, INITIAL CALIBRATION CHECK (ICC) and INITIAL CALIBRATION VERIFICATION (ICV)

Part 2 of 2

Analyte	— ,NA	Lab Value
c. Show calculat	tion for the ICV % recovery of Me	ercury.
	NA	Lab Value
SPECIFIC COMME	NTS	

# CONTINUING CALIBRATION VERIFICATION (CCV) and CALIBRATION CHECK STANDARD (CCS)

ASSO	CIATED SAMPLES	Part 1	of 2
1. a.	Was the CCV/CCS performed at the minimum frequency of 10%?	(Yes)	No
	If no, list action		
	b. Was the CCV/CCS performed after ten samples and at the end of Yes	f sample and No	alysis?
	If no, list action		
2.	Were the CCV/CCS standards analyzed for all analytes?	Yes No	
	If no, list affected analytes, their associated samples and action.		
3.	Was the CCV/CCS concentration near the midpoint of the calibration	curve?	
	If no, list affected analytes, their associated samples and action.	(Yes	No
4.	Do all CCV/CCS analytes meet the QC requirement for % recovery?	(V) s	No
	If no, list affected analytes, their associated samples and action.		

# CONTINUING CALIBRATION VERIFICATION (CCV) and CALIBRATION CHECK STANDARD (CCS)

Part 2 of 2

5.	a,	Show calculation for the % recovery of one CCV analyte a  Analyte	nalyzed by ICP.  Lab value
	b.	Show calculation for the % recovery of one CCS analyte a	nalyzed by AA.
		Analyte Ma	Lab value
	c.	Show calculation for the % recovery of one CCV analyte f	or Mercury.
		M	Lab value
6.	SPI	ECIFIC COMMENTS	

# **METHOD BLANK SUMMARY**

Method Blank ID W	53708	Sample matrix	k: Soil Water
		Units:	mg/kg (ug/L)
, .	method blank analysis me	eet method req	uirements?
If no, explain and note ac	tion	T T	
ANALYTE	CONCENTRATION	<mdl< th=""><th>COMMENTS / ACTION</th></mdl<>	COMMENTS / ACTION
<i>A</i>			
9			

ASSOCIATEDSAMPLES

ASS	OCIATED SAMPLES		
1.	Were the initial calibration blanks analyzed for all analytes and run after the ICV/IC	CC?	No
2.	Was the absolute value for all analytes in the calibration blank below the MDL?  If no, list affected analytes and qualify them.	Yes	No
3.	Were the continuing calibration blanks analyzed for all analytes and run after the CCV/CCS?	Yes	No
	If no, list affected analytes, associated samples and action.		
4.	Was the frequency for the continuing calibration blanks correct?  Yes No If no, list affected analytes, associated samples and action.		

۸۹	SOCIATED SAMPLES		
	SOCIATED SAMI EES		
1.	Was an ICP interference check sample performed at the correct frequency?		
	If no, note any deviations and action	Yes	No
2.	Were the analytes interest and interferents for ICS reported?		
	If no, note deviations		
3.	Did all the required analytes of interest in the ICS meet the QC limit of 80-120%?		
	If no, list the analytes, the % recovery, associated samples and the action	Yes	No
4.	Show the calculation for the % recovery for one analyte in the ICS.  Analyte Lab value		
	458 (500=.91		
5.	COMMENTS		

# MATRIX SPIKE (MS) and MATRIX SPIKE DUPLICATE (MSD)

Spike Analysis performed on sample				Part 1 of	f 2
Sample matrix:  Soil  Water  Units:  mg/kg  Ug/b  ASSOCIATED SAMPLES    1. Was the MS/MSD performed at the correct frequency?  If no, note deviations and action  2. Was the MS/MSD analyses performed on a field sample?  If no, reject all associated samples.  3. a. Were two (2) analytical methods used to obtain reported values for one analyte (i.e., ICP and AA) ?  Yes (No)	Spike	Analy	vsis performed on sample <u>JA509U-Z</u> W % Solids <u>VA</u>		
ASSOCIATED SAMPLES  1. Was the MS/MSD performed at the correct frequency?  If no, note deviations and action  2. Was the MS/MSD analyses performed on a field sample?  If no, reject all associated samples.  3. a. Were two (2) analytical methods used to obtain reported values for one analyte (i.e., ICP and AA) ?  Yes (No.)	Samp	ole ma			
1. Was the MS/MSD performed at the correct frequency?  If no, note deviations and action	Units	:	mg/kg		
1. Was the MS/MSD performed at the correct frequency?  If no, note deviations and action	ASS(	CIAT	ED SAMPLES		
If no, note deviations and action					
<ul> <li>Was the MS/MSD analyses performed on a field sample?</li> <li>If no, reject all associated samples.</li> <li>a. Were two (2) analytical methods used to obtain reported values for one analyte (i.e., ICP and AA) ?</li> </ul>	1.	Was	s the MS/MSD performed at the correct frequency?	(Yes)	No
If no, reject all associated samples.  3. a. Were two (2) analytical methods used to obtain reported values for one analyte (i.e., ICP and AA) ?  Yes No		If no	o, note deviations and action		
3. a. Were two (2) analytical methods used to obtain reported values for one analyte (i.e., ICP and AA) ?  Yes No	2.	Was	s the MS/MSD analyses performed on a field sample?	Yes	No
analyte (i.e., ICP and AA) ? Yes (No		lf n	o, reject all associated samples		
If yes, list analytes	3.	a.		Yes (	No
			If yes, list analytes	(	
b. Was MS/MSD analysis performed using both methods for that analyte?  Yes No  If no reject affected sample(s) which did not have spike analysis performed.		b.		Myes	No

# MATRIX SPIKE (MS) and MATRIX SPIKE DUPLICATE (MSD)

Part 2 of 2

e Relative Percent Difference (RPD) for all analytes	meet the requirement o	of 20% F
Yes I	No N/A	of 20% F
Yes I	No N/A	of 20% F
Yes I	No N/A	of 20% F
Yes I	No N/A	
list analytes and action.		
show calculation for % recovery for one analyte.		
te <u> </u>	Lab value /0	
226-20.5/20021.		
Show calculation for % RPD for one analyte.		
te <u>CV</u>	Lab value (, 3	
7210-229		
We-229 = .013		

DPFSR/BEMQA MAY 2002

# POST-DIGESTION SPIKE ANALYSIS

Post D	igestion Spike A	nalysis perf	ormed on sample				
Sample	e matrix:	Soil	Water		% Solids		
Units:		mg/kg	ug/L				
ASSO(	CIATED SAMPLE	ES				<del></del>	
						-	
1.		tion spike a	nalysis performed a	the correct	t frequency?	Yes	No
		digestion sp	ike performed on a		?	Yes No	
			-			<del>_</del>	
3.			eir % recovery whe C criteria and action		estion spike anal I/A	lysis was perfo	rmed
4.	Show the calc		% recovery for at	least one	analyte where	post-digestion	spike
	Analyte	_			Lab value		
5.	Comments:					general section in the section is a section in the	
						 SR/ΒΕΜΩΑ Y 2002	

# LABORATORY CONTROL SAMPLE (LCS)

Units	ole matrix: Soil  water  ug/L  DCIATED SAMPLES	_
1.	Was the laboratory control sample performed at the correct frequency?  If no, give action.	No -
2.	Do all analytes meet the QC limits of 80-120 %?  If no, list analytes, their % recovery and action.	
3.	Show the calculation for % recovery for one analyte.  Analyte $\frac{1}{2}$ Lab Value $\frac{1}{2}$ Soil limits $\frac{1}{2}$	<u> </u>
4.	Comments:	

	SERIAL DILUTION ANALYSIS
Seria	Il Dilution performed on sample 145692-2 Dilution Factor
Sam	ple matrix: Soil Water Units: mg/kg ug/L
1.	Was a serial dilution performed at the correct frequency?
*	If no, give action
2.	Was a field sample used for serial dilution?
	If no, give action
3.	For all analytes greater than ten times the IDL after dilution for 6010B and 25 times the EDL for 7000A methods, was a serial dilution performed?
	If no, list analytes and reject them.
4.	For all analytes that needed serial dilution analysis, was the QC limit of 10 % D met?  If no, list those analytes outside the limits and qualify them.
5.	Show calculation for % D for one analyte analyzed by ICP.  Analyte
	20.5-21.3 = .039 DPFSR/BEMQA MAY 2002

METHOD OF STANDARD ADDITION (MSA)

	CIATED SAMPLES				
	If the post digestion spike recovery for Methods MSA performed?  If no, explain and list action.	7000A v	was outside	the QC	limit, was the
2.	Was the MSA within the linear range of the instru	ment?	, Yes	No	
3.	Was the MSA sample and spikes analyzed consecution, explain and list action.	utively?	Yes	No	
4.	Was the slope of the MSA plot less than 20% distandard curve?  If no, explain and list action.		Yes N	10	
5.	Comments:				
		1		DPFSR/B MAY 20	

ΔSS0	CIATED SAMPLES SAMPLE RESULT VERIFICATION
7000	01/(12b c/ 1111 22c
1.	Were all sample results reported within the calibration range?  Yes No
	If no, list affected samples and action.
2.	Was the raw data free of any anomalies?
	If no, list affected samples and action.
3.	Was the data package free of any computational or transcription errors?  (Yes) No
	If no, list affected samples and action.
4.	Was the % solids analysis performed for all nonaqueous samples?  Yes No (N/A)
lf n	o, list affected samples and action
5.	Show the calculation for % solids for one sample.  Lab Value
6.	Verify that nonaqueous samples were reported on a dry weight basis by recalculating the result for one analyte in a sample.
	Sample Analyte Lab value

# DATA DELIVERABLE REQUIREMENTS for HEXAVALENT CHROMIUM

SHE	NO.			$\bigcirc$				
Site Name_Honeywell Hudson County_				SDG JAGUU				
Location_Edison, NJ			Site	Site ManagerEd Gaven/Maria Kaouris				
	oratory Name_ Accutest							
			Lea	d Division/BureauNJDEP_				
	iewer_Christina Jensen		Me	thodologySW3060 (71	9 <sup>6</sup> , 2199			
Dat	e of Review_ <i>\{\gamma\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	)			)			
************	~ / - / ··		70000000000000000000000000000000000000		***************************************			
GEI	NERAL REQUIREMENTS	6: Circle YES or	NO and	d list the deviations at the	e bottom:			
Α.	Permanently Bound	Yes (No	G.	Methodology Review	(Yes) No			
B.	Paginated	(Yes) No	Н.	Uninitialed Strikeovers	Yes (No)			
C.	Title Page	(Yes) No	I.	Legible Xerox	'(es) No			
D.	Table of Contents	(Yea) No	J.	Consistent Dates	(Yes) No			
E.	Chain of Custody	(Yes) No						
		6						
F.	Non-conformance	(Yes No						
	Summary							
Describe any deviations from the requirements								

# **HOLDING TIMES**

Sample ID Field or Lab	Matrix	Date of Sample Collection	Hex Chrome Analysis Date	Holding Time Exceeded	QA Decision
1 JAS0921-1 2   C	W	7 /8/10	7/8/10	100	none
3 2					
5 3					
7					
9	,		4	4	¥
11					
13 14					
15 16					
17 18		,			
19 20					

List any samples t	that exceeded the	holding time, t	he number o	f days exceeded	d by and QA d	ecision.

# INSTRUMENT CALIBRATION CURVE and CALIBRATION CHECK STANDARD (CCS)

ASS	OCIATED SAMPLES
1.	Was the instrument properly standardized?  If no, explain and list action.
2.	Was the CCS analyzed at the proper frequency?  If no, explain and list action.
3.	Was the same CCS concentration used throughout the analysis? Yes No If no, list action.
4.	Does the CCS standard meet the QC requirements of 90-110% recovery ?  If no, list the % recovery, and action.
5.	Show calculation for the % recovery of Hexavalent Chromium in the CCS standard.  Lab value
	DPFSR/BEMQA OCTOBER 2001

## CALIBRATION BLANKS

SSC	OCIATED SAMPLES
	Was the calibration blank analyzed before the instrument's initial calibration standards?  Yes No  If no, list action.
	Was a calibration blank analyzed after the calibration check standard?  Yes No  If no, list associated samples and action.
	Was the value of Hexavalent Chromium for the continuing calibration blank below the MI

## PREPARATION/REAGENT BLANK SUMMARY

Preparation/Reager	nt Blank ID <u>GM 3</u> °	7697			
Sample matrix: So	oil Water				
Units: m	g/kg (ug/L)				
Does the frequenc	y of the preparation/reag	gent blank	analysis	meet method requiremen	ts?
				Yes No	
f no, explain and ı	note action				
ANALYTE	CONCENTRATION	< MDL	>IDL	COMMENTS /	
**************************************				ACTION	
Ψ					
ASSOCIATED SAM	MPLES .				
$\bigcap Q Q Q$					

# HOULDUS - NA PREDIGESTION SPIKE ANALYSIS

Spik	e Analysis performed on sample Solids_	
Sam	ple matrix: Soil	Units: mg/kg
ASS	OCIATED SAMPLES	
1.	Was the predigestion spike analysis performed at the corn Yes If no, note deviations and action	s No
2. sam	Was the predigestion spike analysis performed on a field Yes If no, reject all associated ples.	<b>1</b> -
3.	Was the predigestion spike analysis performed at the property of the property	Yes No
4.	Did the % recovery for hexavalent chromium meet the cr Yes	No
5.	Show calculation for predigestion spike recovery of Hex	avalent Chromium. value

## POST VERIFICATION SPIKE ANALYSIS

Post `	Verification Spike (PVS) performed on sample 14 991 - 26, 2
	ole matrix: Soil Water % Solids
Units	: mg/kg dg/L/
ASSC	OCIATED SAMPLES
1.	Was PVS analysis performed at the correct frequency and proper concentration?  If no, list action.
2.	Was PVS analysis performed on a field sample?  If no, list action
3.	a. Does the PVS recovery meet the criteria of 85-115%? Yes No
	If no, list action Whileled but an 3969 G Thut HID HZ
	b. If the PVS recovery was less than 85%, did the laboratory reanalyze the sample?  If no, list action was less than 85%, did the laboratory reanalyze the sample?  The possible was less than 85%, did the laboratory reanalyze the sample?  The possible was less than 85%, did the laboratory reanalyze the sample?  The possible was less than 85%, did the laboratory reanalyze the sample?
4.	Show the calculation for % recovery for PVS.
	Lab value <u>43</u> · /4 / 15 = .93

#### **DUPLICATE ANALYSIS**

Duplic	cate Analysis performed on sample <u>JASUUU</u> %Solids
	le matrix: Soil Water
Units:	mg/kg \ug/l
ASSO	OCIATED SAMPLES
1.	Was the Duplicate analyses performed at the correct frequency Yes No If no, list action.
2.	Was the duplicate analysis performed on a field sample? Yes No If no, reject all associated samples.
3.	Does the duplicate analysis meet the QC control limits?  If no, qualify the associated samples.
4.	Show the calculation for RPD for Hexavalent Chromium.
	Lab value
	$\Phi/\varphi=\phi$

## LABORATORY CONTROL SAMPLE

Samı	ole matrix: Soil Water
Units	: mg/kg (ug/)L
ASS	DCIATED SAMPLES
1.	Was the laboratory control sample performed at the correct frequency?    Yes   No
2.	Does the LCS meet the QC limit of 80-120 %  If no, list the % recovery and actionRange Used
3.	Show the calculation for the LCS % recovery for hexavalent chromium.  Lab Value
	Range =
	.15/.15=1.

## SAMPLE RESULT VERIFICATION

ASS	OCIATED SAMPLES
1.	Were all samples reported within the calibration range?
	If no, list affected samples and action
2.	Was the raw data free of any anomalies?
	If no, list affected samples and action
3.	Was the data package free of any computational or transcription errors?  Yes No  If no, list affected samples and action.
4.	Were both 3060 & 7196A pH readings provided and within method requirement Yes No N/A  If no, list affected samples and aetion.
	3060A?
5.	Were the hotplate temperatures provided and within method requirements?  Yes No N/A  If no, list affected samples and action.
6.	Show the calculation for % solids for one sample.  Lab value
7.	Show the calculation for a nonaqueous sample.  Lab value

## APPENDIX C CAPS CERTIFICATE



# Reregistration Eligibility Decision for Inorganic Polysulfides

List D

Case No. 4054

Approved by:

Debra Edwards Ph. D.

September 30, 2005

Director

Special Review and Reregistration Division

## Reregistration Eligibility Decision for

Inorganic Polysulfides

Special Review and Reregistration Division
Office of Pesticide Programs
U.S. Environmental Protection Agency
1801 South Bell Street
Arlington, VA 22202

September 30, 2005

Background:	1
I. Executive Summary:	1
II. Use Information:  Calcium Polysulfide  Calcium Hydroxide  Sulfur	2
III. Physical/Chemical Properties:	5
IV. Hazard Characterization:  A. Toxicity  B. Metabolism  C. Special Considerations for Infants and Children	5
V. Exposure Assessment:	7
VI. Dietary Exposure:	7
VII. Aggregate Assessment:	7
VIII. Cumulative Exposure:	7
IX. Risk Characterization:	3
X. Environmental Fate and Exposure Considerations:  Calcium Polysulfide	3
Calcium Polysulfide	)
XII. Drinking Water Considerations: 13	
XIII. References: 13	
Appendix 1. BEAD Screening Level Usage Analysis for Calcium Polysulfide for Agricultural Uses and Other Information	

#### Background:

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) was amended in 1988 to accelerate the reregistration of products with active ingredients registered prior to November 1, 1984. The amended Act calls for the development and submission of data to support the reregistration of an active ingredient, as well as a review of all submitted data to the EPA. Reregistration involves a thorough review of the scientific database underlying a pesticide's registration. The purpose of the Agency's review is to reassess the potential risks arising from the currently registered uses of the pesticide; to determine the need for additional data on health and environmental effects; and to determine whether or not the pesticide meets the "no unreasonable adverse effects" criteria of FIFRA.

EPA has completed its Reregistration Eligibility Decision (RED) document for the inorganic polysulfides case, which includes one chemical, calcium polysulfide. In this document, EPA presents the results of its review of the potential human health effects of dietary, drinking water, occupational/residential exposure to calcium polysulfide, and ecological risks. Based on this assessment, the Agency has determined that products containing calcium polysulfide as the sole active ingredient are eligible for reregistration. Also, as a result of this assessment, one exemption from the requirement for a tolerance has been reassessed.

#### I. Executive Summary:

Calcium polysulfide is used as an active ingredient primarily in agricultural and residential use fungicides, but some products also have secondary insecticidal activity. There are sixteen products currently registered with calcium polysulfide as an active ingredient, with only three of these also containing other active ingredients. Calcium polysulfide is mildly irritating to the skin and can cause irreversible damage to the eye due to its high pH. The current calcium polysulfide product labels require personal protective equipment for all handlers and a Restricted Entry Interval for all post-application activities of 48 hours in accordance with the Worker Protection Standard. Products containing calcium polysulfide in addition to other active ingredients would need to be assessed separately. The Agency has determined that calcium polysulfide rapidly degrades to calcium hydroxide and sulfur in the environment and in the human body. Therefore, this assessment of calcium polysulfide is based, in part, on the Agency's 2002 Inert Ingredient Focus Group tolerance reassessment decision for calcium, ammonium, potassium, magnesium and sodium hydroxide and on the 1991 reregistration eligibility decision for sulfur. Calcium polysulfide has a tolerance exemption under 40CFR 180.1232. The current exemption from the requirement of a tolerance for calcium polysulfide (lime sulfur) under 40CFR 180.1232 is considered reassessed and meets the reasonable certainty of no harm as defined by FQPA.

Like calcium polysulfide, calcium hydroxide is irritating to skin and eyes. However, calcium hydroxide is a direct food substance affirmed as generally recognized as safe (GRAS) by the Food and Drug Administration (FDA). A 1975 FDA assessment of calcium hydroxide states that the average daily intake of calcium hydroxide is 5 mg/kg for adults and ranges from 15 to 28 mg/kg for infants. Further, the Agency's 2002 TRED states that "Given the widespread occurrence of these hydroxides in the existing food supply, the amounts that can be applied to food as a result of a use in a pesticide product would not be expected to significantly increase the existing amounts in the food supply....EPA concludes that there is a reasonable certainty that no harm will result to the general population, and to infants and children, from aggregate exposure to residues of ammonium, sodium, potassium, calcium, and magnesium hydroxides."

According to the sulfur RED, "The human risks, if any, from both dietary and occupational exposures are considered to be very low because of the general knowledge of the chemical sulfur, its ubiquitous

occurrence, and its low toxicity, as well as its long history of use by humans, including some pharmaceutical applications." However, sulfur can cause eye and skin irritation and EPA has determined that a hazard exists for workers reentering fields following foliar application of sulfur dust (i.e., eye and skin irritation to people who handle sulfur dust or who come into contact with treated foliage during field work). Thus, a 24-hour restricted entry interval and protective clothing requirements are included on all current labeling of applicable sulfur products.

In the ecological assessment, risks for freshwater fish resulting from spray drift and acute risks for birds and mammals were identified. However, due to the rapid dissociation of calcium polysulfide to components with very low toxicity, no mitigation for freshwater fish, mammals or avian species is warranted at this time. Also, based on the dissociation of calcium polysulfide, as well as the findings in the calcium hydroxide TRED and the sulfur RED, it has been determined that the use of products containing calcium polysulfide as the sole active ingredient would not present a human health hazard to the general public.

#### II. Use Information:

#### Calcium Polysulfide

Calcium polysulfide (CAS Number 1344-81-6) has various synonyms, including calcium sulfide and lime sulfur. As mentioned above, calcium polysulfide is used as an active ingredient in insecticides and fungicides (PC Code 076702).

Calcium polysulfide has fungicidal and secondary acaricidal activity, and is used to control powdery mildews, anthracnose, scab, and other diseases, as well as spider mites. Based on current labels, calcium polysulfide is registered for feed and food uses on the following sites: alfalfa, almonds, apples, beef, blackberries, blueberries, boysenberries, caneberries, cherries (sweet), cherries (tart), citrus, clover, currants, dairy cattle, deciduous fruit trees, gooseberries, grapes, hazelnuts (filberts), hogs, nectarines, oranges, peaches, pears, pecans, pistachio nuts, plums, prunes, quinces, raspberries, rye, sheep, stone fruits, tangerines, and walnuts. The non-food/non-feed use sites include the following: cherry (dormant), horses, ornamentals, residential lawns, and sheep. Products are applied as liquid sprays (ground, air blast, and hand-held equipment, with no labels specifically prohibiting aerial). The end use products include soluble concentrates (SL/C) and emulsifiable concentrates (EC) formulation. The Agency database, OPPIN Query, indicates that all of the current products are formulated ranging from 5% to 29% calcium polysulfide as the active ingredient. All but three of the current products list calcium polysulfide as the sole active ingredient, with the others listing aliphatic hydrocarbons (4-166 and 239-2528) or calcium thiosulfate (8660-67) as the additional active ingredients (Table 1).

Lable Retrier a Pfodber Being Ressesser Compliants C. Iginin Pelyjulfide						
Registration	Registration Name	Calcaire Calcaire Polyeulfde	Other Aguve. Abgredičnis	Formulation Fype	Date first registered	
33955-420	Acme Lime Sulfur Spray	29%	none	soluble concentrate	2 Feb, 1974	
5887-143	Black Leaf Lime Sulfur Spray	29%	none	soluble concentrate	30 July, 1982	

. n	ble I. Régistered Produc	straing Read	es (es su yaranda	g Calcium Pol	ysulfide
Registration Number	Registration Name	Percent Calcium Polyautide	Citises Acque Magrisqueius	Formulation Type	Date first registered
4-166	Bonide Oil and Lime Sulfur Spray	5%	80% aliphatic petroleum hydrocarbons	emulsifiable concentrate	7 May, 1971
4-402	Bonide Lime Sulfur Spray	30%	none	soluble concentrate	4 May, 1966
66196-3	BSP Sulforix	27.5%	none	emulsifiable concentrate	29 May, 1953
802-73	Lilly/Miller Polysul Summer & Dormant Spray Concentrate	28.7%	none	soluble concentrate	7 April, 1950
51036-226	Lime-Sulfur	29%	none	soluble concentrate	13 May, 1988
66196-2	Lime-Sulfur Solution	29%	none	soluble concentrate	2 March, 1975
8660-67	Liquid Lime-Sulfur 32 Degrees Baume	28%	2% calcium thiosulfate	soluble concentrate	6 Dec., 1972
239-2391	Ortho Dormant Disease Control	26%	none	soluble concentrate	15 April, 1972
239-2528	Ortho Dormant Insect & Disease Control	16.66%	34.84% aliphatic petroleum hydrocarbons	emulsifiable concentrate	11 July, 1986
239-309	Orthorix Spray	26%	none	emulsifiable concentrate	24 Sept, 1948
11656-51	Poly-Sul Fungicide Insecticide Miticide	29%	none	emulsifiable concentrate	20 Oct, 1976
71096-6	Rex Lime Sulphur Solution	28%	none	soluble concentrate	26 June, 1948
769-558	Suregard Lime Sulphur Solution 32 BE	29%	none	soluble concentrate	17 Nov, 1981
71096-11	Tetrasul 4S5	27%	none	soluble concentrate	15 Aug, 2002

The Biological and Economic Analysis Division (BEAD) Screening Level Usage Analysis (SLUA) in Appendix A indicates that the crops receiving the greatest amounts of pounds ai of total applied calcium polysulfides include grapes and apples, with pears, peaches, and cherries also receiving substantial amounts, on a national basis, followed by blackberries, raspberries, and blueberries. The states where the greatest amounts are used include California, Washington, and Oregon. Based on the information reviewed in the BEAD assessment of current labels, the highest application rates are for blueberries (66.58).

lb ai/A) and cherries and grapes (61.48 lb ai/A), although the BEAD Revised Usage assessment indicates that "average" or "typical" rates actually applied to these crops are substantially lower, 17.31, 14.96, and 9.38 lb ai/A to blueberries, cherries, and grapes, respectively.

Calcium polysulfide is produced by reacting lime with sulfur in boiling water. The resultant solution is highly alkaline (pH 11.5-11.8) and corrosive. Upon application to agricultural crops, calcium polysulfides or its dissociation products reach foliage and soils and can enter water bodies via spray drift and later via run-off and erosion. Calcium polysulfide present in moist soils and/or on moist foliage is expected to dissociate rapidly; therefore, run-off and erosion into surface water, as parent calcium polysulfide, should be negligible. Calcium polysulfide dissociates to form calcium cations and sulfur (S), and therefore the fate of this pesticide is dependent on the fate of its dissociation products. The EFED Environmental Science Chapter states two important conclusions regarding fate: 1) the expected change in environmental background levels of calcium cations and elemental sulfur due to application of the pesticide would be expected to be low compared with the relative presence of these chemicals already appearing in the environment; and 2) the fate and transport characteristics of these dissociation products suggest that applications of calcium sulfide to targeted foliage/soils would result in minimal movement to water bodies by drift, likely resulting in low concentrations in these aquatic systems.

#### Calcium Hydroxide

Calcium hydroxide is used in pesticide products as both an inert ingredient and an active ingredient. As an inert ingredient, it is used primarily as a solid diluent and/or carrier, and has been placed on the Agency's pesticide inert ingredient list 4B. This classification indicates that the Agency has concluded that calcium hydroxide will not adversely affect the public health or the environment under current use patterns. As an active ingredient, there is currently only one manufacturing use product registered with calcium hydroxide. Calcium hydroxide is listed as an FDA GRAS chemical under 21CFR 184.1205, with no limitations specified as to its use in food except good manufacturing use practice.

The tolerance exemptions reassessed for calcium hydroxide, with the respective citation in the Code of Federal Regulations (CFR), and the use pattern as an inert ingredient are listed in Table 2.

Table 2: Tole	auce Exemp	tions Reassessed in t	ne 2002:C'40	un Hydrexide PRED	
Tolerance Exemption Expression	Section Control of Control of		nPC Code	Use Pattern	
	1305-62-0	Active Ingredient			
calcium hydroxide		Not Applicable	075601	Microbiocide/Microbiostat	
· ·			Inert Ingr	edient	
		180.910	875601	solid diluent, carrier	

#### <u>Sulfur</u>

As an active ingredient in pesticides, sulfur is an insecticide and fungicide used on terrestrial food and feed crops, non-food crops, aquatic food crops, greenhouse food and non-food crops, indoor food and non-food, and indoor/outdoor residential premises. Non-pesticidal uses include use as a fertilizer or as a soil amendment for reclaiming alkaline soils.

## III. Physical/Chemical Properties:

The physical and chemical properties of calcium polysulfide are provided in Table 3. This information was obtained from the profiles in TOXNET (Hazardous Substances Data Bank (HSDB) and CambridgeSoft (ChemFinder), as well as various MSDS sheets for calcium polysulfide.

	(1906). Physical/Chapilcal Peoperties	
		Reflacences
Molecular formula	Ca (Sx)	ChemFinder, 2005
Color/Form	Deep orange liquid	HSDB, 2005
Odor	unpleasant smell of hydrogen sulfide; rotten egg odor	HSDB, 2005
Density/Specific Gravity	1.28 @ 15.6°C	HSDB, 2005
	10.9-11.2	MSDS, 2005a
pН	11.5 - 11.9	MSDS, 2005c
	11.8 - 11.9	MSDS, 2005d
,	Soluble in water	HSDB, 2005
Water Solubility	"Very soluble"	MSDS, 2005c
	"soluble"	MSDS, 2005d

## IV. Hazard Characterization:

#### A. Toxicity

Tables 4 and 5 list the acute toxicity data for calcium polysulfide and sulfur, respectively.

Lable 4 Acpts   Pricty Profile for Calcium Polysulfider					
Study Type	Categogy	Rosults	Reference		
Acute Oral (LD <sub>50</sub> )	III	820 mg/kg (male) 820 mg/kg (female)			
Acute Dermal (LD <sub>50</sub> )	III	>2000 mg/kg			
Acute Inhalation (LC <sub>50</sub> )	IV	3.9 mg/L (male) 3.1 mg/L (female)	MSDS, 2005b		
Primary Eye Irritation	I	Irreversible damage due to high pH			
Primary Skin Irritation	III	Mildly irritating			

	Table 5.	Acuts Toxicity Profile for Sulfur	
Study Type	Category		Reference
Acute Oral (LD50)	IV	> 5 mg/kg	are services and a service and
Acute Dermal (LD <sub>50</sub> )	III	> 2 mg/kg	
Acute Inhalation (LC <sub>50</sub> )	III	> 2.56 mg/L	Sulfur RED
Primary Eye Irritation	Ш	n/a	
Primary Skin Irritation	IV	n/a	

Based on the current product labels for calcium polysulfides, personal protective equipment (PPE) is required for all handlers. This includes coveralls over long-sleeved shirts and long pants, waterproof gloves, chemical resistant footwear plus socks, protective eyewear, chemical resistant headgear for overhead exposure, chemical resistant apron when cleaning equipment, mixing, or loading, and a MSHA/NIOSH approved dust/mist filtering respirator. In addition, the Restricted Entry Interval for all postapplication activities is 48 hours, in accordance with the Worker Protection Standard 40 CFR part 170.

According to the calcium hydroxide TRED (EPA, 2002), acute toxicity studies were obtained from Toxnet for calcium hydroxide; however, these studies were not reviewed by the Agency. An oral LD<sub>50</sub> of 7340 mg/kg (rats) was reported for calcium hydroxide. The NIOSH International Chemical Safety Card states that calcium hydroxide irritates the respiratory tract, and is corrosive to the eyes and skin. Repeated or prolonged exposure can cause dermatitis, and may also affect the lungs due to exposure to dust particles (NIOSH, 2005).

From the sulfur RED, chronic exposure at low levels is generally considered safe, with no known risks of oncogenic, teratogenic, or reproductive effects associated with its use. In addition, sulfur has been shown to be non-mutagenic in microorganisms (EPA, 1991).

For calcium polysulfide, the Agency waived the data requirements for acute inhalation and dermal sensitization, because "calcium polysulfide, upon dissolution in water, is converted rapidly to calcium hydroxide and colloidal elemental sulfur" (Tox Branch II, HED, 1991). In addition, the Agency also determined the all the subchronic and chronic toxicity testing requirements to be waived, based on the availability of adequate toxicity data in the literature for the degradation products. Based on that determination, the toxicity of calcium polysulfide is due to the degradation products and "exposure to human[s] is self-limiting and can be regulated through [product] labeling" (Tox Branch I, HED, 1993).

#### B. Metabolism

The Agency has determined that calcium polysulfide rapidly degrades to calcium hydroxide and sulfur in the human body. Thus, the data requirements for the higher tier toxicity studies have been waived by the Agency, and there are no repeated dose toxicity studies available for calcium polysulfide (Tox Branch I, HED, 1993).

## C. Special Considerations for Infants and Children

Based on the toxicity data reviewed in this document for calcium polysulfides, calcium hydroxide, and sulfur, there is no information which indicates increased sensitivity to calcium polysulfide for infants and children. Although calcium polysulfide and its degradates can cause skin and eye irritation, once incorporated into the food supply, there is a low potential for risk to these groups of the population.

#### V. Exposure Assessment:

The Agency has determined that calcium polysulfide readily breaks down into calcium hydroxide and sulfur in the human body. Since the risks have already been assessed for both of these other chemicals and use patterns are similar, it is not necessary to generate a separate risk assessment for calcium polysulfide. The conclusions of the RED document for sulfur and the TRED document for calcium hydroxide indicate that these chemicals have been determined to not present unacceptable risks to humans.

#### VI. Dietary Exposure:

Based on the rapid dissociation of calcium polysulfide in the environment, as well as in the human body, to calcium hydroxide and sulfur, the Agency has determined that only a qualitative dietary assessment is needed, based on the results of the RED and TRED for these constituent products. Thus, the Agency has determined that there are no dietary risk concerns, whether from the ingestion of food or water or both, for calcium polysulfide.

#### VII. Aggregate Assessment:

In examining aggregate exposure, FFDCA section 408 directs EPA to consider available information concerning exposures from the pesticide residue in food and all other non-occupational exposures, including drinking water from ground water or surface water and exposure through pesticide use in gardens, lawns, or buildings (residential and other indoor uses). In developing this assessment document for calcium polysulfide, a qualitative assessment for all pathways of human exposure (food, drinking water, and residential) is deemed appropriate given the lack of human health concerns associated with exposure to this chemical, as well as its constituent products (calcium hydroxide and sulfur). Thus, the Agency has determined that there are no aggregate risk concerns resulting from exposure to calcium polysulfide through food, drinking water and/or residential uses.

#### VIII. Cumulative Exposure:

Section 408(b)(2)(D)(v) of the FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider "available information" concerning the cumulative effects of a particular pesticide's residues and "other substances that have a common mechanism of toxicity." If chemicals are structurally related and all are low toxicity chemicals, then the risks either separately or combined should also be low. Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, EPA has not made a common mechanism of toxicity finding as to calcium polysulfide and any other substances.

For the purposes of this action, EPA has assumed that calcium polysulfide does not share a common mechanism of toxicity with other substances. For information regarding the Agency's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such

chemicals, see the policy statements released by EPA's Office of Pesticide Programs concerning common mechanism determinations and procedures for cumulating effects from substances found to have a common mechanism on EPA's website at <a href="http://www.epa.gov/pesticides/cumulative/">http://www.epa.gov/pesticides/cumulative/</a>.

#### IX. Risk Characterization:

As mentioned above, the Agency has determined that calcium polysulfide readily breaks down into calcium hydroxide and sulfur in the environment and in the human body. Assessments performed on both these substituent compounds indicate a reasonable certainty of no harm to human health. Therefore, it has been determined that the use of products containing calcium polysulfide (as the sole active ingredient) also would not present a human health hazard to the general public. Furthermore, the current exemption from the requirement of a tolerance for calcium polysulfide (lime sulfur) under 40CFR 180.1232 is considered reassessed, and meets the reasonable certainty of no harm standard as defined by FQPA.

## X. Environmental Fate and Exposure Considerations:

#### Calcium Polysulfide

Lime sulfur is readily soluble in water, and solutions of lime sulfur have a highly alkaline pH, ranging from 10.9 to 11.9 (Table 3). In an agricultural setting, the end-use products containing this chemical are mixed in water and the solution applied to growing rain-fed and/or irrigated crops. In such environments, it can be assumed that moisture is abundant on/in targeted plants/soils. Calcium polysulfide is expected to rapidly dissociate in the presence of any moisture to form calcium cations (calcium hydroxide) and elemental sulfur. Upon application, most of the applied material reaches targeted crops/soils, while some reaches, as drift, non-targeted plants/soils. It is considered likely that "rapid dissociation" is initiated when water is added to the end-use product within the tank-mix, and much of the "active ingredient" reaching the treated crop is colloidal sulfur.

Any calcium polysulfide reaching targeted crops is expected to be washed off into the soil as parent and/or with time, with the dissociation products consisting mainly of elemental sulfur and calcium. These same dissociation products are expected to form from parent that reaches the soil directly from application. In the soil system, the modest amounts of calcium and sulfur that result from the use of calcium polysulfide are not believed to be significant when compared to their respective natural background levels.

Since calcium polysulfide dissociates quickly in the environment, runoff and/or leaching of the parent into nearby water bodies is assumed to be negligible; thus, aquatic exposure models which consider runoff and/or leaching, such as GENEEC2 and PRZM/EXAMS, are not used in this assessment. To estimate exposure of terrestrial organisms (mammals and birds), the terrestrial exposure model T-REX was used to estimate exposures resulting from single spray application of calcium polysulfide. As with the aquatic assessment, due to rapid breakdown, it is unlikely that repeated applications would result in the accumulation of calcium polysulfide on terrestrial forage materials. Accumulations on forage material, if any, would most likely be of sulfur and/or inert ingredients.

#### Calcium Hydroxide

Calcium hydroxide is commonly found in soil and water, suggesting that low levels would not pose adverse effects to wildlife or water resources. Large releases may cause direct effects, such as exceedances of toxicity thresholds, or indirect effects, such as disruption of ecosystems through altering of pH or increasing availability of algal nutrients. Calcium hydroxide is a medium to strong base, and as such, can cause varying degrees of pH change depending on the amount of material released and the buffering

capacity of the soil or water. Hydroxides are persistent in the environment, but they also tend to dissociate, react with organic and inorganic materials, and form complexes with ionic substances.

#### <u>Sulfur</u>

All environmental fate data requirements were waived in 1982, based on the fact that sulfur is a natural component of the environment (EPA, 1991). It is possible for sulfur to oxidize to sulfuric acid and acidify soils; however, this is not considered likely to be a deleterious effect. In addition, elemental sulfur added to the environment will become incorporated into the natural sulfur cycle. There is potential for non-target organisms to be exposed to sulfur due to its large annual usage and relatively high application rates. However, the risks associated with exposure to sulfur appear to be low.

## XI. Ecotoxicity and Environmental Risk Considerations:

#### Calcium Polysulfide

Based on an extensive search of environmental toxicity data, the most sensitive aquatic species in each category was selected for detailed environmental risk analysis (Table 6). Note that in some cases, the study report had not clarified that the results were based on the active ingredient present in the test solution, so the EFED Science Chapter has corrected for the percent active ingredient (i.e., lowered the acute toxicity value reported in the study, based on the % ai).

ım Polysulfide T	oxicity Reference V	'alues (mg ac	ctive ingredient/L) for Aq	uatic Organisms.	
Species	Scientific Name	Exposure Duration	Toxicity Reference Value (mg a.i./L)	Reference (Classification)	
h					
Rainbow trout	Oncorhynchus mykiss	96 hours	$LC_{50} = 0.97 \text{ mg a.i./L}^{a}$ (study value: 3.35 mg/L)	McCann 1976 (Acceptable)	
No Data Available					
ertebrates				· · · · · · · · · · · · · · · · · · ·	
Water flea	Daphnia pulex	48 hours	$LC_{50} = 2.9 \text{ mg a.i./L}^{a}$ (study value: 10 mg/L)	MRID 40098001 (Acceptable)	
No Data Available					
ne Fish			· · · · · · · · · · · · · · · · · · ·	<del></del>	
No Data Available					
No Data Available					
ne Invertebrates					
No Data Available					
No Data Available					
	No Data Availabers No Data Avail	Rainbow trout  Rainbow trout  Oncorhynchus mykiss  No Data Available  ertebrates  Water flea  Daphnia pulex  No Data Available  ne Fish  No Data Available  ne Invertebrates  No Data Available  ne Invertebrates	Species Scientific Name Exposure Duration  Rainbow trout Oncorhynchus mykiss  No Data Available  ertebrates  Water flea Daphnia pulex 48 hours  No Data Available  ne Fish  No Data Available  ne Invertebrates  No Data Available  ne Invertebrates	Duration   Value (mg a.i./L)   Rainbow trout   Oncorhynchus mykiss   96 hours   LC <sub>50</sub> = 0.97 mg a.i./L a (study value: 3.35 mg/L)   No Data Available   Value (mg a.i./L a (study value: 3.35 mg/L)	

Exposure Scenario	Species	Scientific Name	Exposure Duration	Toxicity Reference Value (mg a.i./L)	Reference (Classification)
Aquatic Plants					<u> </u>
Algae	green algae	Selenastrum capricornutum	120 hours	$EC_{50} = 14.1 \text{ mg a.i./L}^{b}$ $EC_{05} = 0.5 \text{ mg a.i./L}^{b}$	MRID 43960801 (Acceptable)
Macrophytes	No Data Availab	ple			L

<sup>&</sup>lt;sup>a</sup> The study report did not specify if toxicity endpoints were expressed in terms of mg formulation/L or mg a.i./L. Taking the most conservative approach, it is assumed that toxicity endpoints were reported in terms of mg formulation/L. To calculate toxicity values in terms of mg a.i./L, values were multiplied by the % a.i. in the formulation tested. Details are provided in Appendix E of the EFED Science Chapter.

The EC<sub>50</sub> was used to assess risk to non-listed aquatic algae; the EC<sub>05</sub> value was used to assess risk to listed algae. Also, the statistical methods used in the study were different than those used by EFED; therefore, the numbers used here are slightly different than those reported in the MRID (EC<sub>50</sub> = 15 mg a.i./L, EC<sub>05</sub> = 1.2 mg a.i./L).

The spray drift model AGDRIFT (SDTF 2001) was used to estimate the fraction of calcium polysulfide that is released indirectly to a water body due to spray drift following a typical aerial or ground based application to a crop. Since calcium polysulfide reacts quickly in the environment, runoff and/or leaching into nearby water bodies were assumed to be negligible. Spray drift from both aerial and ground applications was assessed. Although the BEAD assessment of the calcium polysulfide labels did not identify any labels which indicate instructions for aerial applications, aerial applications were evaluated because none of the labels specifically prohibit aerial use. Initial average deposition to water bodies was reported to be 3.21% for aerial applications, and 0.02% for ground applications, such as air blast applications to orchards. Thus, based on the maximum label rates, the initial concentrations in the standard pond range from less than 0.0007 ppm for grapes treated via orchard/air blast, to 0.110 ppm for grapes treated by aerial applications. The AgDrift Model was also run with typical use rates, and the resulting in EECs ranged from 0.0169 ppm to 0.0407 ppm, respectively.

Acute Risk Quotients (RQs) were then calculated based on the estimated environmental concentration (EEC) divided by the aquatic toxicity data. The acute RQs for freshwater fish were as high as 0.12 (for blueberries with aerial applications at the maximum label rate), but for typical applications rates, even with aerial applications, the highest RQ was 0.042, which does not exceed the acute endangered species LOCs. In addition, for freshwater invertebrates, all acute RQs are below the LOCs for acute restricted use (LOC 0.1) and acute endangered species (LOC 0.05). In addition, the LOC for acute risk to plants (LOC 1) is not exceeded for non-listed or listed algae under any of the modeled crop scenarios. While there are no data available for estuarine or marine species, this has been identified in the EFED Science Chapter as a data gap. However, there is no information available that would indicate that crops treated with calcium polysulfide are grown directly adjacent to estuarine and/or marine waters.

The terrestrial exposure model T-REX (T-REX Version 1.12, dated December 7, 2004) was used to estimate exposures and risks to avian and mammalian species for single spray applications of calcium polysulfide. Since calcium polysulfide breaks down rapidly, it is unlikely that repeated applications would result in the accumulation of calcium polysulfide on terrestrial forage materials. Accumulations on forage materials, if any, would most likely be of calcium, sulfur, and/or inert ingredients. Therefore, only acute risks from single applications of calcium polysulfide are considered in this assessment. The EECs for

residues on various forage categories (short grass, tall grass. broadleaf plants/small insects, fruits/pods/large insects, and seeds) were obtained from the Tier I model T-REX for five crop uses: blueberries, grapes, almonds, apples, and alfalfa. As with aquatic organisms, these EECs were compared with the available reported toxicity data for the most sensitive species. For birds, acute RQs were derived using dose-based and dietary-based acute toxicity values (but since those LC<sub>50</sub> values were >5000 mg a.i./kg, no RQ values could be calculated); for mammals, acute RQs were derived using a dose-based acute toxicity value (Table 7).

Table 7. Calcium Polysulfide Toxicity Reference Values (TRVs) for Terrestrial Organisms.

Exposure Scenario	Species	Exposure Duration	Toxicity Reference Value	Reference MRIL (Classification)		
Mammals						
Acute (Dose- based)	rat	single oral dose	$LD_{50}$ (_) = 86.63 mg a.i./body wt. <sup>a</sup>	00154738 (Acceptable)		
Chronic	No Data Available					
Birds				<del></del>		
Acute (Dose- based)	bobwhite quail	single oral dose	$LD_{50} = 560 \text{ mg a.i./kg body wt.}$	43945101 (Acceptable)		
Acute (Dietary- based)	bobwhite quail and mallard duck	5-day dietary	LC <sub>50</sub> >5000 mg a.i./kg diet (for both species)	43945103 quail (Acceptable) 43945104 duck (Acceptable)		
Chronic	No Data Available					
Plants	No Data Available					

The study report did not specify if toxicity endpoints were expressed in terms of mg formulation/L or mg a.i./L. Taking the most conservative approach, it is assumed that toxicity endpoints were reported in terms of mg formulation/L. To calculate toxicity values in terms of mg a.i./L, values were multiplied by the % a.i. in the formulations tested (16.66%). Details are provided in Appendix E of the EFED Science Chapter.

Thus, dietary-based RQs were calculated using EECs expressed in terms of residue concentration for the various forage categories, and toxicity values (LC<sub>50</sub>) expressed in units of dietary concentration. Dose-based RQs were calculated using a body weight-adjusted LD<sub>50</sub> and consumption-weighted equivalent dose sorted by food source and body size. For both birds and mammals, three weight categories (or sizes) were considered (20 g, 100 g, 1000 g for birds, and 15 g, 35 g, 1000 g for mammals). Nearly all dose-based acute RQs for birds exceed the LOCs for acute risk (LOC 0.5), acute restricted use (LOC 0.2), and acute endangered risk (LOC 0.1). For example, the highest RQs for birds were for application to blueberries at the maximum label rate, with dose-based RQs ranging from 0.52 to 45.95, exceeding all acute LOCs for all forage categories, and from 0.13 to 11.95, for typical application rates to blueberries.

Note that these RQs are based on an acute oral toxicity test in bobwhite quail, with an LD<sub>50</sub> value of 560 mg a.i./kg body weight, which indicates that calcium polysulfide is slightly toxic to avian species on an

acute oral basis. This study was based on gavage dosing. Note also that avian toxicity data are quite different when the acute dietary toxicity of calcium polysulfide is based on feeding studies (not gavage-dosed). The acute dietary toxicity was evaluated in bobwhite quail and mallard ducks, with both studies yielding  $LC_{50}$  values >5,000 mg a.i./kg diet. Based on these results, calcium polysulfide is categorized as practically non-toxic to birds on an acute dietary basis. These  $LC_{50}$  values of >5,000 mg a.i./kg diet were not evaluated to assess dietary-based acute risk of birds to calcium polysulfide.

The risks to terrestrial mammals also used dose-based acute RQs for mammals, specifically gavage-dosed rats. As with avian risks, nearly all dose-based acute RQs for mammals exceed the LOCs for acute risk (LOC 0.5), acute restricted use (LOC 0.2), and acute endangered risk (LOC 0.1). For example, the highest RQs for mammals were also for application to blueberries, with dose-based RQs ranging from 0.45 to 79.73 at the maximum label rate, exceeding all acute LOCs for all forage categories, and from 0.04 to 7.55 for typical application rates to blueberries. [Note that these RQs are based on an acute toxicity value of 86.63 mg a.i./body wt., from the EFED Science Chapter, much lower than the Acute Oral (LD $_{50}$ ) value of 820 mg/kg, as reported in Table 4, for the Acute Toxicity Profile for Calcium Polysulfides.]

All RQ values for terrestrial species which exceed LOCs are based on toxicity data from studies in which animals were dosed by gavage. The pH of calcium polysulfide solutions is reported to range from 10.9 to 11.9, suggesting that it is likely that the observed mortality in gavage-dosed rats and birds was due to corrosive effects on the lining of the gastrointestinal tract. When birds are tested with food which has calcium polysulfide incorporated into the diet (the 5-day dietary feeding studies in Table 7), there was essentially no mortality, even at the highest doses. Since almost all products containing calcium polysulfide are mixed with water prior to application, it is likely that significant dissociation occurs within the mix tank. In fact, some labels have language to address the formation of crusts or crystals which may occur in the tank prior to application. These surface solids are very likely comprised of elemental sulfur resulting from product dissociation. Regarding risks for freshwater fish resulting from spray drift, it is expected that calcium polysulfide will dissociate to calcium cations and sulfur upon contact with natural water bodies. Thus, no mitigation for terrestrial species or freshwater fish is warranted at this time.

## **Endangered Species Considerations**

The Agency has developed the Endangered Species Protection Program to carry out its responsibilities under FIFRA in compliance with the Endangered Species Act (ESA). The ESA requires Federal agencies to ensure that their actions are not likely to jeopardize listed species or adversely modify designated critical habitat, and requires Federal agencies to use their authorities to further the purposes of the Act by carrying out programs for the conservation of listed species. To analyze the potential of registered pesticide uses that may affect any particular species, EPA uses basic toxicity and exposure data and considers ecological parameters, pesticide use information, geographic relationship between specific pesticide uses and species locations, and biological requirements and behavioral aspects of the particular species.

In accordance with the agreement between the U.S. EPA Office of Pesticide Programs and the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (Letter of Agreement, http://endangered.fws.gov/consultations/pesticides/evaluation.pdf), the Agency has provided in this risk assessment an interpretation of the listed species' LOCs in terms of the chance of an individual effect should organisms be exposed to a media concentration or dose corresponding to1/10 or 1/20 of the LC50, LD50, or EC50 used as the acute toxicity measurement endpoint for a particular taxonomic group. The Agency has reviewed the data and other information for calcium polysulfide and its degradates and concludes that this fungicide does not warrant action under the Endangered Species Act. Although EPA's

screening-level assessment shows that there are possible "effects" on listed species or their critical habitat (some RQ values were above the level of concern for endangered species), the Agency has determined that mitigation is not warranted at this time, based on the characterizations presented above in the respective sections for exposure scenarios and toxicity data for fish, birds, and mammals. Thus, this determination was derived by the Agency based on the evaluation and characterization of relevant exposure assessments and toxicity tests that were conducted on aquatic and terrestrial animals, as well as aquatic and terrestrial plants.

The Endangered Species Protection Program as described in a Federal Register notice (54 FR 27984-28008, July 3, 1989) is currently being implemented on an interim basis. As part of the interim program, the Agency has developed County Specific Pamphlets that articulate many of the specific measures outlined in the Biological Opinions issued to date. The Pamphlets are available for voluntary use by pesticide applicators on the EPA website at www.epa.gov/espp. A final Endangered Species Protection Program, which may be altered from the interim program, was proposed for public comment in the Federal Register on December 2, 2002.

#### XII. Drinking Water Considerations:

Since calcium polysulfide dissociates quickly in the environment, runoff and/or leaching into nearby water bodies is assumed to be negligible; thus, aquatic exposure models which consider runoff and/or leaching, such as GENEEC2 and PRZM/EXAMS, are not used in this assessment. In the receiving water systems, the modest amounts of calcium and sulfur that result from the use of calcium polysulfide is not believed to be significant when compared to their respective natural background levels.

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Appendix 1. BEAD Screening Level Usage Analysis for Calcium Polysulfide for Agricultural Uses and Other Information

## Screening Level Usage Analysis for

(Inorganic polysulfides (PC code 076702))
2/07/05

## What is a Screening Level Usage Analysis (SLUA)?

• Available estimates of pesticide usage data for a particular active ingredient that is used on agricultural crops in the United States.

## What does it contain?

- Pesticide usage data for a single active ingredient only.
- Agricultural use sites (crops) that the pesticide is reported to be used on
- Pesticide usage information on the national level for the United States.
- Annual percent of crop treated (average & maximum) for each agricultural use site.
- Average annual pounds of the pesticide applied for each agricultural use site.

## What assumptions can I make about the data reported?

- Average pounds of active ingredient applied Values are calculated by merging pesticide usage data sources together; averaging by year, averaging across all years, & then rounding. *Note:* If the estimated value is less than 500, then that value is labeled <500. Estimated values between 500 & <1,000,000 are rounded to 1 significant digit. Estimated values of 1,000,000 or greater are rounded to 2 significant digits.)
- Average percent of crop treated Values are calculated by merging data sources together; averaging by year, averaging across all years, & rounding to the nearest multiple of 5. *Note:* If the estimated value is less than 1, then the value is labeled <1.
- Maximum percent of crop treated Value is the single maximum value reported across all data sources, across all years, & rounded up. *Note:* If the estimated value is less than 2.5, then the value is labeled <2.5.

#### What are the data sources used?

- USDA-NASS (United States Department of Agriculture's National Agricultural Statistics Service) pesticide usage data from 1998 to 2003.
- NCFAP (National Center for Food and Agricultural Policy) pesticide usage data from 1997 & is *only* used if data is not available from the other sources.
- Private pesticide market research pesticide usage data from 1998 to 2003.

## What are the limitations to the data?

- Registered/labeled uses may exist but are not surveyed by the available data sources.
- Lack of reported usage data for the pesticide on a crop does not imply zero usage.
- Usage data on a particular site may be noted in data sources, but **not quantified**. In these instances, no usage would be reported in the SLUA for that use site.

• Non-agricultural use sites (e.g., turf, post-harvest, mosquito control, etc.) are not reported in the SLUA. A separate request must be made to receive these estimates.

## Who do I contact for further information and/or questions on this SLUA?

- (Jenna Carter, Botanist, BEAD)
- ((703)308-8370, <u>carter\_jenna@epa.gov</u>)

Screening Level Estimates of Agricultural Uses of Inorganic polysulfides Sorted Alphabetically

OBS	Crop	Lbs. A.I.	Percent Avg.	Crop Ttd.
1	Almonds	6,000	<1	<2.5
2	Apples	700,000	10	15
3	Apricots	10,000	5	10
4	Blackberries	70,000	65	75
5	Blueberries	20,000	5	5
6	Cherries	100,000	5	5
7	Grapefruit	<500	<1	<2.5
8	Grapes	600,000	5	10
9	Hazelnuts (Filberts)	10,000	<1	<2.5
10	Lemons	9,000	<1	5
11	Oranges	30,000	<1	<2.5
12	Peaches	40,000	<1	5
13	Pears	300,000	15	25
14	Prunes & Plums	7,000	<1	<2.5
15	Raspberries	60,000	50	70
16	Walnuts	10,000	<1	<2.5

All numbers rounded.

<sup>&#</sup>x27;<500' indicates less than 500 pounds of active ingredient. '<2.5' indicates less than 2.5 percent of crop is treated. (slua003k.sas a005a8n.sas Inorganic polysulfides)



## **NSF Product and Service Listings**

These NSF Official Listings are current as of **Thursday**, **September 30**, **2010** at 12:15 a.m. Eastern Time. Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information: http://www.nsf.org/Certified/PwsChemicals/Listings.asp?Company=3L430&Standard=060&

# NSF/ANSI STANDARD 60 Drinking Water Treatment Chemicals - Health Effects

## Tessenderlo Kerley, Inc.

2255 North 44th Street Suite 300 Phoenix, AZ 85008 United States 602-889-8300 Visit this company's website

**Facility**: Eufaula, AL

#### Calcium Thiosulfate[1]

Trade DesignationProduct FunctionMax UseCAPTOR®Ozone Reduction50mg/LDechlorination

Calcium Thiosulfate Ozone Reduction 50mg/L

Dechlorination

[1] This product is to be used for the destruction of residual chlorine. It should be applied only to the extent necessary to ensure chlorine removal. Actual chlorine concentration in the water should be used to calculate the necessary dose of calcium thiosulfate.

Facility: Fresno, CA

Calcium Polysulfide[1]

Trade DesignationProduct FunctionMax UseCalmetOtherNAPrecipitation Agent

http://www.nsf.org/Certified/PwsChemicals/Listings.asp?Company=3L430&Standard=060

[1] This product is used to treat heavy metals in wells used as drinking water sources. It should be applied according to the manufacturer's dosage chart.

Calcium Thiosulfate[2]

Trade Designation CAPTOR®

Product Function
Dechlorination
Ozone Reduction

Max Use 50mg/L

[2] This product is to used for the destruction of residual chlorine. It should be applied only to the extent necessary to ensure chlorine removal. Actual chlorine concentration in the water should be used to calculate the necessary dose of calcium thiosulfate.

Facility: Kennewick, WA

Calcium Polysulfide[1]

Trade Designation
Calmet

Product Function

Max Use

Other

NA

Precipitation Agent

[1] This product is to be used to treat heavy metals in wells used as drinking water sources. Product should be applied according to the manufacturer's dosage chart.

Calcium Thiosulfate[2]

Trade Designation CAPTOR®

Product Function
Dechlorination
Ozone Reduction

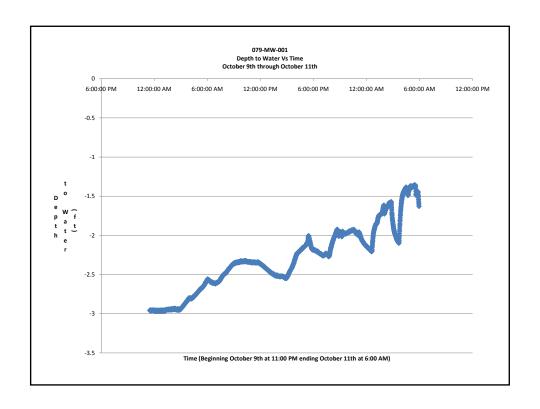
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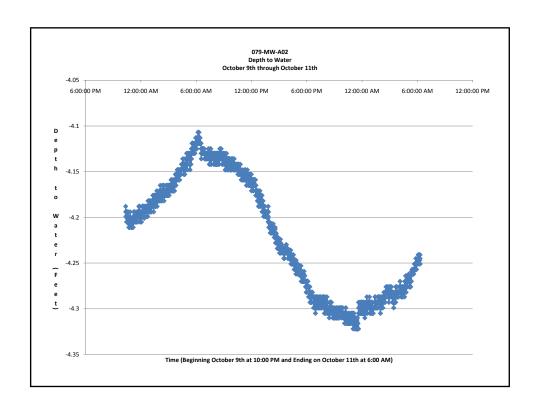
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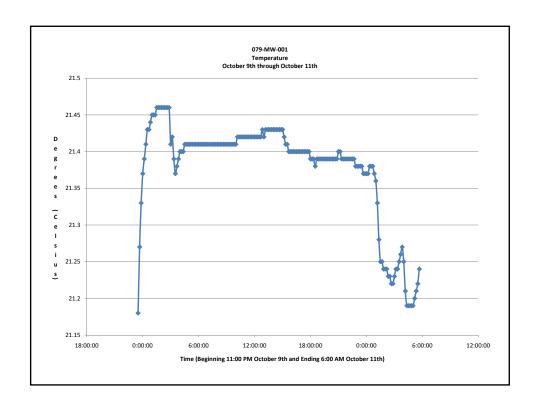
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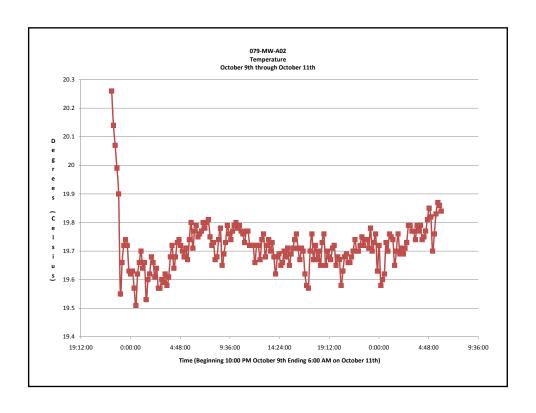
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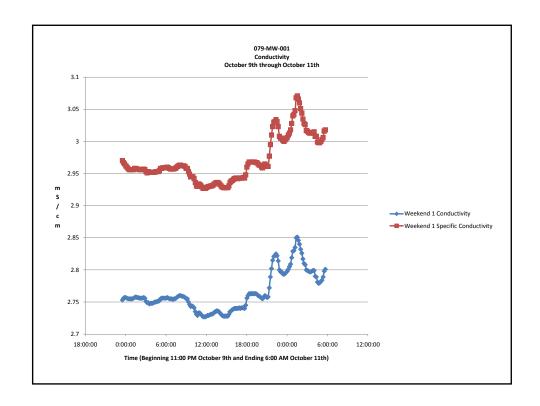
## APPENDIX D DATA LOGGER RECORDS AND FIELD MEASUREMENT TABLES

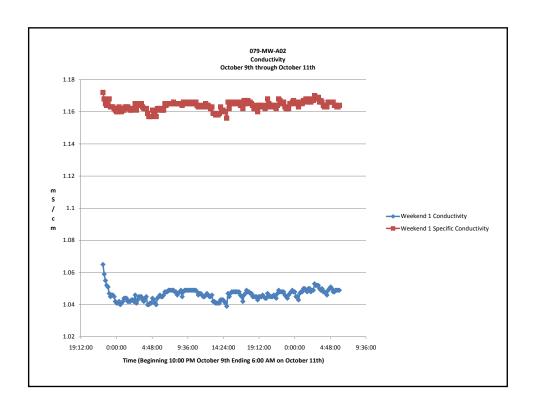


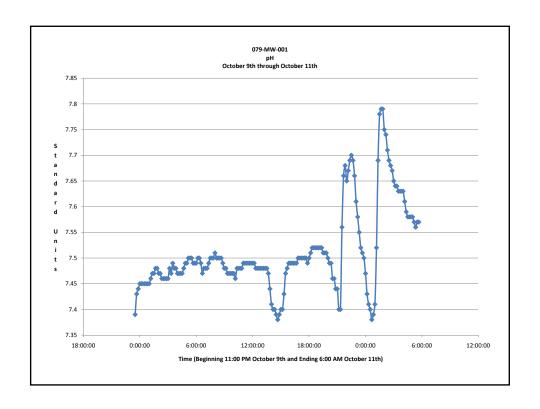


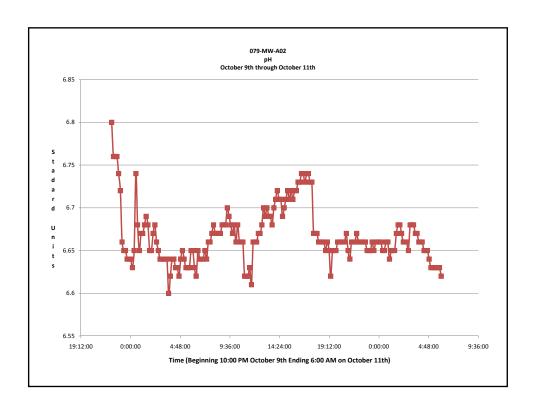


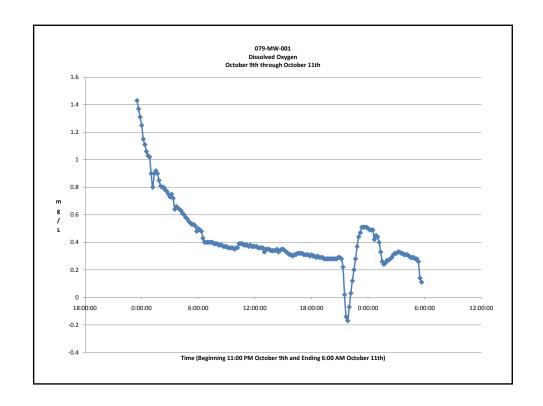


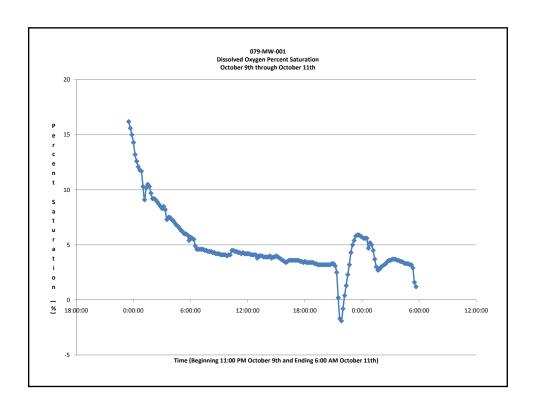


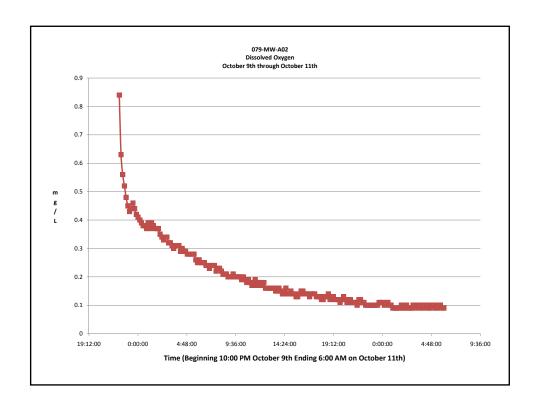


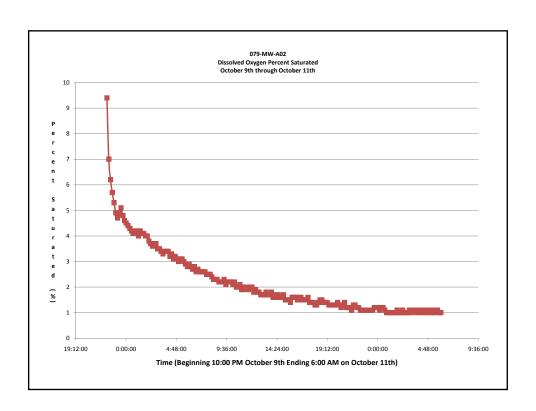


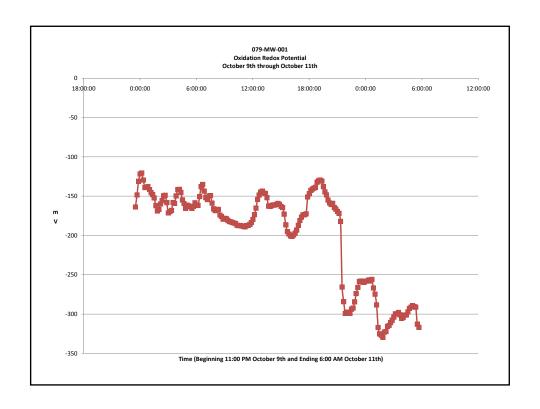


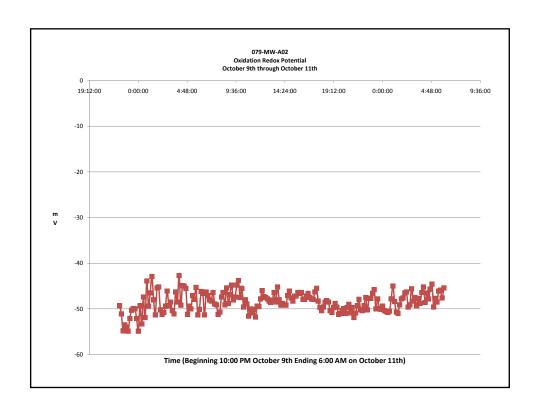


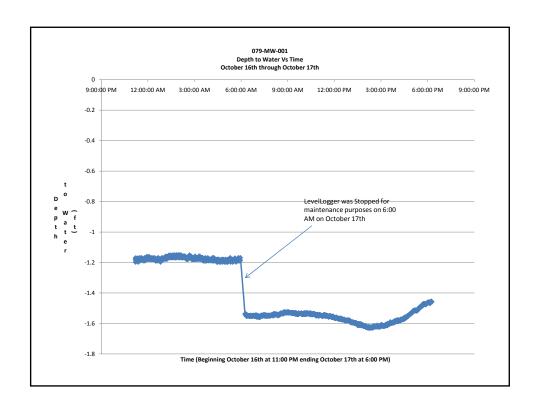


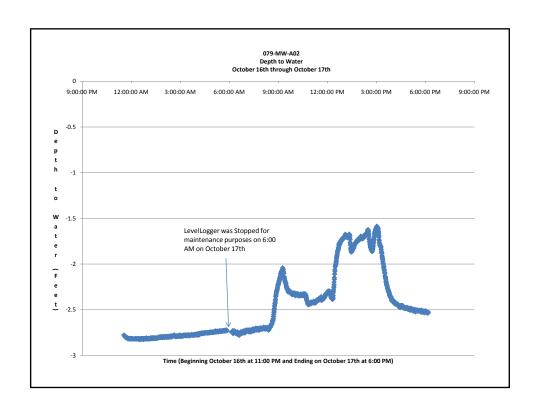


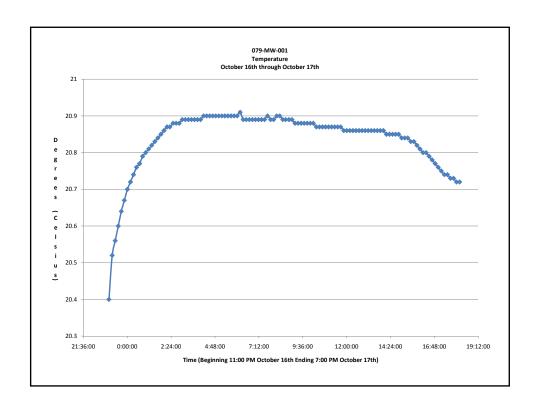


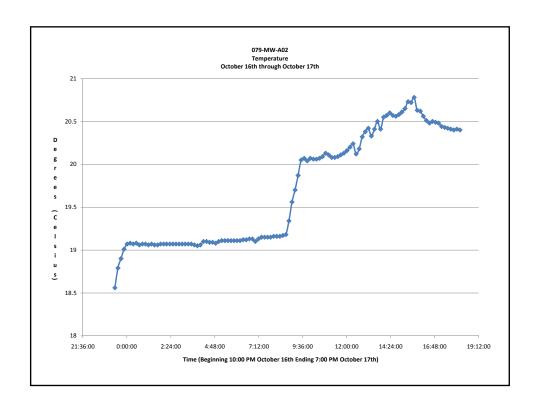


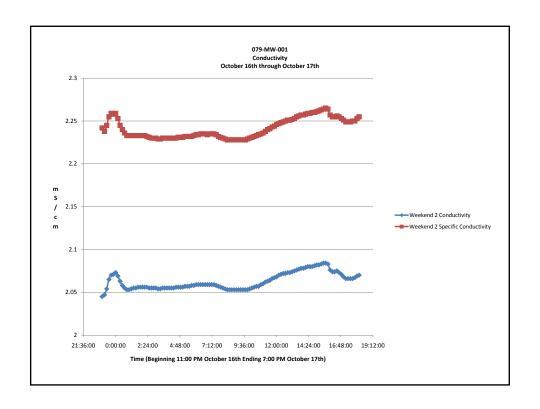


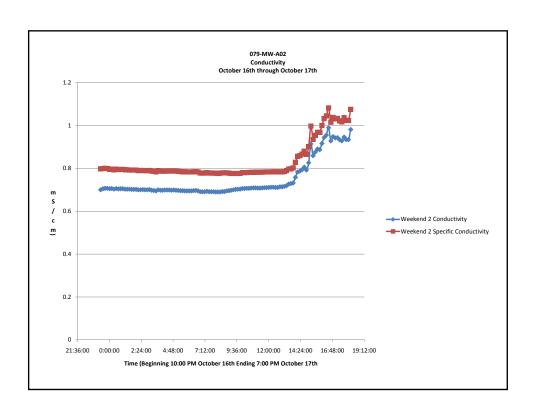


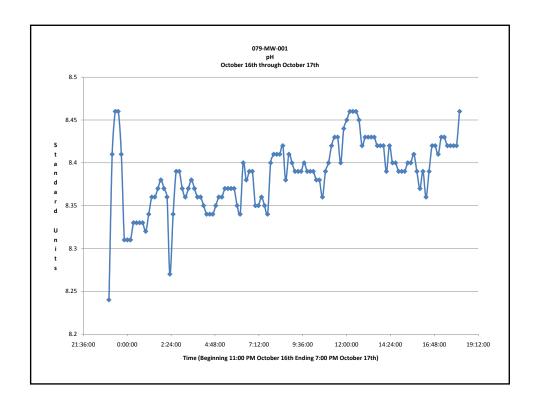


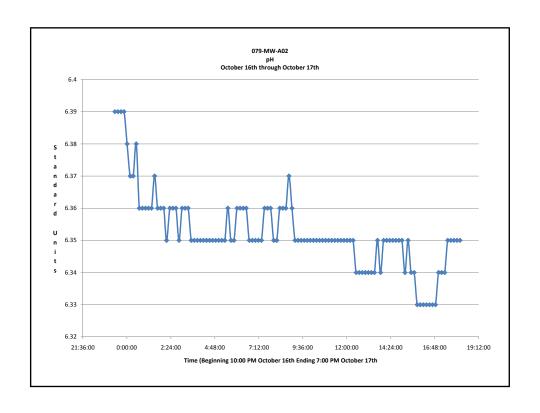


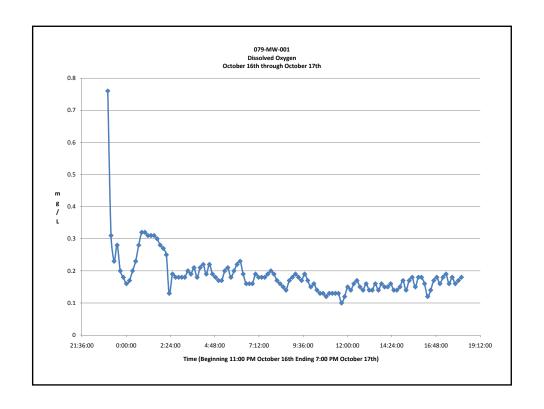


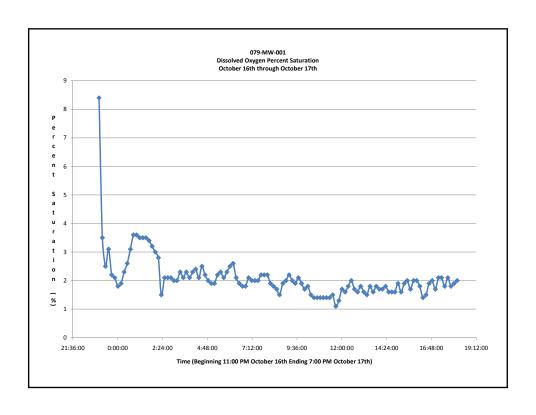


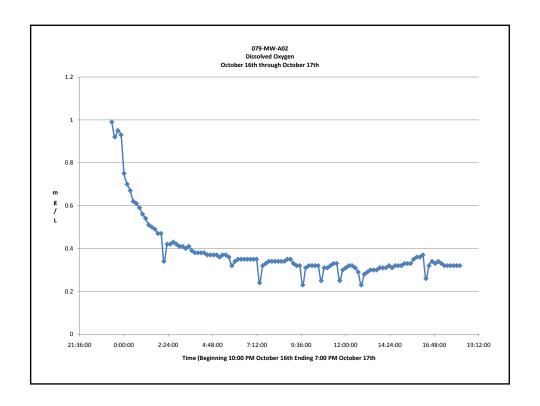


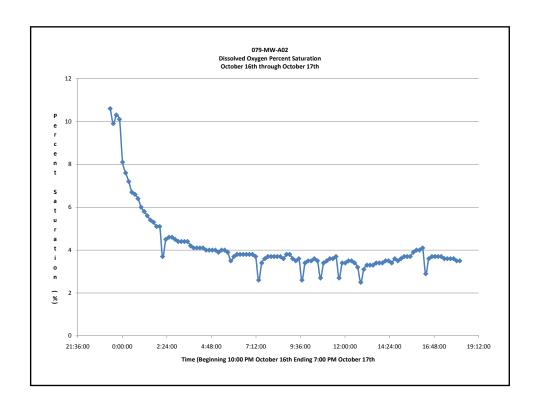


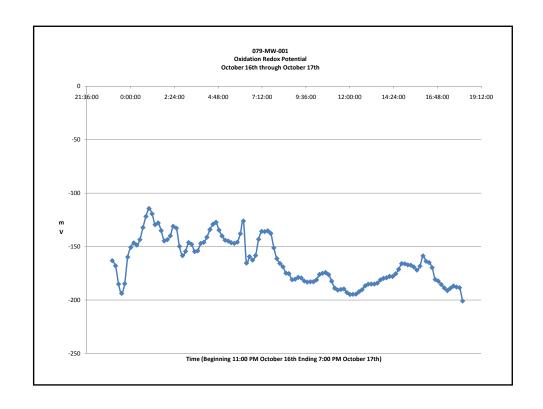


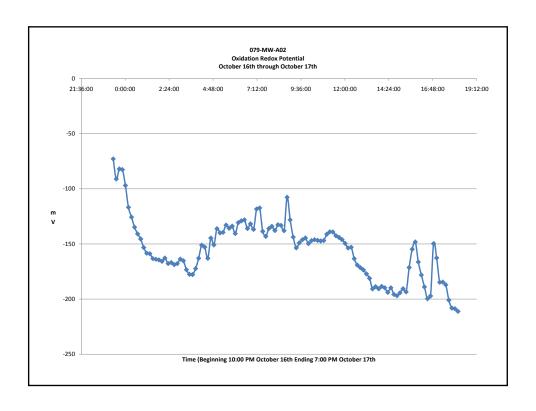












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Instrument number = Location = 15826

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Sample method =T

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Altitude =0 ft
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Reference level =-4.00 °F
Range =180.00 °F

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3654

505.		
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10/11/2010 5:14	37.419	70.18
10/11/2010 5:15	37.419	70.18
10/11/2010 5:15	37.425	70.18
10/11/2010 5:16	37.414	70.18
10/11/2010 5:16	37.419	70.19
10/11/2010 5:17	37.419	70.19
10/11/2010 5:17	37.419	70.19
10/11/2010 5:18	37.414	70.19
10/11/2010 5:18	37.419	70.19
10/11/2010 5:19	37.431	70.19
10/11/2010 5:19	37.425	70.19
10/11/2010 5:20	37.419	70.19
10/11/2010 5:20	37.425	70.19
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10/11/2010 5:21	37.425	70.19

10/11/2010 5:22	37.425	70.19
10/11/2010 5:22	37.425	70.19
10/11/2010 5:23	37.425	70.2
10/11/2010 5:23	37.431	70.2
10/11/2010 5:24	37.431	70.2
10/11/2010 5:24	37.425	70.21
10/11/2010 5:25	37.419	70.21
10/11/2010 5:25	37.431	70.21
10/11/2010 5:26	37.431	70.21
10/11/2010 5:26	37.425	70.21
10/11/2010 5:27	37.438	70.21
10/11/2010 5:27	37.431	70.23
10/11/2010 5:28	37.425	70.21
10/11/2010 5:28	37.431	70.21
10/11/2010 5:29	37.425	70.23
10/11/2010 5:29	37.425	70.21
10/11/2010 5:30	37.425	70.21
10/11/2010 5:30	37.419	70.21
10/11/2010 5:31	37.431	70.21
10/11/2010 5:31	37.425	70.21
10/11/2010 5:32	37.419	70.21
10/11/2010 5:32	37.412	70.2
10/11/2010 5:33	37.393	70.2
10/11/2010 5:33	37.373	70.2
10/11/2010 5:34	37.349	70.2
10/11/2010 5:34	37.324	70.2
10/11/2010 5:35	37.31	70.2
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10/11/2010 5:36	37.305	70.2
10/11/2010 5:36	37.305	70.21
10/11/2010 5:37	37.312	70.21
10/11/2010 5:37	37.318	70.21
10/11/2010 5:38	37.324	70.21
10/11/2010 5:38	37.331	70.21
10/11/2010 5:39	37.337	70.21

10/11/2010 5:39	37.337	70.21
10/11/2010 5:40	37.343	70.21
10/11/2010 5:40	37.349	70.21
10/11/2010 5:41	37.349	70.21
10/11/2010 5:41	37.349	70.21
10/11/2010 5:42	37.349	70.21
10/11/2010 5:42	37.349	70.21
10/11/2010 5:43	37.349	70.23
10/11/2010 5:43	37.349	70.23
10/11/2010 5:44	37.349	70.21
10/11/2010 5:44	37.349	70.21
10/11/2010 5:45	37.349	70.21
10/11/2010 5:45	37.349	70.21
10/11/2010 5:46	37.343	70.21
10/11/2010 5:46	37.343	70.21
10/11/2010 5:47	37.343	70.21
10/11/2010 5:47	37.337	70.23
10/11/2010 5:48	37.337	70.23
10/11/2010 5:48	37.343	70.24
10/11/2010 5:49	37.349	70.25
10/11/2010 5:49	37.343	70.26
10/11/2010 5:50	37.331	70.26
10/11/2010 5:50	37.305	70.27
10/11/2010 5:51	37.299	70.27
10/11/2010 5:51	37.28	70.35
10/11/2010 5:52	37.253	70.43
10/11/2010 5:52	37.247	70.33
10/11/2010 5:53	37.228	70.31
10/11/2010 5:53	37.211	70.3
10/11/2010 5:54	37.197	70.3
10/11/2010 5:54	37.184	70.3
10/11/2010 5:55	37.165	70.29
10/11/2010 5:55	37.159	70.44

END OF DATA FILE OF DATALOGGER FOR WINDOWS

### Data file for DataLogger.

COMPANY : <Company name>

COMP.STATUS: Do : 18/10/2010 DATE TIME : 10:07:01

FILENAME : C:\Documents and Settings\JDillon\My Documents\DiverOffice\SA-5 site 079\CSV\15117 101018100701 D6241.CSV

CREATED BY: SWS Diver-Office 3.2.0.0

============= BEGINNING OF DATA =============================

#### [Logger settings]

Instrument type =Micro-Diver=15

Status =Started =0

Serial number =..00-D6241 215.

Instrument number

=0

Location =15117 Sample period =S30 Sample method =T

Number of channels =2

### [Channel 1]

Identification =PRESSURE =13.123 ft Reference level =57.415 ft Range Master level =0 m Altitude =0 ft

[Channel 2]

Identification =TEMPERATURE =-20.00 °C Reference level =100.00 °C Range

# [Series settings]

Serial number =..00-D6241 215.

Instrument number = Location =15117 Sample period =00 00:00:30 0

Sample method =T

Start date / time =14:11:23 16/10/10 End date / time =14:57:05 17/10/10

[Channel 1 from data header]
Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m
Altitude =0 ft
[Channel 2 from data header]

Identification =TEMPERATURE
Reference level =-20.00 °C
Range =100.00 °C

## [Data]

813

Date/time	Pressure[ft]	Temperature[°C]
10/16/2010 23:11	37.611	20.37
10/16/2010 23:11	37.62	20.39
10/16/2010 23:12	37.592	20.41
10/16/2010 23:12	37.611	20.42
10/16/2010 23:13	37.62	20.43
10/16/2010 23:13	37.601	20.44
10/16/2010 23:14	37.611	20.45
10/16/2010 23:14	37.611	20.46
10/16/2010 23:15	37.611	20.46
10/16/2010 23:15	37.611	20.48
10/16/2010 23:16	37.611	20.48
10/16/2010 23:16	37.611	20.48
10/16/2010 23:17	37.611	20.49
10/16/2010 23:17	37.611	20.49
10/16/2010 23:18	37.601	20.49
10/16/2010 23:18	37.611	20.49

10/16/2010 23:19	37.62	20.5
10/16/2010 23:19	37.611	20.5
10/16/2010 23:20	37.601	20.51
10/16/2010 23:20	37.611	20.51
10/16/2010 23:21	37.611	20.51
10/16/2010 23:21	37.611	20.51
10/16/2010 23:22	37.611	20.51
10/16/2010 23:22	37.592	20.51
10/16/2010 23:23	37.601	20.51
10/16/2010 23:23	37.601	20.52
10/16/2010 23:24	37.601	20.52
10/16/2010 23:24	37.611	20.52
10/16/2010 23:25	37.601	20.52
10/16/2010 23:25	37.611	20.52
10/16/2010 23:26	37.62	20.53
10/16/2010 23:26	37.611	20.53
10/16/2010 23:27	37.611	20.53
10/16/2010 23:27	37.62	20.53
10/16/2010 23:28	37.611	20.53
10/16/2010 23:28	37.62	20.53
10/16/2010 23:29	37.62	20.53
10/16/2010 23:29	37.62	20.53
10/16/2010 23:30	37.611	20.53
10/16/2010 23:30	37.611	20.53
10/16/2010 23:31	37.62	20.53
10/16/2010 23:31	37.62	20.53
10/16/2010 23:32	37.611	20.53
10/16/2010 23:32	37.601	20.53
10/16/2010 23:33	37.611	20.54
10/16/2010 23:33	37.611	20.54
10/16/2010 23:34	37.62	20.54
10/16/2010 23:34	37.611	20.54
10/16/2010 23:35	37.611	20.54
10/16/2010 23:35	37.62	20.54
10/16/2010 23:36	37.62	20.54

10/16/2010 23:36	37.62	20.54
10/16/2010 23:37	37.62	20.54
10/16/2010 23:37	37.611	20.55
10/16/2010 23:38	37.611	20.55
10/16/2010 23:38	37.611	20.55
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10/16/2010 23:39	37.611	20.55
10/16/2010 23:40	37.611	20.55
10/16/2010 23:40	37.611	20.55
10/16/2010 23:41	37.611	20.55
10/16/2010 23:41	37.611	20.55
10/16/2010 23:42	37.611	20.55
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10/16/2010 23:44	37.601	20.55
10/16/2010 23:45	37.601	20.55
10/16/2010 23:45	37.611	20.55
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10/16/2010 23:46	37.611	20.55
10/16/2010 23:47	37.611	20.55
10/16/2010 23:47	37.622	20.55
10/16/2010 23:48	37.611	20.55
10/16/2010 23:48	37.611	20.55
10/16/2010 23:49	37.601	20.55
10/16/2010 23:49	37.611	20.55
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10/16/2010 23:51	37.611	20.56
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10/16/2010 23:53	37.62	20.56

10/16/2010 23:54	37.62	20.56
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10/16/2010 23:55	37.62	20.56
10/16/2010 23:55	37.62	20.56
10/16/2010 23:56	37.63	20.56
10/16/2010 23:56	37.62	20.56
10/16/2010 23:57	37.611	20.56
10/16/2010 23:57	37.62	20.56
10/16/2010 23:58	37.62	20.56
10/16/2010 23:58	37.62	20.56
10/16/2010 23:59	37.611	20.56
10/16/2010 23:59	37.62	20.56
10/17/2010 0:00	37.611	20.56
10/17/2010 0:00	37.611	20.56
10/17/2010 0:01	37.62	20.56
10/17/2010 0:01	37.62	20.56
10/17/2010 0:02	37.611	20.56
10/17/2010 0:02	37.62	20.56
10/17/2010 0:03	37.62	20.56
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10/17/2010 0:06	37.62	20.56
10/17/2010 0:06	37.611	20.56
10/17/2010 0:07	37.611	20.56
10/17/2010 0:07	37.611	20.56
10/17/2010 0:08	37.611	20.56
10/17/2010 0:08	37.62	20.56
10/17/2010 0:09	37.62	20.56
10/17/2010 0:09	37.62	20.56
10/17/2010 0:10	37.62	20.56
10/17/2010 0:10	37.62	20.56
10/17/2010 0:11	37.62	20.56

10/17/2010 0:11	37.611	20.56
10/17/2010 0:12	37.62	20.56
10/17/2010 0:12	37.611	20.56
10/17/2010 0:13	37.62	20.56
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10/17/2010 0:14	37.611	20.56
10/17/2010 0:14	37.611	20.56
10/17/2010 0:15	37.62	20.56
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10/17/2010 0:19	37.611	20.56
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10/17/2010 0:22	37.611	20.56
10/17/2010 0:22	37.611	20.57
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10/17/2010 1:27	37.639	20.58
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10/17/2010 1:30	37.63	20.58
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10/17/2010 1:31	37.63	20.58
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10/17/2010 1:38	37.63	20.58

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10/17/2010 1:46	37.622	20.58
10/17/2010 1:47	37.622	20.58
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10/17/2010 1:48	37.632	20.58
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10/17/2010 2:00	37.632	20.58
10/17/2010 2:01	37.632	20.58
10/17/2010 2:01	37.622	20.58
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END OF DATA FILE OF DATALOGGER FOR WINDOWS

### Data file for DataLogger.

\_\_\_\_\_\_

COMPANY : <Company name>

COMP.STATUS: Do
DATE : 18/10/2010
TIME : 13:16:46

FILENAME : C:\Documents and Settings\JDillon\My Documents\DiverOffice\SA-5 site 079\CSV\14534\_101018131646\_C3122.CSV

CREATED BY: SWS Diver-Office 3.2.0.0

#### [Logger settings]

Instrument type =Micro-Diver=15

Status =Started =0

Serial number =..00-C3122 215.

Instrument number =

=0

Location =14534
Sample period =S30
Sample method =T
Number of channels =2

### [Channel 1]

Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m
Altitude =0 ft

[Channel 2]

Identification =TEMPERATURE Reference level =-20.00 °C Range =100.00 °C

# [Series settings]

Serial number =..00-C3122 215.

Instrument number = Location = 14534

Sample period =00 00:00:30 0

Sample method =T

Start date / time =33:15:06 17/10/10 End date / time =33:13:10 18/10/10

[Channel 1 from data header]
Identification =PRESSURE

Reference level =13.123 ft

Range =57.415 ft Master level =0 m

Altitude =0 ft

[Channel 2 from data header]

Identification =TEMPERATURE
Reference level =-20.00 °C

Range =100.00 °C

### [Data]

3357

Date/time	Pressure[ft]	Temperature[°C]
10/17/2010 6:15	37.253	18.47
10/17/2010 6:16	37.247	19.03
10/17/2010 6:16	37.247	19.43
10/17/2010 6:17	37.253	19.74
10/17/2010 6:17	37.253	19.98
10/17/2010 6:18	37.253	20.17
10/17/2010 6:18	37.249	20.31
10/17/2010 6:19	37.247	20.43
10/17/2010 6:19	37.241	20.52
10/17/2010 6:20	37.238	20.6
10/17/2010 6:20	37.247	20.65
10/17/2010 6:21	37.249	20.71
10/17/2010 6:21	37.236	20.74
10/17/2010 6:22	37.243	20.78
10/17/2010 6:22	37.249	20.8
10/17/2010 6:23	37.238	20.83

37.241	20.84
37.241	20.85
37.241	20.87
37.241	20.88
37.238	20.89
37.241	20.89
37.241	20.9
37.241	20.91
37.241	20.91
37.241	20.91
37.241	20.91
37.241	20.91
37.241	20.92
37.241	20.92
37.241	20.92
37.236	20.92
37.241	20.92
37.236	20.93
37.236	20.93
37.236	20.93
37.236	20.93
37.238	20.93
37.243	20.93
37.243	20.93
37.243	20.93
37.243	20.93
37.238	20.93
37.243	20.93
37.243	20.93
37.238	20.93
37.236	20.94
37.241	20.94
37.236	20.94
37.236	20.94
37.236	20.94
	37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.241 37.243 37.236 37.236 37.236 37.236 37.236 37.238 37.243

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10/17/2010 6:41	37.241	20.94
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10/17/2010 7:00	37.238	20.96
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10/17/2010 7:01	37.23	20.96
10/17/2010 7:02	37.243	20.96
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10/17/2010 7:03	37.243	20.96
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	37.247 37.247 37.247 37.253

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27.266	24
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10/17/2010 18:15	37.331	20.89
10/17/2010 18:16	37.331	20.89
10/17/2010 18:16	37.331	20.89

END OF DATA FILE OF DATALOGGER FOR WINDOWS

=====	===	======	=====	=====	=====	=====	=====	=====	===== :	=======================================		======
Date	)	Time	Temp	SpCond	Cond	DOsat	DO	DOchrg	рН	рН	Orp	Battery
m/d/y	/	hh:mm:ss	С	mS/cm	mS/cm	%	mg/L			mV	mV	volts
10/9/		23:30:40	21.18	2.97	2.753		1.43		7.39	-42.1	-163.8	6.5
10/9/		23:40:40	21.27	2.967	2.756		1.37		7.43	-44.3	-148.5	6.5
10/9/		23:50:40	21.33	2.965	2.757		1.31	36.9	7.44	-44.9	-131.1	6.4
10/10/2		0:00:40	21.37	2.962	2.757		1.25	36.9	7.45	-45.2	-121.8	6.4
10/10/2		0:10:40	21.39	2.96	2.756		1.15		7.45	-45.2	-120.6	6.4
10/10/2		0:20:40	21.41	2.958	2.755		1.11	35.7	7.45	-45.3	-129.5	6.4
10/10/2		0:30:40	21.43	2.956	2.755		1.06		7.45	-45.2	-139.1	6.4
10/10/2		0:40:40	21.43	2.956	2.755		1.03		7.45	-45.1	-139	6.4
10/10/2		0:50:23	21.44	2.956	2.755		1.02		7.45	-45.3	-137.8	12.3
10/10/2		1:00:40	21.45		2.755		0.9		7.45	-45.4	-141.6	6.4
10/10/2		1:10:40	21.45	2.956	2.756		0.8	36.9	7.46	-45.7	-145.6	6.4
10/10/2	2010	1:20:40	21.45	2.958	2.757		0.9	35.7	7.47	-46.1	-148.1	6.4
10/10/2		1:30:40	21.46	2.958	2.758		0.92		7.47	-46.4	-152.3	6.4
10/10/2		1:40:40	21.46	2.957	2.757		0.9		7.48	-46.6	-162.2	
10/10/2		1:50:40	21.46	2.957	2.757		0.85		7.48	-46.7	-168.9	6.3
10/10/2		2:00:40	21.46	2.956	2.756		0.81	36.9	7.47	-46.4	-166.9	6.4
10/10/2		2:10:40	21.46	2.956	2.756		0.8	35.7	7.47	-46.2	-159.9	6.3
10/10/2		2:20:40	21.46	2.956	2.756		0.8		7.46	-46.1	-155.8	6.4
10/10/2		2:30:40	21.46	2.956	2.756		0.78	35.7	7.46	-45.9	-149.5	6.3
10/10/2		2:40:40	21.46	2.957	2.757		0.77		7.46	-45.7	-148.9	6.4
10/10/2	2010	2:50:40	21.46	2.956	2.756	8.5	0.75	35.7	7.46	-45.7	-158.3	6.3
10/10/2	2010	3:00:40	21.41	2.953	2.751	8.3	0.73		7.46	-46	-171.3	
10/10/2	2010	3:10:40	21.42	2.951	2.749	8.5	0.75		7.48	-46.7	-169.7	6.3
10/10/2	2010	3:20:40	21.39	2.953	2.749	8.2	0.72		7.47	-46.4	-168.1	6.3
10/10/2		3:30:40	21.37	2.952	2.747		0.64		7.49	-47.1	-158.1	6.3
10/10/2	2010	3:40:40	21.38	2.952	2.748	7.5	0.66	34.6	7.48	-47	-159.2	6.3
10/10/2	2010	3:50:40	21.39	2.952	2.748	7.5	0.65	33.4	7.48	-46.6	-149.7	6.3
10/10/2	2010	4:00:40	21.4	2.952	2.748	7.3	0.64	35.7	7.47	-46.3	-141.7	6.3
10/10/2	2010	4:10:40	21.4	2.952	2.749	7.2	0.63	34.6	7.47	-46.1	-141.3	6.3
10/10/2	2010	4:20:40	21.4	2.952	2.75	7	0.61	35.7	7.47	-46.3	-145.2	6.3
10/10/2	2010	4:30:40	21.41	2.953	2.75	6.8	0.6	35.7	7.47	-46.4	-154.8	6.3
10/10/2	2010	4:40:40	21.41	2.953	2.751	6.7	0.58	33.4	7.48	-46.8	-159.3	6.3
10/10/2	2010	4:50:40	21.41	2.953	2.751	6.5	0.57	34.6	7.49	-47.1	-165.4	6.3

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10/10/2010	5:00:40	21.41	2.955	2.752	6.3	0.55	34.6	7.49	-47.2	-161.5	6.3
10/10/2010	5:10:40	21.41	2.958	2.755	6.2	0.53	34.6	7.49 7.5	-47.2 -47.8	-161.5	6.3
10/10/2010	5:20:40	21.41	2.958	2.756	6	0.54	34.6	7.5 7.5	-47.0 -47.7	-163.5	6.3
10/10/2010	5:30:40	21.41	2.959	2.756	6	0.53	34.6	7.5 7.5	-47.7 -47.7	-165.4	6.3
10/10/2010	5:40:40	21.41	2.959	2.756	5.9	0.53	34.6 34.6	7.3 7.49	-47.7 -47.5	-165.4	6.3
10/10/2010		21.41	2.959	2.756	5.9 5.4	0.52		7.49 7.49	-47.5 -47.4	-158.4	6.3
	5:50:40						33.4				
10/10/2010	6:00:40	21.41	2.959	2.756	5.7	0.5	33.4	7.49	-47.5	-161.4	6.3
10/10/2010	6:10:40	21.41	2.96	2.757	5.6	0.49	34.6	7.5	-47.7	-161.8	6.3
10/10/2010	6:20:40	21.41	2.959	2.756	5.5	0.48	34.6	7.5	-47.8	-150.6	6.3
10/10/2010	6:30:00	21.41	2.958	2.755	4.9	0.43	34.6	7.49	-47.1	-138	12.3
10/10/2010	6:40:00	21.41	2.957	2.755	4.6	0.4	35.7	7.47	-46.6	-135.1	12.3
10/10/2010	6:50:00	21.41	2.957	2.755	4.6	0.4	34.6	7.48	-46.6	-143.6	12.3
10/10/2010	7:00:00	21.41	2.957	2.754	4.6	0.4	34.6	7.48	-46.7	-152	12.3
10/10/2010	7:10:00	21.41	2.957	2.755	4.6	0.4	34.6	7.48	-47	-154.4	12.3
10/10/2010	7:20:00	21.41	2.958	2.755	4.6	0.4	34.6	7.49	-47.4	-149.7	12.3
10/10/2010	7:30:00	21.41	2.959	2.756	4.5	0.4	34.6	7.5	-47.6	-149.3	12.3
10/10/2010	7:40:00	21.41	2.961	2.758	4.5	0.39	33.4	7.5	-47.9	-158.9	12.3
10/10/2010	7:50:00	21.41	2.962	2.759	4.4	0.39	33.4	7.5	-48	-166.1	12.3
10/10/2010	8:00:00	21.41	2.963	2.76	4.4	0.39	34.6	7.51	-48.1	-168.5	12.3
10/10/2010	8:10:00	21.41	2.963	2.76	4.4	0.38	34.6	7.5	-48	-166.9	12.4
10/10/2010	8:20:00	21.41	2.962	2.759	4.3	0.38	34.6	7.5	-47.9	-166.9	12.3
10/10/2010	8:30:00	21.41	2.962	2.759	4.3	0.38	34.6	7.5	-47.9	-174	12.3
10/10/2010	8:40:00	21.41	2.962	2.758	4.2	0.37	34.6	7.5	-47.7	-175.8	12.3
10/10/2010	8:50:00	21.41	2.961	2.757	4.2	0.37	33.4	7.49	-47.2	-179.3	12.3
10/10/2010	9:00:00	21.41	2.958	2.755	4.2	0.37	34.6	7.48	-46.8	-178.2	12.3
10/10/2010	9:10:00	21.41	2.958	2.755	4.1	0.36	34.6	7.48	-46.7	-178.6	12.4
10/10/2010	9:20:00	21.41	2.953	2.75	4.1	0.36	34.6	7.47	-46.5	-180.6	12.3
10/10/2010	9:30:00	21.41	2.949	2.746	4.1	0.36	34.6	7.47	-46.4	-182.3	12.4
10/10/2010	9:40:00	21.41	2.945	2.743	4.1	0.36	34.6	7.47	-46.4	-182.6	12.4
10/10/2010	9:50:00	21.41	2.945	2.744	4	0.35	33.4	7.47	-46.3	-183.5	12.3
10/10/2010	10:00:00	21.41	2.945	2.743	4.1	0.36	34.6	7.47	-46.2	-184.2	12.4
10/10/2010	10:10:00	21.42	2.942	2.741	4.1	0.36	33.4	7.46	-46.1	-184.8	6.3
10/10/2010	10:20:40	21.42	2.936	2.735	4.5	0.39	33.4	7.48	-47	-187.1	6.3
10/10/2010	10:30:40	21.42	2.931	2.731	4.5	0.39	32.8	7.48	-47.1	-187.6	6.3
10/10/2010	10:40:40	21.42	2.93	2.729	4.4	0.39	34.6	7.48	-47	-187.3	6.3
10/10/2010	10:50:40	21.42	2.934	2.733	4.4	0.38	33.4	7.48	-47	-188	6.3
10/10/2010	11:00:40	21.42	2.933	2.733	4.3	0.38	33.4	7.49	-47.2	-188.6	6.3

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10/10/2010	11:10:40	21.42	2.931	2.731	4.3	0.38	33.4	7.49	-47.3	-188.9	6.3
10/10/2010	11:20:00	21.42	2.929	2.729	4.2	0.37	33.4	7.49	-47.3 -47.2	-187.6	12.3
10/10/2010	11:30:40	21.42	2.923	2.727	4.3	0.38	33.4	7.49	-47.2 -47.4	-187.1	6.3
10/10/2010	11:40:40	21.42	2.927	2.727	4.2	0.37	33.4	7.49	-47.5	-186	6.3
10/10/2010	11:50:40	21.42	2.927	2.727	4.2	0.37	33.4	7.49	-47.4	-183.6	6.3
10/10/2010	12:00:40	21.42	2.928	2.728	4.2	0.37	33.4	7.49	-47.2	-179.6	6.3
10/10/2010	12:10:40	21.42	2.929	2.729	4.2	0.37	32.8	7.49	-47.2 -47.1	-173.5	6.3
10/10/2010	12:10:40	21.42	2.93	2.729	4.1	0.36	32.8	7.48	-46.9	-165.3	6.2
10/10/2010	12:30:40	21.42	2.93	2.73	4.1	0.36	32.8	7.48	-46.8	-154.2	6.3
10/10/2010	12:30:40	21.42	2.931	2.731	4.1	0.36	33.4	7.48	-46.8	-134.2	6.2
10/10/2010	12:50:40	21.42	2.931	2.731	4.1	0.36	32.8	7.48	-46.8	-145.0	6.2
10/10/2010	13:00:40	21.43	2.931	2.731	3.8	0.33	32.8	7.48 7.48	-46.6	-143 -143.6	6.2
	13:10:40			2.734							6.2
10/10/2010		21.43	2.934		4	0.35	33.4	7.48	-46.8	-146.2	
10/10/2010	13:20:40	21.43	2.935	2.735	4	0.35	33.4	7.48	-46.8	-146.6	6.2
10/10/2010	13:30:40	21.43	2.936	2.736	4	0.35	33.4	7.48	-46.7	-152	6.2
10/10/2010	13:40:40	21.43	2.936	2.736	3.9	0.34	33.4	7.47	-46.6	-162.7	6.2
10/10/2010	13:50:40	21.43	2.935	2.735	3.9	0.34	33.4	7.44	-44.9	-163.2	6.2
10/10/2010	14:00:40	21.43	2.933	2.733	3.9	0.34	33.4	7.41	-43.6	-162.1	6.2
10/10/2010	14:10:40	21.43	2.931	2.731	3.9	0.34	32.8	7.4	-43	-161.1	6.2
10/10/2010	14:20:40	21.43	2.929	2.729	4	0.35	32.8	7.4	-42.8	-161.4	6.3
10/10/2010	14:30:40	21.43	2.928	2.728	3.8	0.33	32.8	7.39	-42.1	-160.5	6.2
10/10/2010	14:40:40	21.43	2.928	2.728	3.9	0.34	33.4	7.38	-42.1	-159.2	6.2
10/10/2010	14:50:40	21.43	2.928	2.728	3.9	0.35	32.8	7.39	-42.4	-160.4	6.2
10/10/2010	15:00:40	21.43	2.928	2.728	4	0.35	32.8	7.4	-42.7	-163.1	6.2
10/10/2010	15:10:40	21.42	2.928	2.728	3.9	0.34	33.4	7.4	-42.7	-164.5	6.2
10/10/2010	15:20:40	21.41	2.931	2.731	3.8	0.33	32.8	7.43	-44.5	-172.9	6.2
10/10/2010	15:30:40	21.41	2.936	2.735	3.7	0.32	32.8	7.47	-46.3	-186.4	6.2
10/10/2010	15:40:40	21.4	2.938	2.736	3.6	0.31	32.8	7.48	-46.9	-195.1	6.2
10/10/2010	15:50:40	21.4	2.939	2.738	3.5	0.31	32.8	7.49	-47.1	-198.2	6.2
10/10/2010	16:00:40	21.4	2.941	2.739	3.4	0.3	32.8	7.49	-47.2	-200.6	6.2
10/10/2010	16:10:40	21.4	2.942	2.74	3.5	0.31	33.4	7.49	-47.2	-201.1	6.2
10/10/2010	16:20:26	21.4	2.943	2.74	3.6	0.31	33.4	7.49	-47.3	-199.4	6.2
10/10/2010	16:30:40	21.4	2.943	2.74	3.6	0.32	32.8	7.49	-47.4	-197.1	6.1
10/10/2010	16:40:40	21.4	2.942	2.74	3.6	0.32	32.8	7.49	-47.5	-193.2	6.2
10/10/2010	16:50:40	21.4	2.943	2.741	3.6	0.32	32.8	7.5	-47.6	-187.1	6.1
10/10/2010	17:00:40	21.4	2.943	2.74	3.6	0.32	32.8	7.5	-47.7	-181	6.2
10/10/2010	17:10:40	21.4	2.943	2.741	3.6	0.31	33.4	7.5	-47.7	-176.8	6.1

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10/10/2010	17:20:40	21.4	2.943	2.741	3.6	0.31	33.4	7.5	-47.7	-173.7	6.2
10/10/2010	17:30:40	21.4	2.944	2.741	3.5	0.31	33.4	7.5	-47.7	-173.6	6.1
10/10/2010	17:40:40	21.4	2.943	2.74	3.5	0.31	32.8	7.5	-47.7	-172.5	6.1
10/10/2010	17:50:40	21.4	2.948	2.745	3.4	0.3	33.4	7.49	-47.4	-151.1	6.1
10/10/2010	18:00:40	21.39	2.96	2.756	3.5	0.31	33.4	7.5	-48	-146.9	6.1
10/10/2010	18:10:40	21.39	2.965	2.76	3.4	0.3	32.8	7.51	-48.2	-142.7	6.1
10/10/2010	18:20:40	21.39	2.968	2.763	3.4	0.3	34.6	7.52	-48.5	-141	6.1
10/10/2010	18:30:40	21.38	2.968	2.763	3.4	0.29	34.6	7.52	-48.8	-139.9	6.1
10/10/2010	18:40:40	21.39	2.968	2.763	3.4	0.3	32.8	7.52	-48.9	-138.7	6.1
10/10/2010	18:50:40	21.39	2.968	2.763	3.4	0.29	32.8	7.52	-49	-132.3	6.1
10/10/2010	19:00:40	21.39	2.968	2.763	3.3	0.29	32.8	7.52	-49	-130.4	6.1
10/10/2010	19:10:40	21.39	2.968	2.763	3.3	0.29	32.8	7.52	-48.9	-129.5	6.1
10/10/2010	19:20:40	21.39	2.967	2.763	3.2	0.28	32.8	7.52	-48.7	-130.9	6.1
10/10/2010	19:30:40	21.39	2.967	2.762	3.2	0.28	33.4	7.51	-48.5	-137.9	6.1
10/10/2010	19:40:40	21.39	2.965	2.76	3.2	0.28	32.8	7.51	-48.4	-144.5	6.1
10/10/2010	19:50:40	21.39	2.963	2.759	3.2	0.28	33.4	7.51	-48.2	-148.4	6.1
10/10/2010	20:00:40	21.39	2.963	2.758	3.2	0.28	33.4	7.5	-47.9	-155	6.1
10/10/2010	20:10:40	21.39	2.96	2.756	3.2	0.28	34.6	7.49	-47.5	-158.6	6.1
10/10/2010	20:20:40	21.39	2.959	2.755	3.2	0.28	33.4	7.49	-47.2	-160.6	6.1
10/10/2010	20:30:40	21.39	2.962	2.757	3.2	0.28	32.8	7.46	-46	-159.1	6.1
10/10/2010	20:40:40	21.39	2.965	2.76	3.2	0.28	33.4	7.46	-45.8	-164.6	6.1
10/10/2010	20:50:40	21.39	2.963	2.759	3.3	0.29	32.8	7.44	-44.9	-166.6	6.1
10/10/2010	21:00:40	21.4	2.961	2.757	3.3	0.29	32.8	7.44	-44.6	-169.4	6.1
10/10/2010	21:10:40	21.4	2.961	2.758	3.1	0.28	34.6	7.4	-42.9	-171.9	6.1
10/10/2010	21:20:40	21.39	2.977	2.772	2.5	0.22	33.4	7.4	-42.8	-182	6.1
10/10/2010	21:30:40	21.39	2.995	2.789	0.2	0.02	32.8	7.56	-50.8	-265.6	6
10/10/2010	21:40:40	21.39	3.01	2.802	-1.7	-0.14	32.8	7.66	-55.9	-284.2	6.1
10/10/2010	21:50:40	21.39	3.023	2.815	-1.9	-0.17	32.8	7.68	-56.9	-299.1	6
10/10/2010	22:00:40	21.39	3.03	2.821	-0.8	-0.07	32.8	7.65	-55.2	-297.8	6
10/10/2010	22:10:40	21.39	3.031	2.822	0.4	0.03	31.6	7.67	-56.2	-297.5	6.1
10/10/2010	22:20:40	21.39	3.034	2.825	1.3	0.12	31.6	7.69	-57	-299.1	6.1
10/10/2010	22:30:40	21.39	3.031	2.822	2.3	0.2	32.8	7.7	-57.8	-293.8	6.1
10/10/2010	22:40:40	21.39	3.023	2.814	3.2	0.28	31.6	7.69	-57.1	-292.3	6.1
10/10/2010	22:50:40	21.38	3.008	2.8	4.3	0.37	32.8	7.66	-55.7	-284.4	6.1
10/10/2010	23:00:40	21.38	3.005	2.797	5	0.44	31.6	7.61	-53.2	-273.9	6.1
10/10/2010	23:10:40	21.38	3.005	2.797	5.4	0.47	33.4	7.58	-51.8	-266.1	6
10/10/2010	23:20:40	21.38	3.002	2.794	5.8	0.51	31.6	7.55	-50.4	-258.5	6

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10/10/2010	23:30:40	21.38	3	2.793	5.9	0.51	32.8	7.52	-48.8	-257.9	6.1
10/10/2010	23:40:40	21.37	3.002	2.793	5.9 5.9	0.51	32.8	7.52 7.51	-48.5	-257.9 -259.3	6.1
10/10/2010	23:50:40	21.37	3.002	2.796	5.8	0.51	32.8	7.5	-40.5 -47.8	-259.5 -259.6	6.1
10/11/2010	0:00:40	21.37	3.004	2.798	5.7	0.51	32.8	7.47	-47.0 -46.2	-259.0 -258.1	6.1
10/11/2010	0:10:40	21.37	3.006	2.790	5. <i>1</i> 5.6	0.5	32.8	7.47 7.43	-40.2 -44.4	-256.1 -257.9	6.1
10/11/2010	0:10:40			2.805	5.6	0.49	32.6 33.4		-44.4 -43.6		6
		21.38	3.013					7.41		-256.5	
10/11/2010	0:30:40	21.38	3.018	2.809	5.6	0.49	33.4	7.4	-43.1	-258	6.1
10/11/2010	0:40:40	21.38	3.028	2.819	4.7	0.42	33.4	7.38	-41.6	-255.9	6
10/11/2010	0:50:40	21.37	3.04	2.829	5.2	0.45	34.6	7.39	-42.5	-266.8	6
10/11/2010	1:00:40	21.36	3.042	2.83	5	0.44	34.6	7.41	-43.1	-274.7	6
10/11/2010	1:10:40	21.33	3.048	2.835	4.5	0.4	34.6	7.52	-48.8	-288.2	6
10/11/2010	1:20:40	21.28	3.068	2.85	3.7	0.33	34.6	7.69	-57.1	-317	6
10/11/2010	1:30:40	21.25	3.071	2.851	3	0.26	34.6	7.78	-61.7	-325.1	6
10/11/2010	1:40:40	21.25	3.066	2.846	2.7	0.24	34.6	7.79	-62.2	-326.9	6
10/11/2010	1:50:40	21.24	3.06	2.84	2.8	0.25	34.6	7.79	-62.2	-329.5	6
10/11/2010	2:00:40	21.24	3.051	2.832	3	0.27	33.4	7.75	-60.2	-323	6
10/11/2010	2:10:40	21.24	3.044	2.826	3.1	0.27	34.6	7.74	-59.5	-322.2	6
10/11/2010	2:20:40	21.23	3.035	2.817	3.2	0.28	33.4	7.71	-58.2	-315.6	6
10/11/2010	2:30:40	21.23	3.028	2.81	3.3	0.29	34.6	7.69	-57.4	-314.5	6
10/11/2010	2:40:40	21.22	3.026	2.808	3.5	0.31	33.4	7.68	-56.6	-310.9	6
10/11/2010	2:50:40	21.22	3.017	2.8	3.6	0.32	33.4	7.67	-56	-307.8	6
10/11/2010	3:00:40	21.23	3.016	2.799	3.6	0.32	33.4	7.65	-55.2	-303.9	6
10/11/2010	3:10:40	21.24	3.014	2.798	3.7	0.33	34.6	7.64	-54.8	-299.6	6
10/11/2010	3:20:40	21.24	3.013	2.797	3.7	0.33	34.6	7.64	-54.5	-299.6	6
10/11/2010	3:30:40	21.25	3.013	2.797	3.7	0.32	33.4	7.63	-54.4	-297.9	6
10/11/2010	3:40:40	21.26	3.013	2.798	3.6	0.32	34.6	7.63	-54.3	-300.9	6
10/11/2010	3:50:40	21.27	3.014	2.799	3.6	0.31	34.6	7.63	-54	-305.5	6
10/11/2010	4:00:40	21.25	3.015	2.799	3.5	0.31	35.7	7.63	-54.3	-304.4	6
10/11/2010	4:10:40	21.21	3.008	2.79	3.5	0.31	34.6	7.61	-53	-301.3	6
10/11/2010	4:20:40	21.19	3.008	2.789	3.4	0.3	35.7	7.59	-52.2	-301.1	6
10/11/2010	4:30:40	21.19	2.999	2.781	3.3	0.29	34.6	7.58	-51.7	-297.1	6
10/11/2010	4:40:40	21.19	2.998	2.779	3.3	0.29	35.7	7.58	-51.8	-292.8	6
10/11/2010	4:50:40	21.19	2.998	2.78	3.3	0.29	34.6	7.58	-51.8	-291.1	6
10/11/2010	5:00:40	21.19	3	2.782	3.2	0.28	34.6	7.58	-51.8	-289.3	6
10/11/2010	5:10:40	21.2	3.003	2.784	3.2	0.28	34.6	7.57	-51.5	-290.5	6
10/11/2010	5:20:40	21.21	3.006	2.789	2.9	0.26	34.6	7.56	-50.8	-291.3	6
10/11/2010	5:30:40	21.22	3.016	2.798	1.6	0.14	34.6	7.57	-51.1	-312.9	6

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10/11/2010 5:40:40 21.24 3.018 2.801 1.2 0.11 34.6 7.57 -51.4 -316.8 6

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=======	======	=====	=====	=====	=====	=====	=====	===== :		======	======
Date	Time	Temp	SpCond	Cond	DOsat	DO	DOchrg	рН	рН	Orp	Battery
m/d/y	hh:mm:ss	С	mS/cm	mS/cm	%	mg/L			mV	mV	volts
10/16/2010		18.56	0.798	0.7	10.6	0.99	41.6	6.39	24	-72.9	6.3
10/16/2010		18.79	0.799	0.705	9.9	0.92		6.39	24	-91.1	6.3
10/16/2010		18.9	0.8	0.707	10.3	0.95	41	6.39	24	-82	
10/16/2010		19.01	0.799	0.707	10.1	0.93	41	6.39	24	-82.6	
10/17/2010		19.07	0.795	0.705	8.1	0.75	39.8	6.38	24.4	-97	
10/17/2010		19.08	0.796	0.706	7.6	0.7		6.37	24.8	-116.8	
10/17/2010		19.07	0.793	0.703	7.2	0.67	39.8	6.37	24.7	-125.7	
10/17/2010		19.08	0.796	0.706	6.7	0.62	39.8	6.38	24.5	-134.8	6.3
10/17/2010		19.06	0.794	0.704		0.61	39.8	6.36	25.4	-140.9	6.3
10/17/2010		19.07	0.795	0.705	6.4	0.59	39.8	6.36	25.2	-145.5	6.3
10/17/2010		19.07	0.795	0.705	6	0.56	39.8	6.36	25.2	-153.3	
10/17/2010		19.06	0.793	0.703	5.8	0.54	39.8	6.36	25.1	-158.4	
10/17/2010	1:20:40	19.07	0.793	0.703	5.6	0.51	38.7	6.36	25.3	-158.9	6.3
10/17/2010	1:30:40	19.06	0.792	0.703	5.4	0.5	38.7	6.37	25.1	-163.3	
10/17/2010	1:40:40	19.06	0.792	0.702	5.3	0.49	38.7	6.36	25.5	-163.9	6.3
10/17/2010	1:50:40	19.07	0.792	0.702	5.1	0.47	38.7	6.36	25.3	-164.5	6.3
10/17/2010	2:00:40	19.07	0.792	0.702	5.1	0.47	38.7	6.36	25.3	-165.8	6.3
10/17/2010	2:10:00	19.07	0.789	0.7	3.7	0.34	38.7	6.35	25.7	-162.8	12.1
10/17/2010	2:20:40	19.07	0.79	0.7	4.5	0.42	37.5	6.36	25.3	-167.8	6.3
10/17/2010	2:30:40	19.07	0.79	0.701	4.6	0.42	37.5	6.36	25.1	-166.9	6.3
10/17/2010	2:40:40	19.07	0.789	0.7	4.6	0.43	38.7	6.36	25.5	-168.8	6.3
10/17/2010	2:50:40	19.07	0.789	0.7	4.5	0.42	37.5	6.35	25.8	-167.9	6.3
10/17/2010	3:00:40	19.07	0.79	0.701	4.4	0.41	38.7	6.36	25.3	-163.8	6.3
10/17/2010	3:10:40	19.07	0.787	0.698	4.4	0.41	37.5	6.36	25.5	-165.3	6.3
10/17/2010	3:20:40	19.07	0.786	0.697	4.4	0.4	37.5	6.36	25.6	-173.4	6.3
10/17/2010	3:30:40	19.07	0.784	0.695	4.4	0.41	37.5	6.35	25.9	-177.6	6.3
10/17/2010	3:40:40	19.06	0.789	0.7	4.2	0.39	37.5	6.35	25.8	-177.8	6.3
10/17/2010	3:50:40	19.05	0.787	0.698	4.1	0.38	37.5	6.35	25.8	-172.4	6.3
10/17/2010	4:00:40	19.06	0.787	0.698	4.1	0.38	36.9	6.35	25.8	-163	6.3
10/17/2010	4:10:40	19.1	0.787	0.699	4.1	0.38	37.5	6.35	25.8	-151.1	6.3
10/17/2010		19.1	0.787	0.699	4.1	0.38	37.5	6.35	25.7	-152.9	6.3
10/17/2010		19.09	0.788	0.699	4	0.37	37.5	6.35	25.9	-163	
10/17/2010		19.09	0.787	0.698	4	0.37	36.9	6.35	26.1	-144.7	

10/17/2010	4:50:40	19.08	0.788	0.699	4	0.37	36.9	6.35	25.9	-150.9	6.3
10/17/2010	5:00:40	19.1	0.787	0.698	4	0.37	37.5	6.35	25.9	-136.2	6.3
10/17/2010	5:10:40	19.11	0.786	0.697	3.9	0.36	37.5	6.35	26	-140	6.3
10/17/2010	5:20:40	19.11	0.785	0.696	4	0.37	37.5	6.35	25.9	-139.5	6.3
10/17/2010	5:30:40	19.11	0.784	0.696	4	0.37	36.9	6.36	25.7	-132.9	6.3
10/17/2010	5:40:40	19.11	0.784	0.695	3.9	0.36	37.5	6.35	25.8	-135.8	6.3
10/17/2010	5:50:40	19.11	0.783	0.695	3.5	0.32	36.9	6.35	25.9	-133.9	6.3
10/17/2010	6:00:40	19.11	0.783	0.695	3.7	0.34	37.5	6.36	25.7	-140.6	6.3
10/17/2010	6:10:40	19.11	0.783	0.695	3.8	0.35	37.5	6.36	25.5	-130.7	6.3
10/17/2010	6:20:40	19.12	0.784	0.696	3.8	0.35	37.5	6.36	25.6	-129.1	6.3
10/17/2010	6:30:40	19.12	0.785	0.697	3.8	0.35	36.9	6.36	25.6	-128.2	6.3
10/17/2010	6:40:40	19.13	0.783	0.695	3.8	0.35	37.5	6.35	25.8	-136	6.3
10/17/2010	6:50:40	19.13	0.778	0.691	3.8	0.35	36.9	6.35	25.8	-131.8	6.3
10/17/2010	7:00:40	19.1	0.778	0.691	3.8	0.35	37.5	6.35	26.2	-136.8	6.3
10/17/2010	7:10:40	19.13	0.778	0.691	3.7	0.35	37.5	6.35	26.2	-118.4	6.3
10/17/2010	7:20:40	19.15	0.78	0.693	2.6	0.24	36.9	6.35	26.1	-117.4	6.3
10/17/2010	7:30:40	19.15	0.778	0.691	3.4	0.32	36.9	6.36	25.7	-138.6	6.3
10/17/2010	7:40:40	19.15	0.778	0.691	3.6	0.33	36.9	6.36	25.7	-143.1	6.3
10/17/2010	7:50:40	19.15	0.778	0.691	3.7	0.34	36.9	6.36	25.6	-136.1	6.3
10/17/2010	8:00:40	19.16	0.777	0.69	3.7	0.34	36.9	6.35	26	-134	6.3
10/17/2010	8:10:40	19.16	0.776	0.69	3.7	0.34	36.9	6.35	25.7	-137.8	6.3
10/17/2010	8:20:40	19.16	0.777	0.69	3.7	0.34	36.9	6.36	25.5	-132.6	6.3
10/17/2010	8:30:40	19.17	0.779	0.692	3.7	0.34	36.9	6.36	25.5	-133.2	6.3
10/17/2010	8:40:40	19.18	0.779	0.692	3.6	0.34	37.5	6.36	25.5	-138	6.3
10/17/2010	8:50:40	19.34	0.779	0.695	3.8	0.35	36.9	6.37	25.1	-107.7	6.3
10/17/2010	9:00:40	19.56	0.777	0.696	3.8	0.35	36.9	6.36	25.6	-128.2	6.2
10/17/2010	9:10:40	19.7	0.776	0.698	3.6	0.33	36.9	6.35	25.9	-143.8	6.3
10/17/2010	9:20:40	19.87	0.776	0.7	3.5	0.32	36.9	6.35	26.1	-153.6	6.3
10/17/2010	9:30:40	20.05	0.776	0.702	3.6	0.32	37.5	6.35	26.1	-149	6.2
10/17/2010	9:40:40	20.07	0.776	0.703	2.6	0.23	37.5	6.35	26.2	-146.2	6.2
10/17/2010	9:50:40	20.04	0.776	0.703	3.4	0.31	36.9	6.35	26.1	-144.6	6.2
10/17/2010	10:00:40	20.07	0.78	0.706	3.5	0.32	36.9	6.35	26.2	-149.7	6.2
10/17/2010	10:10:40	20.06	0.78	0.706	3.5	0.32	37.5	6.35	26.2	-147	6.3
10/17/2010	10:20:40	20.06	0.78	0.707	3.6	0.32	36.9	6.35	26.2	-146.2	6.2
10/17/2010	10:30:40	20.07	0.781	0.707	3.5	0.32	37.5	6.35	26.2	-146.8	6.2
10/17/2010	10:40:40	20.09	0.781	0.708	2.7	0.25	35.7	6.35	26.2	-147.3	6.3
10/17/2010	10:50:40	20.13	0.781	0.709	3.4	0.31	37.5	6.35	26.2	-147	6.2

10/17/2010	11:00:40	20.11	0.782	0.709	3.5	0.31	36.9	6.35	26.2	-141.2	6.2
10/17/2010	11:10:40	20.08	0.782	0.708	3.6	0.32	37.5	6.35	26.2	-139	6.2
10/17/2010	11:20:40	20.08	0.782	0.708	3.6	0.33	36.9	6.35	26.2	-139.2	6.2
10/17/2010	11:30:40	20.09	0.782	0.709	3.7	0.33	36.9	6.35	26.2	-142.6	6.2
10/17/2010	11:40:40	20.11	0.783	0.71	2.7	0.25	36.9	6.35	26.3	-144.1	6.2
10/17/2010	11:50:40	20.13	0.783	0.71	3.4	0.3	36.9	6.35	26.2	-146.1	6.2
10/17/2010	12:00:40	20.16	0.783	0.711	3.4	0.31	36.9	6.35	26.3	-149.5	6.2
10/17/2010	12:10:40	20.2	0.783	0.712	3.5	0.32	36.9	6.35	26.3	-153.7	6.2
10/17/2010	12:20:40	20.24	0.784	0.712	3.5	0.32	36.9	6.35	26.3	-153	6.2
10/17/2010	12:30:40	20.12	0.784	0.711	3.4	0.31	35.7	6.34	26.5	-163.4	6.2
10/17/2010	12:40:40	20.18	0.783	0.711	3.2	0.29	35.7	6.34	26.6	-169.2	6.2
10/17/2010	12:50:40	20.32	0.784	0.714	2.5	0.23	35.7	6.34	26.7	-171.5	6.2
10/17/2010	13:00:40	20.38	0.783	0.714	3.1	0.28	35.7	6.34	26.7	-173.6	6.2
10/17/2010	13:10:40	20.42	0.785	0.716	3.3	0.29	36.9	6.34	26.6	-177.2	6.2
10/17/2010	13:20:40	20.33	0.789	0.719	3.3	0.3	35.7	6.34	26.6	-181.2	6.2
10/17/2010	13:30:40	20.41	0.797	0.727	3.3	0.3	36.9	6.34	26.5	-190.8	6.2
10/17/2010	13:40:40	20.5	0.798	0.729	3.4	0.3	35.7	6.35	26.4	-188.7	6.2
10/17/2010	13:50:40	20.41	0.802	0.732	3.4	0.31	36.9	6.34	26.5	-190.7	6.2
10/17/2010	14:00:40	20.55	0.828	0.758	3.4	0.31	35.7	6.35	26.4	-188.5	6.2
10/17/2010	14:10:40	20.57	0.856	0.783	3.5	0.31	36.9	6.35	26.2	-189.8	6.2
10/17/2010	14:20:40	20.6	0.859	0.787	3.5	0.32	36.9	6.35	26.3	-193.9	12.1
10/17/2010	14:30:40	20.57	0.866	0.793	3.4	0.31	35.7	6.35	26.4	-189.8	6.2
10/17/2010	14:40:40	20.56	0.88	0.806	3.6	0.32	36.9	6.35	25.9	-195.8	6.2
10/17/2010	14:50:40	20.58	0.865	0.792	3.5	0.32	35.7	6.35	26.2	-197	6.2
10/17/2010	15:00:40	20.61	0.901	0.826	3.6	0.32	36.9	6.35	26.4	-194.3	6.2
10/17/2010	15:10:40	20.65	0.997	0.914	3.7	0.33	36.9	6.34	26.6	-190.6	6.2
10/17/2010	15:20:40	20.73	0.935	0.859	3.7	0.33	35.7	6.35	26.3	-193.5	6.2
10/17/2010	15:30:40	20.72	0.954	0.876	3.7	0.33	35.7	6.34	26.6	-171.4	6.2
10/17/2010	15:40:40	20.78	0.968	0.89	3.9	0.35	35.7	6.34	26.7	-154.8	6.2
10/17/2010	15:50:40	20.63	0.968	0.887	4	0.36	35.7	6.33	27	-148.2	6.2
10/17/2010	16:00:40	20.62	1	0.916	4	0.36	36.9	6.33	27.1	-166.4	6.2
10/17/2010	16:10:40	20.56	1.032	0.944	4.1	0.37	36.9	6.33	27.2	-178.2	6.2
10/17/2010	16:20:40	20.51	1.045	0.955	2.9	0.26	36.9	6.33	27.2	-189	6.2
10/17/2010	16:30:40	20.48	1.082	0.989	3.6	0.32	36.9	6.33	27	-199.7	6.2
10/17/2010	16:40:40	20.5	1.015	0.928	3.7	0.34	36.9	6.33	27.1	-197.2	6.2
10/17/2010	16:50:40	20.49	1.038	0.948	3.7	0.33	35.7	6.33	27.1	-149.8	6.2
10/17/2010	17:00:40	20.48	1.031	0.942	3.7	0.34	35.7	6.34	26.5	-162.7	6.2

10/17/2010	17:10:40	20.44	1.033	0.943	3.7	0.33	35.7	6.34	26.6	-184.8	6.2
10/17/2010	17:10:40	20.43	1.022	0.933	3.6	0.32	35.7	6.34	26.4	-184.6	6.2
10/17/2010	17:20:40	20.42	1.022	0.928	3.6	0.32	35.7	6.35	26.3	-187.1	6.2
10/17/2010	17:40:40	20.42	1.037	0.946	3.6	0.32	36.9	6.35	26.2	-201	6.2
10/17/2010	17:50:40	20.41	1.024	0.934	3.6	0.32	35.7	6.35	26.2	-208.2	6.2
10/17/2010	18:00:40	20.41	1.024	0.934	3.5	0.32	35.7	6.35	26.2	-208.8	6.2
10/17/2010	18:10:40	20.41	1.025	0.981	3.5	0.32	35.7	6.35	25.9	-211.2	6.2
10/17/2010	18:20:40	16.74	0.001	0.001	96.6	9.38	42.8	6.82	0.5	54.2	6.2
10/17/2010	18:30:40	17.64	0.001	0.001	96.7	9.22	42.8	7.28	-24.8	-5.1	6.2
10/17/2010	18:40:40	17.86	0.001	0.001	96.8	9.22	43.9	7.45	-24.0	-3.1 -1.4	6.2
10/17/2010	18:50:40	17.00	0.001	0.001	96.7	9.16	42.8	7.53	-37.9	4.3	6.2
10/17/2010	19:00:40	18.04	0.001	0.001	96.7 96.6	9.16	42.8 42.8	7.53 7.52	-37.9 -37.9	4.3 9.1	6.2
10/17/2010	19:00:40	18.09	0.001	0.001	96.6 96.5	9.14	42.8 42.8	7.32 7.49	-37.9 -35.9	12.1	6.1
10/17/2010					96.5 96.5	9.12					6.2
	19:20:40	18.08	0.001	0.001			42.8	7.46	-34.2	14.6	
10/17/2010	19:30:40	18.03	0.001	0.001	96.7	9.15	42.8	7.38	-30.3	17.2	6.2
10/17/2010	19:40:40	17.97	0.001	0.001	96.7	9.16	42.8	7.32	-26.7	19.5	6.2
10/17/2010	19:50:40	17.92	0.001	0.001	96.8	9.18	42.8	7.26	-23.6	21.5	6.1
10/17/2010	20:00:40	17.86	0.001	0.001	96.8	9.19	42.8	7.22	-21.5	23.4	6.2
10/17/2010	20:10:40	17.79	0.001	0.001	96.8	9.21	42.8	7.2	-20.3	25.3	6.2
10/17/2010	20:20:40	17.71	0.001	0.001	96.6	9.21	42.8	7.18	-19.3	27.2	6.2
10/17/2010	20:30:40	17.62	0.001	0.001	96.6	9.22	42.8	7.17	-18.8	29.2	6.1
10/17/2010	20:40:40	17.53	0.001	0.001	96.6	9.24	42.8	7.17	-18.5	31.1	6.2
10/17/2010	20:50:40	17.44	0.001	0.001	96.6	9.25	42.8	7.17	-18.5	32.9	6.1
10/17/2010	21:00:40	17.34	0.001	0.001	96.8	9.29	42.8	7.17	-18.7	34.7	6.1
10/17/2010	21:10:40	17.24	0.001	0.001	96.9	9.32	42.8	7.16	-18.1	36.7	6.1
10/17/2010	21:20:40	17.11	0.001	0.001	97	9.35	42.8	7.13	-16.4	39.2	6.1
10/17/2010	21:30:40	16.99	0.001	0.001	97	9.38	42.8	7.1	-14.8	41.3	6.1
10/17/2010	21:40:40	16.86	0.001	0.001	97.1	9.41	42.8	7.09	-14.3	42.9	6.1
10/17/2010	21:50:40	16.71	0.001	0.001	97.1	9.45	42.8	7.08	-13.9	44.4	6.2
10/17/2010	22:00:40	16.56	0.001	0.001	97	9.46	42.8	7.08	-13.5	45.9	6.1
10/17/2010	22:10:40	16.41	0.001	0.001	96.9	9.49	42.8	7.06	-12.9	47.3	6.2
10/17/2010	22:20:40	16.25	0.001	0.001	96.9	9.52	41.6	7.03	-11	49.1	6.1
10/17/2010	22:30:40	16.08	0.001	0.001	97	9.55	42.8	7	-9.6	49.7	6.2
10/17/2010	22:40:40	15.91	0.001	0.001	97	9.59	41.6	6.98	-8.4	50.2	6.1
10/17/2010	22:50:40	15.74	0.001	0.001	97.2	9.65	42.8	6.95	-6.9	50.8	6.1
10/17/2010	23:00:40	15.55	0.001	0.001	97.2	9.69	41.6	6.92	-4.9	51.6	6.1
10/17/2010	23:10:40	15.35	0.001	0.001	97.3	9.74	42.8	6.87	-2.6	52.3	6.1

10/17/2010	23:20:40	15.18	0.001	0.001	97.6	9.8	41.6	6.83	-0.1	53	6.1
10/17/2010	23:30:40	15.07	0.001	0.001	97.4	9.81	42.8	6.79	2.1	53.6	6.1
10/17/2010	23:40:40	14.92	0.001	0.001	97.6	9.86	42.8	6.75	4.2	54.6	6.1
10/17/2010	23:50:40	14.76	0.001	0.001	97.7	9.9	41.6	6.7	6.7	55.8	6.1
10/18/2010	0:00:40	14.61	0.001	0.001	97.7	9.94	41.6	6.64	9.7	57.1	6.1
10/18/2010	0:10:40	14.45	0.001	0.001	97.8	9.98	42.8	6.56	14.2	58.6	6.1
10/18/2010	0:20:40	14.3	0.001	0.001	97.8	10.01	41.6	6.52	16.4	60.5	6.1
10/18/2010	0:30:40	14.15	0.001	0.001	97.8	10.05	41.6	6.5	17.2	62.7	6.1
10/18/2010	0:40:40	13.99	0.001	0.001	97.8	10.08	42.8	6.49	17.7	64.9	6.1
10/18/2010	0:50:40	13.82	0.001	0	97.8	10.12	42.8	6.48	18.2	66.9	6.1
10/18/2010	1:00:40	13.66	0.001	0	97.8	10.15	42.8	6.47	19.1	69.5	6.1
10/18/2010	1:10:40	13.5	0.001	0	97.7	10.18	41.6	6.44	20.6	73	6.1
10/18/2010	1:20:40	13.35	0.001	0	97.5	10.19	41.6	6.41	22	75.9	6.1
10/18/2010	1:30:40	13.2	0.001	0	97.4	10.21	42.8	6.4	22.6	78	6.1
10/18/2010	1:40:40	13.06	0.001	0	97.5	10.26	41.6	6.39	22.9	80	6.1
10/18/2010	1:50:40	12.93	0.001	0	97.3	10.27	41.6	6.39	23.3	82	6.1
10/18/2010	2:00:40	12.79	0.001	0	97.5	10.32	41.6	6.37	24.1	83.8	6.1
10/18/2010	2:10:40	12.66	0.001	0	97.5	10.35	41.6	6.33	26.4	85.6	6.1
10/18/2010	2:20:40	12.53	0.001	0	97.5	10.38	41.6	6.29	28.4	87.6	6.1
10/18/2010	2:30:40	12.41	0.001	0	97.4	10.4	41.6	6.28	28.9	88.6	6.1
10/18/2010	2:40:40	12.31	0.001	0	97.4	10.42	41.6	6.29	28.5	89.4	6.1
10/18/2010	2:50:40	12.23	0.001	0	97.1	10.41	41.6	6.3	28	90.3	6.1
10/18/2010	3:00:40	12.16	0.001	0	97.2	10.44	41.6	6.3	27.6	91.2	6.1
10/18/2010	3:10:40	12.1	0.001	0	97.2	10.45	41.6	6.31	27.3	92.3	6.1
10/18/2010	3:20:40	12.05	0.001	0	97.2	10.46	41.6	6.31	27.3	93.6	6.1
10/18/2010	3:30:40	11.99	0.001	0	97.2	10.48	41.6	6.31	27.5	95.2	6.1
10/18/2010	3:40:40	11.92	0.001	0	96.9	10.47	42.8	6.3	27.6	97	6.1
10/18/2010	3:50:40	11.85	0.001	0	96.8	10.47	41.6	6.3	27.8	98.9	6.1
10/18/2010	4:00:40	11.76	0.001	0	97	10.51	41.6	6.29	28.2	100.8	6.1
10/18/2010	4:10:40	11.67	0.001	0	97	10.54	41.6	6.28	28.6	102.5	6.1
10/18/2010	4:20:40	11.56	0.001	0	96.8	10.54	41.6	6.28	29	104	6
10/18/2010	4:30:40	11.45	0.001	0	97	10.58	41.6	6.27	29.4	105.3	6.1
10/18/2010	4:40:40	11.32	0.001	0	96.8	10.6	41.6	6.27	29.5	106.3	6
10/18/2010	4:50:40	11.2	0.001	0	96.9	10.64	41.6	6.27	29.4	107.1	6
10/18/2010	5:00:40	11.1	0.001	0	97	10.67	41.6	6.27	29.3	107.7	6.1
10/18/2010	5:10:40	11.01	0.001	0	96.8	10.67	41	6.27	29.2	108.2	6.1
10/18/2010	5:20:40	10.92	0.001	0	96.9	10.71	41.6	6.27	29.1	108.7	6.1

10/18/2010	5:30:40	10.84	0.001	0	96.7	10.71	41	6.27	29	109.3	6
10/18/2010	5:40:40	10.77	0.001	0	96.6	10.72	41.6	6.28	28.8	109.7	6.1
10/18/2010	5:50:40	10.7	0.001	0	96.6	10.72	41.6	6.28	28.9	110.3	6.1
10/18/2010	6:00:40	10.64	0	0	96.6	10.74	41.6	6.27	29	111	6.1
10/18/2010	6:10:40	10.57	0	0	97	10.81	41	6.27	29.3	111.7	6.1
10/18/2010	6:20:40	10.5	0	0	97.2	10.84	41.6	6.26	29.5	112.5	6.1
10/18/2010	6:30:40	10.43	0	0	97.2	10.86	41.6	6.26	29.6	113.1	6.1
10/18/2010	6:40:40	10.36	0	0	97	10.86	41.6	6.26	29.4	113.5	6.1
10/18/2010	6:50:40	10.31	0	0	97.1	10.89	41.6	6.28	28.9	113.6	6.1
10/18/2010	7:00:40	10.27	0.001	0	97.2	10.91	41.6	6.29	27.9	113	6.1
10/18/2010	7:10:40	10.24	0.001	0	97	10.89	41	6.3	27.3	112.4	6
10/18/2010	7:20:40	10.21	0.001	0	97.2	10.92	41.6	6.31	27.1	112.2	6.1
10/18/2010	7:30:40	10.19	0.001	0	97	10.9	41.6	6.32	26.6	112.2	6.1
10/18/2010	7:40:40	10.18	0.001	0	96.9	10.89	41.6	6.28	28.6	119.2	6.1
10/18/2010	7:50:40	10.18	0.001	0	97.1	10.92	41.6	6.27	29.2	122.8	6.1
10/18/2010	8:00:40	10.19	0.001	0	97.2	10.92	41.6	6.26	29.5	124.3	6.1
10/18/2010	8:10:40	10.22	0.001	0	97	10.89	41.6	6.26	29.5	125.2	6.1
10/18/2010	8:20:40	10.82	0.001	0	101.1	11.2	41.6	6.79	1.5	110.5	6
10/18/2010	8:30:40	11.26	0.001	0	101.5	11.12	41.6	7.01	-10.2	102.2	6.1
10/18/2010	8:40:40	11.56	0.001	0	101.7	11.08	42.8	7.1	-14.6	97.8	6.1
10/18/2010	8:50:40	11.84	0.001	0	101.9	11.03	41.6	7.19	-19.5	95.2	6.1
10/18/2010	9:00:40	12.23	0.001	0	102.1	10.94	41.6	7.27	-24	92.3	6.1
10/18/2010	9:10:40	12.59	0.001	0	102	10.84	42.8	7.26	-23.5	90.9	6
10/18/2010	9:20:40	12.82	0	0	102	10.79	42.8	7.29	-24.7	90.9	6.1
10/18/2010	9:30:40	12.97	0	0	102	10.75	42.8	7.24	-22	90.3	6.1
10/18/2010	9:40:40	13.1	0	0	102	10.73	42.8	7.25	-22.6	90	6.1
10/18/2010	9:50:40	13.23	0	0	102.3	10.73	42.8	7.21	-20.4	89.9	6

## Data file for DataLogger. \_\_\_\_\_\_ COMPANY : < Company name> COMP.STATUS: Do DATE : 11/10/2010 TIME : 14:05:07 FILENAME: C:\Documents and Settings\jfrady\My Documents\DiverOffice\10-11-10\CSV\15171\_101011140507\_C9722.CSV CREATED BY: SWS Diver-Office 3.2.0.0 ============= BEGINNING OF DATA ============================= [Logger settings] Instrument type =Micro-Diver=15 Status =Started =0 Serial number =..00-C9722 215. Instrument number = =0 =15171 Location Sample period =S30 Sample method =T Number of channels =2 [Channel 1] Identification =PRESSURE =13.123 ft Reference level =57.415 ft Range Master level =0 m ft Altitude =0 [Channel 2] Identification =TEMPERATURE Reference level =-4.00 °F Range =180.00 °F

## [Series settings]

Serial number =..00-C9722 215.

Instrument number =

Location =15171

Sample period =00 00:00:30 0

Sample method =T

Start date / time =01:21:22 09/10/10 End date / time =01:18:06 11/10/10

[Channel 1 from data header]

Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m
Altitude =0 ft

[Channel 2 from data header]
Identification =TEMPERATURE

Reference level =-4.00 °F Range =180.00 °F

## [Data]

3835

Date/time	Pressure[ft Ter	mperature[	°F]
10/9/2010 22:21	34.602	70.82	
10/9/2010 22:21	34.596	70.84	
10/9/2010 22:22	34.596	70.84	
10/9/2010 22:22	34.591	70.86	
10/9/2010 22:23	34.596	70.86	
10/9/2010 22:23	34.596	70.87	
10/9/2010 22:24	34.596	70.87	
10/9/2010 22:24	34.596	70.88	
10/9/2010 22:25	34.596	70.89	
10/9/2010 22:25	34.596	70.89	
10/9/2010 22:26	34.596	70.9	
10/9/2010 22:26	34.591	70.92	
10/9/2010 22:27	34.585	70.92	
10/9/2010 22:27	34.596	70.9	

10/9/2010 22:28	34.596	70.9
10/9/2010 22:28	34.585	70.92
10/9/2010 22:29	34.596	70.93
10/9/2010 22:29	34.591	70.95
10/9/2010 22:30	34.589	70.93
10/9/2010 22:30	34.589	70.93
10/9/2010 22:31	34.591	70.95
10/9/2010 22:31	34.585	70.96
10/9/2010 22:32	34.585	70.96
10/9/2010 22:32	34.589	70.97
10/9/2010 22:33	34.589	70.97
10/9/2010 22:33	34.596	70.98
10/9/2010 22:34	34.589	70.98
10/9/2010 22:34	34.596	70.99
10/9/2010 22:35	34.589	70.99
10/9/2010 22:35	34.589	70.99
10/9/2010 22:36	34.589	70.99
10/9/2010 22:36	34.591	71.01
10/9/2010 22:37	34.596	71.03
10/9/2010 22:37	34.585	71.04
10/9/2010 22:38	34.585	71.04
10/9/2010 22:38	34.585	71.04
10/9/2010 22:39	34.589	71.03
10/9/2010 22:39	34.583	71.03
10/9/2010 22:40	34.589	71.03
10/9/2010 22:40	34.589	71.03
10/9/2010 22:41	34.589	71.03
10/9/2010 22:41	34.589	71.03
10/9/2010 22:42	34.583	71.03
10/9/2010 22:42	34.579	71.04
10/9/2010 22:43	34.579	71.05
10/9/2010 22:43	34.585	71.04
10/9/2010 22:44	34.585	71.04
10/9/2010 22:44	34.579	71.04

10/9/2010 22:45	34.585	71.04
10/9/2010 22:45	34.585	71.05
10/9/2010 22:46	34.579	71.05
10/9/2010 22:46	34.585	71.05
10/9/2010 22:47	34.585	71.05
10/9/2010 22:47	34.589	71.06
10/9/2010 22:48	34.589	71.06
10/9/2010 22:48	34.589	71.06
10/9/2010 22:49	34.589	71.06
10/9/2010 22:49	34.589	71.06
10/9/2010 22:50	34.596	71.06
10/9/2010 22:50	34.589	71.07
10/9/2010 22:51	34.583	71.07
10/9/2010 22:51	34.589	71.07
10/9/2010 22:52	34.589	71.07
10/9/2010 22:52	34.589	71.07
10/9/2010 22:53	34.589	71.08
10/9/2010 22:53	34.589	71.07
10/9/2010 22:54	34.583	71.08
10/9/2010 22:54	34.589	71.08
10/9/2010 22:55	34.589	71.08
10/9/2010 22:55	34.589	71.08
10/9/2010 22:56	34.589	71.08
10/9/2010 22:56	34.579	71.1
10/9/2010 22:57	34.583	71.08
10/9/2010 22:57	34.585	71.1
10/9/2010 22:58	34.585	71.1
10/9/2010 22:58	34.585	71.1
10/9/2010 22:59	34.585	71.1
10/9/2010 22:59	34.579	71.1
10/9/2010 23:00	34.585	71.1
10/9/2010 23:00	34.585	71.1
10/9/2010 23:01	34.585	71.1
10/9/2010 23:01	34.585	71.1

10/9/2010 23:02	34.585	71.1
10/9/2010 23:02	34.579	71.1
10/9/2010 23:03	34.585	71.04
10/9/2010 23:03	34.583	71.03
10/9/2010 23:04	34.583	71.03
10/9/2010 23:04	34.583	71.03
10/9/2010 23:05	34.589	71.03
10/9/2010 23:05	34.589	71.03
10/9/2010 23:06	34.589	71.03
10/9/2010 23:06	34.585	71.04
10/9/2010 23:07	34.585	71.04
10/9/2010 23:07	34.585	71.04
10/9/2010 23:08	34.585	71.04
10/9/2010 23:08	34.579	71.04
10/9/2010 23:09	34.579	71.05
10/9/2010 23:09	34.585	71.05
10/9/2010 23:10	34.585	71.05
10/9/2010 23:10	34.591	71.05
10/9/2010 23:11	34.591	71.05
10/9/2010 23:11	34.591	71.05
10/9/2010 23:12	34.585	71.05
10/9/2010 23:12	34.585	71.05
10/9/2010 23:13	34.589	71.06
10/9/2010 23:13	34.589	71.06
10/9/2010 23:14	34.596	71.06
10/9/2010 23:14	34.596	71.07
10/9/2010 23:15	34.596	71.07
10/9/2010 23:15	34.589	71.07
10/9/2010 23:16	34.589	71.07
10/9/2010 23:16	34.589	71.07
10/9/2010 23:17	34.596	71.07
10/9/2010 23:17	34.596	71.07
10/9/2010 23:18	34.589	71.08
10/9/2010 23:18	34.589	71.08

10/9/2010 23:19	34.589	71.08
10/9/2010 23:19	34.596	71.08
10/9/2010 23:20	34.589	71.08
10/9/2010 23:20	34.589	71.08
10/9/2010 23:21	34.589	71.08
10/9/2010 23:21	34.585	71.1
10/9/2010 23:22	34.585	71.1
10/9/2010 23:22	34.589	71.08
10/9/2010 23:23	34.585	71.1
10/9/2010 23:23	34.585	71.1
10/9/2010 23:24	34.589	71.08
10/9/2010 23:24	34.591	71.1
10/9/2010 23:25	34.591	71.1
10/9/2010 23:25	34.585	71.1
10/9/2010 23:26	34.591	71.1
10/9/2010 23:26	34.585	71.1
10/9/2010 23:27	34.591	71.1
10/9/2010 23:27	34.591	71.1
10/9/2010 23:28	34.591	71.1
10/9/2010 23:28	34.591	71.1
10/9/2010 23:29	34.591	71.1
10/9/2010 23:29	34.591	71.1
10/9/2010 23:30	34.591	71.1
10/9/2010 23:30	34.585	71.1
10/9/2010 23:31	34.585	71.1
10/9/2010 23:31	34.585	71.1
10/9/2010 23:32	34.591	71.1
10/9/2010 23:32	34.591	71.1
10/9/2010 23:33	34.585	71.1
10/9/2010 23:33	34.585	71.11
10/9/2010 23:34	34.589	71.13
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10/11/2010 5:45	34.533	70.93
10/11/2010 5:45	34.533	70.92
10/11/2010 5:46	34.539	70.92
10/11/2010 5:46	34.533	70.92
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10/11/2010 5:48	34.533	70.92
10/11/2010 5:49	34.539	70.92
10/11/2010 5:49	34.539	70.92
10/11/2010 5:50	34.545	70.92
10/11/2010 5:50	34.539	70.92
10/11/2010 5:51	34.539	70.92
10/11/2010 5:51	34.539	70.93
10/11/2010 5:52	34.539	70.92
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10/11/2010 5:53	34.539	70.93
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10/11/2010 5:54	34.539	70.93

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10/11/2010 5:55	34.539	70.93
10/11/2010 5:56	34.539	70.93
10/11/2010 5:56	34.539	70.93
10/11/2010 5:57	34.539	70.93
10/11/2010 5:57	34.539	70.93
10/11/2010 5:58	34.539	70.93
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10/11/2010 6:00	34.539	70.93
10/11/2010 6:00	34.539	70.93
10/11/2010 6:01	34.539	70.93
10/11/2010 6:01	34.545	70.93
10/11/2010 6:02	34.539	70.93
10/11/2010 6:02	34.539	70.93
10/11/2010 6:03	34.543	70.93
10/11/2010 6:03	34.539	70.93
10/11/2010 6:04	34.543	70.93
10/11/2010 6:04	34.543	70.93
10/11/2010 6:05	34.549	70.93
10/11/2010 6:05	34.543	70.93
10/11/2010 6:06	34.543	70.93
10/11/2010 6:06	34.543	70.93
10/11/2010 6:07	34.549	70.93
10/11/2010 6:07	34.543	70.93
10/11/2010 6:08	34.543	70.93
10/11/2010 6:08	34.543	70.93
10/11/2010 6:09	34.543	70.93
10/11/2010 6:09	34.543	70.93
10/11/2010 6:10	34.543	70.93
10/11/2010 6:10	34.543	70.93
10/11/2010 6:11	34.543	70.93
10/11/2010 6:11	34.549	70.93

10/11/2010 6:12	34.543	70.93
10/11/2010 6:12	34.549	70.93
10/11/2010 6:13	34.543	70.93
10/11/2010 6:13	34.543	71.07
10/11/2010 6:14	34.549	71.07
10/11/2010 6:14	34.543	70.99
10/11/2010 6:15	34.549	70.97
10/11/2010 6:15	34.539	70.96
10/11/2010 6:16	34.545	70.96
10/11/2010 6:16	34.545	70.96
10/11/2010 6:17	34.545	70.96
10/11/2010 6:17	34.549	70.98
10/11/2010 6:18	34.539	71.14

END OF DATA FILE OF DATALOGGER FOR WINDOWS

### Data file for DataLogger.

\_\_\_\_\_\_

COMPANY : <Company name>

COMP.STATUS: Do
DATE : 18/10/2010
TIME : 10:07:19

FILENAME: C:\Documents and Settings\JDillon\My Documents\DiverOffice\SA-5 site 079\CSV\14534\_101018100719\_C3122.CSV

CREATED BY: SWS Diver-Office 3.2.0.0

### [Logger settings]

Instrument type =Micro-Diver=15

Status =Started =0

Serial number =..00-C3122 215.

Instrument number =

=0

Location =14534
Sample period =S30
Sample method =T
Number of channels =2

#### [Channel 1]

Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m

Altitude =0 ft

## [Channel 2]

Identification =TEMPERATURE
Reference level =-20.00 °C
Range =100.00 °C

# [Series settings]

Serial number =..00-C3122 215.

Instrument number = Location = 14534

Sample period =00 00:00:30 0

Sample method =T

Start date / time =08:33:23 16/10/10 End date / time =38:51:05 17/10/10

[Channel 1 from data header]
Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m
Altitude =0 ft

[Channel 2 from data header]

Identification =TEMPERATURE
Reference level =-20.00 °C
Range =100.00 °C

# [Data]

758

Date/time	Pressure[ft]	Temperature[°C]
10/16/2010 23:33	36.013	20.36
10/16/2010 23:33	36.013	20.37
10/16/2010 23:34	36.007	20.38
10/16/2010 23:34	36.007	20.4
10/16/2010 23:35	36.007	20.41
10/16/2010 23:35	36.007	20.42
10/16/2010 23:36	36.007	20.43
10/16/2010 23:36	35.999	20.44
10/16/2010 23:37	35.999	20.45
10/16/2010 23:37	35.994	20.46
10/16/2010 23:38	35.999	20.47
10/16/2010 23:38	35.994	20.47
10/16/2010 23:39	35.994	20.49
10/16/2010 23:39	35.988	20.49
10/16/2010 23:40	35.988	20.5
10/16/2010 23:40	35.988	20.5

10/16/2010 23:41	35.982	20.51
10/16/2010 23:41	35.988	20.52
10/16/2010 23:42	35.988	20.52
10/16/2010 23:42	35.988	20.52
10/16/2010 23:43	35.988	20.53
10/16/2010 23:43	35.988	20.52
10/16/2010 23:44	35.988	20.52
10/16/2010 23:44	35.988	20.53
10/16/2010 23:45	35.982	20.54
10/16/2010 23:45	35.982	20.54
10/16/2010 23:46	35.976	20.54
10/16/2010 23:46	35.982	20.55
10/16/2010 23:47	35.976	20.56
10/16/2010 23:47	35.976	20.56
10/16/2010 23:48	35.971	20.56
10/16/2010 23:48	35.976	20.57
10/16/2010 23:49	35.976	20.57
10/16/2010 23:49	35.976	20.58
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10/16/2010 23:53	35.971	20.6
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10/16/2010 23:58	35.976	20.61

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10/17/2010 0:00	35.971	20.61
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10/17/2010 0:02	35.971	20.61
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10/17/2010 0:15	35.976	20.67

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36.013	20.61
	36.007 36.013 36.013 36.007 36.018 36.013 36.007 36.007 36.007 36.007 36.007 36.007 36.007

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10/17/2010 5:48	36.07	20.6

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10/17/2010 5:50	36.064	20.62
10/17/2010 5:50	36.07	20.62
10/17/2010 5:51	36.064	20.63
10/17/2010 5:51	36.059	20.63

END OF DATA FILE OF DATALOGGER FOR WINDOWS

## Data file for DataLogger.

\_\_\_\_\_\_

COMPANY : <Company name>

COMP.STATUS: Do
DATE : 18/10/2010
TIME : 13:16:38

FILENAME : C:\Documents and Settings\JDillon\My Documents\DiverOffice\SA-5 site 079\CSV\15117\_101018131638\_D6241.CSV

CREATED BY: SWS Diver-Office 3.2.0.0

## [Logger settings]

Instrument type =Micro-Diver=15

Status =Started =0

Serial number =..00-D6241 215.

Instrument number =

=0

Location =15117
Sample period =S30
Sample method =T
Number of channels =2

## [Channel 1]

Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m
Altitude =0 ft

[Channel 2]

Identification =TEMPERATURE Reference level =-20.00 °C Range =100.00 °C

## [Series settings]

Serial number =..00-D6241 215.

Instrument number = Location = 15117

Sample period =00 00:00:30 0

Sample method =T

Start date / time =00:11:06 17/10/10 End date / time =00:10:13 18/10/10

[Channel 1 from data header]
Identification =PRESSURE
Reference level =13.123 ft
Range =57.415 ft
Master level =0 m
Altitude =0 ft
[Channel 2 from data header]

Identification =TEMPERATURE
Reference level =-20.00 °C
Range =100.00 °C

[Data]

3719

Date/time	Pressure[ft]	Temperature[°C]
10/17/2010 6:11	36.039	20.26
10/17/2010 6:11	36.049	20.27
10/17/2010 6:12	36.059	20.27
10/17/2010 6:12	36.059	20.28
10/17/2010 6:13	36.059	20.28
10/17/2010 6:13	36.039	20.28
10/17/2010 6:14	36.028	20.29
10/17/2010 6:14	36.049	20.3
10/17/2010 6:15	36.049	20.31
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10/17/2010 6:16	36.049	20.34
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10/17/2010 6:22	36.049	20.37
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10/17/2010 6:59	36.049	20.38
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10/17/2010 15:51	36.443	21.04
10/17/2010 15:51	36.443	21.04
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10/17/2010 18:05	36.256	20.93
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10/17/2010 18:08	36.256	20.93
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10/17/2010 18:09	36.265	20.93
10/17/2010 18:09	36.265	20.93
10/17/2010 18:10	36.256	20.93
10/17/2010 18:10	36.256	20.93
10/17/2010 18:11	36.256	20.93
10/17/2010 18:11	36.265	20.93

END OF DATA FILE OF DATALOGGER FOR WINDOWS

========	=======	=====	=====	=====	=====		=====	=====	=======================================		======
Date	Time	Temp	SpCond	Cond	DOsat	DO	DOchrg	рН	рН	Orp	Battery
m/d/y	hh:mm:ss	С	mS/cm	mS/cm	%	mg/L			mV	mV	volts
10/9/2010	22.40.20	20.20	4 470	4.005			40.0		400	40.2	40
10/9/2010		20.26 20.14	1.172 1.168	1.065 1.059	9.4 7	0.84 0.63		6.8 6.76	-16.3 -14	-49.3 -51.1	12 6.4
10/9/2010		20.14	1.165	1.059	6.2	0.63		6.76	-14.2	-51.1 -54.8	6.4
10/9/2010		19.99	1.163			0.50		6.76	-14.2	-54.6 -53.5	6.4
10/9/2010		19.99	1.165		5.3	0.32		6.74	-13.9	-55.5 -54	
10/9/2010		19.55	1.168	1.047	4.9	0.45		6.72	-11.9	-54.9	6.3
10/9/2010		19.66	1.163		4.7	0.43		6.66	-9	-52.1	6.4
10/9/2010		19.72	1.163		4.9	0.43		6.65	-8.5	-50.3	6.3
10/9/2010		19.74	1.163		5.1	0.46		6.65	-8.1	-49.9	6.4
10/9/2010		19.72	1.162		4.8	0.44		6.64	-7.6	-50	6.3
10/9/2010		19.63	1.161	1.042	4.6	0.42		6.64	-7.7	-52.1	6.3
10/10/2010		19.62	1.16	1.041	4.5	0.41	46.9	6.64	-7.8	-54.9	6.3
10/10/2010		19.63	1.16	1.041	4.4	0.4		6.63	-7.1	-49.3	6.4
10/10/2010		19.57	1.163		4.3	0.39		6.65	-8.1	-53.3	6.3
10/10/2010		19.51	1.162			0.38		6.74	-13	-47.4	
10/10/2010		19.62	1.16	1.041	4.1	0.38		6.68	-10.1	-51.9	6.3
10/10/2010		19.66	1.161	1.042	4.1	0.37		6.65	-8.3	-43.9	6.3
10/10/2010		19.7	1.161	1.044		0.39		6.67	-9.5	-49.4	6.3
10/10/2010		19.64	1.163	1.044		0.37		6.67	-9.6	-46.5	12
10/10/2010		19.66	1.163	1.044	4.2	0.39		6.68	-9.9	-42.9	6.3
10/10/2010	1:30:40	19.53	1.163	1.042	4.1	0.38	46.9	6.69	-10.5	-48	6.3
10/10/2010	1:40:40	19.6	1.162	1.042	4.1	0.37	46.9	6.68	-9.9	-51.3	6.3
10/10/2010	1:50:40	19.62	1.161	1.042	4	0.37	46.9	6.65	-8.4	-45.4	6.3
10/10/2010	2:00:40	19.68	1.161	1.043	4	0.37	46.9	6.65	-8.3	-45.2	6.3
10/10/2010	2:10:40	19.66	1.162	1.043	3.8	0.35	46.9	6.67	-9.6	-50.2	6.3
10/10/2010	2:20:40	19.61	1.162	1.042	3.7	0.34	46.9	6.68	-9.7	-51.2	6.3
10/10/2010	2:30:40	19.64	1.165	1.046	3.6	0.33	46.9	6.66	-8.7	-50.8	6.3
10/10/2010	2:40:40	19.57	1.161	1.041	3.7	0.34	46.9	6.65	-8.4	-49.4	6.3
10/10/2010	2:50:40	19.57	1.164	1.043	3.7	0.34	46.9	6.64	-7.9	-46.1	6.3
10/10/2010		19.6	1.165	1.045	3.5	0.32		6.64	-7.6	-49.3	6.3
10/10/2010	3:10:40	19.59	1.165	1.045	3.5	0.32	46.9	6.64	-7.8	-48.5	6.3
10/10/2010	3:20:40	19.62	1.165	1.045	3.4	0.31	46.9	6.64	-7.9	-50.4	6.3
10/10/2010	3:30:40	19.58	1.163	1.043	3.3	0.3	46.9	6.64	-7.9	-51.1	6.3

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10/10/2010	3:50:40	19.68	1.162	1.044	3.4	0.31	46.9	6.62	-6.7	-48.5	6.3
10/10/2010	4:00:40	19.72	1.162	1.045	3.4	0.31	46.9	6.64	-7.8	-42.7	6.3
10/10/2010	4:10:40	19.64	1.159	1.04	3.2	0.29	46.9	6.64	-8	-49.2	6.3
10/10/2010	4:20:40	19.68	1.157	1.04	3.3	0.3	46.9	6.63	-7.5	-44.9	6.3
10/10/2010	4:30:40	19.73	1.157	1.041	3.1	0.29	48	6.63	-7.3	-45	6.3
10/10/2010	4:40:40	19.74	1.157	1.041	3.2	0.29	46.9	6.62	-6.8	-45.5	6.3
10/10/2010	4:50:40	19.72	1.161	1.044	3.1	0.28	46.9	6.64	-7.9	-51.2	6.3
10/10/2010	5:00:40	19.7	1.161	1.043	3	0.28	46.9	6.65	-8.2	-49.4	6.3
10/10/2010	5:10:40	19.68	1.158	1.041	3.1	0.28	48	6.64	-7.9	-50	6.3
10/10/2010	5:20:40	19.71	1.157	1.04	3.1	0.28	46.9	6.63	-7.1	-47.1	6.3
10/10/2010	5:30:40	19.67	1.162	1.044	3	0.28	48	6.63	-7.5	-47.9	6.3
10/10/2010	5:40:40	19.74	1.162	1.045	2.9	0.26	46.9	6.63	-7.3	-45.3	6.3
10/10/2010	5:50:40	19.8	1.161	1.046	2.8	0.25	48	6.65	-8.3	-51.3	6.3
10/10/2010	6:00:40	19.71	1.162	1.045	2.9	0.26	46.9	6.65	-8.4	-50.1	6.3
10/10/2010	6:10:40	19.77	1.161	1.045	2.8	0.25	46.9	6.63	-7.1	-46.2	6.3
10/10/2010	6:20:40	19.79	1.161	1.046	2.7	0.25	48	6.62	-7	-46.6	6.3
10/10/2010	6:30:40	19.75	1.165	1.048	2.8	0.25	48	6.65	-8.5	-51.3	6.3
10/10/2010	6:40:40	19.76	1.164	1.048	2.6	0.24	48	6.64	-7.6	-46.3	6.3
10/10/2010	6:50:40	19.77	1.165	1.048	2.7	0.24	48	6.64	-7.8	-47.1	6.3
10/10/2010	7:00:40	19.8	1.165	1.049	2.6	0.23	48	6.64	-7.9	-48	6.3
10/10/2010	7:10:40	19.78	1.165	1.049	2.6	0.24	46.9	6.65	-8.2	-48.3	6.3
10/10/2010	7:20:40	19.8	1.165	1.049	2.6	0.24	48	6.64	-7.9	-46.4	6.3
10/10/2010	7:30:40	19.81	1.165	1.049	2.6	0.24	48	6.66	-8.7	-48.9	6.3
10/10/2010	7:40:40	19.75	1.166	1.049	2.5	0.22	46.9	6.66	-8.6	-49.1	6.3
10/10/2010	7:50:40	19.72	1.165	1.048	2.5	0.23	48	6.67	-9.2	-51.2	6.3
10/10/2010	8:00:40	19.73	1.165	1.048	2.5	0.23	48	6.68	-9.9	-50.7	6.3
10/10/2010	8:10:40	19.67	1.165	1.046	2.4	0.22	48	6.67	-9.2	-47.4	6.3
10/10/2010	8:20:40	19.68	1.165	1.047	2.3	0.21	48	6.67	-9.3	-46.4	6.3
10/10/2010	8:30:40	19.74	1.165	1.048	2.3	0.21	48	6.67	-9.5	-49.1	6.3
10/10/2010	8:40:40	19.78	1.165	1.049	2.3	0.21	48	6.67	-9.2	-45.4	6.3
10/10/2010	8:50:40	19.65	1.164	1.045	2.2	0.2	48	6.68	-10	-48.8	6.3
10/10/2010	9:00:40	19.69	1.166	1.048	2.2	0.2	48	6.68	-9.7	-46.9	6.3
10/10/2010	9:10:40	19.73	1.166	1.049	2.2	0.2	48	6.68	-9.8	-44.8	6.3
10/10/2010	9:20:40	19.79	1.165	1.049	2.3	0.21	48	6.7	-10.8	-48	6.3
10/10/2010	9:30:40	19.76	1.165	1.049	2.1	0.2	48	6.69	-10.4	-47.4	6.3
10/10/2010	9:40:40	19.74	1.166	1.049	2.2	0.2	48	6.68	-9.9	-44.8	6.3

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10/10/2010												
10/10/2010   10:10:40   19.8   1.165   1.049   2.1   0.19   48   6.66   -8.9   -45.5   6.3   10/10/2010   10:20:40   19.78   1.166   1.049   2.2   0.19   48   6.66   -8.6   -8.6   -48   6.3   10/10/2010   10:30:40   19.79   1.165   1.049   2   0.19   48   6.66   -8.6   -8.6   -48   6.3   10/10/2010   10:40:40   19.77   1.166   1.049   2   0.18   48   6.66   -8.7   -51.6   6.3   10/10/2010   11:00:40   19.77   1.163   1.046   1.9   0.18   48   6.62   -6.8   -50.1   6.3   10/10/2010   11:00:40   19.77   1.163   1.047   1.9   0.17   48   6.62   -7   -50.9   6.3   10/10/2010   11:00:40   19.77   1.163   1.047   1.9   0.17   48   6.62   -6.8   -50.1   6.3   10/10/2010   11:30:40   19.77   1.163   1.047   2   0.18   48   6.62   -7   -50.9   6.3   10/10/2010   11:30:40   19.72   1.163   1.045   1.9   0.17   48   6.61   -6.3   -49.4   6.3   10/10/2010   11:50:40   19.72   1.163   1.045   2   0.19   48   6.66   -8.7   -46   6.3   10/10/2010   11:50:40   19.72   1.163   1.045   2   0.18   48   6.66   -8.7   -46   6.3   10/10/2010   12:00:40   19.62   1.164   1.046   1.9   0.18   48   6.66   -8.7   -46   6.3   10/10/2010   12:00:40   19.62   1.164   1.047   1.8   0.17   48   6.66   -8.7   -46   6.3   10/10/2010   12:20:40   19.72   1.164   1.046   1.9   0.18   48   6.66   -8.7   -46   6.3   10/10/2010   12:20:40   19.72   1.164   1.045   1.8   0.16   48   6.67   -9.3   -47.3   6.2   10/10/2010   12:30:40   19.72   1.164   1.045   1.8   0.16   48   6.67   -9.3   -47.3   6.2   10/10/2010   12:20:40   19.76   1.163   1.045   1.8   0.16   48   6.68   -9.8   -47.8   6.2   10/10/2010   13:00:40   19.68   1.163   1.045   1.8   0.16   48   6.69   -10.4   -46.4   6.2   10/10/2010   13:00:40   19.68   1.163   1.042   1.7   0.16   48   6.69   -10.4   -46.4   6.2   10/10/2010   13:00:40   19.68   1.159   1.042   1.7   0.16   48   6.69   -10.4   -46.4   6.2   10/10/2010   13:00:40   19.68   1.165   1.041   1.7   0.15   48   6.69   -10.4   -46.4   6.2   10/10/2010   13:00:40   19.68   1.165   1.041   1.7   0.15   48   6.69   -10.6	10/10/2010	9:50:40	19.77	1.165	1.049	2.2		48	6.67	-9.3	-43.8	6.3
10/10/2010   10:20:40   19:78   1.166   1.049   2.2   0.2   48   6.68   -9.9   -49.6   6.3     10/10/2010   10:30:40   19:79   1.165   1.049   2   0.19   48   6.66   -8.6   -48   6.3     10/10/2010   10:50:40   19:76   1.166   1.049   2   0.18   48   6.66   -8.7   -51.6   6.3     10/10/2010   11:00:40   19:73   1.163   1.046   1.9   0.18   48   6.62   -6.8   -50   6.3     10/10/2010   11:10:40   19:77   1.163   1.047   1.9   0.17   48   6.62   -6.8   -50.1   6.3     10/10/2010   11:20:40   19:77   1.163   1.047   1.9   0.17   48   6.62   -6.8   -50.1   6.3     10/10/2010   11:30:40   19:72   1.163   1.047   2   0.18   48   6.62   -6.8   -50.1   6.3     10/10/2010   11:40:40   19:72   1.163   1.045   2   0.19   48   6.63   -7.3   -51.8   6.3     10/10/2010   11:40:40   19:72   1.163   1.045   2   0.18   48   6.66   -9   -49.5   6.3     10/10/2010   11:50:40   19:72   1.163   1.045   2   0.18   48   6.66   -9   -49.5   6.3     10/10/2010   12:20:40   19:72   1.163   1.045   2   0.18   48   6.66   -9   -49.5   6.3     10/10/2010   12:10:40   19:72   1.164   1.046   2   0.18   48   6.66   -8.7   -46   6.3     10/10/2010   12:20:40   19:72   1.164   1.046   2   0.18   48   6.66   -8.7   -46   6.3     10/10/2010   12:20:40   19:72   1.164   1.046   1.9   0.18   48   6.66   -8.7   -46   6.2     10/10/2010   12:30:40   19:74   1.162   1.045   1.8   0.16   48   6.67   -9.3   -47.5   6.2     10/10/2010   13:00:40   19:68   1.163   1.045   1.8   0.16   48   6.69   -10.7   -48.6   6.3     10/10/2010   13:00:40   19:74   1.152   1.045   1.8   0.16   48   6.69   -10.7   -48.6   6.3     10/10/2010   13:00:40   19:74   1.158   1.041   1.7   0.16   48   6.69   -10.7   -48.6   6.3     10/10/2010   13:00:40   19:74   1.158   1.041   1.7   0.15   48   6.69   -10.6   -48.5   6.2     10/10/2010   13:00:40   19:73   1.158   1.041   1.7   0.15   48   6.69   -10.6   -48.5   6.2     10/10/2010   13:00:40   19:69   1.161   1.043   1.6   0.15   48   6.69   -10.6   -48.5   6.2     10/10/2010   14:00:40   19:69   1.161   1.043   1.7   0.1	10/10/2010	10:00:40	19.79	1.165	1.049	2.2	0.2	48	6.68	-10	-47.5	6.3
10/10/2010	10/10/2010	10:10:40	19.8	1.165	1.049	2.1	0.19	48	6.66	-8.9	-45.5	6.3
10/10/2010	10/10/2010	10:20:40	19.78	1.166	1.049	2.2	0.2	48	6.68	-9.9	-49.6	6.3
10/10/2010	10/10/2010	10:30:40	19.79	1.165	1.049	2	0.19	48	6.66	-8.6	-48	6.3
10/10/2010	10/10/2010	10:40:40	19.77	1.166	1.049	2	0.18	48	6.66	-8.9	-48.9	6.3
10/10/2010	10/10/2010	10:50:40	19.76	1.164	1.048	2.1	0.19	48	6.66	-8.7	-51.6	6.3
10/10/2010	10/10/2010	11:00:40	19.73	1.163	1.046	1.9	0.18	48	6.62	-6.8	-50	6.3
10/10/2010	10/10/2010	11:10:40	19.77	1.163		1.9	0.17	48	6.62	-7		
10/10/2010         11:40:40         19.72         1.163         1.045         1.9         0.17         48         6.61         -6.3         -49.4         6.3           10/10/2010         11:50:40         19.72         1.163         1.045         2         0.18         48         6.66         -9         -49.5         6.3           10/10/2010         12:00:40         19.62         1.164         1.046         2         0.18         48         6.66         -8.7         -47.8         6.2           10/10/2010         12:10:40         19.72         1.164         1.047         1.8         0.17         48         6.66         -8.7         -46         6.3           10/10/2010         12:20:40         19.72         1.163         1.045         1.8         0.16         48         6.67         -9.3         -47.3         6.2           10/10/2010         12:30:40         19.74         1.162         1.045         1.8         0.16         48         6.67         -9.5         -47.5         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.67         -11.1         -48.3         6.2	10/10/2010		19.77	1.163		2		48				
10/10/2010         11:50:40         19.72         1.163         1.045         2         0.18         48         6.66         -9         -49.5         6.3           10/10/2010         12:00:40         19.66         1.165         1.046         2         0.18         48         6.66         -8.7         -47.8         6.2           10/10/2010         12:10:40         19.72         1.164         1.047         1.8         0.17         48         6.66         -8.7         -46         6.3           10/10/2010         12:20:40         19.72         1.164         1.046         1.9         0.18         48         6.67         -9.3         -47.3         6.2           10/10/2010         12:30:40         19.67         1.163         1.045         1.8         0.16         48         6.67         -9.5         -47.5         6.2           10/10/2010         12:50:40         19.76         1.163         1.046         1.7         0.16         48         6.67         -11.1         -48.3         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3	10/10/2010			1.164		2		48				
10/10/2010         12:00:40         19.66         1.165         1.046         2         0.18         48         6.66         -8.7         -47.8         6.2           10/10/2010         12:10:40         19.72         1.164         1.047         1.8         0.17         48         6.66         -8.7         -46         6.3           10/10/2010         12:20:40         19.72         1.164         1.046         1.9         0.18         48         6.67         -9.3         -47.3         6.2           10/10/2010         12:30:40         19.67         1.163         1.045         1.8         0.16         48         6.67         -9.5         -47.5         6.2           10/10/2010         12:40:40         19.74         1.162         1.045         1.8         0.16         48         6.68         -9.8         -47.8         6.2           10/10/2010         13:00:40         19.76         1.163         1.046         1.7         0.16         48         6.67         -11.1         -48.3         6.2           10/10/2010         13:00:40         19.72         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3     <	10/10/2010	11:40:40	19.72	1.163	1.045	1.9	0.17	48	6.61	-6.3	-49.4	
10/10/2010         12:10:40         19.72         1.164         1.047         1.8         0.17         48         6.66         -8.7         -46         6.3           10/10/2010         12:20:40         19.72         1.164         1.046         1.9         0.18         48         6.67         -9.3         -47.3         6.2           10/10/2010         12:30:40         19.67         1.163         1.045         1.8         0.16         48         6.67         -9.5         -47.5         6.2           10/10/2010         12:40:40         19.74         1.162         1.045         1.8         0.16         48         6.68         -9.8         -47.8         6.2           10/10/2010         12:50:40         19.76         1.163         1.046         1.7         0.16         48         6.69         -10.7         -48.6         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2	10/10/2010	11:50:40	19.72	1.163	1.045	2	0.18	48	6.66	-9	-49.5	6.3
10/10/2010         12:20:40         19.72         1.164         1.046         1.9         0.18         48         6.67         -9.3         -47.3         6.2           10/10/2010         12:30:40         19.67         1.163         1.045         1.8         0.16         48         6.67         -9.5         -47.5         6.2           10/10/2010         12:40:40         19.74         1.162         1.045         1.8         0.16         48         6.68         -9.8         -47.8         6.2           10/10/2010         12:50:40         19.76         1.163         1.046         1.7         0.16         48         6.67         -11.1         -48.3         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:20:40         19.74         1.158         1.041         1.7         0.15         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2	10/10/2010		19.66	1.165				48				
10/10/2010         12:30:40         19.67         1.163         1.045         1.8         0.16         48         6.67         -9.5         -47.5         6.2           10/10/2010         12:40:40         19.74         1.162         1.045         1.8         0.16         48         6.68         -9.8         -47.8         6.2           10/10/2010         12:50:40         19.76         1.163         1.046         1.7         0.16         48         6.7         -11.1         -48.3         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:10:40         19.72         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:20:40         19.74         1.158         1.041         1.7         0.15         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.73         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2	10/10/2010	12:10:40	19.72	1.164	1.047	1.8		48	6.66	-8.7	-46	
10/10/2010         12:40:40         19.74         1.162         1.045         1.8         0.16         48         6.68         -9.8         -47.8         6.2           10/10/2010         12:50:40         19.76         1.163         1.046         1.7         0.16         48         6.7         -11.1         -48.3         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:10:40         19.72         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:20:40         19.74         1.158         1.041         1.8         0.16         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:50:40         19.68         1.159         1.041         1.8         0.16         48         6.7         -11.2         -48         6.2	10/10/2010	12:20:40	19.72	1.164	1.046	1.9		48	6.67	-9.3	-47.3	
10/10/2010         12:50:40         19.76         1.163         1.046         1.7         0.16         48         6.7         -11.1         -48.3         6.2           10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:10:40         19.72         1.159         1.042         1.7         0.16         48         6.7         -11.1         -48.1         6.2           10/10/2010         13:20:40         19.74         1.158         1.041         1.8         0.16         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:40:40         19.73         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:50:40         19.68         1.159         1.041         1.8         0.16         48         6.7         -11.2         -48         6.2	10/10/2010	12:30:40	19.67	1.163	1.045	1.8	0.16	48	6.67	-9.5	-47.5	
10/10/2010         13:00:40         19.68         1.159         1.042         1.7         0.16         48         6.69         -10.7         -48.6         6.3           10/10/2010         13:10:40         19.72         1.159         1.042         1.7         0.16         48         6.7         -11.1         -48.1         6.2           10/10/2010         13:20:40         19.74         1.158         1.041         1.8         0.16         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:40:40         19.73         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:50:40         19.68         1.159         1.041         1.8         0.16         48         6.7         -11.2         -48         6.2           10/10/2010         14:10:40         19.68         1.161         1.043         1.6         0.14         48         6.71         -11.8         -48.8         6.3	10/10/2010	12:40:40	19.74	1.162	1.045	1.8	0.16	48	6.68	-9.8	-47.8	6.2
10/10/2010       13:10:40       19.72       1.159       1.042       1.7       0.16       48       6.7       -11.1       -48.1       6.2         10/10/2010       13:20:40       19.74       1.158       1.041       1.8       0.16       48       6.69       -10.4       -46.4       6.2         10/10/2010       13:30:40       19.7       1.158       1.041       1.7       0.15       48       6.69       -10.6       -48.5       6.2         10/10/2010       13:40:40       19.73       1.158       1.041       1.7       0.15       48       6.69       -10.6       -48.5       6.2         10/10/2010       13:50:40       19.68       1.159       1.041       1.8       0.16       48       6.7       -11.2       -48       6.2         10/10/2010       14:00:40       19.62       1.163       1.043       1.6       0.15       48       6.71       -11.5       -49.2       6.2         10/10/2010       14:20:40       19.68       1.161       1.043       1.7       0.15       48       6.71       -11.7       -49.1       6.2         10/10/2010       14:30:40       19.65       1.16       1.042       1.7 <td< td=""><td>10/10/2010</td><td>12:50:40</td><td>19.76</td><td>1.163</td><td>1.046</td><td>1.7</td><td></td><td>48</td><td>6.7</td><td>-11.1</td><td></td><td></td></td<>	10/10/2010	12:50:40	19.76	1.163	1.046	1.7		48	6.7	-11.1		
10/10/2010         13:20:40         19.74         1.158         1.041         1.8         0.16         48         6.69         -10.4         -46.4         6.2           10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:40:40         19.73         1.158         1.041         1.7         0.15         48         6.68         -10.1         -45.2         6.2           10/10/2010         13:50:40         19.68         1.159         1.041         1.8         0.16         48         6.7         -11.2         -48         6.2           10/10/2010         14:00:40         19.62         1.163         1.043         1.6         0.15         48         6.71         -11.5         -49.2         6.2           10/10/2010         14:10:40         19.68         1.161         1.043         1.6         0.14         48         6.72         -11.8         -48.8         6.3           10/10/2010         14:20:40         19.69         1.161         1.043         1.7         0.15         48         6.71         -11.7         -49.1         6.2	10/10/2010		19.68	1.159		1.7		48		-10.7		
10/10/2010         13:30:40         19.7         1.158         1.041         1.7         0.15         48         6.69         -10.6         -48.5         6.2           10/10/2010         13:40:40         19.73         1.158         1.041         1.7         0.15         48         6.68         -10.1         -45.2         6.2           10/10/2010         13:50:40         19.68         1.159         1.041         1.8         0.16         48         6.7         -11.2         -48         6.2           10/10/2010         14:00:40         19.62         1.163         1.043         1.6         0.15         48         6.71         -11.5         -49.2         6.2           10/10/2010         14:10:40         19.68         1.161         1.043         1.6         0.14         48         6.72         -11.8         -48.8         6.3           10/10/2010         14:20:40         19.69         1.161         1.043         1.7         0.15         48         6.71         -11.7         -49.1         6.2           10/10/2010         14:30:40         19.65         1.16         1.042         1.7         0.16         48         6.71         -11.6         -47.1         6.2	10/10/2010	13:10:40	19.72	1.159	1.042	1.7	0.16	48	6.7	-11.1	-48.1	6.2
10/10/2010       13:40:40       19.73       1.158       1.041       1.7       0.15       48       6.68       -10.1       -45.2       6.2         10/10/2010       13:50:40       19.68       1.159       1.041       1.8       0.16       48       6.7       -11.2       -48       6.2         10/10/2010       14:00:40       19.62       1.163       1.043       1.6       0.15       48       6.71       -11.5       -49.2       6.2         10/10/2010       14:10:40       19.68       1.161       1.043       1.6       0.14       48       6.72       -11.8       -48.8       6.3         10/10/2010       14:20:40       19.69       1.161       1.043       1.7       0.15       48       6.71       -11.7       -49.1       6.2         10/10/2010       14:30:40       19.65       1.16       1.042       1.7       0.16       48       6.71       -11.6       -49.2       6.2         10/10/2010       14:40:40       19.66       1.16       1.041       1.6       0.14       48       6.69       -10.6       -47.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7 <t< td=""><td>10/10/2010</td><td>13:20:40</td><td>19.74</td><td>1.158</td><td>1.041</td><td>1.8</td><td>0.16</td><td>48</td><td>6.69</td><td>-10.4</td><td>-46.4</td><td>6.2</td></t<>	10/10/2010	13:20:40	19.74	1.158	1.041	1.8	0.16	48	6.69	-10.4	-46.4	6.2
10/10/2010         13:50:40         19.68         1.159         1.041         1.8         0.16         48         6.7         -11.2         -48         6.2           10/10/2010         14:00:40         19.62         1.163         1.043         1.6         0.15         48         6.71         -11.5         -49.2         6.2           10/10/2010         14:10:40         19.68         1.161         1.043         1.6         0.14         48         6.72         -11.8         -48.8         6.3           10/10/2010         14:20:40         19.69         1.161         1.043         1.7         0.15         48         6.71         -11.7         -49.1         6.2           10/10/2010         14:30:40         19.65         1.16         1.042         1.7         0.16         48         6.71         -11.6         -49.2         6.2           10/10/2010         14:40:40         19.66         1.16         1.041         1.6         0.14         48         6.69         -10.6         -47.1         6.2           10/10/2010         14:50:40         19.7         1.156         1.039         1.6         0.14         48         6.7         -11         -46.1         6.2     <	10/10/2010	13:30:40		1.158		1.7		48	6.69	-10.6		
10/10/2010       14:00:40       19.62       1.163       1.043       1.6       0.15       48       6.71       -11.5       -49.2       6.2         10/10/2010       14:10:40       19.68       1.161       1.043       1.6       0.14       48       6.72       -11.8       -48.8       6.3         10/10/2010       14:20:40       19.69       1.161       1.043       1.7       0.15       48       6.71       -11.7       -49.1       6.2         10/10/2010       14:30:40       19.65       1.16       1.042       1.7       0.16       48       6.71       -11.6       -49.2       6.2         10/10/2010       14:40:40       19.66       1.16       1.041       1.6       0.14       48       6.69       -10.6       -47.1       6.2         10/10/2010       14:50:40       19.7       1.156       1.039       1.6       0.14       48       6.7       -11       -46.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5 <td< td=""><td>10/10/2010</td><td>13:40:40</td><td>19.73</td><td>1.158</td><td>1.041</td><td>1.7</td><td>0.15</td><td>48</td><td>6.68</td><td>-10.1</td><td>-45.2</td><td></td></td<>	10/10/2010	13:40:40	19.73	1.158	1.041	1.7	0.15	48	6.68	-10.1	-45.2	
10/10/2010       14:10:40       19.68       1.161       1.043       1.6       0.14       48       6.72       -11.8       -48.8       6.3         10/10/2010       14:20:40       19.69       1.161       1.043       1.7       0.15       48       6.71       -11.7       -49.1       6.2         10/10/2010       14:30:40       19.65       1.16       1.042       1.7       0.16       48       6.71       -11.6       -49.2       6.2         10/10/2010       14:40:40       19.66       1.16       1.041       1.6       0.14       48       6.69       -10.6       -47.1       6.2         10/10/2010       14:50:40       19.7       1.156       1.039       1.6       0.14       48       6.7       -11       -46.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5       0.14       48       6.72       -11.8       -48.3       6.2         10/10/2010       15:20:40       19.65       1.166       1.047       1.5 <td< td=""><td>10/10/2010</td><td>13:50:40</td><td>19.68</td><td>1.159</td><td>1.041</td><td>1.8</td><td>0.16</td><td>48</td><td>6.7</td><td>-11.2</td><td>-48</td><td>6.2</td></td<>	10/10/2010	13:50:40	19.68	1.159	1.041	1.8	0.16	48	6.7	-11.2	-48	6.2
10/10/2010       14:20:40       19.69       1.161       1.043       1.7       0.15       48       6.71       -11.7       -49.1       6.2         10/10/2010       14:30:40       19.65       1.16       1.042       1.7       0.16       48       6.71       -11.6       -49.2       6.2         10/10/2010       14:40:40       19.66       1.16       1.041       1.6       0.14       48       6.69       -10.6       -47.1       6.2         10/10/2010       14:50:40       19.7       1.156       1.039       1.6       0.14       48       6.7       -11       -46.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5       0.14       48       6.72       -11.8       -48.3       6.2         10/10/2010       15:20:40       19.65       1.166       1.047       1.5       0.14       48       6.71       -11.6       -47.2       6.2         10/10/2010       15:30:40       19.69       1.166       1.048       1.5 <td< td=""><td>10/10/2010</td><td>14:00:40</td><td>19.62</td><td>1.163</td><td></td><td>1.6</td><td></td><td>48</td><td>6.71</td><td>-11.5</td><td></td><td></td></td<>	10/10/2010	14:00:40	19.62	1.163		1.6		48	6.71	-11.5		
10/10/2010       14:30:40       19.65       1.16       1.042       1.7       0.16       48       6.71       -11.6       -49.2       6.2         10/10/2010       14:40:40       19.66       1.16       1.041       1.6       0.14       48       6.69       -10.6       -47.1       6.2         10/10/2010       14:50:40       19.7       1.156       1.039       1.6       0.14       48       6.7       -11       -46.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5       0.14       48       6.72       -11.8       -48.3       6.2         10/10/2010       15:20:40       19.65       1.166       1.047       1.5       0.14       48       6.71       -11.6       -47.2       6.2         10/10/2010       15:30:40       19.69       1.166       1.048       1.5       0.13       48       6.72       -11.9       -47.2       6.2         10/10/2010       15:40:40       19.71       1.165       1.048       1.4 <td< td=""><td>10/10/2010</td><td></td><td>19.68</td><td>1.161</td><td></td><td>1.6</td><td></td><td>48</td><td></td><td>-11.8</td><td></td><td></td></td<>	10/10/2010		19.68	1.161		1.6		48		-11.8		
10/10/2010       14:40:40       19.66       1.16       1.041       1.6       0.14       48       6.69       -10.6       -47.1       6.2         10/10/2010       14:50:40       19.7       1.156       1.039       1.6       0.14       48       6.7       -11       -46.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5       0.14       48       6.72       -11.8       -48.3       6.2         10/10/2010       15:20:40       19.65       1.166       1.047       1.5       0.14       48       6.71       -11.6       -47.2       6.2         10/10/2010       15:30:40       19.69       1.166       1.048       1.5       0.13       48       6.72       -11.9       -47.2       6.2         10/10/2010       15:40:40       19.71       1.165       1.048       1.4       0.13       48       6.71       -11.3       -46.4       6.2	10/10/2010	14:20:40	19.69	1.161	1.043	1.7	0.15	48	6.71	-11.7	-49.1	6.2
10/10/2010       14:50:40       19.7       1.156       1.039       1.6       0.14       48       6.7       -11       -46.1       6.2         10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5       0.14       48       6.72       -11.8       -48.3       6.2         10/10/2010       15:20:40       19.65       1.166       1.047       1.5       0.14       48       6.71       -11.6       -47.2       6.2         10/10/2010       15:30:40       19.69       1.166       1.048       1.5       0.13       48       6.72       -11.9       -47.2       6.2         10/10/2010       15:40:40       19.71       1.165       1.048       1.4       0.13       48       6.71       -11.3       -46.4       6.2	10/10/2010	14:30:40	19.65	1.16	1.042	1.7	0.16	48	6.71	-11.6	-49.2	6.2
10/10/2010       15:00:40       19.68       1.166       1.047       1.7       0.15       48       6.71       -11.4       -47.6       6.2         10/10/2010       15:10:40       19.71       1.162       1.045       1.5       0.14       48       6.72       -11.8       -48.3       6.2         10/10/2010       15:20:40       19.65       1.166       1.047       1.5       0.14       48       6.71       -11.6       -47.2       6.2         10/10/2010       15:30:40       19.69       1.166       1.048       1.5       0.13       48       6.72       -11.9       -47.2       6.2         10/10/2010       15:40:40       19.71       1.165       1.048       1.4       0.13       48       6.71       -11.3       -46.4       6.2	10/10/2010	14:40:40		1.16		1.6		48				
10/10/2010     15:10:40     19.71     1.162     1.045     1.5     0.14     48     6.72     -11.8     -48.3     6.2       10/10/2010     15:20:40     19.65     1.166     1.047     1.5     0.14     48     6.71     -11.6     -47.2     6.2       10/10/2010     15:30:40     19.69     1.166     1.048     1.5     0.13     48     6.72     -11.9     -47.2     6.2       10/10/2010     15:40:40     19.71     1.165     1.048     1.4     0.13     48     6.71     -11.3     -46.4     6.2	10/10/2010	14:50:40	19.7	1.156	1.039	1.6		48	6.7	-11	-46.1	6.2
10/10/2010     15:20:40     19.65     1.166     1.047     1.5     0.14     48     6.71     -11.6     -47.2     6.2       10/10/2010     15:30:40     19.69     1.166     1.048     1.5     0.13     48     6.72     -11.9     -47.2     6.2       10/10/2010     15:40:40     19.71     1.165     1.048     1.4     0.13     48     6.71     -11.3     -46.4     6.2	10/10/2010	15:00:40	19.68	1.166	1.047	1.7	0.15	48	6.71	-11.4	-47.6	6.2
10/10/2010     15:30:40     19.69     1.166     1.048     1.5     0.13     48     6.72     -11.9     -47.2     6.2       10/10/2010     15:40:40     19.71     1.165     1.048     1.4     0.13     48     6.71     -11.3     -46.4     6.2	10/10/2010	15:10:40	19.71	1.162	1.045	1.5	0.14	48	6.72	-11.8	-48.3	6.2
10/10/2010 15:40:40 19.71 1.165 1.048 1.4 0.13 48 6.71 -11.3 -46.4 6.2	10/10/2010	15:20:40	19.65	1.166	1.047	1.5	0.14	48	6.71	-11.6	-47.2	6.2
	10/10/2010	15:30:40	19.69	1.166	1.048	1.5	0.13	48	6.72	-11.9	-47.2	6.2
10/10/2010 15:50:40 19.74 1.165 1.048 1.6 0.14 48 6.72 -12 -46.6 6.2	10/10/2010	15:40:40	19.71	1.165	1.048	1.4	0.13	48	6.71	-11.3	-46.4	6.2
	10/10/2010	15:50:40	19.74	1.165	1.048	1.6	0.14	48	6.72	-12	-46.6	6.2

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10/10/2010	16:00:40	19.76	1.165	1.048	1.6	0.15	48	6.72	-11.9	-46.4	6.2
10/10/2010	16:10:40	19.71	1.166	1.048	1.6	0.15	48	6.73	-12.8	-47.9	6.2
10/10/2010	16:20:40	19.67	1.166	1.048	1.5	0.14	48	6.73	-12.3	-47.9	6.2
10/10/2010	16:30:40	19.71	1.166	1.048	1.6	0.14	48	6.74	-12.9	-47.2	6.2
10/10/2010	16:40:40	19.7	1.164	1.046	1.6	0.14	48	6.74	-13	-46.6	6.2
10/10/2010	16:50:40	19.62	1.165	1.045	1.5	0.13	48	6.73	-12.7	-47.5	6.2
10/10/2010	17:00:40	19.58	1.162	1.042	1.5	0.14	48	6.74	-12.9	-47.8	6.2
10/10/2010	17:10:40	19.57	1.167	1.046	1.5	0.14	48	6.74	-13.1	-47.9	6.2
10/10/2010	17:20:40	19.7	1.165	1.047	1.6	0.14	48	6.73	-12.8	-46.3	6.2
10/10/2010	17:30:40	19.76	1.165	1.049	1.4	0.13	48	6.73	-12.8	-45.5	6.2
10/10/2010	17:40:40	19.67	1.167	1.048	1.4	0.13	48	6.67	-9.3	-48.3	6.2
10/10/2010	17:50:40	19.72	1.166	1.048	1.4	0.13	48	6.67	-9.2	-49.7	6.2
10/10/2010	18:00:40	19.67	1.166	1.047	1.3	0.12	48	6.67	-9.2	-50.4	6.2
10/10/2010	18:10:40	19.7	1.165	1.047	1.3	0.12	48	6.66	-9	-49.6	6.2
10/10/2010	18:20:40	19.65	1.164	1.045	1.4	0.13	48	6.66	-8.8	-48.5	6.2
10/10/2010	18:30:40	19.73	1.162	1.045	1.5	0.13	48	6.66	-8.7	-48.2	6.2
10/10/2010	18:40:40	19.76	1.162	1.045	1.5	0.14	48	6.66	-8.7	-48.5	6.2
10/10/2010	18:50:40	19.65	1.164	1.045	1.4	0.12	48	6.65	-8.6	-50.4	6.2
10/10/2010	19:00:40	19.7	1.16	1.043	1.4	0.13	48.6	6.66	-8.6	-50.8	6.2
10/10/2010	19:10:40	19.68	1.164	1.045	1.4	0.13	48.6	6.65	-8.5	-49.7	6.2
10/10/2010	19:20:00	19.67	1.164	1.045	1.3	0.12	48	6.62	-7	-48.8	12
10/10/2010	19:30:40	19.71	1.163	1.045	1.3	0.12	48	6.65	-8.3	-49.6	6.2
10/10/2010	19:40:40	19.72	1.163	1.046	1.3	0.12	48	6.65	-8.5	-51.2	6.2
10/10/2010	19:50:40	19.65	1.164	1.045	1.3	0.11	48	6.65	-8.5	-51	6.2
10/10/2010	20:00:40	19.68	1.162	1.044	1.3	0.12	48	6.66	-8.6	-50.4	6.2
10/10/2010	20:10:40	19.67	1.163	1.044	1.4	0.13	48	6.66	-8.7	-49.9	6.2
10/10/2010	20:20:40	19.58	1.168	1.047	1.3	0.12	48	6.66	-8.8	-51	6.2
10/10/2010	20:30:40	19.63	1.165	1.046	1.2	0.11	48	6.66	-8.7	-49.7	6.2
10/10/2010	20:40:40	19.68	1.164	1.045	1.3	0.12	48	6.66	-8.9	-49	6.2
10/10/2010	20:50:40	19.69	1.163	1.045	1.4	0.12	48	6.67	-9.3	-50.9	6.2
10/10/2010	21:00:40	19.66	1.164	1.045	1.2	0.11	48	6.65	-8.1	-49.7	6.2
10/10/2010	21:10:40	19.66	1.164	1.046	1.2	0.11	48	6.64	-7.8	-51.9	6.2
10/10/2010	21:20:40	19.68	1.163	1.045	1.2	0.11	48	6.66	-8.7	-50.9	6.1
10/10/2010	21:30:40	19.7	1.162	1.044	1.1	0.1	48	6.66	-8.7	-49.3	6.2
10/10/2010	21:40:40	19.74	1.164	1.047	1.3	0.12	48	6.66	-8.8	-47.9	6.2
10/10/2010	21:50:40	19.7	1.168	1.049	1.3	0.12	48	6.67	-9.2	-50.2	6.2
10/10/2010	22:00:40	19.7	1.167	1.048	1.2	0.11	48	6.66	-9.1	-50.4	6.1

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10/10/2010	22:10:40	19.72	1.165	1.048	1.2	0.11	48	6.66	-9	-49.3	6.1
10/10/2010	22:20:40	19.75	1.165	1.048	1.1	0.1	48	6.66	-8.9	-47.5	6.1
10/10/2010	22:30:40	19.72	1.166	1.048	1.1	0.1	48	6.66	-9.1	-50.2	6.1
10/10/2010	22:40:40	19.74	1.163	1.046	1.1	0.1	48	6.66	-8.6	-47.7	6.1
10/10/2010	22:50:40	19.74	1.162	1.045	1.1	0.1	48	6.65	-8.6	-47.7	6.1
10/10/2010	23:00:40	19.71	1.162	1.044	1.1	0.1	48	6.65	-8.5	-46.6	6.1
10/10/2010	23:10:40	19.78	1.162	1.046	1.1	0.1	48.6	6.65	-8.4	-45.8	6.1
10/10/2010	23:20:40	19.7	1.165	1.047	1.1	0.1	48	6.66	-8.7	-50	6.1
10/10/2010	23:30:40	19.73	1.165	1.048	1.1	0.1	48.6	6.65	-8.5	-47.8	6.1
10/10/2010	23:40:40	19.76	1.166	1.049	1.2	0.11	48	6.66	-8.9	-49.9	6.2
10/10/2010	23:50:40	19.63	1.167	1.048	1.2	0.11	48	6.66	-8.7	-50.1	6.1
10/11/2010	0:00:40	19.72	1.165	1.048	1.2	0.11	48	6.66	-8.8	-49.4	6.1
10/11/2010	0:10:40	19.58	1.166	1.045	1.1	0.1	48	6.66	-8.8	-50.4	6.2
10/11/2010	0:20:40	19.6	1.165	1.045	1.2	0.11	48	6.65	-8.6	-50.6	6.2
10/11/2010	0:30:40	19.62	1.163	1.043	1.2	0.11	48	6.65	-8.5	-50.8	6.1
10/11/2010	0:40:40	19.73	1.165	1.047	1.1	0.1	48.6	6.66	-8.9	-50.5	6.1
10/11/2010	0:50:40	19.7	1.166	1.048	1	0.1	48	6.66	-8.7	-47.8	6.1
10/11/2010	1:00:40	19.76	1.165	1.048	1	0.09	48	6.64	-8.1	-45	6.1
10/11/2010	1:10:40	19.75	1.167	1.05	1	0.09	48	6.65	-8.3	-48.4	6.1
10/11/2010	1:20:40	19.74	1.167	1.05	1	0.09	48	6.65	-8.4	-50.7	6.1
10/11/2010	1:30:40	19.65	1.168	1.049	1	0.09	48	6.65	-8.3	-51	6.1
10/11/2010	1:40:40	19.7	1.166	1.048	1	0.09	48	6.67	-9.4	-49.1	6.1
10/11/2010	1:50:40	19.76	1.167	1.05	1.1	0.1	48	6.68	-9.7	-47.8	6.1
10/11/2010	2:00:40	19.69	1.168	1.05	1	0.09	48	6.68	-9.9	-47.6	6.1
10/11/2010	2:10:40	19.71	1.166	1.048	1	0.09	48	6.67	-9.4	-46.5	6.1
10/11/2010	2:20:40	19.69	1.167	1.049	1.1	0.1	48	6.66	-8.9	-46.3	6.1
10/11/2010	2:30:40	19.71	1.167	1.049	1	0.09	48.6	6.66	-8.9	-49.6	6.1
10/11/2010	2:40:40	19.73	1.17	1.053	1	0.09	48	6.66	-8.8	-49.1	6.1
10/11/2010	2:50:40	19.79	1.169	1.052	1	0.09	48	6.65	-8.5	-45.6	6.1
10/11/2010	3:00:40	19.79	1.168	1.052	1.1	0.1	48	6.68	-9.8	-48.3	6.1
10/11/2010	3:10:40	19.77	1.169	1.052	1	0.09	48.6	6.68	-9.8	-47.5	6.1
10/11/2010	3:20:40	19.77	1.166	1.05	1.1	0.1	48	6.68	-9.7	-49.3	6.1
10/11/2010	3:30:40	19.74	1.167	1.049	1.1	0.1	48	6.67	-9.5	-47.7	6.1
10/11/2010	3:40:40	19.79	1.166	1.05	1	0.09	48	6.67	-9.3	-48.8	6.1
10/11/2010	3:50:40	19.77	1.164	1.048	1.1	0.1	48	6.66	-9	-46.4	6.1
10/11/2010	4:00:40	19.79	1.163	1.048	1	0.09	48	6.66	-8.7	-45.2	6.1
10/11/2010	4:10:40	19.74	1.164	1.047	1.1	0.1	48	6.66	-8.9	-48.6	6.1

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10/11/2010	4:20:40	19.75	1.163	1.046	1.1	0.1	48	6.65	-8.5	-46.5	6.1
10/11/2010	4:30:40	19.77	1.166	1.049	1	0.09	48	6.65	-8.4	-47.8	6.1
10/11/2010	4:40:40	19.81	1.166	1.05	1	0.09	48	6.65	-8.1	-45.7	6.1
10/11/2010	4:50:40	19.85	1.166	1.051	1.1	0.1	48	6.64	-7.6	-44.6	6.1
10/11/2010	5:00:40	19.82	1.166	1.05	1.1	0.1	48	6.63	-7.4	-49.6	6.1
10/11/2010	5:10:40	19.7	1.166	1.048	1	0.09	48	6.63	-7.1	-47.7	6.1
10/11/2010	5:20:40	19.76	1.164	1.048	1	0.09	48	6.63	-7.4	-48.5	6.1
10/11/2010	5:30:40	19.83	1.164	1.049	1.1	0.1	48	6.63	-7.1	-46.1	6.1
10/11/2010	5:40:40	19.87	1.163	1.049	1.1	0.1	48	6.63	-7.2	-45.9	6.1
10/11/2010	5:50:40	19.86	1.163	1.049	1	0.09	48	6.63	-7.1	-47.6	6.1
10/11/2010	6:00:40	19.84	1.164	1.049	1	0.09	48	6.62	-6.8	-45.4	6.1

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Air Monitoring Site 079 Route 440 Vehicle Corp Route 440, Jersey City, New Jersey

Location	Date	Time	со	voc	H2S	LEL	ОХҮ
079-MW-A02	10/16/2010	21:57	0	3.1	0	6	19.8
079-MW-001	10/16/2010	22:01	0	0.4	0	0	20.6
Southern Manhole	10/16/2010	23:41	0	2.4	0	0	20.9
079-MW-A02	10/17/2010	2:30	0	0.1	0	0	20.9
079-MW-001	10/17/2010	2:33	0	0	0	0	20.9
Storm Sewer	10/17/2010	3:55	0	0	0	0	20.9
079-MW-001	10/17/2010	5:15	0	0	0	0	20.9
079-MW-001	10/17/2010	7:25	0	0	0	0	20.9
079-MW-A02	10/17/2010	7:32	0	0.3	0	0	20.9
Southern Manhole	10/17/2010	7:30	0	0.5	0	0	20.9
Southern Manhole	10/17/2010	8:15	0	0.9	0	0	20.9
079-MW-A02	10/17/2010	8:20	0	1.2	0	0	20.9
079-MW-001	10/17/2010	8:25	0	0	0	0	20.9
079-MW-001	10/17/2010	9:02	0	1.1	0	0	20.9
079-MW-A02	10/17/2010	9:04	0	1.2	0	0	20.9
Southern Manhole	10/17/2010	9:08	0	0.2	0	0	20.9
079-MW-001	10/17/2010	10:20	0	1.3	0	0	20.9
079-MW-A02	10/17/2010	10:22	0	0.9	0	0	20.9
Southern Manhole	10/17/2010	11:24	0	0	0	0	20.9
Southern Manhole	10/17/2010	12:40	1	0	0	0	20.9
079-MW-A02	10/17/2010	12:45	0	0	0	0	20.9
079-MW-001	10/17/2010	12:48	0	0	0	0	20.9
Southern Manhole	10/17/2010	13:00	0	0	0	0	20.9
079-MW-001	10/17/2010	13:02	0	0	0	0	20.9
Southern Manhole	10/17/2010	12:58	0	0	0	0	20.9
079-MW-001	10/17/2010	14:08	0	0	0	0	20.9
079-MW-A02	10/17/2010	14:10	0	0	0	9	20.9
Southern Manhole	10/17/2010	14:12	0	0	0	0	20.9
079-MW-001	10/17/2010	14:47	0	0	0	0	20.9

079-MW-A02	10/17/2010	14:48	0	0	0	9	20.9
Southern Manhole	10/17/2010	14:49	0	0	0	0	20.9
Northern Manhole	10/17/2010	14:50	0	0	0	0	20.9
079-MW-A02	10/17/2010	15:24	0	0	0	5	20.9
079-MW-001	10/17/2010	15:25	0	0	0	0	20.9
Southern Manhole	10/17/2010	15:26	0	0	0	0	20.9
Northern Manhole	10/17/2010	15:27	0	0	0	0	20.9
079-MW-001	10/17/2010	16:16	0	0	0	0	20.9
Northern Manhole	10/17/2010	16:17	0	0	0	0	20.9
Southern Manhole	10/17/2010	16:18	0	0	0	4	20.9
079-MW-A02	10/17/2010	16:19	0	0	0	0	20.9
Southern Manhole	10/17/2010	16:45	1	0	0	4	20.9
Northern Manhole	10/17/2010	16:46	0	0	0	0	20.9
079-MW-A02	10/17/2010	16:47	0	0	0	0	20.9
079-MW-001	10/17/2010	16:48	0	0	0	0	20.9

079-MW-A02 10/16/2010-10/17/2010 Site 079 Route 440 Vehicle Corp Injections

Date	Time	Depth To water	
10/16/2010	)	21:50	4.99
10/16/2010	)	23:13	4.99
10/17/2010	)	1:07	4.99
10/17/2010	)	1:42	4.99
10/17/2010	)	2:01	4.98
10/17/2010	)	2:55	4.95
10/17/2010	)	3:25	4.94
10/17/2010	)	4:04	4.93
10/17/2010	)	5:08	4.9
10/17/2010	)	6:02	4.87
10/17/2010	)	7:15	4.83
10/17/2010	)	8:30	4.78
10/17/2010	)	9:35	4.4
10/17/2010	)	10:35	4.4
10/17/2010	)	11:36	4.44
10/17/2010	)	12:41	3.80
10/17/2010	)	13:25	3.80
10/17/2010	)	14:20	3.60
10/17/2010	)	15:30	4.05
10/17/2010	)	16:16	4.40

## 079-MW-001 10/16/2010-10/17/2010 Site 079 Route 440 Vehicle Corp Injections

Date	Time	Depth To water
10/16/2010	22:00	5.03
10/16/2010	22:50	5.03
10/17/2010	1:09	5.03
10/17/2010	3:27	5.03
10/17/2010	4:06	5.03
10/17/2010	5:11	5.03
10/17/2010	7:35	5.03
10/17/2010	8:40	5.01
10/17/2010	9:40	5.02
10/17/2010	10:38	4.98
10/17/2010	11:37	4.98
10/17/2010	12:45	4.98
10/17/2010	14:25	4.91
10/17/2010	16:18	4.98

## Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 4 10-16-2010-10-17-2010

					Dissolved			Depth to
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water
10/16/2010	22:15	6.37	2.56	870	3.62	20.3	-26	7.12
10/17/2010	1:21	7.28	2.58	6.02	2.84	19.19	-87	7.11
10/17/2010	2:44	7:58	2.51	361	4.91	19.04	-104	7.11
10/17/2010	4:12	7.13	2.46	253	8.13	18.32	-102	7.10
10/17/2010	6:40	6.90	2.62	347	2.00	16.88	-91	7.06
10/17/2010	7:56	7.56	2.67	>999	9.93	17.05	-129	7.05
10/17/2010	9:00	7.51	2.44	>999	2.54	20.15	-129	7.05
10/17/2010	10:00	7.82	2.46	>999	1.05	22.14	-143	7.02
10/17/2010	11:03	7.71	2.40	>999	8.53	21.68	-141	7.03
10/17/2010	12:07	7.84	2.45	>999	8.11	24.10	-150	7.03
10/17/2010	13:30	7.66	2.49	832	8.90	22.77	-135	7.03
10/17/2010	15:02	7.94	2.48	757	5.77	22.96	-170	7.03
10/17/2010	16:25	8.13	2.51	866	4.84	22.48	-169	7.05
10/17/2010	18:05	7.97	2.51	>999	1.02	22.17	-184	7.04

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 5 10-16-2010-10-17-2010

					Dissolved			Depth to
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water
10/16/2010	22:20	7.04	2.37	401	4.41	21.68	-107	6.59
10/17/2010	1:29	7.53	2.44	138	2.93	20.18	-130	6.58
10/17/2010	2:48	7.53	2.45	123	2.27	21.21	-137	6.58
10/17/2010	4:16	7.71	2.42	213	3.76	20.02	-139	6.55
10/17/2010	6:48	7.48	2.45	443	0.86	19.82	-142	6.54
10/17/2010	8:04	7.52	2.45	7.07	0.48	20.22	-142	6.54
10/17/2010	9:07	7.40	2.41	907.00	0.50	20.20	-139	6.52
10/17/2010	10:05	7.69	2.40	744.00	0.49	21.87	-156	6.52
10/17/2010	11:09	7.60	2.42	647.00	2.95	21.77	-149	6.52
10/17/2010	12:12	7.54	2.42	4.91	0.81	21.87	-137	6.51
10/17/2010	13:37	7.57	2.39	321.00	1.06	22.14	-139	6.51
10/17/2010	15:06	7.77	2.39	308.00	2.21	22.37	-161	6.51
10/17/2010	16:30	7.90	2.33	380.00	2.85	22.17	-149	6.50
10/17/2010	18:00	8.30	2.38	312.00	2.27	21.53	-235	6.50

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 6 10-16-2010-10-17-2010

				Dissolved			Depth to		
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water	<b>GW</b> Color
10/16/2010	22:25	7.25	2.47	701	6.23	21.41	-130	6.61	
10/17/2010	7.59	7.59	2.46	144	3.01	20.63	-153	6.60	
10/17/2010	2:52	7.68	2.48	304	0.6	19.35	-152	6.58	
10/17/2010	4:18	7.69	2.45	280	5.51	20.10	-148	6.57	
10/17/2010	6:53	7.80	2.44	>999	0.55	19.08	-224	6.52	
10/17/2010	8:06	8.88	2.63	852	2.37	19.79	-352	6.52	Yellow color
10/17/2010	9:15	9.07	3.65	>999	0	20.01	-428	6.52	
10/17/2010	10:11	9.10	4.29	ulfur Odors	0	19.78	-442	6.53	
10/17/2010	11:11 St	topped M	onitoring Due to	Sulfur Odo	rs				Olive Green
10/17/2010	12:19							6.53	
10/17/2010	13:45	9.25	5.50	>999	0.42	21.95	-439	6.53	
10/17/2010	15:09	9.10	3.86	>999	0	21.86	-431	6.51	
10/17/2010	16:39	8.83	2.72	898	2.65	21.73	-360	6.51	
10/17/2010	17:57	8.82	2.62	>999	6.33	21.79	-387	6.51	

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 7 10-16-2010-10-17-2010

			Dissolved Dep						
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water	
10/16/2010	22:30	7.27	2.39	787	7.11	21.83	-140	6.48	
10/17/2010	1:37	7.53	2.39	362	5.82	20.93	-158	6.47	
10/17/2010	2:59	7.65	4.41	204	4.60	20.35	-159	6.46	
10/17/2010	4:23	7.62	2.37	168	5.36	20.89	-16	6.44	
10/17/2010	7:02	7.50	2.39	334	0.89	18.41	-169	6.51	
10/17/2010	8:14	7.71	2.41	384	0.78	19.23	-202	6.40	
10/17/2010	9:17	8.15	2.31	243	1.26	19.95	-229	6.40	
10/17/2010	10:16	8.47	2.30	147	1.17	21.20	-237	6.41	
10/17/2010	11:16	8.60	2.28	523	0.00	21.30	-320	6.41	
10/17/2010	12:20	8.85	2.53	>999	8.29	21.83	-371	6.40	
10/17/2010	13:52	9.12	2.58	>999	0.00	23.33	-407	6.41	
10/17/2010	15:12	9.10	2.73	819	0.00	22.33	-403	6.40	
10/17/2010	16:39	8.91	2.56	>999	0.00	21.79	-372	6.40	
10/17/2010	17:51	8.76	2.50	>999	0.00	21.93	-364	6.41	

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 8 10-16-2010-10-17-2010

			Dissolved Depth						
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water	
10/16/2010	22:35	7.89	2.27	629	4.35	23.11	-65	6.33	
10/17/2010	1:42	8.02	2.30	281	3.35	21.70	-87	6.32	
10/17/2010	3:00	8.04	2.28	123	4.75	20.62	-78	6.32	
10/17/2010	4:30	8.29	2.33	91.8	383	19.77	-64	6.31	
10/17/2010	7:08	8.04	2.26	675	2.15	20.01	-111	6.30	
10/17/2010	8:18	8.08	2.25	637	0.77	20.06	-160	6.28	
10/17/2010	9:21	8.37	2.26	437	1.31	21.49	-197	6.27	
10/17/2010	10:20	8.49	2.26	358	2.40	21.89	-198	6.25	
10/17/2010	11:20	8.50	2.23	183	0.49	22.58	-199	6.25	
10/17/2010	12:27	8.71	2.21	165	0.98	21.87	-228	6.25	
10/17/2010	14:00	8.88	2.22	85.7	2.87	22.70	-244	6.30	
10/17/2010	15:18	8.73	2.16	181	2.61	22.54	-234	6.26	
10/17/2010	16:43	8.79	2.13	202	2.35	21.79	-230	6.26	
10/17/2010	17:50	8.38	2.17	186	3.46	22.40	-118	6.26	

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 9 10-16-2010-10-17-2010

			Dissolved Depth to						
Date	Time	рΗ	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water	
10/16/2010	22:40	8.04	2.25	399	3.93	21.82	43	6.13	
10/17/2010	1:44	8.21	2.36	219	5.86	19.97	64	6.11	
10/17/2010	3:06	8.14	2.35	98.7	5.18	20.89	19	6.11	
10/17/2010	4:34	8.25	2.40	46.4	4.67	21.21	10	6.11	
10/17/2010	7:11	7.98	2.42	160	1.53	20.12	-114	6.10	
10/17/2010	8:25	8.13	2.40	229	1.47	20.43	-158	6.10	
10/17/2010	9:26	8.35	2.39	135	1.02	2.42	-182	6.06	
10/17/2010	10:25	8.35	2.35	124	5.35	21.68	-175	6.05	
10/17/2010	11:25	8.35	2.37	155	1.90	22.08	-171	6.06	
10/17/2010	12:32	8.39	2.38	157	1.70	22.98	-192	6.03	
10/17/2010	14:05	8.56	2.19	64.8	3.24	24.44	-197	6.04	
10/17/2010	15:23	8.40	2.25	91.4	4.02	22.93	-204	6.10	
10/17/2010	16:49	8.33	2.30	97.4	8.85	22.53	-186	6.05	
10/17/2010	17:46	8.33	2.35	173	9.23	22.00	-118	6.05	

## Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 1 10-09-2010 thru 10-11-2010

					Dissolved	Depth to			
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water	
10/10/2010	12:38	7.55	2.06	517	2.31	21.31	-88	6.91	
10/10/2010	4:12	7.56	2.19	321	2.21	21.14	-112	6.91	
10/10/2010	5:36	7.54	2.33	130	2.90	19.38	-91	6.91	
10/10/2010	6:30	7.55	2.27	144	1.63	18.77	-51	6.91	
10/10/2010	7:30	7.53	2.20	236	1.55	17.21	-103	6.91	
10/10/2010	8:30	7.67	2.29	>999	2.07	19.25	47	6.91	Very turbid
10/10/2010	9:30	7.34	2.17	>999	2.34	19.78	-73	6.90	
10/10/2010	10:45	7.53	2.20	240	1.45	20.50	-104	6.86	
10/10/2010	12:00	7.63	2.13	225	1.52	22.10	-96	6.87	
10/10/2010	12:57	7.60	2.19	145	1.58	23.26	-103	6.85	
10/10/2010	14:30	7.37	2.22	64.3	1.75	24.15	-111	6.85	
10/10/2010	15:30	7.70	2.12	154	1.74	24.11	-111	6.85	
10/10/2010	16:27	7.60	2.18	66.6	1.97	23.70	-38	6.85	
10/10/2010	16:50	7.60	2.24	289	2.01	22.20	-93	6.85	
10/10/2010	17:30	7.62	2.36	172	4.57	22.48	-53	6.85	
10/10/2010	18:26	7.42	2.21	9.22	1.32	22.28	-101	6.84	
10/10/2010	19:47	7.58	2.06	94.7	4.21	21.40	-69	6.83	
10/10/2010	20:45	7.54	2.31	85.7	3.01	21.80	-75	6.84	
10/10/2010	22:15	7.29	2.25	60.5	4.31	22.13	-114	6.80	
10/10/2010	23:14	7.31	2.12	48.5	4.78	21.13	-95	6.87	
10/11/2010	0:30	7.61	2.27	125	4.60	22.57	-109	6.78	
10/11/2010	1:35	7.45	2020.00	91.8	3.81	21.98	-89	6.78	
10/11/2010	2:39	7.47	2.17	154	4.38	20.11	-113	6.78	
10/11/2010	4:01	7.49	2.30	58.6	4.10	21.70	-123	6.79	
10/11/2010	4:45	7.70	2.25	91.7	5.15	19.75	-121	6.79	

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 2 10-9-2010 thru 10-11-2010

					Dissolved			Depth to
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water
10/10/2010	12:15	6.96	2.58	559	2.03	21.56	-77	6.03
10/10/2010	4:09	7.47	2.63	404	1.13	20.87	-115	6.03
10/10/2010	5:24	7.48	2.63	520	0.94	20.86	-125	6.03
10/10/2010	6:36	7.44	2.57	678	1.24	20.53	-120	6.03
10/10/2010	7:36	7.36	2.5	788	1.03	17.92	-116	6.00
10/10/2010	8:37	7.37	2.47	301	0.94	18.8	-93	6.00
10/10/2010	9:48	7.35	2.55	454	2.02	19.26	-106	5.98
10/10/2010	10:55	7.36	2.53	396	1.59	20.85	-109	5.96
10/10/2010	12:05	7.36	2.51	243	1.60	22.25	-113	5.96
10/10/2010	13:05	7.42	2.54	177	2.03	21.95	-110	5.98
10/10/2010	14:42	7.35	2.55	375	1.53	22.62	-108	5.97
10/10/2010	15:37	7.63	2.61	347	2.03	22.62	-117	5.98
10/10/2010	16:36	7.54	2.58	214	1.82	22.12	-117	5.95
10/10/2010	17:34	7.48	2.46	259	2.40	21.99	-109	5.93
10/10/2010	18:32	7.40	2.57	149	0.80	21.82	-114	5.95
10/10/2010	19:53	7.48	2.52	208	2.25	21.85	-101	5.95
10/10/2010	20:50	7.53	2.5	95.1	0.93	21.79	-105	5.94
10/10/2010	22:09	7.19	5.54	167	3.91	21.99	-125	5.92
10/10/2010	23:18	7.33	2.57	185	5.16	21.47	-168	5.91
10/11/2010	0:23	7.51	2.69	212	5.10	21.91	-167	5.91
10/11/2010	1:39	7.40	2.71	151	3.87	20.89	-159	5.91
10/11/2010	2:47	7.47	2.65	217	3.45	20.59	-154	5.89
10/11/2010	3:58	7.52	2.65	137	3.64	20.82	-175	5.9
10/11/2010	4:47	7.41	2.63	180	2.65	21.20	-174.00	5.91

Site 079 Route 440 Vehicle Injection Pilot Study Temporary Well Point 3 10-9-2010 thru 10-11-2010

					Dissolved			Depth to
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP	Water
10/9/2010	11:58	6.31	2.70	>999	2.49	20.95	-9	5.98
10/10/2010	4:05	7.20	2.68	358	1.23	20.15	-128	5.98
10/10/2010	5:18	7.36	2.69	278	1.19	19.27	-115	5.94
10/10/2010	7:00	7.22	2.61	>999	2.95	17.20	-107	5.92
10/10/2010	7:50	7.24	2.66	454	0.83	18.62	-101	5.93
10/10/2010	8:42	7.36	2.69	>999	0.66	19.46	-108	5.93
10/10/2010	9:52	7.25	2.67	888	0.93	21.42	-109	5.91
10/10/2010	11:03	7.25	2.62	782	0.50	22.20	-112	5.90
10/10/2010	12:13	7.24	2.64	285	1.62	22.07	-110	5.91
10/10/2010	13:10	7.45	2.65	423	1.83	22.53	-111	5.93
10/10/2010	14:50	7.07	2.67	239	1.05	23.06	-99	5.91
10/10/2010	15:42	7.44	2.62	809	1.71	22.56	-116	5.89
10/10/2010	16:45	7.46	2.64	599	1.47	22.64	-125	5.91
10/10/2010	17:39	7.48	2.58	289	2.48	21.61	-100	5.91
10/10/2010	18:35	7.37	2.63	553	0.42	22.33	-117	5.86
10/10/2010	19:58	7.53	2.60	674	0.52	22.50	-123	5.87
10/10/2010	20:55	7.29	2.53	483	2.65	22.81	-104	5.87
10/10/2010	22:04	7.21	2.61	469	3.27	21.23	-114	5.84
10/10/2010	23:23	7.42	2.62	391	4.61	22.25	-138	5.83
10/11/2010	0:21	7.30	2.65	413	2.45	20.95	-127	5.83
10/11/2010	1:40	7.38	2.60	501	3.08	21.85	-113	5.83
10/11/2010	2:49	7.62	2.60	244	3.01	21.81	-151	5.83
10/11/2010	3:55	7.45	2.63	341	4.83	19.85	-140	5.83
10/11/2010	4:51	7.50	2.64	269	3.35	20.42	-137	5.83

# Site 079 Route 440 Vehicle Injection Pilot Study Southern Sanitary Sewer 10-9-2010 thru 10-11-2010

					Dissolved		
Date	Time	рН	Conductivity	Turbidity	Oxygen	Temerature	ORP
10/10/2010	3:50	7.55	1.43	4.20	17.8	5.08	-10
10/10/2010	5:04	7.63	1.41	4.00	17.82	8.19	-21
10/10/2010	6:44	7.68	1.42	6.60	18.38	9.12	-48
10/10/2010	7:47	7.66	1.42	6.80	18.3	5.98	-53
10/10/2010	8:54	7.59	1.42	8.30	18.48	6.16	-46
10/10/2010	10:04	7.61	1.43	6.10	18.69	5.25	-43
10/10/2010	11:05	7.69	1.47	11.90	18.83	7.96	-48
10/10/2010	12:20	7.71	1.41	13.10	20.26	6.07	-54
10/10/2010	13:05	7.69	1.46	6.30	20.44	7.05	-72
10/10/2010	14:55	7.73	1.44	12.20	20.56	5.50	-41
10/10/2010	15:52	7.69	1.40	11.50	20.87	5.71	-74
10/10/2010	16:48	7.67	1.38	15.20	20.66	8.20	-81
10/10/2010	17:42	7.68	1.38	13.10	20.37	7.19	-79
10/10/2010	18:41	7.46	1.42	21.10	19.57	6.24	-71
10/10/2010	20:03	7.67	1.43	18.70	21.18	5.35	-67
10/10/2010	21:14	7.05	1.48	1.60	19.8	5.92	-35
10/10/2010	23:28	7.43	1.48	5.70	20.7	6.47	-60
10/11/2010	1:10	7.54	1.41	3.90	19.82	5.41	-66
10/11/2010	2:15	7.52	1.40	2.50	19.31	6.34	-78
10/11/2010	4:29	7.89	1.58	4.38	19.05	4.21	-151

079-MW-A02 10/09/2010 thru 10/11/2010 Site 079 Route 440 Vehicle Corp Injections

Date	Time		Depth To water	
10/9/20	10	21:45		4.91
10/10/20	10	3:30		4.91
10/10/20	10	19:30		4.91
10/10/20	10	20:43		4.89
10/10/20	10	21:26		4.91
10/10/20	10	22:40		4.87
10/10/20	10	23:34		4.87
10/11/20	10	0:33		4.86
10/11/20	10	1:00		4.87
10/11/20	10	1:41		4.87
10/11/20	10	1:52		4.87
10/11/20	10	2:10		4.87
10/11/20	10	2:33		4.86
10/11/20	10	4:05		4.87
10/11/20	10	5:34		4.91

Note: No manual readings from (9:45 on 10/9/2010 until 3:30 on 10/10/2010 due to monitoring well being under car

079-MW-001 10/9/2010-10/11/2010 Site 079 Route 440 Vehicle Corp Injections

Date		Time	Depth to Water
	10/9/2010	23:13	5.31
	10/10/2010	2:57	5.31
	10/10/2010	3:17	5.25
	10/10/2010	3:34	5.19
	10/10/2010	4:24	5.14
	10/10/2010	4:46	5.08
	10/10/2010	4:59	5.07
	10/10/2010	5:38	4.96
	10/10/2010	6:10	4.93
	10/10/2010	7:08	4.95
	10/10/2010	7:55	4.95
	10/10/2010	8:30	4.95
	10/10/2010	8:57	4.70
	10/10/2010	9:50	4.71
	10/10/2010	10:50	4.65
	10/10/2010	11:30	4.64
	10/10/2010	11:49	4.62
	10/10/2010	12:45	4.68
	10/10/2010	14:20	4.65
	10/10/2010	15:09	4.62
	10/10/2010	15:52	4.40
	10/10/2010	16:17	4.30
	10/10/2010	16:50	4.02
	10/10/2010	17:20	4.05
	10/10/2010	17:50	4.22
	10/10/2010	18:23	4.30
	10/10/2010	18:40	4.30
	10/10/2010	19:34	4.31
	10/10/2010	20:20	4.07

10/10/2010	20:42	3.98
10/10/2010	21:20	4.03
10/10/2010	21:55	4.02
10/10/2010	22:36	3.99
10/10/2010	23:11	4.03
10/11/2010	0:16	4.22
10/11/2010	1:00	3.92
10/11/2010	1:31	3.79
10/11/2010	1:54	3.67
10/11/2010	2:22	3.67
10/11/2010	2:53	3.87
10/11/2010	4:38	3.57
10/11/2010	5:18	3.47
10/11/2010	5:32	3.57

# Site 079 Route 440 Vehicle Injection Pilot Study Southern Manhole 10-16-2010 thru 10-17-2010

# Dissolved ORP рΗ **Conductivity Turbidity** Oxygen Date Time **Temerature** 10/16/2010 23:50 8.05 6.72 1.25 14.6 16.95 -31 1.29 6.47 -43 10/17/2010 1:55 8.44 15.7 18.31 10/17/2010 3:35 8.62 1.30 82.1 5.04 17.69 -163 10/17/2010 4:38 8.67 18.23 9.12 1.36 437 -215 10/17/2010 7:20 9.02 1.37 408 3.11 16.82 -213 10/17/2010 8:30 9.07 1.32 403 9.03 17.20 -215 10/17/2010 9:32 9.33 1.48 753 0 18.95 -288 10/17/2010 10:32 9.08 1.34 360 6.90 19.27 -233 10/17/2010 19.62 -305 11:31 9.44 1.48 >999 9.10 10/17/2010 9.40 7.00 20.57 -265 12:38 1.46 0.71 10/17/2010 9.02 1.22 417 3.29 21.51 -182 13:25 10/17/2010 14:16 9.33 1.28 728 2.25 20.56 -250 10/17/2010 14:51 9.58 1.55 >999 0 20.66 -374 10/17/2010 16:05 9.38 1.44 841 1.15 21.38 -283

========	=======	=====	======	=====	=====	=====	=====	===== :			======
Date	Time	Temp	SpCond	Cond	DOsat	DO	DOchrg	рН	рН	Orp	Battery
m/d/y	hh:mm:ss	С	mS/cm	mS/cm	%	mg/L			mV	mV	volts
10/16/2000	23:00:00	20.4	2.242	2.045	8.4	0.76	49.8	 8.24	-58.2	 -163.2	6.3
10/16/2000		20.4				0.76		8.41	-36.2 -66.7	-163.2	6.3
10/16/2000		20.56				0.31		8.46	-69	-185.1	6.4
10/16/2000		20.56				0.23		8.46	-68.9	-193.8	6.4
10/16/2000		20.64				0.20		8.41	-66.8	-184.7	6.4
10/16/2000		20.67			2.1	0.18		8.31	-61.7	-159.8	6.3
10/17/2000		20.7			1.8	0.16		8.31	-61.4	-150.8	6.3
10/17/2000		20.72			1.9	0.17		8.31	-61.5	-146.6	6.3
10/17/2000		20.74			2.3	0.2		8.33	-62.8	-148.6	6.3
10/17/2000		20.76			2.6	0.23		8.33	-62.6	-143.5	6.3
10/17/2000		20.77				0.28		8.33	-62.5	-132.2	6.3
10/17/2000		20.79				0.32		8.33	-62.4	-121.8	6.4
10/17/2000		20.8				0.32		8.32	-62.1	-114.4	6.3
10/17/2000	1:10:40	20.81	2.233	2.054	3.5	0.31	60.9	8.34	-63.1	-119.4	6.3
10/17/2000	1:20:40	20.82	2.233	2.055	3.5	0.31	60.9	8.36	-64.1	-129.5	6.3
10/17/2000	1:30:40	20.83	2.233	2.055	3.5	0.31	60.9	8.36	-64.3	-127.9	6.3
10/17/2000	1:40:40	20.84	2.233	2.056	3.4	0.3	60.4	8.37	-64.6	-135.1	6.3
10/17/2000	1:50:40	20.85	2.233	2.056	3.2	0.28	59.2	8.38	-64.9	-144.7	6.3
10/17/2000	2:00:40	20.86	2.233	2.056	3	0.27	58	8.37	-64.4	-143.5	6.3
10/17/2000	2:10:40	20.87	2.233	2.056	2.8	0.25	56.8	8.36	-63.9	-139.9	6.3
10/17/2000		20.87		2.056		0.13		8.27	-59.4	-131	6.3
10/17/2000	2:30:40	20.88		2.055		0.19		8.34	-63.1	-132.8	6.3
10/17/2000		20.88				0.18		8.39	-65.5	-149.8	6.3
10/17/2000		20.88				0.18		8.39	-65.5	-158.5	6.3
10/17/2000		20.89				0.18		8.37	-64.8	-154.5	6.3
10/17/2000		20.89				0.18		8.36	-64	-146.2	6.3
10/17/2000		20.89				0.2		8.37	-64.6	-147.9	6.3
10/17/2000		20.89				0.19		8.38	-65.1	-154.7	6.3
10/17/2000		20.89				0.21	55.1	8.37	-64.8	-154	6.3
10/17/2000		20.89				0.18		8.36	-64	-147	6.3
10/17/2000		20.89				0.21	55.1	8.36	-64	-146	6.3
10/17/2000		20.9				0.22		8.35	-63.8	-141.3	6.3
10/17/2000	4:20:40	20.9	2.23	2.055	2.1	0.19	53.9	8.34	-63.1	-134.1	6.3

10/17/2000	4:30:40	20.9	2.23	2.056	2.5	0.22	53.9	8.34	-63	-129.1	6.3
10/17/2000	4:40:40	20.9	2.231	2.056	2.2	0.19	52.7	8.34	-62.9	-127.3	6.3
10/17/2000	4:50:40	20.9	2.231	2.056	2	0.18	52.1	8.35	-63.8	-134.6	6.3
10/17/2000	5:00:40	20.9	2.231	2.056	1.9	0.17	51	8.36	-64	-140.1	6.3
10/17/2000	5:10:40	20.9	2.232	2.057	1.9	0.17	51	8.36	-64.3	-144	6.3
10/17/2000	5:20:40	20.9	2.232	2.057	2.2	0.2	52.1	8.37	-64.4	-144.8	6.3
10/17/2000	5:30:40	20.9	2.232	2.057	2.3	0.21	52.1	8.37	-64.8	-146.4	6.3
10/17/2000	5:40:40	20.9	2.232	2.058	2.1	0.18	51	8.37	-64.8	-147	6.3
10/17/2000	5:50:40	20.9	2.233	2.058	2.3	0.2	52.1	8.37	-64.8	-145.9	6.3
10/17/2000	6:00:40	20.9	2.234	2.059	2.5	0.22	52.1	8.35	-63.4	-137.9	6.3
10/17/2000	6:10:40	20.91	2.234	2.059	2.6	0.23	51	8.34	-63.2	-126.1	6.3
10/17/2000	6:20:40	20.89	2.235	2.059	2.1	0.19	51	8.4	-66.2	-165.4	6.3
10/17/2000	6:30:40	20.89	2.235	2.059	1.9	0.16	51	8.38	-65	-159.3	6.3
10/17/2000	6:40:40	20.89	2.235	2.059	1.8	0.16	51	8.39	-65.9	-162.7	6.3
10/17/2000	6:50:40	20.89	2.234	2.059	1.8	0.16	49.8	8.39	-65.8	-158.4	6.3
10/17/2000	7:00:40	20.89	2.235	2.059	2.1	0.19	51	8.35	-63.8	-143.2	6.3
10/17/2000	7:10:40	20.89	2.235	2.059	2	0.18	49.8	8.35	-63.5	-135.8	6.3
10/17/2000	7:20:40	20.89	2.235	2.059	2	0.18	49.8	8.36	-63.9	-136	6.3
10/17/2000	7:30:40	20.89	2.234	2.058	2	0.18	49.8	8.35	-63.7	-135.3	6.3
10/17/2000	7:40:40	20.9	2.232	2.057	2.2	0.19	49.8	8.34	-63.1	-137.7	6.3
10/17/2000	7:50:40	20.89	2.231	2.056	2.2	0.2	49.8	8.4	-65.9	-151.2	6.3
10/17/2000	8:00:40	20.89	2.23	2.055	2.2	0.19	51	8.41	-66.7	-161.3	6.3
10/17/2000	8:10:40	20.9	2.229	2.054	1.9	0.17	49.8	8.41	-66.6	-165.8	6.3
10/17/2000	8:20:40	20.9	2.228	2.053	1.8	0.16	49.8	8.41	-66.4	-168.9	6.3
10/17/2000	8:30:40	20.89	2.228	2.053	1.7	0.15	48.6	8.42	-67.1	-174.9	6.3
10/17/2000	8:40:00	20.89	2.228	2.053	1.5	0.14	48.6	8.38	-65.1	-175.3	6.3
10/17/2000	8:50:40	20.89	2.228	2.053	1.9	0.17	48.6	8.41	-66.5	-181	6.3
10/17/2000	9:00:40	20.89	2.228	2.053	2	0.18	49.8	8.4	-66	-180.5	6.3
10/17/2000	9:10:40	20.88	2.228	2.053	2.2	0.19	51	8.39	-65.6	-178.8	6.3
10/17/2000	9:20:40	20.88	2.228	2.053	2	0.18	48.6	8.39	-65.6	-179.4	6.3
10/17/2000	9:30:40	20.88	2.228	2.053	1.9	0.17	49.8	8.39	-65.9	-182.2	6.3
10/17/2000	9:40:40	20.88	2.228	2.053	2.1	0.19	49.8	8.4	-66	-183.2	12.3
10/17/2000	9:50:40	20.88	2.229	2.053	1.9	0.17	48	8.39	-65.6	-182.9	6.3
10/17/2000	10:00:40	20.88	2.23	2.054	1.7	0.15	48	8.39	-65.7	-182.9	6.3
10/17/2000	10:10:40	20.88	2.231	2.055	1.8	0.16	48	8.39	-65.6	-181.2	6.3
10/17/2000	10:20:40	20.87	2.232	2.056	1.5	0.14	48.6	8.38	-64.9	-176.1	6.3
10/17/2000	10:30:40	20.87	2.233	2.057	1.4	0.13	48.6	8.38	-65.1	-175	6.3

10/17/2000	10:40:40	20.87	2.234	2.057	1.4	0.13	46.9	8.36	-64.3	-174.3	6.3
10/17/2000	10:50:40	20.87	2.235	2.059	1.4	0.12	48	8.39	-65.4	-176.3	6.2
10/17/2000	11:00:40	20.87	2.236	2.06	1.4	0.13	48	8.4	-66.3	-182.4	6.3
10/17/2000	11:10:40	20.87	2.238	2.062	1.4	0.13	48.6	8.42	-67.1	-188.9	6.3
10/17/2000	11:20:40	20.87	2.24	2.063	1.4	0.13	48.6	8.43	-67.4	-190.7	6.3
10/17/2000	11:30:40	20.87	2.241	2.064	1.5	0.13	48.6	8.43	-67.6	-190.1	6.3
10/17/2000	11:40:40	20.87	2.243	2.066	1.1	0.1	45.7	8.4	-66.3	-189.6	6.2
10/17/2000	11:50:40	20.86	2.244	2.067	1.3	0.12	48	8.44	-68	-193	6.3
10/17/2000	12:00:40	20.86	2.246	2.068	1.7	0.15	48	8.45	-68.8	-194.8	6.2
10/17/2000	12:10:40	20.86	2.247	2.07	1.6	0.14	48.6	8.46	-69.2	-194.7	6.3
10/17/2000	12:20:40	20.86	2.248	2.071	1.8	0.16	48.6	8.46	-69.2	-194.5	6.2
10/17/2000	12:30:40	20.86	2.249	2.072	2	0.17	49.8	8.46	-69	-192.2	6.2
10/17/2000	12:40:40	20.86	2.25	2.072	1.7	0.15	48.6	8.45	-68.5	-190.3	6.2
10/17/2000	12:50:40	20.86	2.251	2.073	1.6	0.14	46.9	8.42	-67.3	-186.8	6.3
10/17/2000	13:00:40	20.86	2.251	2.073	1.8	0.16	48	8.43	-67.7	-185.2	6.2
10/17/2000	13:10:40	20.86	2.252	2.074	1.6	0.14	48.6	8.43	-67.7	-185.1	6.2
10/17/2000	13:20:40	20.86	2.253	2.075	1.5	0.14	48.6	8.43	-67.7	-185.1	6.2
10/17/2000	13:30:40	20.86	2.255	2.076	1.8	0.16	48.6	8.43	-67.6	-184.2	6.2
10/17/2000	13:40:40	20.86	2.256	2.077	1.6	0.14	48.6	8.42	-67.1	-181.2	6.2
10/17/2000	13:50:40	20.86	2.257	2.078	1.8	0.16	49.8	8.42	-67	-179.7	6.2
10/17/2000	14:00:40	20.86	2.257	2.078	1.7	0.15	49.8	8.42	-67	-179.2	6.2
10/17/2000	14:10:40	20.85	2.258	2.079	1.7	0.15	48.6	8.39	-65.7	-177.9	6.2
10/17/2000	14:20:40	20.85	2.259	2.08	1.8	0.16	49.8	8.42	-66.9	-178	6.2
10/17/2000	14:30:40	20.85	2.259	2.08	1.6	0.14	46.9	8.4	-65.9	-175.5	6.2
10/17/2000	14:40:40	20.85	2.26	2.08	1.6	0.14	48	8.4	-65.9	-171.3	6.2
10/17/2000	14:50:40	20.85	2.26	2.081	1.6	0.15	48	8.39	-65.4	-165.9	6.2
10/17/2000	15:00:40	20.84	2.261	2.082	1.9	0.17	48.6	8.39	-65.7	-166.1	6.2
10/17/2000	15:10:40	20.84	2.262	2.082	1.6	0.14	48.6	8.39	-65.8	-167.1	6.2
10/17/2000	15:20:40	20.84	2.263	2.083	1.9	0.17	48.6	8.4	-65.9	-167.4	6.2
10/17/2000	15:30:40	20.83	2.264	2.084	2	0.18	49.8	8.4	-66.3	-169.1	6.2
10/17/2000	15:40:40	20.83	2.265	2.084	1.7	0.15	48.6	8.41	-66.5	-172	6.2
10/17/2000	15:50:40	20.82	2.264	2.083	2	0.18	49.8	8.39	-65.8	-168.3	6.2
10/17/2000	16:00:40	20.81	2.257	2.076	2	0.18	49.8	8.37	-64.6	-158.7	6.2
10/17/2000	16:10:40	20.8	2.255	2.074	1.8	0.16	49.8	8.39	-65.4	-163.8	6.2
10/17/2000	16:20:40	20.8	2.255	2.074	1.4	0.12	46.9	8.36	-64	-165	6.2
10/17/2000	16:30:40	20.79	2.256	2.075	1.5	0.14	46.9	8.39	-65.7	-169.7	6.2
10/17/2000	16:40:40	20.78	2.255	2.073	1.9	0.17	48.6	8.42	-66.9	-180.8	6.2

10/17/2000	16:50:40	20.77	2.253	2.071	2	0.18	48.6	8.42	-66.9	-182.3	6.2
10/17/2000	17:00:40	20.76	2.251	2.068	1.7	0.16	48.6	8.41	-66.8	-185.5	6.2
10/17/2000	17:10:40	20.75	2.249	2.066	2.1	0.18	48.6	8.43	-67.3	-188.7	6.2
10/17/2000	17:20:40	20.74	2.249	2.066	2.1	0.19	48.6	8.43	-67.7	-191.2	6.2
10/17/2000	17:30:40	20.74	2.249	2.066	1.8	0.16	48.6	8.42	-67.1	-189	6.2
10/17/2000	17:40:40	20.73	2.25	2.066	2.1	0.18	48.6	8.42	-67.1	-186.9	6.2
10/17/2000	17:50:40	20.73	2.25	2.067	1.8	0.16	48.6	8.42	-67.3	-187.9	6.2
10/17/2000	18:00:40	20.72	2.253	2.069	1.9	0.17	49.8	8.42	-67.3	-188.5	6.2
10/17/2000	18:10:40	20.72	2.255	2.07	2	0.18	49.8	8.46	-69.2	-200.9	6.2
10/17/2000	18:20:40	14.52	0.021	0.017	92.6	9.44	55.1	8.16	-52.6	-86.4	6.2
10/17/2000	18:30:40	14.85	0.017	0.013	92.7	9.37	52.7	8.52	-70.4	-79.3	6.2
10/17/2000	18:40:40	15.98	0.015	0.013	93.1	9.2	52.1	8.83	-86.2	-68.8	6.2
10/17/2000	18:50:40	16.26	0.013	0.011	93.9	9.22	52.1	8.83	-86.1	-54.6	6.2
10/17/2000	19:00:40	16.74	0.012	0.01	94.4	9.17	51	8.9	-89.8	-49	6.2
10/17/2000	19:10:40	16.94	0.011	0.009	94.9	9.19	49.8	8.96	-93.1	-45.6	6.2
10/17/2000	19:20:40	17.03	0.01	0.009	95.6	9.24	49.8	9.06	-97.7	-44.6	6.2
10/17/2000	19:30:40	17.1	0.01	0.009	96	9.26	49.8	9.13	-101.5	-43.5	6.2
10/17/2000	19:40:40	17.12	0.01	0.008	96.5	9.3	49.8	9.13	-101.4	-42.2	6.2
10/17/2000	19:50:40	17.07	0.01	0.008	97	9.36	51	9.11	-100.4	-42.1	6.2
10/17/2000	20:00:40	16.94	0.009	0.008	97.3	9.41	52.1	9.18	-103.7	-36.1	6.1
10/17/2000	20:10:40	16.85	0.009	0.007	97.6	9.46	52.1	9.2	-104.9	-33.1	6.2
10/17/2000	20:20:40	16.55	0.008	0.007	98	9.56	52.7	9.16	-102.5	-28.9	6.1
10/17/2000	20:30:40	16.2	0.008	0.007	98.4	9.67	53.9	9.08	-98.5	-26.7	6.1
10/17/2000	20:40:40	15.79	0.008	0.007	98.8	9.8	53.9	8.91	-90.3	-26.2	6.1
10/17/2000	20:50:40	15.67	0.008	0.007	98.9	9.84	55.1	8.87	-87.8	-26.2	6.2
10/17/2000	21:00:40	15.56	0.008	0.006	99.1	9.87	56.3	8.85	-87	-25.9	6.2
10/17/2000	21:10:40	15.37	0.008	0.006	99.3	9.94	56.8	8.83	-85.9	-25.9	6.2
10/17/2000	21:20:40	15.23	0.007	0.006	99.4	9.98	56.8	8.81	-85	-25.3	6.1
10/17/2000	21:30:40	15.25	0.007	0.006	99.4	9.97	56.8	8.81	-84.8	-25	6.1
10/17/2000	21:40:40	15.62	0.007	0.006	99	9.85	58	8.81	-85	-24.8	6.1
10/17/2000	21:50:40	15.47	0.007	0.006	99.1	9.9	58	8.78	-83.6	-24.4	6.1
10/17/2000	22:00:40	15.33	0.007	0.006	99.1	9.93	59.2	8.76	-82.6	-23.4	6.2
10/17/2000	22:10:40	15.16	0.007	0.006	99.2	9.97	59.2	8.74	-81.7	-22.8	6.2
10/17/2000	22:20:40	15.02	0.007	0.006	99.1	9.99	59.2	8.73	-80.9	-22.2	6.1
10/17/2000	22:30:40	14.85	0.007	0.006	99	10.02	59.2	8.72	-80.7	-22.1	6.1
10/17/2000	22:40:40	14.66	0.007	0.006	99	10.06	60.4	8.66	-77.6	-21.4	6.1
10/17/2000	22:50:40	14.41	0.007	0.006	98.9	10.11	60.4	8.59	-73.7	-20.6	6.1

10/17/2000	23:00:40	14.17	0.007	0.006	99	10.16	60.4	8.5	-69.3	-19.5	6.1
10/17/2000	23:10:40	13.99	0.007	0.006	98.8	10.19	60.4	8.42	-65.5	-18.6	6.1
10/17/2000	23:20:40	13.82	0.007	0.006	98.8	10.22	60.4	8.26	-57.8	-17.5	6.1
10/17/2000	23:30:40	13.63	0.007	0.005	98.8	10.27	60.4	7.99	-44.4	-17.3	6.1
10/17/2000	23:40:40	13.43	0.007	0.005	98.6	10.29	60.4	7.97	-43.4	-18.6	6.1
10/17/2000	23:50:40	13.3	0.007	0.005	98.6	10.32	60.4	7.96	-42.6	-18.7	6.1
10/18/2000	0:00:40	13.2	0.007	0.005	98.5	10.34	60.9	7.93	-41.4	-18.9	6.1
10/18/2000	0:10:40	13.13	0.007	0.005	98.5	10.35	60.4	7.93	-41	-18.7	6.1
10/18/2000	0:20:40	13	0.007	0.005	98.5	10.38	60.4	7.87	-38	-19.2	6.1
10/18/2000	0:30:40	12.81	0.007	0.005	98.5	10.42	60.9	7.87	-38.1	-18.9	6.1
10/18/2000	0:40:40	12.62	0.006	0.005	98.4	10.45	60.9	7.86	-37.6	-18.7	6.1
10/18/2000	0:50:40	12.39	0.006	0.005	98.3	10.5	60.9	7.85	-37.2	-18.8	6.1
10/18/2000	1:00:40	12.18	0.005	0.004	98.2	10.54	60.4	7.85	-37.2	-18.2	6.1
10/18/2000	1:10:40	12.05	0.005	0.004	98.1	10.56	60.9	7.89	-39	-17.7	6.1
10/18/2000	1:20:40	11.95	0.005	0.004	98.1	10.58	60.4	7.88	-38.6	-17.4	6.1
10/18/2000	1:30:40	11.84	0.005	0.004	98	10.6	60.9	7.88	-38.4	-17.3	6.1
10/18/2000	1:40:40	11.71	0.005	0.004	98	10.63	60.9	7.9	-39.4	-17.5	6.1
10/18/2000	1:50:40	11.56	0.005	0.004	98	10.67	60.9	7.9	-39.4	-17.3	6.1
10/18/2000	2:00:40	11.4	0.005	0.004	98	10.71	60.9	7.89	-39.2	-17.3	6.1
10/18/2000	2:10:40	11.27	0.005	0.003	98	10.74	60.9	7.9	-39.3	-16.7	6.1
10/18/2000	2:20:40	11.14	0.004	0.003	97.9	10.76	60.9	7.88	-38.6	-16.5	6.1
10/18/2000	2:30:40	11.1	0.003	0.002	97.9	10.77	60.9	7.89	-39.1	-16.3	6.1
10/18/2000	2:40:40	11.13	0.002	0.002	97.9	10.76	60.4	7.89	-38.8	-16.1	6.1
10/18/2000	2:50:40	11.19	0.002	0.001	97.9	10.75	60.9	7.89	-39	-15.7	6.1
10/18/2000	3:00:40	11.3	0.001	0.001	97.8	10.71	60.9	7.87	-38	-15.6	6.1
10/18/2000	3:10:40	11.35	0.001	0.001	97.7	10.69	60.9	7.82	-35.8	-15.8	6.1
10/18/2000	3:20:40	11.35	0.001	0	97.7	10.69	60.9	7.81	-35	-15.7	6.1
10/18/2000	3:30:40	11.32	0	0	97.7	10.69	60.9	7.81	-34.9	-15.8	6.1
10/18/2000	3:40:40	11.27	0	0	97.7	10.7	60.9	7.8	-34.6	-15.5	6.1
10/18/2000	3:50:40	11.16	0	0	97.7	10.73	60.9	7.8	-34.8	-15.5	6.1
10/18/2000	4:00:40	11.04	0	0	97.6	10.75	60.9	7.77	-33	-15.3	6.1
10/18/2000	4:10:40	10.88	0	0	97.5	10.79	60.9	7.8	-34.4	-15.5	6.1
10/18/2000	4:20:40	10.65	0	0	97.5	10.84	60.9	7.8	-34.4	-16.4	6.1
10/18/2000	4:30:40	10.43	0	0	97.4	10.89	60.9	7.82	-35.3	-16.5	6.1
10/18/2000	4:40:40	10.25	0	0	97.4	10.93	60.9	7.8	-34.6	-16.1	6.1
10/18/2000	4:50:40	10.21	0	0	97.4	10.94	60.9	7.8	-34.3	-16	6.1
10/18/2000	5:00:40	10.2	0	0	97.5	10.95	60.4	7.86	-37.3	-17.2	6.1

10/18/2000	5:10:40	10.2	0	0	97.4	10.94	60.9	7.89	-38.9	-18.1	6.1
10/18/2000	5:20:40	10.21	0	0	97.4	10.94	60.9	7.87	-38	-17.9	6.1
10/18/2000	5:30:40	10.19	0	0	97.4	10.94	60.9	7.87	-37.7	-17.9	6.1
10/18/2000	5:40:40	10.18	0	0	97.4	10.95	60.9	7.89	-38.6	-17.8	6.1
10/18/2000	5:50:40	10.14	0	0	97.4	10.96	60.9	7.87	-38	-17.8	6.1
10/18/2000	6:00:40	10.09	0	0	97.4	10.97	60.4	7.85	-36.7	-18.1	6.1
10/18/2000	6:10:40	10.04	0	0	97.4	10.98	60.9	7.88	-38.3	-18.1	6.1
10/18/2000	6:20:40	10	0	0	97.4	10.99	60.9	7.89	-38.6	-17.9	6.1
10/18/2000	6:30:40	9.97	0	0	97.4	11	60.9	7.88	-38.1	-18.1	6.1
10/18/2000	6:40:40	9.93	0	0	97.4	11.02	60.4	7.89	-38.8	-17.6	6.1
10/18/2000	6:50:40	9.9	0	0	97.5	11.03	60.9	7.88	-38.5	-17.3	6.1
10/18/2000	7:00:40	9.88	0	0	97.5	11.04	60.9	7.88	-38.1	-17.4	6.1
10/18/2000	7:10:40	9.85	0	0	97.4	11.04	60.9	7.88	-38	-16.9	6.1
10/18/2000	7:20:40	9.83	0	0	97.5	11.05	60.9	7.85	-36.6	-17.2	6.1
10/18/2000	7:30:40	9.83	0	0	97.5	11.05	60.9	7.86	-37.3	-17.2	6.1
10/18/2000	7:40:40	9.84	0	0	97.4	11.04	60.9	7.89	-39	-16.8	6.1
10/18/2000	7:50:40	9.86	0	0	97.3	11.03	60.9	7.88	-38.5	-16.7	6.1
10/18/2000	8:00:40	9.9	0	0	97.3	11.01	60.9	7.86	-37.5	-17	6.1
10/18/2000	8:10:40	9.94	0	0	97.3	10.99	60.9	7.89	-39	-16.9	6.1
10/18/2000	8:20:40	10.35	0	0	97.3	10.89	60.9	7.98	-43.1	-15.6	6.1
10/18/2000	8:30:40	10.29	0	0	97.3	10.91	60.9	8.08	-48.2	-16.5	6.1
10/18/2000	8:40:40	10.3	0	0	97.3	10.91	60.9	8.12	-49.8	-16.1	6.1
10/18/2000	8:50:40	10.38	0	0	97.3	10.89	60.9	8.17	-52.2	-16	6.1
10/18/2000	9:00:40	10.86	0	0	97.2	10.75	60.9	8.01	-44.9	-15.7	6.1
10/18/2000	9:10:40	11.26	0	0	97.3	10.66	62.1	7.97	-43.1	-15.1	6.1
10/18/2000	9:20:40	11.53	0	0	97.2	10.59	60.9	7.91	-40	-15.7	6.1
10/18/2000	9:30:40	11.7	0	0	97.1	10.53	62.1	7.9	-39.6	-15.4	6.1
10/18/2000	9:40:40	11.77	0	0	97.1	10.52	60.9	7.91	-40	-15.5	6.1
10/18/2000	9:50:40	11.81	0	0	97.2	10.52	62.1	7.99	-44.2	-15	6.1

# APPENDIX E INJECTION LOG

Injection Point ID	Injection Date	Injection Depth (feet BGS)		-	on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
IP-1	17-Oct-10	3.0-8.5	1:09 AM	2:12 AM	9.5-10.0%	63	135	45	2.14	0-2	No problems noted while injecting.
IP-1	17-Oct-10	3.0-8.5	2:12 AM	3:12 AM	9.5-10.0%	60	121	40	2.02	0-2	
IP-1	17-Oct-10	3.0-8.5	3:12 AM	4:03 AM	9.5-10.0%	51 70	126 147	42	2.47	0-2	
IP-1 IP-1	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	4:03 AM 5:13 AM	5:13 AM 6:27 AM	9.5-10.0% 9.5-10.0%	74	137	49 46	2.10 1.85	0-2 0-2	
IP-1	17-Oct-10	3.0-8.5	6:27 AM	6:55 AM	9.5-10.0%	28	64	21	2.29	0-2	
							730.0	243.3			
IP-2	17-Oct-10	3.0-8.5	1:09 AM	2:12 AM	9.5-10.0%	63	116	39	1.84	0-2	No problems noted while injecting.
IP-2	17-Oct-10	3.0-8.5	2:12 AM	3:12 AM	9.5-10.0%	60	122	41	2.03	0-2	
IP-2	17-Oct-10	3.0-8.5	3:12 AM	4:03 AM	9.5-10.0%	51	130	43	2.55	0-2	
IP-2 IP-2	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	4:13 AM 5:13 AM	5:13 AM 6:27 AM	9.5-10.0% 9.5-10.0%	60 74	129 123	43 41	2.15 1.66	0-2 0-2	
IP-2	17-Oct-10	3.0-8.5	6:27 AM	7:18 AM	9.5-10.0%	51	110	37	2.16	0-2	
11-2	17 Oct 10	3.0 0.5	0.27 71141	7.107111	7.5 10.070	31	730.0	243.3	2.10	0.2	
IP-3	17-Oct-10	3.0-8.5									This IP location was attempted 5 separate times with refusal occurring on every attempt.
IP-4	17-Oct-10	3.0-9.5	4:26 AM	5:13 AM	9.5-10.0%	47	69	23	1.47	0-2	No problems noted while injecting.
IP-4	17-Oct-10	3.0-9.5	5:13 AM	6:27 AM	9.5-10.0%	74	113	38	1.53	0-2	
IP-4	17-Oct-10	3.0-9.5	6:27 AM	7:27 AM	9.5-10.0%	60	123	41	2.05	0-2	
IP-4	17-Oct-10	3.0-9.5	7:35 AM	8:29 AM	9.5-10.0%	54	166	55	3.07	0-2	
IP-4	17-Oct-10	3.0-9.5	8:32 AM	9:24 AM	9.5-10.0%	52	143	48	2.75	0-2	
IP-4	17-Oct-10	3.0-9.5	9:24 AM	10:19 AM	9.5-10.0%	55	116	39	2.11	0-2	
							730.0	243.3			
IP-5					This IP Lo	cation was e	eliminated by	MACTEC	due to vicinit	y to nower li	ine
11-3					I IIIS II LO	cation was c	illilliated by	MACIEC	iuc to vicinit	l power n	
IP-6	11-Oct-10	3.0-8.5	2:28 AM	3:08 AM	14-14.5%	40	145	73	3.63	0-2	No problems noted while injecting.
IP-6	11-Oct-10	3.0-8.5	3:40 AM	6:00 AM	14-14.5%	140	345	173	2.46	0-2	
							490.0	245.0			
	45.0 . 40	2005		· · · ·	0.7.40.00				4.00		T1 1 /
IP-7 IP-7	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	7:11 AM	7:27 AM	9.5-10.0% 9.5-10.0%	16 54	22	7	1.38 0.43	0-2	Flow rates >1 gal/min caused the
IP-7	17-Oct-10 17-Oct-10	3.0-8.5	7:35 AM 8:32 AM	8:29 AM 9:24 AM	9.5-10.0%	52	43	8 14	0.43	0-2	IP to daylight from the annulus. Flow rates <0.5-1 gal/min did not cause
IP-7	17-Oct-10	3.0-8.5	9:24 AM	10:34 AM	9.5-10.0%	70	43	14	0.61	0-2	daylighting
IP-7	17-Oct-10	3.0-8.5	10:44 AM	12:01 PM	9.5-10.0%	77	53	18	0.69	0-2	
IP-7	17-Oct-10	3.0-8.5	12:18 PM	1:15 PM	14-14.5%	57	43	22	0.75	0-2	
IP-7	17-Oct-10	3.0-8.5	1:21 PM	2:25 PM	14-14.5%	64	38	19	0.59	0-2	
IP-7	17-Oct-10	3.0-8.5	2:25 PM	3:55 PM	14-14.5%	90	50	25	0.56	0-2	
IP-7	17-Oct-10	3.0-8.5	3:57 PM	4:14 PM	14-14.5%	17	4	2	0.24	0-2	
IP-7	17-Oct-10	3.0-8.5	4:14 PM	5:05 PM	14-14.5%	51	41 <b>360.0</b>	21 <b>149.3</b>	0.80	0-2	
			t				200.0	17/13			
IP-7A	17-Oct-10	3.0-8.5	4:14 PM	5:05 PM	14-14.5%	51	36 36.0	18 18.0	0.71	0-8	No problems noted while injecting. IP installed within 6 feet of IP-7
IP-8	17-Oct-10	3.0-9.0	1:09 AM	2:12 AM	9.5-10.0%	63	91	30	1.44	0-2	
IP-8	17-Oct-10	3.0-9.0	2:12 AM	3:12 AM	9.5-10.0%	60	127	42	2.12	0-2	Injections terminated when CAPS was
IP-8	17-Oct-10	3.0-9.0	3:12 AM	3:48 AM	9.5-10.0%	36	97	32	2.69	0-2	observed seeping into nearby catch basin.
							315.0	105.0			
TD °	17.0 : 15	2007	10.15.70.5	10.00 77.	14 14 700			<u> </u>	1 *0	0.2	
IP-9 IP-9	17-Oct-10 17-Oct-10	3.0-9.5 3.0-9.5	12:15 PM 1:14 PM	12:20 PM 1:15 PM	14-14.5% 14-14.5%	5	8	4	1.60	0-2 0-2	
IP-9	17-Oct-10	3.0-9.5	1:14 PM 1:21 PM	2:25 PM	14-14.5%	64	81	41	1.00	0-2	Injections were terminated when
IP-9	17-Oct-10	3.0-9.5	2:25 PM	3:29 PM	14-14.5%	64	115	58	1.80	0-2	CAPS was observed in PZTW7.
-							205.0	102.5			
IP-10							Piezome	ter location			
*** **	48.0		1.00 :-	0.40.15	0 7 4		4			0 -	
IP-11	17-Oct-10	3.0-8.5	1:09 AM	2:12 AM	9.5-10.0%	63	111	37	1.76	0-2	
IP-11	17-Oct-10	3.0-8.5 3.0-8.5	2:12 AM 3:12 AM	3:12 AM 4:03 AM	9.5-10.0% 9.5-10.0%	60 51	124 124	41	2.07	0-2 0-2	Injections were terminated when CAPS
	17-Oct-10						124	7.1	4.43	U-2	
IP-11 IP-11	17-Oct-10 17-Oct-10	3.0-8.5	4:03 AM	4:44 AM	9.5-10.0%	41	70	23	1.71	0-2	was observed seeping into nearby manhole.

Injection Point ID	Injection Date	Injection Depth (feet BGS)	Injection Start Time	Injection Stop Time	CAPS Injection Concentrati on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
TD 44	45.0 . 40	200#	40.4570.6	4.45.70.6	4444	**				0.0	
IP-12 IP-12	17-Oct-10 17-Oct-10	3.0-9.5 3.0-9.5	12:15 PM 1:21 PM	1:15 PM 2:25 PM	14-14.5% 14-14.5%	60 64	94 85	47 43	1.57	0-2 0-2	Injections were terminated when
IP-12 IP-12	17-Oct-10 17-Oct-10	3.0-9.5	2:25 PM	2:25 PM 2:38 PM	14-14.5%	13	13	7	1.00	0-2	CAPS was observed in PZTW7.
11-12	17-001-10	3.0-7.3	2.23 1 W	2.30 T W	14-14.570	13	192.0	96.0	1.00	0-2	CHI 5 was observed in 121 w/.
IP-13	17-Oct-10	3.0-9.5	1:09 AM	2:12 AM	9.5-10.0%	63	113	38	1.79	0-2	
IP-13	17-Oct-10	3.0-9.5	2:12 AM	3:12 AM	9.5-10.0%	60	113	38	1.88	0-2	
IP-13	17-Oct-10	3.0-9.5	3:12 AM	4:03 AM	9.5-10.0%	51	121	40	2.37	0-2	Injections terminated when CAPS was
IP-13	17-Oct-10	3.0-9.5	4:03 AM	4:35 AM	9.5-10.0%	32	55 <b>402.0</b>	18 134.0	1.72	0-2	observed seeping into nearby catch basin.
TD 44	11.0.10	2000	4.50.134	2 10 121	44.44.50	#0			2.02	0.0	N 11 17 17 17
IP-14 IP-14	11-Oct-10 11-Oct-10	3.0-9.0 3.0-9.0	1:58 AM 3:40 AM	2:48 AM 6:00 AM	14-14.5% 14-14.5%	50 140	146 344	73 172	2.92 2.46	0-2 0-2	No problems noted while injecting.
11-14	11-001-10	3.0-7.0	3.40 AW	0.00 AW	14-14.570	140	490.0	245.0	2.40	0-2	
IP-15	17-Oct-10	3.0-9.0	1:09 AM	2:12 AM	9.5-10.0%	63	122	41	1.94	0-2	No problems noted while injecting.
IP-15	17-Oct-10	3.0-9.0	2:12 AM	3:12 AM	9.5-10.0%	60	104	35	1.73	0-2	<u> </u>
IP-15	17-Oct-10	3.0-9.0	3:12 AM	4:03 AM	9.5-10.0%	51	111	37	2.18	0-2	
IP-15	17-Oct-10	3.0-9.0	4:03 AM	5:13 AM	9.5-10.0%	70	117	39	1.67	0-2	
IP-15	17-Oct-10	3.0-9.0	5:13 AM	6:27 AM	9.5-10.0% 9.5-10.0%	74	111 114	37 38	1.50	0-2 0-2	
IP-15 IP-15	17-Oct-10 17-Oct-10	3.0-9.0	6:27 AM 7:35 AM	7:27 AM 7:55 AM	9.5-10.0%	60 20	51	17	1.90 2.55	0-2	
11-13	17-001-10	3.0-7.0	7.55 AW	7.33 AW	7.5-10.0%	20	730.0	243.3	2.33	0-2	
IP-16	17-Oct-10	3.0-8.5	4:49 AM	5:13 AM	9.5-10.0%	24	51	17	2.13	0-2	No problems noted while injecting.
IP-16	17-Oct-10	3.0-8.5	5:13 AM	6:27 AM	9.5-10.0%	74	128	43	1.73	0-2	
IP-16	17-Oct-10	3.0-8.5	6:27 AM	7:27 AM	9.5-10.0%	60	135	45	2.25	0-2	
IP-16	17-Oct-10	3.0-8.5	7:35 AM	8:29 AM	9.5-10.0%	54	166	55	3.07	0-2	
IP-16	17-Oct-10	3.0-8.5	8:32 AM	9:24 AM	9.5-10.0%	52	151	50	2.90	0-2	
IP-16	17-Oct-10	3.0-8.5	9:24 AM	10:20 PM	9.5-10.0%	776	99 <b>730.0</b>	33 <b>243.3</b>	0.13	0-2	
IP-17							Piezome	ter location			
IP-18	11-Oct-10	3.0-9.0	1:34 AM	1:58 AM	14-14.5%	24	35	18	1.46	0-2	No problems noted while injecting.
IP-18 IP-18	11-Oct-10 11-Oct-10	3.0-9.0	1:58 AM 3:40 AM	2:48 AM 6:00 AM	14-14.5% 14-14.5%	50 140	136 319	68 160	2.72 2.28	0-2 0-2	
11-10	11-001-10	3.0-9.0	3:40 AM	6:00 AM	14-14.5%	140	490.0	245.0	2.28	0-2	
IP-19	17-Oct-10	3.0-8.5	8:30 AM	9:13 AM	9.5-10.0%	43	98	33	2.28	0-2	Injections were terminated as precaution
IP-19	17-Oct-10	3.0-8.5	12:15 PM	1:15 PM	14-14.5%	60	159	80	2.65	0-2	when CAPS was observed seeping into
IP-19	17-Oct-10	3.0-8.5	1:21 PM	2:25 PM	14-14.5%	64	139	70	2.17	0-2	nearby sewer
IP-19	17-Oct-10	3.0-8.5	2:25 PM	3:01 PM	14-14.5%	36	94 <b>490.0</b>	47 228.7	2.61	0-2	
IP-20	17-Oct-10	3.0-8.5	1:09 AM	2:12 AM	9.5-10.0%	63	75 85	25 28	1.19	0-2 0-2	
IP-20 IP-20	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	2:12 AM 3:12 AM	3:12 AM 4:03 AM	9.5-10.0% 9.5-10.0%	60 51	101	34	1.42	0-2	
IP-20	17-Oct-10	3.0-8.5	4:03 AM			70	103	34	1.47	0-2	
IP-20	17-Oct-10	3.0-8.5	5:13 AM	6:27 AM	9.5-10.0%	74	98	33	1.32	0-2	
IP-20	17-Oct-10	3.0-8.5	6:27 AM	7:27 AM	9.5-10.0%	60	109	36	1.82	0-2	Injections were terminated
IP-20	17-Oct-10	3.0-8.5	7:35 AM	8:05 AM	9.5-10.0%	30	81 <b>652.0</b>	27 217.3	2.70	0-2	when CAPS was observed in PZTW6.
IP-21						1	Piezome	ter location		I	
IP-22	17-Oct-10	3.0-8.5	8:25 AM	8:29 AM	9.5-10.0%	4	13	4	3.25	0-2	No problems noted while injecting.
IP-22	17-Oct-10	3.0-8.5	8:32 AM	9:24 AM	9.5-10.0%	52	122	41	2.35	0-2	
IP-22	17-Oct-10	3.0-8.5	9:24 AM	10:34 AM	9.5-10.0%	70	126	42	1.80	0-2	
IP-22 IP-22	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	10:44 AM 12:01 PM	12:01 PM 1:15 PM	9.5-10.0% 14-14.5%	77 74	128 132	43 66	1.66	0-2 0-2	
IP-22 IP-22	17-Oct-10	3.0-8.5	1:21 PM	2:18 PM	14-14.5%	57	99	50	1.74	0-2	
	1, 500 10	2.0 0.2	1.2.1111	2.101111	1.17.0/0	51	620.0	245.2	2.77	U 2	

Injection Point ID	Injection Date	Injection Depth (feet BGS)	Injection Start Time	Injection Stop Time	CAPS Injection Concentrati on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
TD 44	15.0 . 10	200#			0 # 40 0**	22		10		0.0	N 11 12 12 12 12
IP-23 IP-23	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	4:40 AM	5:13 AM	9.5-10.0% 9.5-10.0%	33 74	55 107	18 36	1.67	0-2	No problems noted while injecting.
IP-23	17-Oct-10 17-Oct-10	3.0-8.5	5:13 AM 6:27 AM	6:27 AM 7:27 AM	9.5-10.0%	60	111	37	1.45 1.85	0-2	
IP-23	17-Oct-10	3.0-8.5	7:35 AM	8:29 AM	9.5-10.0%	54	139	46	2.57	0-2	
IP-23	17-Oct-10	3.0-8.5	8:32 AM	9:24 AM	9.5-10.0%	52	121	40	2.33	0-2	
IP-23	17-Oct-10	3.0-8.5	9:24 AM	10:34 AM	9.5-10.0%	70	143	48	2.04	0-2	
IP-23	17-Oct-10	3.0-8.5	10:44 AM	11:08 AM	9.5-10.0%	24	54	18	2.25	0-2	
							730.0	243.3			
IP-24							Piezome	l ter location			
	10.0 . 10	20100	4 04 PM	# 40 PM	4444	40			201		
IP-25	10-Oct-10	3.0-10.0	6:01 PM	7:10 PM	14-14.5%	69	141	71	2.04	0-2	No problems noted while injecting.
IP-25 IP-25	10-Oct-10 10-Oct-10	3.0-10.0 3.0-10.0	7:10 PM 8:23 PM	8:23 PM 9:34 PM	14-14.5% 14-14.5%	73 71	150 119	75 60	2.05 1.68	0-2 0-2	
IP-25	10-Oct-10	3.0-10.0	9:34 PM	10:10 PM	14-14.5%	36	83	42	2.31	0-2	
-						-	493.0	246.5	-		
IP-26	10-Oct-10	3.0-9.5	6:27 AM	7:10 AM	9.5-10.0%	43	110	37	2.56	0-2	No problems noted while injecting.
IP-26 IP-26	10-Oct-10	3.0-9.5	7:14 AM	8:15 AM	9.5-10.0%	61	120	40	1.97	0-2	140 problems noted with injecting.
IP-26	10-Oct-10	3.0-9.5	8:15 AM	9:19 AM	9.5-10.0%	64	161	54	2.52	0-2	
IP-26	10-Oct-10	3.0-9.5	9:19 AM	10:27 AM	9.5-10.0%	68	158	53	2.32	0-2	
IP-26	10-Oct-10	3.0-9.5	10:29 AM	11:37 AM	9.5-10.0%	68	182	61	2.68	0-2	
							731.0	243.7			
IP-27	10-Oct-10	3.0-9.5	3:07 AM	4:00 AM	9.5-10.0%	53	50	17	0.94	0-2	No problems noted while injecting.
IP-27	10-Oct-10	3.0-9.5	4:10 AM	5:15 AM	9.5-10.0%	65	111.5	37	1.72	0-2	
IP-27	10-Oct-10	3.0-9.5	5:16 AM	6:00 AM	9.5-10.0%	44	133.5	45	3.03	0-2	
IP-27	10-Oct-10	3.0-9.5	4:48 PM	7:50 PM	14-14.5%	182	235	118	1.29	0-2 0-2	
IP-27	10-Oct-10	3.0-9.5	7:50 PM	8:21 PM	14-14.5%	31	55 <b>585.0</b>	28 243.3	1.77	0-2	
IP-28	10-Oct-10	3.0-9.5	7:08 PM	7:45 PM	14.50%	37	68	34	1.84	0-2	Surfacing/Daylighting of CAPS occurred.
							68.0	34.0			
IP-28/29	17-Oct-10	3.0-9.5	8:07 AM	8:29 AM	9.5-10.0%	22	65	22	2.95	0-2	No problems noted while injecting.
IP-28/29	17-Oct-10	3.0-9.5	8:32 AM	9:24 AM	9.5-10.0%	52	133	44	2.56	0-2	Injection point was installed in between
IP-28/29	17-Oct-10	3.0-9.5	9:24 AM	10:34 AM	9.5-10.0%	70	141	47	2.01	0-2	IP-28 and IP-29
IP-28/29	17-Oct-10	3.0-9.5	10:44 AM	12:01 PM	9.5-10.0%	77	187	62	2.43	0-2	
IP-28/29	17-Oct-10	3.0-9.5	12:15 PM	1:15 PM	14-14.5%	60	116	58	1.93	0-2	
IP-28/29	17-Oct-10	3.0-9.5	1:21 PM	2:25 PM	14-14.5%	64	103	52	1.61	0-2 0-2	
IP-28/29	17-Oct-10	3.0-9.5	2:25 PM	3:10 PM	14-14.5%	45	102 <b>847.0</b>	51 <b>335.8</b>	2.27	0-2	
							01710	00010			
IP-29	10-Oct-10	3.0-9.5	6:01 PM	6:37 PM	14.50%	36	55	28	1.53	0-2	Surfacing/Daylighting of CAPS occurred.
							55.0	27.5			
ID 20	10-Oct-10	3.0-8.5	3:07 AM	4:00 AM	0.5-10.00/	52	71	24	1 24	0-2	No problems noted while injecting
IP-30 IP-30	10-Oct-10 10-Oct-10	3.0-8.5	4:10 AM	4:00 AM 5:15 AM	9.5-10.0%	53 65	111	37	1.34 1.71	0-2	No problems noted while injecting.
IP-30	10-Oct-10	3.0-8.5	5:16 AM		9.5-10.0%	44	98	33	2.23	0-2	
IP-30	10-Oct-10	3.0-8.5	2:00 PM	2:18 PM	9.5-10.0%	18	30	10	1.67	0-2	
IP-30	10-Oct-10	3.0-8.5	2:53 PM	5:49 PM	14-14.5%	176	280	140	1.59	0-2	
							590.0	243.3			
IP-31	17-Oct-10	3.0-8.5	1:09 AM	2:12 AM	9.5-10.0%	63	123	41	1.95	0-2	No problems noted while injecting.
IP-31	17-Oct-10	3.0-8.5	2:12 AM	3:12 AM	9.5-10.0%	60	115	38	1.92	0-2	, J
IP-31	17-Oct-10	3.0-8.5	3:12 AM	4:03 AM	9.5-10.0%	51	119	40	2.33	0-2	
IP-31	17-Oct-10	3.0-8.5	4:03 AM	5:13 AM	9.5-10.0%	70	119	40	1.70	0-2	
IP-31	17-Oct-10	3.0-8.5	5:13 AM	6:27 AM	9.5-10.0%	74	111	37	1.50	0-2	
IP-31 IP-31	17-Oct-10 17-Oct-10	3.0-8.5 3.0-8.5	6:27 AM 7:35 AM	7:27 AM 7:40 AM	9.5-10.0% 9.5-10.0%	60 5	117 26	39 9	1.95 5.20	0-2 0-2	
11-31	17-OCI-10	3.0-0.3	1.33 AW	7.40 AIVI	7.3-10.0%	3	730.0	243.3	5.20	0-2	
IP-32							Piezome	ter location			-

Injection Point ID	Injection Date	Injection Depth (feet BGS)	Injection Start Time	Injection Stop Time	CAPS Injection Concentrati on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
IP-33	10-Oct-10	3.0-9.5	3:07 AM	4:00 AM	9.5-10.0%	53	98	33	1.85	0-2	No problems noted while injecting.
IP-33 IP-33	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	4:10 AM 5:16 AM	5:15 AM 6:00 AM	9.5-10.0% 9.5-10.0%	65 44	124 136	41 45	1.91 3.09	0-2 0-2	
IP-33	10-Oct-10	3.0-9.5	3:56 PM	7:50 PM	14-14.5%	234	271	136	1.16	0-2	
11 00	10 001 10	5.0 7.5	5.501111	7.501111	11 11.570	231	629.0	254.8	1.10	0.2	
IP-34	10-Oct-10	3.0-9.5	6:27 AM	7:10 AM	9.5-10.0%	43	67	22	1.56	0-2	No problems noted while injecting.
IP-34	10-Oct-10	3.0-9.5	7:14 AM	8:15 AM	9.5-10.0%	61	65	22	1.07	0-2	
IP-34	10-Oct-10	3.0-9.5	8:15 AM	9:19 AM	9.5-10.0%	64	106	35	1.66	0-2	
IP-34	10-Oct-10	3.0-9.5	9:19 AM	10:27 AM	9.5-10.0%	68	122	41	1.79	0-2	
IP-34 IP-34	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	10:29 AM 1:05 PM	11:37 AM 2:18 PM	9.5-10.0% 9.5-10.0%	68 73	119 51	40 17	1.75 0.70	0-2 0-2	
IP-34	10-Oct-10	3.0-9.5	2:53 PM	4:39 PM	14-14.5%	106	134	67	1.26	0-2	
11-54	10 001 10	5.0 7.5	2.001111	1.57 1.11	11 11.570	100	664.0	243.7	1.20	0.2	
								<u> </u>			
IP-35	11-Oct-10	3.0-9.5	12:20 AM	1:11 AM	14-14.5%	51	131	66	2.57	0-2	No problems noted while injecting.
IP-35	11-Oct-10	3.0-9.5	1:11 AM	1:58 AM	14-14.5%	47	148	74	3.15	0-2	
IP-35	11-Oct-10	3.0-9.5	1:58 AM	2:48 AM	14-14.5%	50	211	106	4.22	0-2	
							490.0	245.0			
TD 254	17.0 . 10	2005	10.50 D) (	1 10 D) (	14.14.50/	10	40	24	2.67	0.0	No continue and dealth intention
IP-35A IP-35A	17-Oct-10 17-Oct-10	3.0-9.5 3.0-9.5	12:52 PM 2:20 PM	1:10 PM 2:25 PM	14-14.5% 14-14.5%	18 5	48 11	24 6	2.67 2.20	0-2 0-2	No problems noted while injecting.
IP-35A	17-Oct-10	3.0-9.5	2:20 PM	3:55 PM	14-14.5%	90	211	106	2.20	0-2	
IP-35A	17-Oct-10	3.0-9.5	3:57 PM	5:05 PM	14-14.5%	68	183	92	2.69	0-2	
							453.0	226.5			
IP-36	10-Oct-10	3.0-8.5	8:39 PM	8:43 PM	14-14.5%	4	7	4	1.75	0-2	No problems noted while injecting.
IP-36	10-Oct-10	3.0-8.5	8:43 PM	9:34 PM	14-14.5%	51	129	65	2.53	0-2	
IP-36	10-Oct-10	3.0-8.5	9:34 PM	10:20 PM	14-14.5%	46	113	57	2.46	0-2	
IP-36	10-Oct-10	3.0-8.5	10:20 PM	11:14 PM	14-14.5%	54	108	54	2.00	0-2	
IP-36 IP-36	10-Oct-10 11-Oct-10	3.0-8.5 3.0-8.5	11:14 PM 12:20 AM	12:03 AM 12:29 AM	14-14.5% 14-14.5%	49 9	109 24	55 12	2.22 2.67	0-2 0-2	
11-30	11-001-10	3.0-6.3	12:20 AM	12:29 AW	14-14.5%	9	490.0	245.0	2.07	0-2	
							470.0	243.0			
IP-36A	17-Oct-10	3.0-8.5	3:52 PM	3:55 PM	14-14.5%	3	8	4	2.67	0-2	No problems noted while injecting.
IP-36A	17-Oct-10	3.0-8.5	3:57 PM	5:05 PM	14-14.5%	68	114	57	1.68	0-2	
							122.0	61.0			
IP-37	1	1					Piezome	ter location			
ID 20	10.0 : 10	2000	10.15 Pk 5	10.20 PM	14 14 50/	-	11		2.20	0.2	Managhlana and J. 19. 2.2. 2
IP-38	10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0	10:15 PM 10:20 PM	10:20 PM 11:14 PM	14-14.5% 14-14.5%	5 54	11 89	6 45	2.20 1.65	0-2 0-2	No problems noted while injecting.
IP-38 IP-38	10-Oct-10 10-Oct-10	3.0-9.0	10:20 PM 11:14 PM	11:14 PM 12:03 AM	14-14.5%	49	101	51	2.06	0-2	
IP-38	11-Oct-10	3.0-9.0	12:20 AM	1:11 AM	14-14.5%	51	99	50	1.94	0-2	
IP-38	11-Oct-10	3.0-9.0	1:11 AM	1:58 AM	14-14.5%	47	125	63	2.66	0-2	
IP-38	11-Oct-10	3.0-9.0	1:58 AM	2:27 AM	14-14.5%	29	67	34	2.31	0-2	
_							492.0	246.0			
			1	1							
										0-2	
IP-38A	17-Oct-10	3.0-9.0	12:37 PM		14-14.5%	38	103	52	2.71		
IP-38A	17-Oct-10	3.0-9.0	1:21 PM	2:25 PM	14-14.5%	64	175	88	2.73	0-2	
							175 25	88 13			
IP-38A	17-Oct-10	3.0-9.0	1:21 PM	2:25 PM	14-14.5%	64	175	88	2.73	0-2	
IP-38A	17-Oct-10	3.0-9.0	1:21 PM	2:25 PM	14-14.5%	64	175 25	88 13	2.73	0-2	No problems noted while injecting.
IP-38A IP-38A	17-Oct-10 17-Oct-10	3.0-9.0 3.0-9.0	1:21 PM 2:25 PM	2:25 PM 2:38 PM	14-14.5% 14-14.5%	64	175 25 <b>303.0</b>	88 13 <b>151.5</b>	2.73 1.92	0-2 0-2	No problems noted while injecting.
IP-38A IP-38A IP-39	17-Oct-10 17-Oct-10	3.0-9.0 3.0-9.0 3.0-9.0	1:21 PM 2:25 PM 8:55 PM	2:25 PM 2:38 PM 9:34 PM	14-14.5% 14-14.5% 14-14.5%	64 13 39	175 25 <b>303.0</b>	88 13 <b>151.5</b> 65	2.73 1.92	0-2 0-2	No problems noted while injecting.
IP-38A IP-38A IP-39 IP-39	17-Oct-10 17-Oct-10 10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0	1:21 PM 2:25 PM 8:55 PM 9:34 PM	2:25 PM 2:38 PM 9:34 PM 10:20 PM	14-14.5% 14-14.5% 14-14.5% 14-14.5%	64 13 39 46	175 25 303.0 130 134 131 95	88 13 151.5 65 67 66 48	2.73 1.92 3.33 2.91	0-2 0-2 0-2 0-2	No problems noted while injecting.
IP-38A IP-38A IP-39 IP-39 IP-39	17-Oct-10 17-Oct-10 10-Oct-10 10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0	1:21 PM 2:25 PM 8:55 PM 9:34 PM 10:20 PM	2:25 PM 2:38 PM 9:34 PM 10:20 PM 11:14 PM	14-14.5% 14-14.5% 14-14.5% 14-14.5% 14-14.5%	39 46 54	175 25 303.0 130 134 131	88 13 151.5 65 67 66	2.73 1.92 3.33 2.91 2.43	0-2 0-2 0-2 0-2 0-2 0-2	No problems noted while injecting.
IP-38A IP-38A IP-39 IP-39 IP-39 IP-39	17-Oct-10 17-Oct-10 10-Oct-10 10-Oct-10 10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0	1:21 PM 2:25 PM 8:55 PM 9:34 PM 10:20 PM 11:14 PM	2:25 PM 2:38 PM 9:34 PM 10:20 PM 11:14 PM 11:50 PM	14-14.5% 14-14.5% 14-14.5% 14-14.5% 14-14.5% 14-14.5%	39 46 54 36	175 25 303.0 130 134 131 95 490.0	88 13 151.5 65 67 66 48 245.0	2.73 1.92 3.33 2.91 2.43 2.64	0-2 0-2 0-2 0-2 0-2 0-2 0-2	
IP-38A IP-38A IP-39 IP-39 IP-39	17-Oct-10 17-Oct-10 10-Oct-10 10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0 3.0-9.0	1:21 PM 2:25 PM 8:55 PM 9:34 PM 10:20 PM	2:25 PM 2:38 PM 9:34 PM 10:20 PM 11:14 PM	14-14.5% 14-14.5% 14-14.5% 14-14.5% 14-14.5%	39 46 54	175 25 303.0 130 134 131 95	88 13 151.5 65 67 66 48	2.73 1.92 3.33 2.91 2.43	0-2 0-2 0-2 0-2 0-2 0-2	No problems noted while injecting.  No problems noted while injecting.

Injection Point ID	Injection Date	Injection Depth (feet BGS)	Injection Start Time	-	CAPS Injection Concentrati on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
IP-40	10-Oct-10	3.0-9.0	3:07 AM	4:00 AM	9.5-10.0%	53	107	36	2.02	0-2	No problems noted while injecting.
IP-40 IP-40	10-Oct-10	3.0-9.0	4:10 AM	5:15 AM	9.5-10.0%	65	127.5	43	1.96	0-2	No problems noted with injecting.
IP-40	10-Oct-10	3.0-9.0	5:16 AM	6:00 AM	9.5-10.0%	44	124.5	42	2.83	0-2	
IP-40	10-Oct-10	3.0-9.0	1:05 PM	2:18 PM	9.5-10.0%	73	170	57	2.33	0-2	
IP-40	10-Oct-10	3.0-9.0	2:53 PM	5:26 PM	14-14.5%	153	305	153	1.99	0-2	
							834.0	328.8			
IP-41	10-Oct-10	3.0-9.0	6:27 AM	7:10 AM	9.5-10.0%	43	109	36	2.53	0-2	No problems noted while injecting.
IP-41	10-Oct-10	3.0-9.0	7:14 AM	8:15 AM	9.5-10.0%	61	135	45	2.21	0-2	110 problems noted with injecting.
IP-41	10-Oct-10	3.0-9.0	8:15 AM	9:19 AM	9.5-10.0%	64	124	41	1.94	0-2	
IP-41	10-Oct-10	3.0-9.0	9:19 AM	10:27 AM	9.5-10.0%	68	119	40	1.75	0-2	
IP-41	10-Oct-10	3.0-9.0	10:29 AM		9.5-10.0%	68	118	39	1.74	0-2	
IP-41	10-Oct-10	3.0-9.0	1:05 PM	1:45 PM	9.5-10.0%	40	125	42	3.13	0-2	
							730.0	243.3			
IP-42			1	1	This IP Lo	cation was e	eliminated by	MACTEC	lue to vicinity	y to power li	ne
IP-43	17-Oct-10	3.0-9.0	7:35 AM	8:29 AM	9.5-10.0%	54	178	59	3.30	0-2	No problems noted while injecting.
IP-43	17-Oct-10	3.0-9.0	8:32 AM	9:24 AM	9.5-10.0%	52	166	55	3.19	0-2	-
IP-43 IP-43	17-Oct-10	3.0-9.0	9:24 AM 10:44 AM	10:34 AM	9.5-10.0% 9.5-10.0%	70	183	61	2.61	0-2 0-2	
IP-43	17-Oct-10	3.0-9.0	10:44 AM	11:40 AM	9.5-10.0%	56	206 <b>733.0</b>	69 <b>244.3</b>	3.68	0-2	
							733.0	244.3			
IP-44	10-Oct-10	3.0-9.0	6:25 AM	7:10 AM	9.5-10.0%	45	118	39	2.62	0-2	No problems noted while injecting.
IP-44	10-Oct-10	3.0-9.0	7:14 AM	8:15 AM	9.5-10.0%	61	110	37	1.80	0-2	
IP-44	10-Oct-10	3.0-9.0	8:15 AM	9:19 AM	9.5-10.0%	64	135	45	2.11	0-2	
IP-44	10-Oct-10	3.0-9.0	9:19 AM	10:27 AM	9.5-10.0%	68	118	39	1.74	0-2	
IP-44 IP-44	10-Oct-10 10-Oct-10	3.0-9.0	10:29 AM 1:05 PM	11:37 AM 2:12 PM	9.5-10.0% 9.5-10.0%	68 67	120 129	40	1.76 1.93	0-2 0-2	
11 -44	10-001-10	3.0-3.0	1.03 FWI	2.12 F IVI	9.5-10.0%	07	730.0	243.3	1.93	0-2	
							7000	21010			
IP-45	10-Oct-10	3.0-9.0	8:35 PM	8:43 PM	14-14.5%	8	20	10	2.50	0-2	Surfacing/Daylighting of CAPS occurred.
IP-45	10-Oct-10	3.0-9.0	8:43 PM	9:34 PM	14-14.5%	51	134	67	2.63	0-2	
IP-45	10-Oct-10	3.0-9.0	9:34 PM	10:20 PM	14-14.5%	46	67	34	1.46	0-2	
IP-45 IP-45	10-Oct-10 10-Oct-10	3.0-9.0	10:20 PM 11:14 PM	11:14 PM 11:53 PM	14-14.5% 14-14.5%	54 39	93 78	47 39	1.72 2.00	0-2 0-2	
IP-45	11-Oct-10	3.0-9.0	12:20 AM	1:11 AM	14-14.5%	51	93	47	1.82	0-2	
IP-45	11-Oct-10	3.0-9.0	1:11 AM	1:14 AM	14-14.5%	3	5	3	1.67	0-2	
							490.0	245.0			
IP-46	10-Oct-10	3.0-9.0	8:55 PM	9:34 PM	14-14.5%	39	135	68	3.46	0-2	No problems noted while injecting.
IP-46 IP-46	10-Oct-10	3.0-9.0	9:34 PM 10:20 PM	10:20 PM 11:14 PM	14-14.5%	46 54	152	76 81	3.30	0-2 0-2	
IP-46 IP-46	10-Oct-10 10-Oct-10	3.0-9.0	10:20 PM 11:14 PM	11:14 PM 11:29 PM	14-14.5% 14-14.5%	54 15	161 53	27	2.98 3.53	0-2	
v		2.0 7.0			2. 2.1.070		501.0	250.5			
IP-47			1	_			Piezome	ter location.			-
ID 40	10.0 : 10	2000	2:46 135	4.00.435	0.5.10.00/	7.1	140	40	2.00	0.2	No moblems not dealth interior
IP-48 IP-48	10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0	2:46 AM 4:10 AM	4:00 AM 5:15 AM	9.5-10.0% 9.5-10.0%	74 65	148 97	49 32	2.00 1.49	0-2 0-2	No problems noted while injecting.
IP-48	10-Oct-10	3.0-9.0	5:16 AM	6:00 AM	9.5-10.0%	44	93	31	2.11	0-2	
IP-48	10-Oct-10	3.0-9.0	2:53 PM	5:16 PM	14-14.5%	143	283	142	1.98	0-2	
							621.0	254.2			
IP-49	10-Oct-10	3.0-9.0	6:25 AM	7:10 AM	9.5-10.0%	45	125	42	2.78	0-2	No problems noted while injecting.
IP-49 IP-49	10-Oct-10 10-Oct-10	3.0-9.0 3.0-9.0	7:14 AM 8:15 AM	8:15 AM 9:19 AM	9.5-10.0% 9.5-10.0%	61 64	49 62	16 21	0.80 0.97	0-2 0-2	
IP-49 IP-49	10-Oct-10	3.0-9.0	9:19 AM	10:27 AM	9.5-10.0%	68	93	31	1.37	0-2	
IP-49	10-Oct-10	3.0-9.0	10:29 AM	11:37 AM	9.5-10.0%	68	110	37	1.62	0-2	
IP-49	10-Oct-10	3.0-9.0	1:05 PM	2:18 PM	9.5-10.0%	73	150	50	2.05	0-2	
IP-49	10-Oct-10	3.0-9.0	2:53 PM	3:44 PM	14-14.5%	51	98	49	1.92	0-2	
							687.0	245.3			
		3.0-9.0	11:34 PM	11:50 PM	14-14.5%	16	50	25	3.13	0-2	No problems noted but injections were terminated
IP-50	10-Oct-10										

Injection Point ID	Injection Date	Injection Depth (feet BGS)	Injection Start Time	Injection Stop Time	CAPS Injection Concentrati on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
IP-51	10-Oct-10	3.0-9.0	6:27 AM	7:10 AM	9.5-10.0%	43	124	41	2.88	0-2	No problems noted while injecting.
IP-51	10-Oct-10	3.0-9.0	7:14 AM	8:15 AM	9.5-10.0%	61	151	50	2.48	0-2	No problems noted while injecting.
IP-51	10-Oct-10	3.0-9.0	8:15 AM	9:19 AM	9.5-10.0%	64	127	42	1.98	0-2	
IP-51	10-Oct-10	3.0-9.0	9:19 AM	10:27 AM	9.5-10.0%	68	141	47	2.07	0-2	
IP-51	10-Oct-10	3.0-9.0	10:29 AM	11:37 AM	9.5-10.0%	68	140	47	2.06	0-2	
IP-51	10-Oct-10	3.0-9.0	1:05 PM	1:27 PM	9.5-10.0%	22	43 <b>726.0</b>	14 242.0	1.95	0-2	
IP-52 IP-52	11-Oct-10 11-Oct-10	3.0-9.0 3.0-9.0	12:33 AM 1:11 AM	1:11 AM 1:58 AM	14-14.5% 14-14.5%	38 47	69 115	35 58	1.82 2.45	0-2	No problems noted while injecting.
IP-52	11-Oct-10	3.0-9.0	1:58 AM	2:48 AM	14-14.5%	50	122	61	2.44	0-2	
IP-52	11-Oct-10	3.0-9.0	3:40 AM	6:00 AM	14-14.5%	140	184	92	1.31	0-2	
							490.0	245.0			
ID 52	10.0~4.10	2005	5:01 DM	5.54 DM	14 14 50/	52	60	20	1 12	0.2	No problems noted while injecting
IP-53 IP-53	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	5:01 PM 5:54 PM	5:54 PM 7:57 PM	14-14.5% 14-14.5%	53 123	60 202	30 101	1.13 1.64	0-2 0-2	No problems noted while injecting.
IP-53	10-Oct-10	3.0-9.5	7:57 PM	8:43 PM	14-14.5%	46	194	97	4.22	0-2	
IP-53	10-Oct-10	3.0-9.5	8:43 PM	9:02 PM	14-14.5%	19	40	20	2.11	0-2	
							496.0	248.0			
IP-54	10-Oct-10	3.0-9.5	2:46 AM	4:00 AM	9.5-10.0%	74	152	51	2.05	0-2	Surfacing/Daylighting of CAPS occurred.
IP-54	10-Oct-10	3.0-9.5	4:10 AM	5:15 AM	9.5-10.0%	65	106	35	1.63	0-2	Surfacing/Daylighting of CAFS occurred.
IP-54	10-Oct-10	3.0-9.5	5:16 AM	6:00 AM	9.5-10.0%	44	53	18	1.20	0-2	
IP-54	10-Oct-10	3.0-9.5	3:53 PM	7:50 PM	14-14.5%	237	232	116	0.98	0-2	
							543.0	219.7			
IP-55	10-Oct-10	3.0-9.5	6:25 AM	7:10 AM	9.5-10.0%	45	124	41	2.76	0-2	No problems noted while injecting.
IP-55	10-Oct-10	3.0-9.5	7:14 AM	8:15 AM	9.5-10.0%	61	190	63	3.11	0-2	110 problems noted winte injecting.
IP-55	10-Oct-10	3.0-9.5	8:15 AM	9:19 AM	9.5-10.0%	64	119	40	1.86	0-2	
IP-55	10-Oct-10	3.0-9.5	9:19 AM	10:27 AM	9.5-10.0%	68	81	27	1.19	0-2	
IP-55 IP-55	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	10:29 AM 1:05 PM	11:37 AM 2:18 PM	9.5-10.0% 9.5-10.0%	68 73	82 70	27 23	1.21 0.96	0-2 0-2	
IP-55	10-Oct-10	3.0-9.5	2:53 PM	3:38 PM	14-14.5%	45	43	22	0.96	0-2	
							709.0	243.5			
IP-56	10-Oct-10	3.0-9.5	11:54 PM	12:03 AM	14-14.5%	9	26	12	2.89	0-2	No problems noted while injecting.
IP-56	11-Oct-10	3.0-9.5	11:54 PM 12:20 AM	1:11 AM	14-14.5%	49	26 165	13 83	3.37	0-2	No problems noted with injecting.
IP-56	11-Oct-10	3.0-9.5	1:11 AM	1:58 AM	14-14.5%	47	157	79	3.34	0-2	
IP-56	11-Oct-10	3.0-9.5	1:58 AM	2:37 AM	14-14.5%	39	144	72	3.69	0-2	
							492.0	246.0			
IP-57	10-Oct-10	3.0-9.0	11:03 PM	11:14 PM	14-14.5%	9	41	21	4.56	0-2	No problems noted while injecting.
IP-57 IP-57	10-Oct-10	3.0-9.0	11:03 PM	12:03 AM	14-14.5%	49	155	78	3.16	0-2	to problems noted with injecting.
IP-57	11-Oct-10	3.0-9.0	12:20 AM	1:11 AM	14-14.5%	51	169	85	3.31	0-2	
IP-57	11-Oct-10	3.0-9.0	1:11 AM	1:48 AM	14-14.5%	37	126	63	3.41	0-2	
							491.0	245.5			
IP-57A	17-Oct-10	3.0-9.0	12:58 PM	1:15 PM	14-14.5%	17	54	27	3.18	0-2	No problems noted while injecting.
IP-57A	17-Oct-10	3.0-9.0	1:21 PM	2:25 PM	14-14.5%	64	188	94	2.94	0-2	
IP-57A	17-Oct-10	3.0-9.0	2:38 PM	3:18 PM	14-14.5%	40	58	29	1.45	0-2	
							300.0	150.0			
IP-58	10-Oct-10	3.0-9.5	5:19 PM	5:54 PM	14-14.5%	35	30	15	0.86	0-2	No problems noted while injecting.
IP-58	10-Oct-10	3.0-9.5	5:54 PM	7:56 PM	14-14.5%	122	107	54	0.88	0-2	
IP-58	10-Oct-10	3.0-9.5	7:56 PM	8:35 PM	14-14.5%	39	51	26	1.31	0-2	
IP-58	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	9:20 PM 9:34 PM	9:34 PM 10:10 PM	14-14.5% 14-14.5%	14 36	50 134	25 67	3.57 3.72	0-2 0-2	
IP-58 IP-58	10-Oct-10	3.0-9.5	9:34 PM 10:10 PM	10:10 PM 10:55 PM	14-14.5%	36 45	69	35	1.53	0-2	
							441.0	220.5			
IP-58A	17-Oct-10 17-Oct-10	3.0-9.5 3.0-9.5	2:56 PM 3:57 PM	3:55 PM 5:05 PM	14-14.5% 14-14.5%	59	150 124	75 62	2.54 1.82	0-2 0-2	No problems noted while injecting.
IP-58A	1/-OCI-10	3.0-9.3	3:37 PM	5:05 PM	14-14.5%	68	274.0	62 137.0	1.82	0-2	

Injection Point ID	Injection Date	Injection Depth (feet BGS)	Injection Start Time	Injection Stop Time	CAPS Injection Concentrati on	CAPS Injection Time (mins)	CAPS Injection Volume (gallons)	Stock Solution Volume (~29% CAPS) (gallons)	CAPS Injection Flow Rate (gals/min)	IP Pressure Range (psi)	Notes
IP-59	10-Oct-10	3.0-9.5	2:46 AM	4:00 AM	9.5-10.0%	74	150	50	2.03	0-2	No problems noted while injecting.
IP-59	10-Oct-10	3.0-9.5	4:10 AM	5:15 AM	9.5-10.0%	65	100.5	34	1.55	0-2	July
IP-59	10-Oct-10	3.0-9.5	5:16 AM	6:00 AM	9.5-10.0%	44	122.5	41	2.78	0-2	
IP-59 IP-59	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	1:51 PM 2:53 PM	2:18 PM 4:56 PM	9.5-10.0% 14-14.5%	27 123	48 206	16 103	1.78 1.67	0-2 0-2	
11 -39	10-001-10	3.0-7.3	2.33 I WI	4.301 W	14-14.570	123	627.0	243.3	1.07	0-2	
IP-60	10-Oct-10	3.0-10.0	7:06 PM	7:31 PM	14-14.5%	25	69	35	2.76	0-2	No problems noted while injecting.
IP-60	10-Oct-10	3.0-10.0	7:31 PM	8:42 PM	14-14.5%	71	197	99	2.77	0-2	, , , , , , , , , , , , , , , , , , ,
IP-60	10-Oct-10	3.0-10.0	8:42 PM	9:34 PM	14-14.5%	52	132	66	2.54	0-2	
IP-60	10-Oct-10	3.0-10.0	9:34 PM	10:10 PM	14-14.5%	36	93	47	2.58	0-2	
							491.0	245.5			
IP-61	10-Oct-10	3.0-10.0	11:25 PM	12:03 AM	14-14.5%	38	126	63	3.32	0-2	No problems noted while injecting.
IP-61	11-Oct-10	3.0-10.0	12:20 AM	1:58 AM	14-14.5%	98	288	144	2.94	0-2	
IP-61	11-Oct-10	3.0-10.0	1:58 AM	2:20 AM	14-14.5%	22	76 <b>490.0</b>	38 <b>245.0</b>	3.45	0-2	
TD (4	10.0 . 10	200#	0.02.71.6	0.42 73.5	4444		100		2.25	0.0	N 11 11 11 11 11 11
IP-62 IP-62	10-Oct-10 10-Oct-10	3.0-9.5 3.0-9.5	8:02 PM 8:43 PM	8:43 PM 9:34 PM	14-14.5% 14-14.5%	41 51	138 114	69 57	3.37 2.24	0-2 0-2	No problems noted while injecting.
IP-62	10-Oct-10	3.0-9.5	9:34 PM	10:10 PM	14-14.5%	36	107	54	2.97	0-2	
IP-62	10-Oct-10	3.0-9.5	10:10 PM	11:14 PM	14-14.5%	64	112	56	1.75	0-2	
IP-62	10-Oct-10	3.0-9.5	11:14 PM	11:24 PM	14-14.5%	10	19	10	1.90	0-2	
							490.0	245.0			
IP-62A	17-Oct-10	3.0-9.5	3:20 PM	3:55 PM	14-14.5%	35	90	45	2.57	0-2	No problems noted while injecting.
IP-62A	17-Oct-10	3.0-9.5	3:57 PM	5:05 PM	14-14.5%	68	221	111	3.25	0-2	
							311.0	155.5			
IP-63	10-Oct-10	3.0-10.0	6:25 AM	7:10 AM	9.5-10.0%	45	148	49	3.29	0-2	No problems noted while injecting.
IP-63	10-Oct-10	3.0-10.0	7:14 AM	8:15 AM	9.5-10.0%	61	119	40	1.95	0-2	July
IP-63	10-Oct-10	3.0-10.0	8:15 AM	9:19 AM	9.5-10.0%	64	108	36	1.69	0-2	
IP-63 IP-63	10-Oct-10 10-Oct-10	3.0-10.0 3.0-10.0	9:19 AM 10:29 AM	10:27 AM 11:37 AM	9.5-10.0% 9.5-10.0%	68 68	106 114	35 38	1.56 1.68	0-2 0-2	
IP-63	10-Oct-10	3.0-10.0	1:05 PM	2:17 PM	9.5-10.0%	72	110	37	1.53	0-2	
IP-63	10-Oct-10	3.0-10.0	2:53 PM	3:04 PM	14-14.5%	11	17	9	1.55	0-2	
							722.0	243.5			
IP-64	10-Oct-10	3.0-10.0	2:46 AM	4:00 AM	9.5-10.0%	74	124	41	1.68	0-2	No problems noted while injecting.
IP-64	10-Oct-10	3.0-10.0	4:10 AM	5:15 AM	9.5-10.0%	65	148	49	2.28	0-2	
IP-64	10-Oct-10	3.0-10.0	5:16 AM	6:00 AM	9.5-10.0%	44	167	56	3.80	0-2	
IP-64	10-Oct-10	3.0-10.0	3:32 PM	6:15 PM	14-14.5%	163	202 <b>641.0</b>	101 247.3	1.24	0-2	
IP-65	10-Oct-10	3.0-9.0	10:21 PM	11:14 PM	14-14.5%	53	88	44	1.66	0-2	No problems noted while injecting.
IP-65 IP-65	10-Oct-10 11-Oct-10	3.0-9.0 3.0-9.0	11:14 PM 12:20 AM	12:03 AM 1:11 AM	14-14.5% 14-14.5%	49 51	102 92	51 46	2.08 1.80	0-2 0-2	
IP-65	11-Oct-10	3.0-9.0	1:11 AM	1:58 AM	14-14.5%	47	101	51	2.15	0-2	
IP-65	11-Oct-10	3.0-9.0	1:58 AM	2:39 AM	14-14.5%	41	107	54	2.61	0-2	
							490.0	245.0			
IP-65A	17-Oct-10	3.0-9.0	10:44 AM	12:01 PM	9.5-10.0%	77	286	95	3.71	0-2	No problems noted while injecting.
IP-65A	17-Oct-10	3.0-9.0	12:15 PM	12:53 PM	14-14.5%	38	145	73	3.82	0-2	
							431.0	167.8			
TOT	TAL VOLUM	IE (Gallone)	/ AVERACI	E FLOW R	ATE (Gals/M	in)	33,042	13,599	2.13	l	T T

BGS = Below Ground Surface Gals = Gallons
Min = Minutes
Gals/Min = Gallons per minute

IP = Injection Point psi = pound per square inch CAPS = Calcium Polysulfide

APPENDIX F
MANIFESTS

6007 6436 Comments 1620 -735 Net Haz Wt. Loaded Wt. ACTIVITY LOG Material R-off#/Truck# Lite/Tare Wt. NONHAZ SHIPME 20 22-01 ManDoc # Trucking Co. Destination 156442 100000 Rulverieno DATE CH001 CHOOL

# New Jersey Meadowlands Commission Billing Agent

Landfill # 201-998-4020

Main Office # 201-460-8161



STATEMENT OF SERVICES RENDERED

 76500 9890074, 55 

9919750 - 54192160 0103/61/90 

Tomoseof.

SCALE INVOITE 20 / 20

VIC DECAL: 17737 CARRIER DEP: 17737 TRUCK ID: 07955

H H G S 

204,45

26.76

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S. ISIG

name 4

IN OPERADRE

	103	oe type or print in block letters. (Form designed for use on silte (12-pitch)			27.)									
1	П	NON-HAZARDOUS 1. Generator's US EF	PA ID	No.	1 1	. 1	Docum	ent No	2. Pa	ge 1				
-	1	MANIFEST A A A A A A A A A A A A A A A A A A A						<u> </u>	A STATE OF THE PERSON NAMED IN	on-haz	zardous M	anifest	Docume	ent Number
	-	HONEYWELL							4	Z02			276	
		101 COLUMBIA ROAD									nerator's IC	)	marile manner transpo	
		MORRISTOWN NJ 07962 4. Generator's Phone ( 9 7 3 ) 4 5 5 - 3 3 0 2							JER JER		SK St. & A ITY NJ 07	lorteran 305	io way	
		5. Transporter 1 Company Name 6.	VARIATION OF	J	JS EPA	ID Nu	mber							
		REBCO CONTRACTING COR. [.]								ate Tra				
		7. Transporter 2 Company Name 8.		t	JS EPA	ID Nu	mber		1		ter's Phone	( 975	3) 472	6087
				١.	10.50				E. St	ate Tra	ns. ID			
		9. Designated Facility Name and Site Address 15. ASMC KELLAN L.	AN:	DFI	LL	ID Nu	moer		5.7		er's Phone	,	\	
		180 BALER BLYD. 437 BERGEN AUE							-		ers Phone	<u> </u>	)	
		NORTHARLINGTON NU CTOOL DEARNY N.T.	,	1	1 1	1 1	1 1	1 1			Phone (	2011	100 10	70
	-				L			12. Con	tainers	iomity o	13.	14.	40U-4D	10
		11. US DOT Description (Including Proper Shipping Name, Hazard Class	iss, a	nd ID	Numb	er)	and the same of th	No.	Туре		Total uantity	Unit Wt/Vol	Wa	ste No.
	اه	a. Non-regulated material											N C	NE
		77 W77 C 20 July 20 W 11 (100 20 1 July 20 1 J						9						
	E						C	1011	0.7	4 8	0 0 0	F		
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T	1													
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	I	J. Additional Descriptions for Materials Listed Above							K. H	andling	Codes for	wastes	Listed A	oove
		1D-27								,	ī		1	1
		а. С.							a			C.		
									b.	1	I	d.	1	1
	1	Special Handling Instructions and Additional Information						- 100 mm						
			TR	冥华:	98		1	MAN	DOC: C	:H001	L			
		RED DECAL#: 07955												
		ACCOUNT NO: 83421								=toresteran				
	Iſ	<ol> <li>GENERATOR'S CERTIFICATION: I hereby declare that the content proper shipping name and are classified, packed, marked, and label</li> </ol>	s of f	this c	onsign	ment a	re fully	and ac	curately ondition	describ for tran	oed above ! esport by h	oy ighway		
		according to applicable international and national government regu	llatio	ns.										
		I hereby certify that the above-named material is not hazardous waste	as de	efined	by 40	OFR Pa	irt 261,	264 an	1 27.9 07	any app	nicadio stati	e iaw.		
								(						
-	-	Printed/Typed Name	13	Signa	TUPO	7	-7						Month	Day Year
-		CHris Mundas (as agent on behalf of Honeywa		/	1	//	-		1				10181	1191116
1	r	17. Transporter 1 Acknowledgement of Receipt of Materials	7		17	glioussus.		NO CONTRACTOR		$\overline{}$		_		
- 1	A	Printed/Typgd Name	CI	Signa	11/8 = 1			#		A PROPERTY OF THE PARTY OF THE			Month	A CAN CO. 10 CO. 10 CO.
	8	dector Cestanda	-	111	No	C	رور	an	<u> </u>				1081	1191110
		18. Transporter 2 Acknowledgement of Receipt of Materials								******			-	
	SPORTER	Printed/Typed Name	1	Signa	ture								Month	Day Year
L	-													
	1	19. Discrepancy Indication Space												
	A1													
	0													
-	ACILITY	20. Facility Owner or Operator: Certification of receipt of non-hazardous management	ateria	als co	d berev	y this n	nanifest	except	as noted	in Item	19.			
	4	Printed/Typed Name	national party and party.	Signa	Marie and Marie and		with the latest the latest to	Terror Terror Terror		A CHARLES OF THE PARTY OF	MODELLA CONTROL SECTION OF SEASON	Serve you en ter tenten.	Month	Day Year
1	1	7/09	1										2 1 2	1 1 1

NON-HAZARDOUS 1. G	enerator's US EPA ID No.		2. Pa	ige 1			
	44	cument No.	oi				
Generator's Name and Mailing Address			A. A	Non-hazardous N	lanifes	Document	Numb
HONEYWELL TOT COLUMBIA ROAD			NH	IZ020	1	2769	)
MORRISTOVAN AU 07982				tate Generator's I	D		ATTENDANCE OF THE PARTY OF THE
Generator's Phone ( 7 7 3 ) 4 5 5 - 3     Transporter 1 Company Name	3 0 2 6. US EPA ID Numb		JER	智を教物も	7308	are samp	
REBCO CONTRACTING COR	o. OS EPA IO NUME	oer					- Mo
7. Transporter 2 Company Name	8. US EPA ID Numb	297	-	tate Trans. ID			
Section Control of the Control of th		1 1 1		tate Trans, ID	e( g;	9 472-6	007
Designated Facility Name and Site Address	10. US EPA ID Numb	per		11473.19			
I-E LANDFILL			F. Tra	ansporter's Phone	(	)	***
100 BALEF GLVC			-	tate Facility's ID	<u>`                                    </u>		-
NORTH ARUNGTON AU 07031		1	H. Fa	cility's Phone (	201	460-4679	
11. US DOT Description (Including Proper Shipping No.	ame, Hazard Class, and ID Number)	12. Cont	ainers	13. Total	14. Unit	L	
		No.	Туре	Quantity	WWVo	Waste	No.
a. Non-regulated material				- Contraction		N O	11 1
		mai					
b.		901	<b>P</b>	19998	1 P		
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		1 1 1	1	1111		l l	1
d.	en en en en en en en en en en en en en e						
						and the second second	
Additional Descriptions for Materials Listed Above		*	K. Ha	indling Codes for	Wastes	Listed Abov	е
10-27							
a.	c.		a.		C.		
							1
b.     Special Handling Instructions and Additional Inform	d.	ANTHRONOUS AND ANTHRONOUS AND ANTHRONOUS AND AND AND AN AND AND AND AN AND AND A	b.		d.		
Emergancy Contact: 609-915-799 PED DECAL#: 67955 ACCOUNT NO: 83421							
<ol> <li>GENERATOR'S CERTIFICATION: I hereby declare to proper shipping name and are classified, packed, ma according to applicable international and national get</li> </ol>	hat the contents of this consignment are fu irked, and labeled, and are in all respects in	ully and accu n proper con	rately dition f	described above b for transport by hi	y ghway		
I hereby certify that the above-named material is not his	izardous waste as defined by 40 GFH Part 2	61, 264 and 3	79 or a	ny applicable state	law.		,
		*					
Printed/Typed Name	Signature					Month Da	y Ya
THIS MAN JOHN (as sgent on beha		a	ing parameters	a to grant the same		981	21 71
17. Transporter 1 Acknowledgement of Receipt of Mater						7311	3 1
Printed/Typed Name	Signature	mid to	and the second			Month Da	y Ya
Horter to Sand	Therefore Com	and the F				941	9171
18. Transporter 2 Acknowledgement of Receipt of Mater	ials					Comment of the control of	
Printed/Typed Name	Signature	BROAD BROKESHI WARDANIA	-		****************	Month Da	y Ye
							11
19. Discrepancy Indication Space	•					214	1.465
<ol> <li>Facility Owner or Operator: Certification of receipt of no Printed/Typed Name</li> </ol>	The state of the second	est except as	noted is	n Item 19.		Month Da	
	Signature	mark 1				The street of a	v. V.a.

5 TSD MAIL TO GENERATOR COPY

SIGNATURE AND INFORMATION MIRES PROPERTY OF

# New Jersey Meadowlands Commission Billing Agent



Landfill # 201-998-4020

Main Office # 201-460-8161

ESCROW PAYMENT RECEIPT

248803 RECEIPT #:

83421 / Honeywell/ SA-5 271744 CUSTOMER:

CHECK NUMBER:

08/02/5010

10:12:58 ESCROW PAYMENT DESCRIPTION:

OLD BALANCE:

0.00

5, 888. 88 5, 888. 88 AMDUNT:

NEW BALANCE:

Honeywell International, Inc.

P.O. Box 981793 El Paso TX 79998-1793

PAGE: 1 of 1

271744

DATE: August 2, 2010 CHECK NUMBER: 271744 AMOUNT PAID: \$5,000.00 ACCOUNT NUMBER: 601872450



02433 CKS ZA 10214 - 0000071744 NANN 2145100000 5 X17474 C NEW JERSEY MEADOWLANDS COMMISSION 1 DEKORTE PARK PL LYNDHURST NJ 07071



**VENDOR NO: 363548** 

# VENDOR: NEW JERSEY MEADOWLANDS COMMISSION

DATE	INVOICE NUMBER	PO CONTRACT NUMBER	REFERENCE #/DESCRIPTION	GROSS	DISCOUNT	NET
07/23/10	072310		Overnight, UPS # 063208, ZIP # 07962 ESCROW ACCOUNT FOR SA 5	\$5,000.00	\$0.00	\$5,000.00
			TOTALS	\$5,000.00	\$0.00	\$5,000.00

INQUIRIES 480-598-9071 OPT #4 OR EMAIL-- ACCOUNTS.PAYABLE.CORPORATE@HONEYWELL.COM

PLEASE DETACH BEFORE DEPOSITING CHECK

Honeywell International, Inc. P.O. Box 981793 El Paso TX 79998-1793

CHECK NUMBER

271744

50-937 213

August 2, 2010

\*\*\* VOID AFTER 180 DAYS \*\*\*

PAY TO THE NEW JERSEY MEADOWLANDS COMMISSION

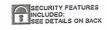
1 DEKORTE PARK PL ORDER OF: LYNDHURST, NJ 07071

CHECK AMOUNT

\$5,000.00

EXACTLY \*\*\*\*\*\*\*5,000 DOLLARS AND 00 CENTS

"Mor" - Chase Bank, N.A.



Authorized Signature





DATE: August 2, 2010 CHECK NUMBER: 271744 AMOUNT PAID: \$5,000.00 ACCOUNT NUMBER: 601872450

PAGE: 1 of 1

271744

VENDOR: NEW JERSEY MEADOWLANDS COMMISSION

		E	BARRACO CONTRACTOR CON	\$5,000.00			85,000,00	1
	The second distribution of the second	DISCOUNT		\$0.00			00 US	
VENDOIL INCIN SELECTION IN THE SELECTION	AND THE PERSON AND PERSONS ASSESSMENT AND ADDRESS OF THE PERSONS ASSESSMENT AND ADDRESS ASSESSMENT AND ADDRESS ASSESSMENT AND ADDRESS ASSESSMENT ASSES	GROSS		\$5,000,00			AC 000 00	00,000,00
		NOITGIGOSSOW BOING GEORGE		C3070 # 063200 # 0611 #1-1	Overnight, One # 002200, Air # 0.502	ESCROW ACCOUNT FOR SA 5		TOTALS
			PO CONTRACT NUMBER					
963670	VINDOR NO. 600040		BERNING SOLVING	INVOICE INDIVIDUE	072340	016210		
Ĺ	٦ ٧		TTAC	DAIE	070240 070340	01/23/10		

INQUIRIES 480-598-9071 OPT #4 OR EMAIL-- ACCOUNTS.PAYABLE.CORPORATE@HONEYWELL.COM



# GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Service Agreeement on File? Yes No Profile Number: WM Renewal Date:
A. Waste Generator Information
1. Generator Name: House WELL INTERNATION 2. 8IC Code: 973-455-3302
5. Facility City: Jersey CITY Montagenous 6. State/Province: Hew Jersey
7 Zip/Postal Code: 07305 8. Generator USEPA/Federal ID #: NIA
9. County HUDSON 10. State/Province ID#: 97 NEW JERSEY
11. Customer Name: HONEYWELL TATERNATIONAL 12. Customer Phone: 973-455-3302
13. Customer Contact: MARIA KAOURIS 14. Customer Fax: 973-455-3082
B. Waste Stream Information
1. Name of Waste: TD-27 Novi Hazardows Soll 2. State Waste Code: N/A
3. Process Generating Waste: MATERIAL BEING EXCAUATED AS PART AS AN APPROVED NODEP REMEDIAL ACTION WORK
O'PLAN.
4. Estimated Annual Volume: 40 Tous Vards Other (specify)
5. Personal Protective Equipment Requirements
6. Transporter/Transfer Station To BE DETERMINED
7. Is this a US Department of Transportation (USDOT) Hazardous Material? (If no, skip 8, 9 & 10)  Yes No
8. Reportable Quantity (lbs.;kgs.): — NA — 9. Hazardous Class/ID#: — NA —
10. USDOT Shipping Name: Now REGULATED MATERIAL  Check if additional information is attached. Indicate the number of attached pages:
C. Generator's Certification (Please check appropriate responses, sign, and date below.)
1. Is the waste represented by this waste profile sheet a "Hazardous Waste," as defined by USEPA, Canadian,
Mexican and/or state/province regulation, in the location where generated or ultimately managed?
2. Does the waste represented by this waste profile sheet contain regulated  Yes No
radioactive material or regulated concentrations of Polychiotinates diplicative (Polsy).  Yes No
Does this waste profile sheet and all attachments contain all and accurate descriptions of the New York and the Section of the Generator regarding known or
suspected hazards pertaining to the weste been disclosed to the Contractor?
5. Is the analytical data attached hereto derived from testing a representative sample in accordance with
40 CFR 261.20 ( c ) or equivalent rules?
Will all changes that occur in the character of the waste be identified by the Generator and disclosed to the Contractor prior to providing the waste to the Contractor?  Yes No
Certification Signature & Date While IZLOWS Title: REMEDIATION MANAGER
Name (Type or Print): MARIA KABURIS Customer Name; HONEYWELL INTERNATIONAL
D. WMI Management's Decision
Management Method: Landfill Solidify Bioremediation Other (specify)      Hours of Acceptance: N/A
2. Proposed Unimate Managersens racially.
4. Supplemental Information:
5. Precautions, Special Handling
Procedures, or Limitations on Approval:
Special Waste Decision: Approved Disapproved
Salesperson's Signature: Date:
Division Approval Signature (Optional): Date: Special Waste Approvals Person Signature Date:
Special Waste Approvals Person Signature Date:



# GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

Sonvice Agreement on File? Yes No Profile Number: Wh	MI
Service Agrecoment on the .	VII.
Renewal Date:	
A. Waste Generator Information	
Generator Name: HALLYWELL INTERNATIONAL 2. SIC Code:	MA
3. Facility Street Address: 5/1E079/F15K 51/	455-3302
	JEW JERSEY
5. Facility City. DECSE & Co. 7	
7. Zip/Postal Code.	97 NEW JERSEY
g. County.	973-455-3302
11. Customer Name.	973-455-3082
13. Customer Contact: WARIA KAOURIS 14. Customer Fax:	175 133 2002
B. Waste Stream Information	1 Mints Cades 4 2 JA
1. Name of Waste: TD-27 NON HAZARDONS SOIL 2. Sta	ate vvaste code.
3 Process Generating Waste: MATERIAL BEING EXCAUATE	DAS PART AS AN
APPROVED NJOEP REMER	DIAL ACTION WORK
O PLAN.	
4. Estimated Annual Volume: 40 Toris Yard	ds Other (specify)
5 Personal Protective Equipment Requirements	
Topological Station To Br Determine	
4 CDOT) Hazardous Material? (If no. skip 8. 9	9 & 10) Yes No
Hazardous C	lass/ID #:
Maria Nama: Al / Value Del MATELL	AC.
Check if additional information is attached. Indicate the nu	imber of attached pages:
Check if additional information is attached. Indicate the in-	n and date below.)
C. Generator's Certification (Please check appropriate responses, sig	nadian .
Is the waste represented by this waste profile sheet a "Hazardous Waste," as defined by USEPA, Car     Is the waste represented by this waste profile sheet a "Hazardous Waste," as defined by USEPA, Car	Yes No
Mexican and/or state/province regulation, in the location where generated or ultimately managed?	
2. Does the waste represented by this waste profile sheet contain regulated	Yes No
radioactive material or regulated concentrations of Polychlorinated Biphenyls (PCBs)?	
Does this waste profile sheet and all attachments contain true and accurate descriptions of the waste	e material?
Has all relevant information within the possession of the Generator regarding known or	OKYes No
suspected hazards pertaining to the waste been disclosed to the Contractor?	
5. Is the analytical data attached hereto derived from testing a representative sample in accordance with	N/A Yes No
40 CFR 261,20 ( c ) or equivalent rules?	IN/A PIES INVO
6 Will all changes that occur in the character of the waste be identified by the Generator and	Myon Mo
disclosed to the Contractor prior to providing the waste to the Contractor?	Yes
	0 0
Certification Signature & Date	Title: KEMEDIATION MANAGER
Name (Type or Print): MARIA KABURIS Custo	omer Name: Howeywell INTERNATION OF
D. WMI Management's Decision	
de la compart Mothod:       andtill     Bolldill     Bolldill	
1. Wallagement would be	f Acceptence:N/A
2. Proposed Ultimate Management Lability.	
4. Supplemental Information:	
5. Precautions, Special Handling	
Procedures, or Limitations on Approval:	pproved
Cial Waste Decision.	Date:
Salesperson's Signature:	Date:
Division Approval Signature (Optional):	Date:
Special Waste Approvals Person Signature	Date.

Honeywell P.O. Box 1057 Morristown, NJ 07962-1057

# ID 27 CERTIFICATION LETTER (SITE 079)

DATE OF DISPOSAL:		
CHRISTOPHER L. DOUR, P.E., P.P. NEW JERSEY MEADOWLANDS COMM KEEGAN LANDFILL ONE DEKORTE PARK PLAZA	MISSION	ī
Lyndhurst, New Jersey 07071		
RE: NJMC1-E LANFILL OR NJM	IC KEE	GAN LANDFILL, ID 27 WASTE DISPOSAL
DEAR MR. DOUR:		
Insert H	auler's Ioneyw	Name NJDEP Decal #  vell Internation, Site 079 Jersey City New  ls ID-27 Non Hazardous Soil.
based on representative analytical in Commission. All bags, steel, poly a	nforma and/or	defined hazardous wastes or toxic materials tion and/or MSDS sheets submitted to the glass containers meet or exceed the RCRA Part 261.7, and all containers are crushed.
MSDS sheets and/or analytical inf Commission and Waste Management non-hazardous. Only the materials li	for thi	on are on file with the NJ Meadowlands s material, which certifies that the material is bove are contained in this load.
If you have any further questions recontact	gardin	g these materials or this information, please
Maria Kaouris Company Representative	@	973-455-3302 Telephone number
I understand that should the materia above, the load will be rejected, and paid for by	al conta l any c	ained in the load differ from what is stated osts incurred for reloading the waste will be
HONEYWELL INTERNATIONAL		
Sincerely,		
Name: Maria Kapuris		
Title: Remediation Manager		

Honeywell P.O. Box 1057 Morristown, NJ 07962-1057

# INDEMNIFICATION (SITE 079)

Date: July 20, 2010

Honeywell International warrants that each load delivered to the NJMC 1E-Landfill or Keegan Landfill include only <u>ID-27 Non Hazardous Soil</u>. Information on all these wastes has been provided to the NJMC and these wastes are non-hazardous as defined by the New Jersey Department of Environmental Protection under NJAC 7:26-2.13(g)(1)vii and classified as ID27 wastes that are generated at <u>Honeywell International</u>, <u>Site 079</u>, <u>Jersey City New Jersey 07305</u>.

<u>Honeywell International</u> further agrees to indemnify the New Jersey Meadowlands Commission and the Keegan Landfill operator against any and all claims, losses, or damages caused in whole or in part by breach of this warranty. <u>Honeywell International</u> understands that should the Commission or the landfill operator's personnel deem any or all of this material unacceptable at any time it will be rejected.

CERTIFICATION SIGNATURE:- MULL KAPULS TITLE: Remediation Manager

NAME (PRINT): Maria Kaouris Company Name: Honeywell International

# SITE 079 INSITU SAMPLING WASTE CHARACTERIZATION RESULT LIST

Sample ID	Method Id	Date Collected	Parameter	Result	RL	Units
		SAMPLE ID	: 079-WC-001-042310			
079-WC-001-042310	1020A	4/23/2010	Ignitability	>200		deg F
079-WC-001-042310	3060A/7199	4/23/2010	Hexavalent Chromium	4.4	0.98	·mg/Kg
079-WC-001-042310	3050B	4/23/2010	Chromium	293	1.2	mg/Kg
079-WC-001-042310	6010B	4/23/2010	Silver	< 0.010	0.01	mg/l
079-WC-001-042310	6010B	4/23/2010	Arsenic	< 0.50	0.5	mg/l
079-WC-001-042310	6010B	4/23/2010	Barium	1.1	1	mg/l
079-WC-001-042310	6010B	4/23/2010	Cadmium	0.015	0.005	mg/l
079-WC-001-042310	6010B	4/23/2010	Lead	0.53	0.5	mg/l
079-WC-001-042310	6010B	4/23/2010	Selenium	<0.50	0.5	mg/l
079-WC-001-042310	6010B	4/23/2010	Chromium	< 0.010	0.01	mg/l
079-WC-001-042310	7470A	4/23/2010	Mercury	<0.00020	0.0002	mg/l
079-WC-001-042310	8081A	4/23/2010	gamma-BHC (Lindane)	ND	0.0002	mg/l
079-WC-001-042310	8081A	4/23/2010	Chlordane	ND	0.005	mg/l
079-WC-001-042310	8081A	4/23/2010	Endrin	ND	0.0002	mg/l
	8081A	4/23/2010	Heptachlor	ND	0.0002	mg/l
079-WC-001-042310	8081A	4/23/2010	Heptachlor epoxide	ND	0.0002	mg/l
079-WC-001-042310		4/23/2010	Methoxychlor	ND	0.0002	mg/l
079-WC-001-042310	8081A	4/23/2010	Toxaphene	ND	0.0025	mg/l
079-WC-001-042310	8081A	4/23/2010	Aroclor-1016	ND	36	ug/kg
079-WC-001-042310	SW846 8082		Aroclor-1010	ND	36	ug/kg
079-WC-001-042310	SW846 8082	4/23/2010	Aroclor-1221 Aroclor-1232	ND	36	ug/kg
079-WC-001-042310	SW846 8082	4/23/2010	Aroclor-1232 Aroclor-1242	ND	36	ug/kg
079-WC-001-042310	SW846 8082	4/23/2010	Aroclor-1242 Aroclor-1248	ND	36	ug/kg
079-WC-001-042310	SW846 8082	4/23/2010	Aroclor-1254	ND	36	ug/kg
079-WC-001-042310	SW846 8082	4/23/2010	Aroclor-1254 Aroclor-1260	99.2	36	ug/kg
079-WC-001-042310	SW846 8082	4/23/2010		ND	0.005	mg/l
079-WC-001-042310	8151A	4/23/2010	2,4-D 2,4,5-TP (Silvex)	ND	0.0015	mg/l
079-WC-001-042310	8151A	4/23/2010	Vinyl Chloride	ND	0.025	mg/l
079-WC-001-042310	8260B	4/23/2010	1,1-Dichloroethene	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	Chloroform	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	1,2-Dichloroethane	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010		ND	0.1	mg/l
079-WC-001-042310	8260B	4/23/2010	Methyl Ethyl Ketone	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	Carbon Tetrachloride	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	Trichloroethene	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	Benzene	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	Tetrachloroethene	ND	0.005	mg/l
079-WC-001-042310	8260B	4/23/2010	Chlorobenzene	ND	0.003	mg/l
079-WC-001-042310	8270C	4/23/2010	o-Cresol	-		mg/l
079-WC-001-042310	8270C	4/23/2010	m&p-Cresol	ND	0.05	mg/l
079-WC-001-042310	8270C	4/23/2010	2,4,6-Trichlorophenol	ND ND	0.05	mg/l
079-WC-001-042310	8270C	4/23/2010	2,4,5-Trichlorophenol	ND ND	0.03	mg/l
079-WC-001-042310	8270C	4/23/2010	2-Methylphenol	-	0.02	mg/l
079-WC-001-042310	8270C	4/23/2010	3&4- Methylphenol	ND		mg/l
079-WC-001-042310	8270C	4/23/2010	Pentachlorophenol	ND	0.1	
079-WC-001-042310	8270C	4/23/2010	1,4-Dichlorobenzene	ND	0.02	mg/l
079-WC-001-042310	8270C	4/23/2010	Hexachloroethane	ND	0.05	mg/l
079-WC-001-042310	8270C	4/23/2010	Nitrobenzene	ND	0.02	mg/l
079-WC-001-042310	8270C	4/23/2010	Hexachlorobutadiene	ND	0.01	mg/l
079-WC-001-042310	8270C	4/23/2010	2,4-Dinitrotoluene	ND	0.02	mg/l
079-WC-001-042310	8270C	4/23/2010	Hexachlorobenzene	ND	0.02	mg/
079-WC-001-042310	8270C	4/23/2010	Pyridine	ND	0.02	mg/
079-WC-001-042310	9040B	4/23/2010	Corrosivity	8.2	0	std un
079-WC-001-042310	SW846-3545	4/23/2010	Total TPHC (DRO)	1150	7.1	mg/K
079-WC-001-042310	SW846-8015B	4/23/2010	Total TPHC (GRO)	ND	14	mg/K
079-WC-001-042310	VOL1C 7.3.3	4/23/2010	Reactive Cyanide	<6.1	6.1	mg/k
079-WC-001-042310	VOLIC 7.3.4	4/23/2010	Reactive Sulfide	<120	120	mg/k

Sample ID	Method Id	Date Collected	Parameter	Result	RL	Units
-		SAMPLE ID	: 079-WC-002-042310			
079-WC-002-042310	1020A	4/23/2010	Ignitability	>200	0	deg F
079-WC-001-042310	3060A/7199	4/23/2010	Hexavalent Chromium	4.1	0.9	mg/Kg
079-WC-001-042310	3050B	4/23/2010	Chromium	92	1.2	mg/Kg
079-WC-002-042310	6010B	4/23/2010	Silver	< 0.010	0.01	mg/l
079-WC-002-042310	6010B	4/23/2010	Arsenic	< 0.50	0.5	mg/l
079-WC-002-042310	6010B	4/23/2010	Barium	<1.0	1	mg/l
079-WC-002-042310	6010B	4/23/2010	Cadmium	< 0.0050	0.005	mg/l
079-WC-002-042310	6010B	4/23/2010	Lead	< 0.50	0.5	mg/l
	6010B	4/23/2010	Selenium	< 0.50	0.5	mg/l
079-WC-002-042310	6010B	4/23/2010	Chromium	< 0.0050	0.005	mg/kg
079-WC-002-042310		4/23/2010	Mercury	< 0.00020	0.0002	mg/l
079-WC-002-042310	7470A		gamma-BHC (Lindane)	ND	0.0002	mg/l
079-WC-002-042310	8081A	4/23/2010	Chlordane	ND	0.005	mg/l
079-WC-002-042310	8081A	4/23/2010	Endrin	ND	0.0002	mg/l
079-WC-002-042310	8081A	4/23/2010		ND	0.0002	mg/l
079-WC-002-042310	8081A	4/23/2010	Heptachlor	ND	0.0002	mg/l
079-WC-002-042310	8081A	4/23/2010	Heptachlor epoxide	ND	0.0002	mg/l
079-WC-002-042310	8081A	4/23/2010	Methoxychlor		0.0002	mg/l
079-WC-002-042310	8081A	4/23/2010	Toxaphene	ND		ug/kg
079-WC-002-042310	8082	4/23/2010	Aroclor-1016	ND	33	
079-WC-002-042310	8082	4/23/2010	Aroclor-1221	ND	33	ug/kg
079-WC-002-042310	8082	4/23/2010	Aroclor-1232	ND	33	ug/kg
079-WC-002-042310	8082	4/23/2010	Aroclor-1242	ND	33	ug/kg
079-WC-002-042310	8082	4/23/2010	Aroclor-1248	ND	33	ug/kg
079-WC-002-042310	8082	4/23/2010	Aroclor-1254	ND	33	ug/kg
079-WC-002-042310	8082	4/23/2010	Aroclor-1260	109	33	ug/kg
079-WC-002-042310	8151A	4/23/2010	2,4-D	ND	0.005	mg/l
079-WC-002-042310	8151A	4/23/2010	2,4,5-TP (Silvex)	ND	0.0015	mg/l
079-WC-002-042310	8260B	4/23/2010	Vinyl Chloride	ND	0.025	mg/l
079-WC-002-042310	8260B	4/23/2010	1,1-Dichloroethene	ND	0.005	mg/l
079-WC-002-042310	8260B	4/23/2010	Chloroform	ND	0.005	mg/l
	8260B	4/23/2010	1,2-Dichloroethane	ND	0.005	mg/l
079-WC-002-042310 079-WC-002-042310	8260B	4/23/2010	Methyl Ethyl Ketone	ND	0.1	mg/l
	8260B	4/23/2010	Carbon Tetrachloride	ND	0.005	mg/l
079-WC-002-042310	8260B	4/23/2010	Trichloroethene	ND	0.005	mg/l
079-WC-002-042310	8260B	4/23/2010	Benzene	ND	0.005	mg/l
079-WC-002-042310		4/23/2010	Tetrachloroethene	ND	0.005	mg/l
079-WC-002-042310	8260B	4/23/2010	Chlorobenzene	ND	0.005	mg/l
079-WC-002-042310	8260B		o-Cresol		0.04	mg/l
079-WC-002-042310	8270C	4/23/2010	m&p-Cresol		0.04	mg/l
079-WC-002-042310	8270C	4/23/2010	2,4,6-Trichlorophenol	ND	0.005	mg/l
079-WC-002-042310	8270C	4/23/2010	2,4,5-Trichlorophenol	ND	0.005	mg/l
079-WC-002-042310	8270C	4/23/2010	Pentachlorophenol	ND	0.1	mg/l
079-WC-002-042310	8270C	4/23/2010	1,4-Dichlorobenzene	ND	0.02	mg/l
079-WC-002-042310	8270C	4/23/2010	Hexachloroethane	ND	0.01	mg/l
079-WC-002-042310	8270C	4/23/2010	AAUTANAAA	ND	0.02	mg/l
079-WC-002-042310	8270C	4/23/2010	Nitrobenzene	ND	0.02	mg/l
079-WC-002-042310	8270C	4/23/2010	Hexachlorobutadiene		0.01	mg/l
079-WC-002-042310	8270C	4/23/2010	2,4-Dinitrotoluene	ND		mg/l
079-WC-002-042310	8270C	4/23/2010	Hexachlorobenzene	ND	0.02	
079-WC-002-042310	8270C	4/23/2010	Pyridine	ND	0.02	mg/l
079-WC-002-042310	ASTM D1498-76M	4/23/2010	Corrosivity	7.98		std uni
079-WC-002-042310	SW846 8015	4/23/2010	Total TPHC (DRO)	84.9	6.6	mg/K
079-WC-002-042310	SW846 8015B	4/23/2010	Total TPHC (GRO)	ND	13	mg/K
	CHAP7/9012B	4/23/2010	Reactive Cyanide	<5.7	5.7	mg/k
079-WC-002-042310 079-WC-002-042310	CHAP7/9034	4/23/2010	Reactive Sulfide	<110	110	mg/k

# ${\bf APPENDIX~G} \\ {\bf LABORATORY~DATA~PACKAGES,~SOIL~REMOVAL~PROGRAM}$









05/21/10



# Technical Report for

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Accutest Job Number: JA44929

Sampling Date: 04/23/10

Report to:

Mactec

AGIOUZELIS@mactec.com

ATTN: Telly Giouzelis

Total number of pages in report: 37





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

VP Ops, Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.



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### Sample Summary

Honeywell International Inc.

HLANJPR: SA-5, Site 079, Jersey City, NJ

Job No:

JA44929

Sample Number	Collected Date	Time By	Received	Matri Code	<del></del>	Client Sample ID
JA44929-1	04/23/10	09:10 BS	04/23/10	SO	Soil	079-WC-001-042310
JA44929-1A	04/23/10	09:10 BS	04/23/10	SO	Soil	079-WC-001-042310
JA44929-1AR	04/23/10	09:10 BS	04/23/10	SO	Soil	079-WC-001-042310
JA44929-1B	04/23/10	09:10 BS	04/23/10	SO	Soil	079-WC-001-042310
JA44929-2	04/23/10	09:30 BS	04/23/10	so	Soil	079-WC-002-042310
JA44929-2A	04/23/10	09:30 BS	04/23/10	SO	Soil	079-WC-002-042310
JA44929-2AF	R 04/23/10	09:30 BS	04/23/10	SO	Soil	079-WC-002-042310
JA44929-2B	04/23/10	09:30 BS	04/23/10	SO	Soil	079-WC-002-042310



### CASE NARRATIVE / CONFORMANCE SUMMARY

Client:

Honeywell International Inc.

Job No

JA44929

Site:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Report Date

5/12/2010 10:23:03 AM

On 04/23/2010, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.4 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA44929 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

Matrix: LEACHATE

Batch ID: GP53354

- Sample(s) JA44806-1LS were used as the QC samples indicated.
- GP53354-LS5 for 2-Butanone (MEK): Outside control limits due to matrix interference.

Matrix: LEACHATE

Batch ID: VL5768

- JA44900-1MSD for 2-Butanone (MEK): Outside control limits due to matrix interference.
- JA44900-1MS for 2-Butanone (MEK): Outside control limits due to matrix interference.

### Extractables by GCMS By Method SW846 8270C

Matrix: LEACHATE

Batch ID: OP43301

- All samples were extracted within the recommended method holding time.
- Sample(s) JA44739-1LS were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Volatiles by GC By Method SW846 8015B

Matrix: SO

Batch ID: GPF2025

- All samples were analyzed within the recommended method holding time.
- Sample(s) JA44836-46MS, JA44836-46MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Extractables by GC By Method SW846 8081A

Matrix: LEACHATE

Batch ID:

OP43303

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44739-1LS were used as the QC samples indicated.

### Extractables by GC By Method SW846 8082

Matrix: SO

Batch ID:

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) OP43278-MSMSD, JA44912-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Aroclor 1016, Aroclor 1260 are outside control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for Aroclor 1016, Aroclor 1260 are outside control limits for sample OP43278-MSD. Probable cause due to sample homogeneity.
- OP43278-MSD for Aroclor 1016: Analytical precision exceeds standard laboratory control limits.
- JA44929-1A for Decachlorobiphenyl: Outside control limits due to matrix interference.
- OP43278-MS for Aroclor 1016: Outside of in house control limits.
- OP43278-MS for Aroclor 1260: Outside of in house control limits.
- OP43278-MS for Decachlorobiphenyl: Outside of in house control limits.
- OP43278-MS for Tetrachloro-m-xylene: Outside of in house control limits.
- OP43278-MSD for Aroclor 1260: Analytical precision exceeds standard laboratory control limits.

Matrix: SO

Batch ID: OP43308

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44206-1MS, JA44206-1MSD, OP43308-MSMSD were used as the QC samples indicated.
- RPD(s) for MSD for Aroclor 1016, Aroclor 1260 are outside control limits for sample OP43308-MSD. Probable cause due to sample homogeneity.
- OP43308-MSD for Aroclor 1260: Analytical precision exceeds standard laboratory control limits.
- OP43308-MSD for Aroclor 1016: Analytical precision exceeds standard laboratory control limits.
- JA44929-2A for Tetrachloro-m-xylene: Outside control limits due to matrix interference.

## Extractables by GC By Method SW846 8151

Matrix: LEACHATE

Batch ID: OP43312

- All samples were extracted within the recommended method holding time.
- Sample(s) JA44739-1LS were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

# Extractables by GC By Method SW846-8015

Matrix: SO

Batch ID: OP43275

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44822-1MS, JA44822-1MSD were used as the QC samples indicated.

#### Metals By Method SW846 6010B

Matrix: LEACHATE

Batch ID: MP52441

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44806-1MS, JA44806-1MSD, JA44806-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Lead, Selenium are outside control limits for sample MP52441-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</p>

Matrix: SO

Batch ID: MP52460

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA45091-1MSD, JA45091-1SDL, JA45091-1MS were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Chromium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- RPD(s) for MSD for Chromium are outside control limits for sample MP52460-S2. High rpd due to possible sample nonhomogeneity.
- RPD(s) for Serial Dilution for Chromium are outside control limits for sample MP52460-SD1. Serial dilution indicates possible matrix interference.

#### Metals By Method SW846 7470A

Matrix: LEACHATE

Batch ID: MP52450

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44806-1MS, JA44806-1MSD were used as the QC samples for metals.
- Matrix Spike Duplicate Recovery(s) for Mercury are outside control limits. Probable cause due to matrix interference.

#### Wet Chemistry By Method ASTM D1498-76M

Matrix: SO

Batch ID: GN36865

Sample(s) JA44929-1DUP were used as the QC samples for Redox Potential Vs H2.

#### Wet Chemistry By Method SM18 2540G

Matrix: SO

Batch ID: GN37025

The data for SM18 2540G meets quality control requirements.



#### Wet Chemistry By Method SW846 3060A/7199

Matrix: SO

Batch ID: GP53399

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44929-1APS, JA44929-1AMS, JA44929-1ADUP were used as the QC samples for Chromium, Hexavalent.
- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (90.4%) on this sample.
- RPD(s) for Duplicate for Chromium, Hexavalent are outside control limits for sample GP53399-D1. High RPD due to possible sample nonhomogeneity.
- GP53399-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

Matrix: SO

Batch ID: GP53483

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44929-1ARDUP, JA44929-1ARPS, JA44929-1ARMS were used as the QC samples for Chromium, Hexavalent.
- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (107%) on this sample.
- GP53483-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

#### Wet Chemistry By Method SW846 9045C,D

Matrix: SO

Batch ID: GN36862

Sample(s) JA44929-1DUP were used as the QC samples for pH.

### Wet Chemistry By Method SW846 CHAP7/9012 B

Matrix: SO

Batch ID: GP53342

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44739-1DUP were used as the QC samples for Cyanide Reactivity.

### Wet Chemistry By Method SW846 CHAP7/9034

Matrix: SO

Batch ID: GP53343

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA44739-1DUP, JA44739-1MS were used as the QC samples for Sulfide Reactivity.

# Wet Chemistry By Method SW846 CHAP7/ASTM D93

Matrix: SO

Batch ID: GN36908

Sample(s) JA45099-1DUP were used as the QC samples for Ignitability (Flashpoint).

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Wednesday, May 12, 2010

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IT'S ALL IN THE CHEMISTRY

Sample	Results
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# Report of Analysis

Page 1 of 1

Client Sample ID: 079-WC-001-042310

Lab Sample ID: Matrix:

JA44929-1 SO - Soil

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 82.2

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

#### General Chemistry

General Chemish y						-	Method
Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Redox Potential Vs H2 Solids, Percent pH	291 82.2 8.20		mv % su	1 1 1	04/28/10 05/03/10 04/28/10	ST RI ST	ASTM D1498-76M SM18 2540G SW846 9045C,D

Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1A

Matrix:

SO - Soil SW846 8015B Date Received: 04/23/10

Date Sampled: 04/23/10

Percent Solids: 82.2

Method: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Run #1

File ID PF81970.D DF Analyzed 04/27/10 1

Ву CY Prep Date n/a

Prep Batch n/a

Q

Analytical Batch

**GPF2025** 

Run #2

Initial Weight 5.1 g

Final Volume 5.0 ml

Methanol Aliquot 100 ul

Run #1 Run #2

CAS No.

Compound

Result

RL

Units MDL

TPH-GRO (C6-C10)

ND

14 Run#2 1.3 mg/kg Limits

CAS No.

Surrogate Recoveries

Run#1

98-08-8

aaa-Trifluorotoluene

98%

66-119%

RL = Reporting Limit

MDL - Method Detection Limit

J = Indicates an estimated value

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank



ND = Not detected

Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1A

Matrix:

SO - Soil

SW846 8082 SW846 3545

Date Sampled: 04/23/10

Date Received: 04/23/10

Percent Solids: 82.2

Method: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Run #1

DF 1

Analyzed 04/26/10

By OPM Prep Date 04/24/10

Prep Batch OP43278

Analytical Batch GXX3754

Run #2

Initial Weight

File ID

XX94621.D

Final Volume

Run #1 Run #2 17.0 g

10.0 ml

**PCB** List

2051-24-3

2051-24-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND ND ND ND	36 36 36 36 36 36 36	13 24 12 13 7.1 9.0 14	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
877-09-8 877-09-8 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	67% 78% 144%		33-	141% 141% 154%	

186% a

(a) Outside control limits due to matrix interference.

Decachlorobiphenyl

Decachlorobiphenyl

ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

MDL - Method Detection Limit

J = Indicates an estimated value

32-154%

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1A

Date Sampled: 04/23/10

Matrix:

SO - Soil

Date Received: 04/23/10

Method:

SW846-8015 SW846 3545

Percent Solids: 82.2

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID 3Z23036.D Run #1

DF Analyzed 1 04/24/10

By DNM Prep Date 04/23/10

Prep Batch OP43275

Analytical Batch G3Z690

Run #2

Initial Weight Final Volume

Run #1 Run #2 17.1 g

1.0 ml

CAS No. Compound Result

RL

Units MDL

Q

TPH-DRO (C10-C28)

1150

7.1 3.5 mg/kg

Surrogate Recoveries CAS No.

Run#1

Run# 2 Limits

17-148%

84-15-1 o-Terphenyl Tetracosane-d50 16416-32-3 5a-Androstane 438-22-2

101% 45% 61%

29-151% 19-161%

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1A SO - Soil

Date Sampled: 04/23/10

Date Received: 04/23/10 Percent Solids: 82.2

Matrix: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Metals Analysis

Prep Method Analyzed By Method Prep Units DF RL Result Analyte SW846 3050B <sup>2</sup> SW846 6010B <sup>1</sup> 04/29/10 04/30/10 GT mg/kg 1 1.2 293 Chromium

(1) Instrument QC Batch: MA24215 (2) Prep QC Batch: MP52460

Page 1 of 1

Client Sample ID: 079-WC-001-042310

Lab Sample ID: Matrix:

JA44929-1A

SO - Soil

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 82.2

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

General Chemistry

General Chambar						_	Se .1 1
Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Chromium, Hexavalent Cyanide Reactivity Ignitability (Flashpoint) Sulfide Reactivity	4.4 <6.1 >200 <120	0.98 6.1 120	mg/kg mg/kg Deg. F mg/kg		04/30/10 13:14 04/29/10 15:01 04/29/10 04/29/10	AE LMM	SW846 CHAP7/9012 B SW846 CHAP7/ASTM D93 SW846 CHAP7/9034

Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1AR

Date Sampled: 04/23/10 Date Received: 04/23/10

SO - Soil

Matrix: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Percent Solids: 82.2

General Chemistry

Method Analyzed DF Units RL Result Analyte

SW846 3060A/7199 05/07/10 12:56 BD 8 mg/kg 3.9 Chromium, Hexavalent 40.9

Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1B

Matrix:

SO - Soil

SW846 8260B SW846 1311

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 82.2

Method: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID L236393.D Run #1

DF 5

Analyzed 04/29/10

Prep Date By 04/26/10 MAH

Prep Batch GP53354

**Analytical Batch** 

VL5768

Run #2

Purge Volume

Run #1

Run #2

**VOA TCLP Leachate** 

5.0 ml

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW# MC	L RL	MDL	Units Q
71-43-2 78-93-3 56-23-5 108-90-7 67-66-3 106-46-7 107-06-2 75-35-4 127-18-4 79-01-6 75-01-4	Benzene 2-Butanone (MEK) Carbon tetrachloride Chlorobenzene Chloroform 1,4-Dichlorobenzene 1,2-Dichloroethane 1,1-Dichloroethene Tetrachloroethene Trichloroethene Vinyl chloride	ND ND ND ND ND ND ND ND ND ND ND ND ND N	D018 0.50 D035 200 D019 0.50 D021 100 D022 6.0 D027 7.5 D028 0.5 D029 0.7 D039 0.7 D040 0.5 D043 0.2	0.10 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050 0.0050	0.0012 0.0081 0.0013 0.0019 0.0012 0.0014 0.0017 0.0020 0.0013 0.0012 0.0022	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	102% 99% 99% 84%		76-120% 64-135% 76-117% 72-122%		

MDL - Method Detection Limit ND = Not detected MCL = Maximum Contamination Level (40 CFR 261 6/96)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1B

SO - Soil

Date Sampled: 04/23/10

Matrix:

Date Received: 04/23/10

Method:

SW846 8270C SW846 3510C

Percent Solids: 82.2

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID 3M18945.D

Analyzed DF 04/29/10 1

By KLS Prep Date 04/28/10

Prep Batch OP43301

Analytical Batch E3M814

Run #1 Run #2

Initial Volume Final Volume

Run #1

100 ml

1.0 ml

Run #2

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7 87-86-5 95-95-4 88-06-2 106-46-7 121-14-2 118-74-1 87-68-3 67-72-1 98-95-3 110-86-1	2-Methylphenol 3&4-Methylphenol Pentachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene Hexachlorobenzene Hexachlorobutadiene Hexachloroethane Nitrobenzene Pyridine	ND ND ND ND ND ND ND ND ND ND ND ND ND N	D023 D024 D037 D041 D042 D027 D030 D032 D033 D034 D036	3.0 2.0	0.020 0.020 0.10 0.050 0.050 0.020 0.020 0.020 0.010 0.050 0.020 0.020	0.011 0.010 0.0080 0.013 0.012 0.0039 0.0022 0.0037 0.0037 0.0026 0.0025	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run#	2 1	Limits			
367-12-4 4165-62-2 118-79-6 4165-60-0 321-60-8 1718-51-0	2-Fluorophenol Phenol-d5 2,4,6-Tribromophenol Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	45% 31% 82% 86% 80% 92%			13-68% 10-49% 37-130% 25-112% 31-106% 14-122%			

ND = Not detected

MDL - Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 261 6/96)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-001-042310

Lab Sample ID: Matrix:

JA44929-1B

SO - Soil

SW846 8151 SW846 3510C

Date Sampled: Date Received:

04/23/10 04/23/10

Percent Solids:

82.2

Method: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

File ID

DF WW89956.D

Analyzed 04/29/10

By TDR Prep Date 04/28/10

Prep Batch OP43312

Analytical Batch GWW3139

Run #1 Run #2

Initial Volume

100 ml

Final Volume 10.0 ml

Run #1 Run #2

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

Units Q

Compound CAS No.

2,4-D

2,4,5-TP (Silvex)

ND ND

D016 10 D017 1.0

Run# 2

0.0050 0.0015

Limits

0.0013 mg/l 0.00018

MDL

mg/l

CAS No.

94-75-7

93-72-1

Surrogate Recoveries

50-142%

HW# MCL RL

2,4-DCAA 19719-28-9 19719-28-9 2,4-DCAA 104% 87%

Run#1

Result

50-142%

ND = Not detected

MDL - Method Detection Limit

MCL = Maximum Contamination Level (40 CFR 261 6/96)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-001-042310

Lab Sample ID:

JA44929-1B

04/23/10 Date Sampled: Date Received:

Prep Date

04/28/10

Matrix:

SO - Soil

By

OPM

04/23/10

Method:

SW846 8081A SW846 3510C

DF

Percent Solids: 82.2

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyzed

04/29/10

Analytical Batch Prep Batch G1G1956 OP43303

Run #1 Run #2

Initial Volume Final Volume

Run #1

100 ml

File ID

1G52857.D

10.0 ml

Run #2

TCLP Leachate method SW846 1311

1 750	CLP Leachate		ICEI Deserrati
CAS No.	Compound	Result	HW# MCL RL MDL Units Q
58-89-9 12789-03-6 72-20-8 76-44-8 1024-57-3 72-43-5 8001-35-2	gamma-BHC (Lindane) Chlordane Endrin Heptachlor Heptachlor epoxide Methoxychlor Toxaphene	ND ND ND ND ND ND ND	D013       0.40       0.00020       0.000011       mg/l         D020       0.030       0.0050       0.00079       mg/l         D012       0.020       0.00020       0.000031       mg/l         D031       0.0080       0.00020       0.000020       mg/l         D014       10       0.00020       0.000068       mg/l         D015       0.50       0.0025       0.0021       mg/l
CAS No.	Surrogate Recoveries	Run#1	Run# 2 Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	76% 68% 82% 83%	30-137% 30-137% 10-137% 10-137%

MDL - Method Detection Limit ND = Not detected MCL = Maximum Contamination Level (40 CFR 261 6/96) E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 079-WC-001-042310

Lab Sample ID: Matrix:

JA44929-1B SO - Soil

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 82.2

Project:

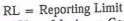
HLANJPR: SA-5, Site 079, Jersey City, NJ

### Metals Analysis, TCLP Leachate SW846 1311

Metals Analys	15, 1001 100	.01.50								
Analyte	Result	HW# 1	MCL	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	<0.50 1.1 0.015 <0.010 0.53 <0.00020 <0.50 <0.010	D005 1 D006 1 D007 1 D008 1 D009	5.0 5.0 0.20 1.0	0.50 1.0 0.0050 0.010 0.50 0.00020 0.50 0.010	mg/l mg/l	1 1 1 1 1 1 1	04/28/10 04/28/10 04/28/10 04/28/10 04/28/10 04/28/10	04/29/10 ND 04/29/10 ND 04/29/10 ND 04/29/10 ND 04/29/10 ND 04/29/10 JF 04/29/10 ND 04/29/10 ND	SW846 6010B <sup>1</sup> SW846 6010B <sup>1</sup> SW846 6010B <sup>1</sup> SW846 7470A <sup>2</sup>	SW846 3010A <sup>3</sup> SW846 7470A <sup>4</sup> SW846 3010A <sup>3</sup>

(1) Instrument QC Batch: MA24199 (2) Instrument QC Batch: MA24202

(3) Prep QC Batch: MP52441 (4) Prep QC Batch: MP52450





Client Sample ID: 079-WC-002-042310

Lab Sample ID:

JA44929-2

Matrix:

SO - Soil

Date Sampled: 04/23/10

Date Received: 04/23/10

Percent Solids: 87.6

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

#### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Redox Potential Vs H2	282		mv	1	04/28/10	ST	ASTM D1498-76M
Solids, Percent	87.6		%	1	05/03/10	RI	SM18 2540G
pH	7.98		su	1	04/28/10	ST	SW846 9045C,D

Client Sample ID: 079-WC-002-042310

Lab Sample ID:

JA44929-2A SO - Soil

04/23/10 Date Sampled: 04/23/10 Date Received: Percent Solids: 87.6

Matrix: Method:

SW846 8015B

HLANJPR: SA-5, Site 079, Jersey City, NJ

Project: Analytical Batch Prep Batch Prep Date By Analyzed GPF2025 DF n/a File ID CY n/a 04/27/10 1 PF81971.D Run #1 Run #2

Run #1 Run #2	Initial Weight 5.0 g	Final Volume 5.0 ml	Methan 100 ul	nol Aliquo	ot				
Run #2			Result	RL	MDL	Units	Q		

CAS No.	Compound	Result	KL	1911011	<b>U</b>				
0112	TPH-GRO (C6-C10)	ND	13	mg/kg					
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its				
	aaa-Trifluorotoluene	97%		66-119%					

MDL - Method Detection Limit ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



By

VDT

Client Sample ID: 079-WC-002-042310

Lab Sample ID:

JA44929-2A

Matrix:

Project:

SO - Soil

Method:

SW846 8082 SW846 3545

DF

1

HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyzed

04/29/10

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids:

04/27/10

87.6

Analytical Batch Prep Batch Prep Date GAB5512 OP43308

Run #1 Run #2

Final Volume Initial Weight Run #1

Run #2

17.1 g

File ID

AB88201.D

10.0 ml

PCB List

PCB List						_
CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND ND ND ND	33 33 33 33 33 33 33	12 22 11 12 6.6 8.4 13	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	. Lin	nits	
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	151% <sup>a</sup> 112% 102% 113%		33- 32-	141% 141% 154% -154%	

(a) Outside control limits due to matrix interference.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-002-042310

Lab Sample ID:

JA44929-2A

Matrix:

SO - Soil

Method:

SW846-8015 SW846 3545 HLANJPR: SA-5, Site 079, Jersey City, NJ

Project:

File ID

DF 1

Analyzed 04/24/10

By DNM Prep Date 04/23/10

Prep Batch OP43275

0

Analytical Batch G3Z690

Run #1 Run #2

Initial Weight 17.2 g

3Z23037.D

Final Volume 1.0 ml

Run #1 Run #2

16416-32-3

438-22-2

Compound CAS No.

TPH-DRO (C10-C28)

6.6

RL

Run#2

3.3

MDL

Units mg/kg

Date Sampled: 04/23/10

Date Received: 04/23/10

Percent Solids: 87.6

Surrogate Recoveries CAS No.

o-Terphenyl 84-15-1

Tetracosane-d50 5a-Androstane

80% 51% 53%

Run#1

Result

84.9

17-148% 29-151% 19-161%

Limits

ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

MDL - Method Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

Client Sample ID: 079-WC-002-042310

Lab Sample ID:

JA44929-2A SO - Soil

Date Sampled: 04/23/10

Date Received: 04/23/10

Percent Solids: 87.6

Project:

Matrix:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Metals Analysis

Result Analyte

Units DF RL

Analyzed By

Method

Prep Method

Chromium

92.0

mg/kg 1 1.2

04/29/10 05/01/10 GT

Prep

SW846 6010B <sup>1</sup>

SW846 3050B <sup>2</sup>

(1) Instrument QC Batch: MA24215

(2) Prep QC Batch: MP52460

Page 1 of 1

Client Sample ID: 079-WC-002-042310

Lab Sample ID: Matrix:

JA44929-2A SO - Soil

Date Sampled: 04/23/10

Date Received: 04/23/10 Percent Solids: 87.6

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

General Chemistry

General Chemistry					A a leverad	Bv	Method
1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	Result	RL	Units	DF	Analyzed	2)	
Analyte			-/1-0	2	04/30/10 13:33	BD	SW846 3060A/7199
Chromium, Hexavalent Cyanide Reactivity Ignitability (Flashpoint) Sulfide Reactivity	4.1 < 5.7 > 200 < 110	0.90 5.7 110	mg/kg mg/kg Deg. F mg/kg	1 1 1	04/20/10 15:02	AE LMM	SW846 CHAP7/9012 B SW846 CHAP7/ASTM D93 SW846 CHAP7/9034

Page 1 of 1

Client Sample ID: 079-WC-002-042310

Lab Sample ID: Matrix:

JA44929-2AR

SO - Soil

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 87.6

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

General Chemistry

Method Ву Analyzed DF Units RL Result Analyte

SW846 3060A/7199 05/07/10 12:08 BD 2 mg/kg 0.92 10.2 Chromium, Hexavalent

By

MAH

Client Sample ID: 079-WC-002-042310

Lab Sample ID: Matrix:

JA44929-2B

SO - Soil

SW846 8260B SW846 1311

DF

5

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 87.6

Prep Date

04/26/10

Method: Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyzed

04/29/10

Prep Batch GP53354

Analytical Batch VL5768

Run #1 Run #2

Purge Volume

File ID

L236394.D

5.0 ml Run #1

Run #2

TCLP Leachate method SW846 1311

VOA TCLP	Leachate	ICEI Dessisse Total	
CAS No.	Compound	Result	HW# MCL RL MDL Units Q
71-43-2 78-93-3 56-23-5 108-90-7 67-66-3 106-46-7 107-06-2 75-35-4 127-18-4 79-01-6 75-01-4	Benzene 2-Butanone (MEK) Carbon tetrachloride Chlorobenzene Chloroform 1,4-Dichlorobenzene 1,2-Dichloroethane 1,1-Dichloroethene Tetrachloroethene Trichloroethene Vinyl chloride	ND ND ND ND ND ND ND ND ND ND ND ND ND N	D018         0.50         0.0050         0.0012         mg/l           D035         200         0.10         0.0081         mg/l           D019         0.50         0.0050         0.0013         mg/l           D021         100         0.0050         0.0019         mg/l           D022         6.0         0.0050         0.0012         mg/l           D027         7.5         0.0050         0.0014         mg/l           D028         0.50         0.0050         0.0017         mg/l           D029         0.70         0.0050         0.0020         mg/l           D039         0.70         0.0050         0.0013         mg/l           D040         0.50         0.0050         0.0012         mg/l           D043         0.20         0.025         0.0022         mg/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2 Limits
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	99% 96% 98% 85%	76-120% 64-135% 76-117% 72-122%

MDL - Method Detection Limit ND = Not detected MCL = Maximum Contamination Level (40 CFR 261 6/96) E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-002-042310

JA44929-2B Lab Sample ID:

Matrix:

Method:

SO - Soil

SW846 8270C SW846 3510C HLANJPR: SA-5, Site 079, Jersey City, NJ Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 87.6

Project: Analytical Batch Prep Batch Prep Date By Analyzed E3M814 DF File ID OP43301 04/28/10 KLS 04/29/10 1 3M18946.D Run #1 Run #2

Final Volume Initial Volume 1.0 ml 100 ml Run #1 Run #2

ABN TCLP Leachate

TCLP Leachate method SW846 1311

ADN ICLI		Result	HW# MCL RL	MDL	Units Q
CAS No.	Compound	Kesuit		0.011	mg/l
95-48-7 87-86-5 95-95-4 88-06-2 106-46-7 121-14-2 118-74-1 87-68-3 67-72-1 98-95-3 110-86-1	2-Methylphenol 3&4-Methylphenol Pentachlorophenol 2,4,5-Trichlorophenol 1,4-Dichlorobenzene 2,4-Dinitrotoluene Hexachlorobenzene Hexachlorobutadiene Hexachloroethane Nitrobenzene Pyridine	ND ND ND ND ND ND ND ND ND ND ND ND ND N	D023       200       0.020         D024       200       0.020         D037       100       0.10         D041       400       0.050         D042       2.0       0.050         D027       7.5       0.020         D030       0.13       0.020         D032       0.13       0.020         D033       0.50       0.010         D034       3.0       0.050         D036       2.0       0.020         D038       5.0       0.020	0.011 0.0080 0.013 0.012 0.0039 0.0022 0.0037 0.0037 0.0026 0.0025 0.0027	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l
CAS No.	Surrogate Recoveries	Run# 1	Run#2 Limits		
367-12-4 4165-62-2 118-79-6 4165-60-0 321-60-8 1718-51-0	2,4,6-Tribromophenoi Nitrobenzene-d5 2-Fluorobiphenyl	51% 35% 88% 91% 82% 92%	13-68% 10-49% 37-130% 25-112% 31-106% 14-122%		

MDL - Method Detection Limit ND = Not detected MCL = Maximum Contamination Level (40 CFR 261 6/96) E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: Lab Sample ID:

079-WC-002-042310

JA44929-2B

Matrix: Method:

Project:

SO - Soil

SW846 8151 SW846 3510C HLANJPR: SA-5, Site 079, Jersey City, NJ Date Sampled: 04/23/10 Date Received:

87.6

04/23/10

Percent Solids:

Analytical Batch

Run #1

File ID WW89957.D DF 1

By Analyzed TDR 04/29/10

Prep Date 04/28/10

Prep Batch OP43312

GWW3139

Run #2

Final Volume Initial Volume 100 ml

Run #1

10.0 ml

Run #2

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

Compound CAS No.

Result ND

HW# MCL RL 0.0050 D016 10

MDL

Units Q

2,4-D 94-75-7

2,4,5-TP (Silvex) 93-72-1

ND

D017 1.0 0.0015

mg/l 0.0013 mg/l 0.00018

CAS No.

Surrogate Recoveries

Run#1

Limits Run#2

19719-28-9 2,4-DCAA 19719-28-9 2,4-DCAA 104% 98%

50-142% 50-142%

ND = Not detected

MDL - Method Detection Limit MCL = Maximum Contamination Level (40 CFR 261 6/96)

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

By

OPM

Client Sample ID: 079-WC-002-042310

DF

1

Lab Sample ID:

JA44929-2B

SO - Soil

Date Sampled: 04/23/10 Date Received: Percent Solids:

04/28/10

04/23/10 87.6

Matrix: Method: Project:

File ID

100 ml

1G52858.D

SW846 8081A SW846 3510C

HLANJPR: SA-5, Site 079, Jersey City, NJ

Analyzed

04/29/10

Prep Batch Prep Date OP43303

Analytical Batch G1G1956

Run #1 Run #2

Final Volume Initial Volume

Run #1

10.0 ml

Run #2

TCLP Leachate method SW846 1311

5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	10D1 Loud-		
	CLP Leachate	Result	HW# MCL RL MDL Units Q
CAS No.  58-89-9 12789-03-6 72-20-8 76-44-8 1024-57-3 72-43-5 8001-35-2	gamma-BHC (Lindane) Chlordane Endrin Heptachlor Heptachlor epoxide Methoxychlor Toxaphene	ND ND ND ND ND ND	D013       0.40       0.00020       0.000011       mg/l         D020       0.030       0.0050       0.00079       mg/l         D012       0.020       0.00020       0.000031       mg/l         D031       0.0080       0.00020       0.000020       mg/l         D014       10       0.00020       0.000068       mg/l         D015       0.50       0.0025       0.0021       mg/l
CAS No.	Surrogate Recoveries	Run# 1	Run#2 Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	81% 75% 85% 85%	30-137% 30-137% 10-137% 10-137%

MDL - Method Detection Limit ND = Not detected MCL = Maximum Contamination Level (40 CFR 261 6/96) E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 079-WC-002-042310

Lab Sample ID: Matrix:

JA44929-2B

SO - Soil

Date Sampled: 04/23/10 Date Received: 04/23/10

Percent Solids: 87.6

Project:

HLANJPR: SA-5, Site 079, Jersey City, NJ

# Metals Analysis, TCLP Leachate SW846 1311

Metals Analys	is, TCLP Lea	achate 5 w	40 1311				0.00	2011	Prep Method
Analyte	Result	HW# MO	L RL	Units	DF	Prep	Analyzed By	Method	- 2
Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	<0.50 <1.0 <0.0050 <0.010 <0.50 <0.00020 <0.50 <0.010	D004 5.0 D005 100 D006 1.0 D007 5.0 D008 5.0 D009 0.0 D010 1.0 D011 5.0	0.0050 0.010 0.50 0.0002 0.50	mg/l mg/l 20 mg/l mg/l	1 1 1 1 1 1 1	04/28/10 04/28/10 04/28/10 04/28/10 04/28/10	04/29/10 ND 04/29/10 ND 04/29/10 ND 04/29/10 ND 04/29/10 ND 04/29/10 JF 04/29/10 ND 04/29/10 ND	SW846 6010B	SW846 3010A <sup>3</sup> SW846 3010A <sup>3</sup> SW846 3010A <sup>3</sup> SW846 3010A <sup>3</sup> SW846 7470A <sup>4</sup> SW846 3010A <sup>3</sup>

(1) Instrument QC Batch: MA24199 (2) Instrument QC Batch: MA24202 (3) Prep QC Batch: MP52441

(4) Prep QC Batch: MP52450











Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



Job Change Order:

JA44929\_4/28/2010

Requested Date:

4/28/2010

Received Date:

4/23/2010

Account Name:

Honeywell International Inc.

Due Date:

4/27/2010

Project Description: HLANJPR: SA-5, Site 079, Jersey City, NJ

Deliverable:

FULT1

CSR:

TAT (Days):

Sample #:

JA44929-1, 2

Change:

Change t/a to 7 day. If possible, obtain data by 5/3, or

the soonest we can.

JA44929: Chain of Custody Page 1 of 4

Above Changes

Telly Guiouzelis

Date: 4/28/2010

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1





Accutest Laboratories V:732.329.0200

# Accutest Laboratories Sample Receipt Summary

Date / Time Received: 4/23/2010 1435  Project: HONEYWELL  Cooler Security	Delivery Method:  No. Coolers:  1  COC Present:  DI Dates/Time OK	Sample Integrity - Documentation	tion Required: uired at Login:  Y or N  Y or N  Y or N  Intact  Y N  Intact	No NVA
Comments  -1, -2 NO SEPARATE VO VOL REC'D  A separate vo vol rec'd	2235 F:	5, Filtering instructions clear:  5, Filtering instructions clear:		Dayton, New Jersey www/accutest.com

JA44929: Chain of Custody Page 2 of 4



Accutest Laboratories V:732.329.0200

# Sample Receipt Summary - Problem Resolution

Accutest Job Number: JA44929

CSR:	Marty Vitanza	

Response Date

4/28/2010

Response: Client Notified (Telly). Procced as noted. Run VOC and GRO from only single jar provided. (Log-in- Please comment, low sampe volume provided, use sparingly)

2235 US Highway 130 F: 732.329.3499

Dayton, New Jersey www/accutest.com

JA44929: Chain of Custody Page 3 of 4



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329-0200 Phone,	122-220-2499 122-220-2499	Fax		Privileged &			Y		-							A Partie of August						Lab ID	A	. 10
29-0200 Phone.	134-347-3477	100		1 DP Fo.	1	Andrew Shu	st (MAC	TEC)	b	Locatio	on of S		SA 5.5	Sites 0	9	ACTIVITY TO SEE STATE OF		OCCUPANT OF THE PARTY OF THE PA	-		-	PAGE	of	Chief Control of the
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JA44929: Chain of Custody Page 4 of 4

### APPENDIX H BACKFILL CERTIFICATION

88474	A 8/23/2010 7:59: JR	PURCHASE ORDER PURCHASE ORDER PURCHASE ORDER			S -je		TN 20,04MG TN 12,64MG	METRIC TONS TODAY	DELIVERY INSIDE CURB LINE AT CONSIGNEE'S RISK.	Signature Required by Consignee or It's Agent for Inside Curb Line Delivery DATE		OSHA M.S.D.S. AVAILABLE UPON REQUEST A SERVICE CHARGE OF 1 1/2% PER MONTH WILL BE ADDED TO ALL BALANCES MORE THAN 30 DAYS OLD. ANNUAL BERGENTIAGE PARE OF 18%.	CUSTOMER COPY
<b>ASPHALT PRODUCTS, LLC</b>	47 88474 WM SOLL MACCHIONE J	CONTRACT NUMBER PUR	HAULER				GROSS 22.09 14.15	ADS US TONS TODAY	DELIVERY INSID	Signature Required by Consignee or			AUTHORIZED
	PLANT LOCATION 2414 95 <sup>th</sup> Street North Bergen, NJ 07047 TEL: (201) 854-2818 FAX: (201) 854-2816	SOURCE CODE	PROJECT CODE F. RT 440			HONDA LOT	GR	NET		TRUCK LEAVE JOB:		MATERIALS HEREBY SOLD BECOME PROPERTY OF PURCHASER AT POINT OF ORIGIN. RECEIPT OF MATERIALS AND THE SIGNATURE OF THE CONSIGNEE OR THE CONSIGNEE'S AGENT SHALL PRECLUDE ANY AND ALL CLAIMS BY PURCHASER.	AUTHORIZED
NORTH BERG	CORPORATE OFFICE 90 West Franklin Street Hackensack, NJ 07601 TEL: (201) 489-6066 FAX: (201) 489-7680		CUSTOMER NAME	ZONE CODE			DESCRIPTION F ABC			DB:		D BECOME PROPERTY OF PURCHASER AT PORTION SHALL PRECLUDE ANY AND ALL CLAIMS	
SA NSPHALT PR	STATE HANDY	SHIPPING PLANT	OUSTOMER CODE CUSTO	_	DELIVERY ADDRESS	INSTRUCTIONS	тем соре			TRUCK ARRIVE JOB:		MATERIALS HEREBY SOLI OR THE CONSIGNEE'S AG	D BIVER

CORPORATE OFFICE 90 West Franklin Street Hackensack, NJ 07601 TEL: (201) 489-6066	PLANT LOCATION 2414 95TH Street North Bergen, NJ 07047 TEL: (201) 854-2818 ww		<b>1</b>
489-7680		JOE MACCHIOME CONTRACT NUMBER	PURCHASE ORDER TRUCK CODE
ASDHALT CORP.	PROJECT CODE HAU	HAULER	DAMEN
ZONE CODE			
BASE	GROSS	A. 14.	Z Z
	S	2 2	00 TM 21.77MG
		DELIVERY IN	DELIVERY INSIDE CURB LINE AT CONSIGNEE'S RISK.
TRUC	TRUCK LEAVE JOB:	Signature Required by Consig	Signature Required by Consignee or 11s Agent for Inside Curb Line Delivery DATE
PURCHASER AT POINT OF ( Y AND ALL CLAIMS BY PUR	MATERIALS HEREBY SOLD BECOME PROPERTY OF PURCHASER AT POINT OF ORIGIN. RECEIPT OF MATERIALS AND THE SIGNATURE OF THE CONSIGNEE OR THE CONSIGNEE'S AGENT SHALL PRECLUDE AWY AND ALL CLAIMS BY PURCHASER.	JRE OF THE CONSIGNEE	OSHA M.S.D.S. AVAILABLE UPON REQUEST A SERVICE CHARGE OF 1 1/2% PER MONTH WILL BE ADDED TO ALL BALANCES MORE THAN 30 DAYS OLD. ANNUAL PERCENTIAGE RATE OF 18%.
	AUTHORIZED SIGNATURE: A HOLDING CHARGE WILL BE MADE IF TRUCK IS ON JOB SITE MORE THAN 20 MINUTES.	N JOB SITE MORE THAN 20 MINUT	

Aville: SRL Joldina 22.83 1000 miles Parties Control 39 SGUT 11600 Control of the contro THE . 1 52 US TONS WITHY 79,320tb 28,980lb 50,34015 ARECON LTD DELIVERY ADDRESS: JERSEY CITY HONDA 540 RTE 440 NEAR FISK ST SHIPPING PLANT: 418 MT HOPE QUARRY SCALE NO: 4 WM: Carolyn Sugar TRUCK: 4910 HAULER: 102715 DELIVERY METHOD: 1 Dollvery DATE: 08/19/10 TEM CODE 1018003 DESCRIPTION DGABO/ TYPE5 CLASS A GROSS # OF LOADS TARE NET 25 85273 CUSTOMER SIGNATURE DRIVER SIGNATURE INSTRUCTIONS: JINO 609 - 915 - 7383 CUSTOMER CODE: PROJECT CODE: PURCHASE ORDER: CONTRACT NO: FICKET NO: 41841399 OFF JOB TIME ON JOB TIME ORDER NO: METRIC LINS LODAY 22.83 SOIMULE B. SIZE 45 COS SUBSECTION OF THE PARTY THE MANAGEMENT 111 12 39.66UT To the second se US TONS TODAY 79.32016 50,34015 28,98015 ARECON LTD DELIVERY ADDRESS: IERSEY CITY HONDA 540 RTE 440 NEAR FISK ST SHIPPING PLANT: 418 MT HOPE QUARRY SCALE NO: 4 WM: Carolyn Sugar TRUCK: 4910 HAULER: 102715 DELIVERY METHOD: 1 Delivery DATE: 08/19/10 TEM CODE 1018003 DESCRIPTION DGABC/ TYPE5 CLASS A GROSS # OF LOADS TARE HE CUSTOMER SIGNATURE 25 85273 DRIVER SIGNATURE INSTRUCTIONS: 31N0 609 - 915 - 7383 ORDER NO: CUSTOMER CODE: PROJECT CODE: PURCHASE ORDER: CONTRACT NO: FICKET NO: 41841399 OFF JOB TIME ON JOB TIME

789-7625 872-7762 SEE THE TERMS AND CONDITIONS OF SALE ON BACK OF TICKET OSHA M.S.D.S. AVAILABLE UPON REQUEST TRUCK CODE 800 TRAP ROC 800 789 ROCK DRIVER SIGNATURE 162 OLD MILL ROAD, WEST NYACK, NY 10994 TILCON NEW YORK INC. METRIC TONS TODAY PURCHASE ORDER NUMBER OF THE 297601b WEADOIL H NEW JERSEY ORDERS NEW YORK ORDERS CONTRACT NUMBER US TONS TODAY HAULER SIGNATURE CUSTOMER GROSS OF LOADS TARE 里 ZOULL SOURCE CODE PROJECT CODE DAM O PM TYPE DEPOS Din a lit . 1 MA/19/18 OFF JOB ZONE CODE DESCRIPTION DAM O PM CH KORDY LIMING CUSTOMER NAME DATE 4.1 P.4.1 4.0.7 The tachaster of the transfer 1018003 ITEM CODE DELIVERY ADDRESS DINC DELIVERY METHOD CUSTOMER CODE SHIPPING PLANT CONTROL NO. S S SCALE NO.

CUSTOMER COPY 1

625 Mount Hope Rd. • Wharton, N.J. 07946 • 973-366-7741

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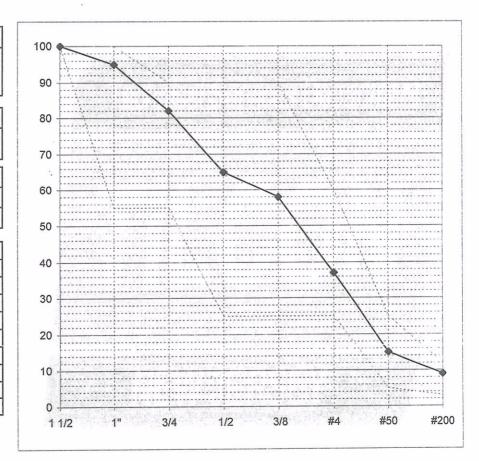
### Typical Gradation, DGABC

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Contractor
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95.7	
104	
	2.71 95.7 104

	Typical	Prod.	Target
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1 1/2	100	100	100
1"	95	55	100
3/4	82	55	90
1/2	65	25	90
3/8	58	25	90
#4	37	25	60
#50	15	5	25
#200	9	3	12



Tilcon Inc confirms that DGABC available at Mt. Hope Quarry conforms to section 901 of the New Jersey Department of Transportation StandardSpecifications for Road and Bridge Construction. The material is defined as virgin Gneiss mined at Mt. Hope Quarry, 625 Mount Hope Road, Block 20001-Lot 6.01 Wharton Borough, Morris County NJ. The material is identified on the job with Tilcon delivery tickets.

e unit weights and voids are for process control and should be verified by the contractor before use.

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Standard   Contract	32-329-0200 Marty Vitanza X21	6: Rich X.		Drivilogod &	Confidenti				F		Ī	O dospi	Munity						Lab Proi #		10001
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08/06/10



### Technical Report for

Honeywell International Inc.

ALNJB: Area 7, Jersey City, NJ

079: Route 440 Vehicle AKA Honda

Accutest Job Number: JA52045

Sampling Date: 07/22/10

### Report to:

Arecon Ltd. 90 US Highway Route 130 Bordentown, NJ 08505

ATTN: Dino Ciccone

Total number of pages in report: 73



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis VP Ops, Laboratory Director

Client Service contact: Marty Vitanza 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.



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### Sample Summary

Honeywell International Inc.

Job No:

JA52045

ALNJB: Area 7, Jersey City, NJ Project No: 079: Route 440 Vehicle AKA Honda

Sample Number	Collected Date Time By	Matrix Received Code Type	Client Sample ID	
JA52045-1	07/22/10 10:00 A	07/22/10 SO Solid	079-TILCON-DGA	



### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Honeywell International Inc.

Job No

JA52045

Site:

ALNJB: Area 7, Jersey City, NJ

Report Date

8/6/2010 4:02:24 PM

On 07/22/2010, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA52045 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Wet Chemistry By Method ASTM D1498-76M

Matrix: SO

Batch ID: GN40214

Sample(s) JA52045-1DUP were used as the QC samples for Redox Potential Vs H2.

### Wet Chemistry By Method SM18 2540G

Matrix: SO

Batch ID: GN40237

The data for SM18 2540G meets quality control requirements.

### Wet Chemistry By Method SW846 3060A/7199

Matrix: SO

Batch ID: GP54718

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA52045-1DUP, JA52045-1PS, JA52045-1MS were used as the QC samples for Chromium, Hexavalent.
- GP54718-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (97.3%) on the post-spike.
- GP54718-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

### Wet Chemistry By Method SW846 9045C,D

Matrix: SO

Batch ID: GN40215

Sample(s) JA52045-1DUP were used as the QC samples for pH.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Sample	Results		
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Report of Analysis



### Page 1 of 1

Client Sample ID: 079-TILCON-DGA

Lab Sample ID:

JA52045-1

Date Sampled: 07/22/10

Matrix:

SO - Solid

Date Received: 07/22/10

Project:

ALNJB: Area 7, Jersey City, NJ

Percent Solids: 98.6

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Chromium, Hexavalent Redox Potential Vs H2 Solids, Percent pH	< 0.41 217 98.6 9.28	0.41	mg/kg mv % su	1 1 1 1	07/26/10 11:07 07/23/10 07/23/10 07/23/10	BD JA WR JA	SW846 3060A/7199 ASTM D1498-76M SM18 2540G SW846 9045C,D

Report of Analysis



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody Sample Tracking Chronicle
- Internal Chain of Custody



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JA52045: Chain of Custody Page 1 of 2





### Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA52045	Client:		Immediate Client Service	es Action Required:	No
Date / Time Received: 7/22/201		y Method:	Client Service Action	Required at Login:	No
roject:	No. Cod	olers: 1	Airbill #'s:		
	N 3. COC Present: 4. Smpl Dates/Time OK  Y or N Infared gun Ice (bag)	Y or N	Sample Integrity - Documentation  1. Sample labels present on bottles: 2. Container labeling complete: 3. Sample container label / COC agree:  Sample Integrity - Condition  1. Sample recvd within HT: 2. All containers accounted for:	Y or N  V	
1. Trip Blank present / cooler: 2. Trip Blank listed on COC: 3. Samples preserved properly:	Y or N N/A  U U U U U U U U U U U U U U U U U U		3. Condition of sample:  Sample Integrity - Instructions  1. Analysis requested is clear: 2. Bottles received for unspecified tests 3. Sufficient volume recvd for analysis: 4. Compositing instructions clear: 5. Filtering instructions clear:	Y or N  D  D  D  D  D  D  D  D  D  D  D  D  D	NVA  V
Comments		·	C. I floring floridate in case.		
Accutest Laboratories V:732.329.0200		2235 US F: 732	Highway 130 329,3499		yton, New Jersey vw/accutest.com

JA52045: Chain of Custody Page 2 of 2



### Internal Sample Tracking Chronicle

Honeywell International Inc.

Job No:

JA52045

ALNJB: Area 7, Jersey City, NJ Project No: 079: Route 440 Vehicle AKA Honda

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
JA52045-1 079-TILCO	Collected: 22-JUL-10 : N-DGA	10:00 By: A	Receiv	ved: 22-JUL-	10 By	: MPC
JA52045-1 JA52045-1	ASTM D1498-76M SM18 2540G SW846 9045C,D SW846 3060A/7199	23-JUL-10 23-JUL-10 23-JUL-10 26-JUL-10 11:07	JA WR JA BD	24-JUL-10	AD	EH SOL104 PH XCRA7199

### Accutest Internal Chain of Custody Job Number: JA52045

Account:

HWINJM Honeywell International Inc. ALNJB: Area 7, Jersey City, NJ

Project: Received:

07/22/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason	
JA52045-1.1 JA52045-1.1 JA52045-1.1 JA52045-1.1 JA52045-1.1 JA52045-1.1 JA52045-1.1 JA52045-1.1	Secured Storage Todd Shoemaker Wojciech Rodzik Jayshree Amin Wojciech Rodzik Secured Storage Adam Scott Anupama Dubey	Todd Shoemaker Wojciech Rodzik Jayshree Amin Wojciech Rodzik Secured Storage Adam Scott Anupama Dubey Secured Storage	07/23/10 08:21 07/23/10 08:41 07/23/10 09:13 07/23/10 16:49 07/24/10 07:09 07/24/10 08:31	Retrieve from Storage Custody Transfer Custody Transfer Custody Transfer Return to Storage Retrieve from Storage Custody Transfer Return to Storage	



General Chemistry

QC Data Summaries

### Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QCPercent Solids Raw Data Summary



Raw Data: GN40214 GN40215 GN40300

### METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA52045 Account: HWINJM - Honeywell International Inc. Project: ALNJB: Area 7, Jersey City, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent Chromium, Hexavalent	GP54718/GN40300 GP54718/GN40300	0.40	0.0	mg/kg mg/kg	40 856	37.2 853	93.0 99.6	80-120% 80-120%

Associated Samples: Batch GP54718: JA52045-1 (\*) Outside of QC limits

### DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA52045
Account: HWINJM - Honeywell International Inc.
Project: ALNJB: Area 7, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP54718/GN40300	JA52045-1	mg/kg	0.0	0.0	0.0	0-20%
Redox Potential Vs H2	GN40214	JA52045-1	mv	217	212	2.8	0-17%
pH	GN40215	JA52045-1	su	9.28	9.25	0.3	0-10%

Batch GN40214: JA52045-1 Batch GN40215: JA52045-1 Batch GP54718: JA52045-1 (\*) Outside of QC limits

Associated Samples:

### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JA52045 Account: HWINJM - Honeywell International Inc. Project: ALNJB: Area 7, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP54718/GN40300	JA52045-1	mg/kg	0.0	1090	1040	95.5(a)	75-125%
Chromium, Hexavalent	GP54718/GN40300	JA52045-1	mg/kg		41.9	33.9	80.9(b)	75-125%

Associated Samples: Batch GP54718: JA52045-1 (\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

(b) Good recovery on soluble XCR matrix spike. Good recovery (97.3%) on the post-spike.

### Accutest Laboratories Instrument Runlog Inorganics Analyses

### Login Number: JA52045 Account: HWINJM - Honeywell International Inc. Project: ALNJB: Area 7, Jersey City, NJ

File ID: 610072601.TXT Analyst: BD

Date Analyzed: 07/26/10 Run ID: GN40300

Methods: SW846 3060A/7199

Parameters: Chromium, Hexavalent

Time	Sample Description	Dilution PS Factor Recov	Comments
08:32	GN40300-STD1	1	STDA
08:39	GN40300-STD2	1	STDB
08:46	GN40300-STD3	1	STDC
08:54	GN40300-STD4	1	STDD
09:01	GN40300-STD5	1	STDE
09:09	GN40300-CCV1	1	
09:45	GN40300-CCB1	1	
09:53	GP54718-MB1	1	
10:00	GP54718-MB1	1	
10:07	GP54718-B1	4	
10:15	GP54718-B1	4	
10:22	GP54718-B2	90	
10:30	GP54718-B2	90	
10:37	GP54718-S2	1	
10:44	GP54718-S1	1,	
10:52	GP54718-D1	1	
10:59	GP54718-D1	1	
11:07	JA52045-1	1	
11:14	ZZZZZZ	1	
11:21	GP54718-S2	100	
11:29	GP54718-S2	100	
11:36	GP54718-B2	1	
11:44	GP54718-B1	1	
11:51	GN40300-CCV2	1	
11:58	GN40300-CCB2	1	
12:06	JA52045-1	1	
	GP54718-S1		
	GP54718-S1		
	GP54718-PS1		
	GP54718-PS1		
	GN40300-CCV3		
	GN40300-CCB3	1 calibration curv	and allowed

Refer to raw data for calibration curve and standards.

### Instrument QC Summary Inorganics Analyses

### Login Number: JA52045 Account: HWINJM - Honeywell International Inc. Project: ALNJB: Area 7, Jersey City, NJ

File ID: 610072601.TXT

Date Analyzed: 07/26/10 Run ID: GN40300 Methods: SW846 3060A/7199

: GN40300 Units: mg/l

	Parameter					True		QC
Sample Number	ralameter		Result	RL	IDL/MDL	Value	% Recov.	Limits
GN40300-CCV1	Chromium, Hexa	avalent	0.24	0.010	0.0057	.25	96.0	90-110
GN40300-CCB1	Chromium, Hexa	avalent	0.0057 U	0.010	0.0057			
GN40300-CCV2	Chromium, Hexa	avalent	0.25	0.010	0.0057	.25	100.0	90-110
GN40300-CCB2	Chromium, Hexa	avalent	0.0057 U	0.010	0.0057			
GN40300-CCV3	Chromium, Hexa	avalent	0.25	0.010	0.0057	.25	100.0	90-110
GN40300-CCB3	Chromium, Hexa	avalent	0.0057 U	0.010	0.0057			

(!) Outside of QC limits

### Percent Solids Raw Data Summary Job Number: JA52045 Account: HWINJM Honeywell International Inc. Project: ALNJB: Area 7, Jersey City, NJ

Sample: JA52 ClientID: 079-7	045-1 IILCON-DGA		23-JUL-10 by WR	Method:	SM18 2540G
Wet Weight (To Tare Weight Dry Weight (To Solids, Percent	otal)	34.98 27.06 34.87 98.6	g g g %		

General	Chemistry
Clicial	Olicilizott y

Raw Data

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Test:	Redox Pote	ential
Matrix	: Aqueous	0
Matrix	. Solid	

Test Code: REDOX Method: ASTM D1498-76

Method: ASTM D1498-76 Mod.

Analyst:	Jaa	_
Date:	07/23/10	
GN Batch ID:	gn40214	
Temp (Deg C):	25	-

Therm ID:

Quality Control Summary 2.75% % RPD: 211.8 Results: 217.7 Dup: ja52045-1 Sample ID: % Rec 99.81% 673.7 Found Ferrous-Ferric True: 675 % Rec 104.48% 482.7 Found pH 4 Quinhydrone True: 462 % Rec 105.00% 485.1 Found pH 4 Quinhydrone True: 462 % Rec Found pH 4 Quinhydrone True: 462 93.96% % Rec 267.8 Found pH 7 Quinhydrone True: 285 92.28% % Rec 263 Found pH 7 Quinhydrone True: 285 % Rec Found pH 7 Quinhydrone True: 285

Sample #:	mv vs. Ag/AgCl Electrode	Corrected results (mv vs. Hydrogen electrode)
Ferrous-Ferric Solution pH 4 Quinhydrone pH 7 Quinhydrone Dup gn40214-d1 1. ja52045-1 2. 3. 4.	495.3 281 89 39 34.1	673.7 482.7 267.8 211.8 217.7
5	281 89.9	485.1 263
12. 13. 14. 15. 16. 17. 18. 19.		
pH 4 Quinhydrone pH 7 Quinhydrone		the state the relative my scale. This conve

is done by adding at	bout 200 mV to the Ag/Ag	converted to corrected results auto pCI reading. 1 4 Fisher 101901 exp 03/2 XP 11/24/2010 Quinhydron	tomatically at the instrument by changing to the relative mv scale. To the relative mv scale mv scale. To the relative mv scale mv sca	l'his conversion
Comments:	_			
Analyst:	JAA	Date: 1 23 10	QC Reviewer: Date	e:

F/N GN141-02

20 of 73 ACCUTES. JA52045 Laboratories

### ACCUTEST.

Balance # 3-24

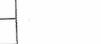
Sample Prep Log

PH - 9n40215

Sample ID	Sample Size	- ~ Final Volume
D JA52045-1	50. 50 gras	50 m1 DI H20
JA52045-1	49.51 gms.	1
		·
	-	

Form: GN166-02 Rev. Date: 8/5/05

QC Review\_\_\_\_



		_	
Test:	pH, Corrosivity		

Method: SW846 9040B or SW846 9045C

Product: PH, CORR Analyst: jaa

GN Batch ID:

gn40215

Thermometer ID: 109

7/23/2010 Analysis Date:

Correction Factor: 1

pH Meter ID:

QC Summary

Duplicate ID: gn40215-d1

Sample ID: ja52045-1

Dup Result:

% RPD:

Uncorrected/ Wt./Vol. used for Corrected Temp in

Io ID	soilds	Deg C.	Result	Corrosivity	Read time
ample ID	99,125	25	4.01		
uffer Check: 4		25	6.99		
uffer Check: 7		25	10.01		
uffer Check: 10	see attachment	25	9.25		
140215-d1	See attacriment	25	9.28		
52050-1		25			
		25			
***************************************		25			
		25			
		25	-		
		25			
		25			
		25	6.99		
h-7		25			-
h-10		25	9.99		-
Anni oliver in the second					
		1			
		1			
		1			
Buffer Check:					
Buffer Check:			<del>\</del>		
			1	1	
			1		
					*
			1		
				X	
				1	
		1		VII.	74
Buffer Check:				1//1	11 - O.
Buffer Check:					11/1/11

QC	Reviewer:	
20	Menicanoi.	

Comments:

Balance #\_\_\_

JAA Analyst EH Method Prep Date

PH - 940215

Sample Prep Log

Sample ID	Sample Size	Final Volume
D JA52045-1	50.50 gml	50 m1 DI H20
JA52045-1	50. 50 gmg 49. 51 gms.	V
		·
		·
	-	

Form: GN166-02 Rev. Date: 8/5/05

QC Review



Reagent Information Log
Test Name: \_\_\_\_pH\_\_\_\_

Reagent		Reagent # or Manufacturer/Lot
pH 2 Buffer Solution		FISHER LOT# 090982 EXP. 03/2011
pH 4 Buffer Solution		FISHER LOT# 094895 EXP. 09/2011
pH 7 Buffer Solution		FISHER LOT# 093739 EXP. 07/2011
pH 10 Buffer Solution		FISHER LOT# 093565 EXP. 07/2011
pH 13 Buffer Solution	. ,	AQUA SOL'N LOT#0030296 EXP 3/30/u
	 e .	
and the same of th	 namen erick og former i filler i fill er former er	And any amount of the first of
	·	
	_	

Form: GN087-01 Rev. Date:4/30/2010



Page 1 of 2 Printed: 7/26/2010 1:21:44 PM

NJCHMICZ_local Accutest(2010\July	:2_local :010\July					Created:	7126/2	7/26/2010 8:09:48 AM by Chemistry	l by Chemistry
accutest 33						Last Update:	7/26/2	010 12:16:32 P	7/26/2010 12:16:32 PM by Chemistry
		,	Description Description	Method	Status	Inj. Date/Time	Weight Di	Dil. Factor	
No. Name	ame	lype		hexachrome	Finished	7/26/2010 8:24:46 AM	1.0000	1.0000	
-	BLANKCONF	Unknown		o control o	Finishad	7/26/2010 8:32:11 AM	1.0000	1.0000	
2	STDA	Standard	2 hexachrome	nexachronie		7/26/2010 0:30:35 AM	1 000	1 0000	
n	STDB	Standard	3 hexachrome	hexachrome	Finished	7/20/2010 0.39.33 Pulk	1 0000	1 0000	
4	STDC	Standard	4 hexachrome	hexachrome	Finished	//26/2010 6.46.39 All	2000	1,0000	
י א	STDD	Standard	5 hexachrome	hexachrome	Finished	7/26/2010 8:54:23 AIM	1.0000	1,0000	
, «c	STDE	Standard	6 hexachrome	hexachrome	Finished	7/26/2010 9:01:48 AM	1.0000	1.0000	
· r	200	Unknown	7 hexachrome	hexachrome	Finished	7/26/2010 9:09:12 AIM	1.0000	1,0000	
- cc	CCB	Unknown	8 hexachrome	hexachrome	Finished	7/26/2010 9:45:37 AM	1.0000	1,0000	
o 0	CDE4718,MR1	1 Inknown	9 hexachrome	hexachrome	Finished	7/26/2010 9:53:01 AIM	1.0000	1.0000	
on (	GF347 10-IMB1	1 Inknown		hexachrome	Finished	7/26/2010 10:00:25 AM	1.0000	1.0000	
2 :	GP347 10-MD1	1 forknown		hexachrome	Finished	7/26/2010 10:07:50 AM	1.0000	4.0000	
1	GP347 10-D1	CIENTOWIN		hexachrome	Finished	7/26/2010 10:15:14 AM	1.0000	4.0000	
12	GP54718-B1	Unknown		hexachrome	Finished	7/26/2010 10:22:38 AM	1.0000	0000.06	
13	GP54718-B2	Unknown	-	hexachrome	Finished	7/26/2010 10:30:02 AM	1.0000	90.000	
14	GP54718-B2	Unknown		howahromo	Finished	7/26/2010 10:37:26 AM	1.0000	1.0000	
15	GP54718-S2	Unknown		Hexacinome	Finished	7/26/2010 10:44:51 AM	1.0000	1.0000	
16	GP54718-S1	Unknown		nexacironie	rinished fra	7/26/2010 10:52:15 AM	1.0000	1.0000	
17	GP54718-D1	Unknown	17 hexachrome	nexacinome	Finished	7/26/2010 10:59:39 AM	1.0000	1.0000	
18	GP54718-D1	Unknown	18 hexachrome	nexacinome	Finished	7/26/2010 11:07:03 AM	1.0000	1.0000	
19	JA52045-1	Unknown	19 hexachrome	nexachionie	rimished	7/26/2010 11:14:28 AM	1.0000	1.0000	
20	JA52045-1conf	f Unknown	20 hexachrome	hexachrome	Linishoo	7/26/2010 11:21:52 AM	1.0000	100.0000	
21	GP54718-S2	Unknown	21 hexachrome	hexachrome	Dalishod	7/26/2010 11:29:16 AM	1.0000	100.0000	4
22	GP54718-S2	Unknown	22 hexachrome	nexacuronie	Linished	7/26/2010 11:36:40 AM	1.0000	1.0000	6
23	GP54718-B2	Unknown	23 hexachrome	nexacinome	Finished	7/26/2010 11:44:04 AM	1.0000	1.0000	N
24	GP54718-B1	Unknown	24 hexachrome	nexacinome	Finished	7/26/2010 11:51:29 AM	1.0000	1.0000	4
1	2,000	I Inknown	25 hexachrome	hexachrome	בווואוומר	Thoracon and an annual and an annual and an annual an an			C

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1.0000 1.0000

1.0000 1.0000

7/26/2010 11:51:29 AM 7/26/2010 11:58:53 AM 7/26/2010 12:06:17 PM

Finished Finished Finished

hexachrome hexachrome hexachrome

26 hexachrome 27 hexachrome

Unknown Unknown

JA52045-1

25 hexachrome

Unknown Unknown

CCV CCB

24 25 26 27

Chromeleon @ Dionex Corporation, Version 6.70 SP2a Build 1871

610072601 Chemistry

Sequence: Operator: Title:

Datasource: Location: Timebase: #Samples: Page 2 of 2 Printed: 7/26/2010 1:21:45 PM

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-3		r		
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/ Chemistry by Chemistry							
7/26/2010 8:09:48 AM by Chemistry 7/26/2010 12:16:32 PM by Chemistry	Weight Dil. Factor	4.0000	4.0000	4.0000	4.0000	1.0000	0000.
7126	Weight	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Created: Last Update:	Inj. Date/Time	7/26/2010 12:13:41 PM	7/26/2010 12:21:06 PM	7/26/2010 12:28:30 PM	7/26/2010 12:35:54 PM	7/26/2010 12:43:18 PM	7/26/2010 12:50:43 PM
	Status	Finished	Finished	Finished	Finished	Finished	Finished
	Method	hexachrome	hexachrome	hexachrome	hexachrome	hexachrome	hexachrome
	Pos. Program					32 hexachrome	33 hexachrome
	Tvne	I Inknown	1 fnknown	Haknown	Unknown	Unknown	Unknown
;2_local 2010\July	9	CDE4749 C4	GF34710-01	CP347 10-31	GP54718-PS1	CCV	CCB
NJCHMICZ_local Accutest\2010\July accutest 33	omely oly		0 6	8 6	34 50	32	33

610072601 Chemistry

> Sequence: Operator:

Title:
Datasource:
Location:
Timebase:
#Samples:

### ACCUTEST LABS DAYTON, NJ

# 3060A/7199 POST-DIGEST SPIKE LEVEL CALCULATION SPREADSHEET

NOTE: Always dilute post-spike first, then take a 20 ml aliquot of the diluted post-spike and add the spike amount.

pajsabbing	Amount in Amount in Suggested Actual ppm to spike spike on back on Spike	Digested in Weight in 20 Results in of 100 ppm Dilution to Dilution to Dilution to on dilution of dilution of curve in Amount in	ml mg/kg. solution needed use be used sample. sample. mg/kg mg/kg	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE!   #VALUE!   #VALUE!   #VALUE!   #VALUE!   #VALUE!	#VALUE!   #VALUE!   #VALUE!   #VALUE!   #VALUE!   #VALUE!   #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	#VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE! #VALUE!	
	PS Aliquot Weight in g	Digested in   Weig	100 ml	\h/#	Λ#	Λ#	Λ#	Λ#	Λ#	Λ#	Λ#	A#	Λ#	Λ#	

### 3060A/7196A INSOLUBLE SPIKE CALCULATION

	To enter	for 7199	l/bm ui	26.22525	21.39851	#DIV/0i	#DIV/0i	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
		Amount	Spiked	1074.805	855.941	#DIV/0!	#DIV/0!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
CALCOLATION		Weight of	Sample	2.44	2.5							
3		Weight of	PbCr04	0.0163	0.0133							

Hexavalent Chromium pH Adjustment Log

Method: SW846 3060A/7199

Digestion Date: pH adi. Date:

7-24-10

9:00 pH adi. start time:

1000	11 - II about times.		4:00		pH adj. Date:	7/26/200	
	H adj. start time:		9:55		GN Batch ID:	16.7,40300	
p	H adj. end time:	Sample	pH after	Final Volume	Spike	,	
	GP54718   Sample ID	Weight in g	HNO3	(ml)	Amounts	Comments	
			935	100	5-m1	5-ppm whre	
-	CCV		4.00	1	J	J	
C	CCV						
C	CCV						
C	ccv		A 1/4.	100			
c	CCB		9.46	100			
c	CCB				-		
-	CCB						
-	CCB					the state of the state	1
-	MS (Sol)	2-42	931	1 100	1-m1	100-ppm absolute	1
-	MS (Insol.)	2.44	9.85	: 0	0.0163	Phroy	
-		2.48	9.25		8'	1 21 =	-
- 1	DUP	12.10	9.45	1 1 1 1	1-ml	100-ppm absolute	WATER STATE ON
	SB (Sol)	- No	924		0.0133	Phorou	-
- 0	SB (Insol)		9.40			,	-
	MB	1000		11/			4
	1JA52045-1	2.50	9.44	+ 1	DEDINI	of 10 pour Hoselute	_
	2 PSI (-1)	2.50	1 9 94	<del>                                     </del>	10000	ML Sumple 120ml	_
	3			-	1 1/1		23/
	4			Total			98
	5			1867			7 (
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	7						
	P .						
	9						
	10		1				-
	21.1						-
	12						_
	13						
	14		/				_
	15						
	16						
	17				_		
	18						
	19						
						III Pag	
	20					dilution	
	SB (Insol)					dilution	-
	MS (Insol.)						
			-				
	1 2 2 2 2		1	1		THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	-

Reagent Reference Information - refer to attached reagent reference information page(s).  $(1000000 \text{ ug/g} \times \text{Insoluble spike wt(g)} \times 52/323.2)/\text{ms sample wt(g)} = \text{Insoluble spike amount of PbCrO4}$ 

Eorm: GN-067A Rev. Date:5/8/06

28 of 73

## MACCUTEST.

## Hexavalent Chromium Digestion Temperature Log Method: SW846 3060A

Record the temperature at the beginning, during, and at the end of each digestion.

Description Time	Time	1	Temp. In deg. C Hot Plate #1	Hot Plate #2	Temp. in deg: C Hot Plate # 1	Hot Plate #1
1:20	11:20		95	93		
OS 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	05:11			95		
Ending Time 12.20	12.20		95	95		
Starting Time						
Time 1		1				
Ending Time		-				
		1				
Starting Time						
Time 1					-	
Todipo Timo						
CHUILIN THEIR						

Analyst:

Form: GN-074 Rev. Date:5/8/06

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GN/GP Batch ID: 6/547/8 6N40300

# Reagent Information Log - XCRA7199 (soil 3060A/7199)

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium,		
1000 mg/L Stock	1/1/2013	Absolute Grade Lot # 012010
Calibration Checks: Hexavalent Chromium,		
1000 mg/L Stock	7/31/2015	Ultra lot # J00509
· · · · · · · · · · · · · · · · · · ·	garte. La companya di Santa da Cara da Cara da Cara da Cara da Cara da Cara da Cara da Cara da Cara da Cara da	
Spiking Solution Source	1/1/2013	Absolute Grade Lot # 012010
Lead Chromate (Insoluble Hexavalent		
Chromium Spike)	NA	Sigma Aldrich Lot # 09921LC
Digestion Solution	8/30/3010	GNET-25592-XCR
		100 Same as a
Magnesium Chloride, Anhydrous	NA .	Alfa Aesar Lot # I02T070
	. 1	0.00
Phosphate Buffer Solution	12/8/2010	GNEG- 25218-XCRA
	١.,	<u> </u>
5.0 M Nitric Acid	1/14/2011	GNET- 25545 - XCRA
Post-Column	i'ar	1 - 7 SELIO ICYOR
Reagent (Diphenylcarbazide Solution)	7198/10	6NE7-25013-1CKCR.
	1 -1	( -2 )500- 10Val
Eluent	1112111	6 NE 7-25550- 1 CKCR
		1 -10-9= 250-10VCB
Buffer Solution	01 60 61	GUE 6-35350-10KCR
		( 25520 101ml
XCR7199 Dilution Water	19/95/10	GNE7-25589-10xcl
Filter	NA	FOCA84866
1 IIIO	, h	
Teflon Chips	NA	chamware # D1069103
DOS	2/20/10	GNE 7-25614-1CKP
	30	$\sim$ 1

Form: GN087A-21 Dev. Date: 2/18/10

### Hexavalent Chromium pH Adjustment Log

Method: SW846 3060A/7199

pH adj. start time: pH adj. end time: 8:20

pH adjustment Date: \_\_\_\_\_ GN Batch ID: 124/2010

Sample ID	Sample Weight in g	pH after HNO3	Final Volume (ml)	Comments	Spike Info.	
Calibration Blank	NA	94	100			
0.005 mg/l standard	NA	937	1	1904 Ab solute	0.50 ml of 1.00 mg/l	
0.050 mg/l standard	NA	9.40		1	5.00 ml of 1.00 mg/l	
0.100 mg/l standard	NA	9.87		1000U Absolute	1.00 ml of 10.0 mg/l	
0.500 mg/l standard	NA	9.05	V		5.0 ml of 10.0 mg/l	
A way of the second second second second second second second second second second second second second second			.,			WAS DESCRIPTION OF THE PARTY OF
		-				

Reagent Reference Information - refer to attached reagent reference information page(s). {1000000 ug/g x Insoluble spike wt(g) x 52/323.2}/ms sample wt(g) = Insoluble spike amount of PbCrO4

Form: GN-068A Rev. Date: 05/08/06 O)

GENERAL CHEMISTRY STANDARD PREPARATION LOG
Product: \(\int \lambda \rangle \rangle \lambda \rangle \ra

tock volume or				50 50			
with		100	Final	diate	Expiration Date	Analyst	Date
units	Autopipet ID (")	+		10.0 mg/L	4/26/2013	9	130°E
1.0 mL				1.0 mg/L	4/26/2013		-
							-
		T	Jan. O	E 0 mg/l	7/31/2015	F	T
0 mL		UI HZO	ZOO HILL	Cinal Conc			
intermediate or	Balance or		Final	of Standard	Expiration		-
		+	Volume	(Mg/l)	le	Analyst	Callage
4		=	00 mL	0.00	+	3	1
			30 mL	GD'0	= -	1	-
			30 mL	0.1		1	
			30 mL	0.5	4	-	1
				-			
	teinonana odi notan	le Accillest	ID numb	er.			
autopipets, meir	elitel tile approprie						
0.50 mL 5.0 mL 5.0 mL 5.0 mL	-   -   -   -   -   -   -   -   -   -	A Social A A A A A A A A A A A A A A A A A A A	Autopipet ID (*) Diluent A Solution 10 A A and DI (10 A A A Water 10 A A Water 10 A A A Water 10 A A A Water 10 A A A A A A A A A A A A A A A A A A	Autopipet ID (*) Diluent Volume A solution 100 mL A and DI 100 mL A water 100 mL A water 100 mL	ŭ	0.0057 0.0057 0.05 0.15 0.5	Autopipet ID (*)  Digestion 100 mL  Solution 100 mL  and DI  Water 100 mL  0.05 (1)  0

Form: GN121-01 Rev. Date: 1/13/09

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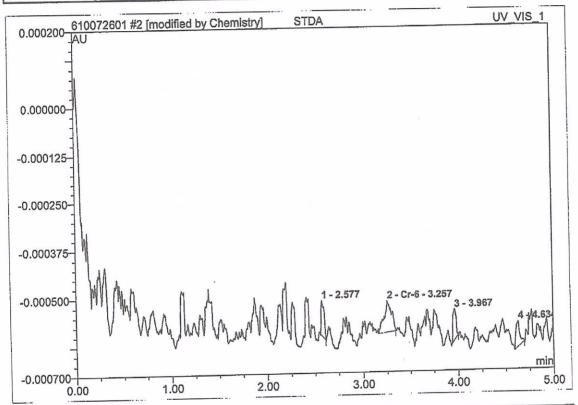
32 of 73

ACCUTEST

JA62045 Laboratories

<u>ග</u>

2 STDA			
Sample Name: Vial Number: Sample Type: Control Program: Quantif, Method: Recording Time: Run Time (min):	STDA 2 standard hexachrome hexachrome 7/26/2010 8:32 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
	2.58	n.a.	0.000	0.000	20.38	n.a.	BMB
2	3.26	Cr-6	0.000	0.000	43.71	0.0006	BMB*
3	3.20	n.a.	0.000	0.000	17.96	n.a.	BMB
4	4.63	n.a.	0.000	0.000	17.94	n.a.	BMB
Total:		Thu.	0.000	0.000	100.00	0.001	

hexachrome/Integration



Sample Name: Vial Number:

STDA

Sample Type: Control Program: Quantif. Method:

standard hexachrome hexachrome

7/26/2010 8:32

Injection Volume: Channel:

Wavelength: Bandwidth:

Dilution Factor: Sample Weight:

1.0000 1.0000 Sample Amount: 1.0000

25.0

n.a.

n.a.

UV\_VIS\_1

Recording Time: Run Time (min):

5.00

610072601 #2	STDA	UV	VIS 1
0.000200 AU			
0.000100			
0.000000.0			
0.000100			
0.000200-			
0.000300-			
0.000400-			
0.000500	An An A 1-2.577	2 - 3.967	3 -1/4.63
0.00000.0	MINIM WWW M	Myllyny	Alm
0.000700	2.00 3.00	4.00	mi 6

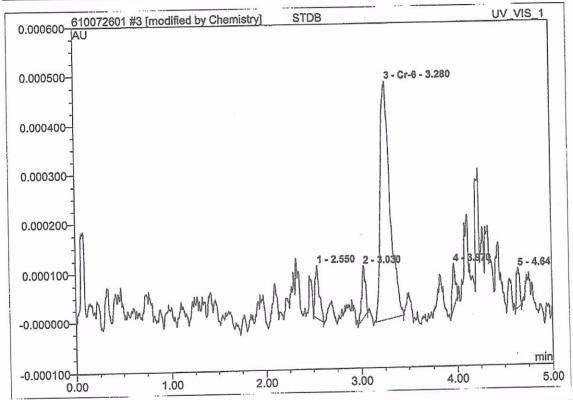
No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Туре
	min 2.58	n.a.	0.000	0.000	36.21	n.a.	BMB
2	3.97	n.a.	0.000	0.000	31.91	n.a.	BMB
3	4.63	n.a.	0.000	0.000	31.88	n.a.	BMB
Total:			0.000	0.000	100.00	0.000	

MP BD 7/26/10

hexachrome/Integration



3 STDB			
Sample Name: Vial Number: Sample Type: Control Program: Quantif, Method: Recording Time: Run Time (min):	STDB 3 standard hexachrome hexachrome 7/26/2010 8:39 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



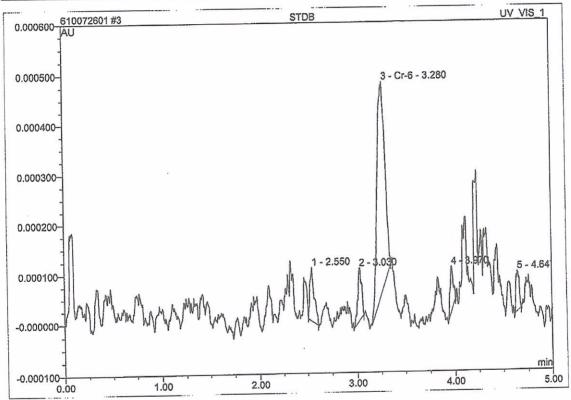
0.000 0.000	0.000 0.000	7.34 6.73	ppm n.a. n.a.	BMB BMB
0.000				BMB
	0.000	6.73	n.a.	
0.000				
0.000	0.000	77.15	0.0061	BMB*
		4.57	n.a.	BMB
		4.21	n.a.	BMB
			0.006	
	0.000 0.000 0.000 0.001	0.000 0.000 0.000 0.000	0.000 0.000 4.57 0.000 0.000 4.21	0.000 0.000 4.57 n.a. 0.000 0.000 4.21 n.a.

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



(3)

3 STDB			
Sample Name: Vial Number: Sample Type: Control Program: Quantif, Method: Recording Time: Run Time (min):	STDB 3 standard hexachrome hexachrome 7/26/2010 8:39 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



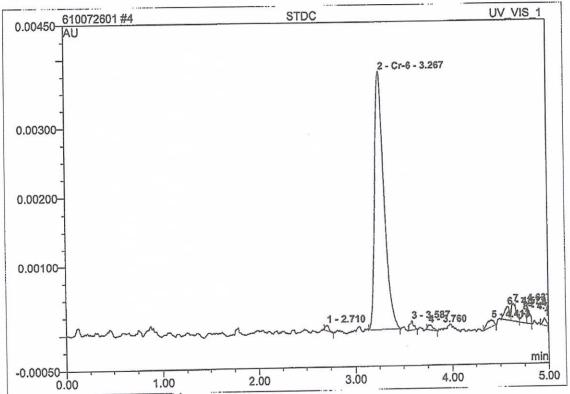
Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
		AU	AU*min	%	ppm	
	n a	0.000	0.000	9.51	n.a.	BMB
			0.000	8.72	n.a.	BMB
				70.39	n.a.	BMB
3.28	Cr-6	* - *			n a	BMB
3.97	n.a.					BMB
4.65	n.a.	0.000	0.000	5.45		סואוט
		0.001	0.000	100.00	0.000	
		min 2.55 n.a. 3.03 n.a. 3.28 Cr-6 3.97 n.a.	min         AU           2.55         n.a.         0.000           3.03         n.a.         0.000           3.28         Cr-6         0.000           3.97         n.a.         0.000           4.65         n.a.         0.000	min         AU         AU*min           2.55         n.a.         0.000         0.000           3.03         n.a.         0.000         0.000           3.28         Cr-6         0.000         0.000           3.97         n.a.         0.000         0.000           4.65         n.a.         0.000         0.000	min         AU         AU*min         %           2.55         n.a.         0.000         0.000         9.51           3.03         n.a.         0.000         0.000         8.72           3.28         Cr-6         0.000         0.000         70.39           3.97         n.a.         0.000         0.000         5.92           4.65         n.a.         0.000         0.000         5.45	Ret.Time min         Peak Name         AU         AU*min         %         ppm           2.55         n.a.         0.000         0.000         9.51         n.a.           3.03         n.a.         0.000         0.000         8.72         n.a.           3.28         Cr-6         0.000         0.000         70.39         n.a.           3.97         n.a.         0.000         0.000         5.92         n.a.           4.65         n.a.         0.000         0.000         5.45         n.a.

PII BO 1/24/10

hexachrome/Integration



4 STDC			
Sample Name:	STDC	Injection Volume:	25.0
Vial Number:	4	Channel:	UV_VIS_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	n.a.
Quantif. Method:	hexachrome		1.0000
Recording Time:	7/26/2010 8:46		1.0000
Run Time (min):	5.00		1.0000

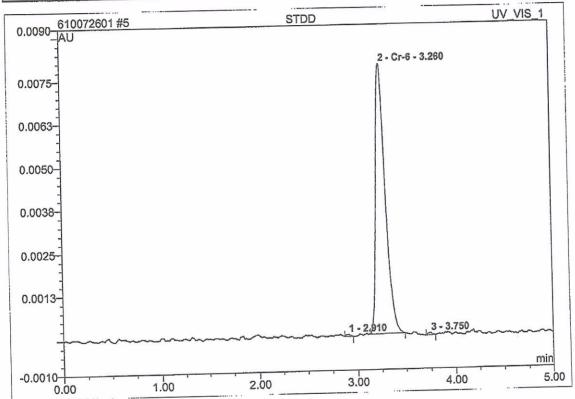


No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Туре
	min		AU	AU*min	%	ppm	
1	2.71	n.a.	0.000	0.000	0.71	n.a.	BMB
2	3.27	Cr-6	0.004	0.000	86.58	0.0475	BMB
3	3.59	n.a.	0.000	0.000	1.23	n.a.	BMB
			0.000	0.000	0.87	n.a.	BMB
4	3.76	n.a.	0.000	0.000	1.73	n.a.	BMB
5	4.41	n.a.	0.000	0.000	2.32	n.a.	BM
6	4.58	n.a.	0.000	0.000	2.83	n.a.	M
7	4.64	n.a.	0.000	0.000	1.50	n.a.	M
8	4.73	n.a.	0.000	0.000	1.39	n.a.	MB
9	4.78	n.a.			0.85	n.a.	BMB
10	4.95	n.a.	0.000	0.000			2.00
Total:			0.005	0.000	100.00	0.047	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

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5 STDD  Sample Name:	STDD	Injection Volume: Channel:	25.0 UV VIS_1
Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	5 standard hexachrome hexachrome 7/26/2010 8:54 5.00	Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
	min		0.000	0.000	0.38	n.a.	BMB
1	2.91	n.a.		0.001	99.23	0.1008	BMB
2	3.26	Cr-6	800.0		0.39	n.a.	BMB
3	3.75	n.a.	0.000	0.000			
Fotal:			0.008	0.001	100.00	0.101	

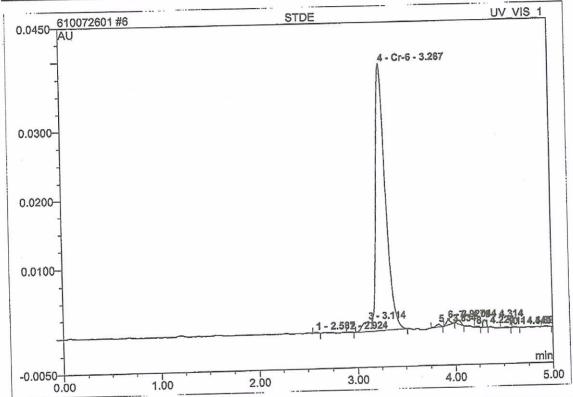
Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration



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6 STDE			
Sample Name: Vial Number: Sample Type: Control Program: Quantif, Method: Recording Time: Run Time (min):	STDE 6 standard hexachrome hexachrome 7/26/2010 9:01 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount	Type
	min			0.000	0.15	n.a.	BMB
1	2.59	n.a.	0.000	0.000	0.08	n.a.	BMB
2	2.92	n.a.	0.000	0.000	2.97	n.a.	BM
3	3.11	n.a.	0.001	0.005	93.60	0.5001	MB
4	3.27	Cr-6	0.039	0.000	0.46	n.a.	BMB
5	3.83	n.a.	0.000	0.000	0.76	n.a.	BMB
6	3.93	n.a.	0.001	0.000	0.60	n.a.	BMB
7	4.04	n.a.	0.001	0.000	0.15	n.a.	вмв
8	4.22	n.a.	0.000	0.000	0.90	n.a.	BMB
9	4.31	n.a.	0.001	0.000		n.a.	BMB
10	4.54	n.a.	0.000	0.000	7112	n.a.	BME
11	4.62	n.a.	0.000	0.000	0.10		

hexachrome/Integration

GN40300

Operator:Chemistry Timebase:accutest Sequence:610072601

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12	4.93	n.a.	0.000	0.000	0.11	n.a.	BMB
Total:	7.00	177	0.044	0.005	100.00	0.500	

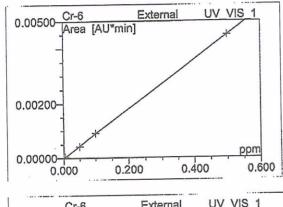
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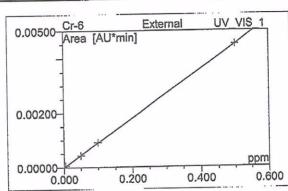
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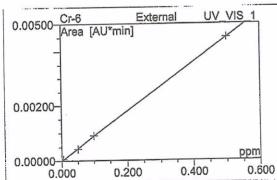
hexachrome/Integration

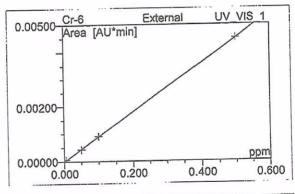


6 STDE			
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	STDE 6 standard hexachrome hexachrome 7/26/2010 9:01 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000









No.	Ret.Time	Peak Name	Cal.Type	Points	Coeff.Det.	Offset	Slope	Curve
	min				%	n.a.	n.a.	n.a
1	2.59	n.a.	n.a.	n.a.	n.a		n.a.	n.a
2	2.92	n.a.	n.a.	n.a.	n.a	n.a.		
3	3.11	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
4	3.27	Cr-6	LOff	5	99.9952	0.0000	0.0090	0.0000
			n.a.	n.a.	n.a.	n.a.	n.a.	n.a
5	3.83	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
6	3.93	n.a.			n.a.	n.a.	n.a.	n.a
7	4.04	n.a.	n.a.	n.a.	Charles .	n.a.	n.a.	n.a
8	4.22	n.a.	n.a.	n.a.	n.a.		n.a.	n.a
9	4.31	n.a.	n.a.	n.a.	n.a.	n.a.		
10	4.54	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
			n.a.	n.a.	n.a.	n.a.	n.a.	n.a
11 12	4.62 4.93	n.a. n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a

hexachrome/Calibration(Batch)

Operator:Chemistry Timebase:accutest Sequence:610072601

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A	99.9952	0.0000	0.0090	0.0000
Average:				

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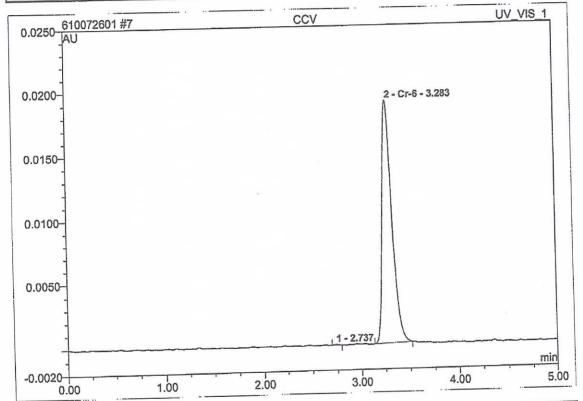
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hexachrome/Calibration(Batch)



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7 CCV			
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	CCV 7 unknown hexachrome hexachrome 7/26/2010 9:09 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Type
	min		0.000	0.000	0.19	n.a.	BMB
1	2.74	n.a.	0.019	0.002	99.81	0.2416	BMB
2	3.28	Cr-6	The state of the s	0.002	100.00	0.242	
Total:			0.019	0.002	100.00		

hexachrome/Integration



## Operator:Chemistry Timebase:accutest Sequence:610072601

8 CCB			
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	CCB 8 unknown hexachrome hexachrome 7/26/2010 9:45 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000

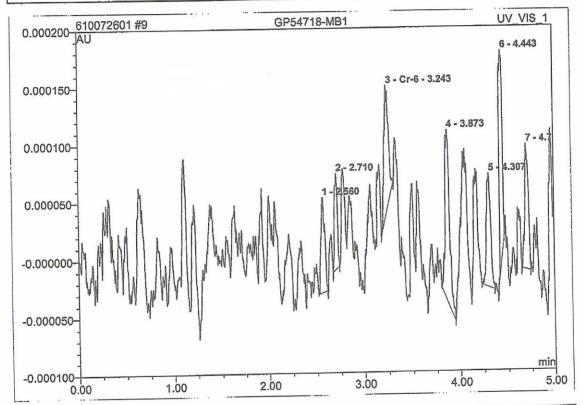
610072601 #8	CCB	UV_VIS_1
0.000100 610072601 #8		
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1 1118 45 47 4 4 11 4 1141 5	JII WINNEY A DIN YANDA A AMADE WILL	THURNAN VILL
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0.000150	¥ V	min
-0.000150 - 1.00	2.00 3.00	4.00 5.00

No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Type
	min	2.0	0.000	0.000	36.34	n.a.	BMB
7	3.84 4.23	n.a. n.a.	0.000	0.000	20.04	n.a.	BMB
2 3	4.72	n.a.	0.000	0.000	18.12	n.a.	BMB
4	4.91	n.a.	0.000	0.000	25.51	n.a.	BMB
Fotal:			0.000	0.000	100.00	0.000	

hexachrome/Integration



9 GP5471	8-MB1		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-MB1 9 unknown hexachrome hexachrome 7/26/2010 9:53 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height	Area AU*min	Rel.Area	Amount	Type
	min		AU		9.70	n.a.	BMB
1	2.56	n.a.	0.000	0.000			BMB
2	2.71	n.a.	0.000	0.000	8.32	n.a.	
		Cr-6	0.000	0.000	15.19	0.0004	BMB
3	3.24		0.000	0.000	21.82	n.a.	BMB
4	3.87	n.a.				n.a.	BMB
5	4.31	n.a.	0.000	0.000	13.38		
6	4.44	n.a.	0.000	0.000	18.95	n.a.	BMB
,	1		0.000	0.000	12.65	n.a.	BMB
7	4.70	n.a.				0.000	
Total:			0.001	0.000	100.00	0.000	

GP54718-MB1

unknown hexachrome

hexachrome

7/26/2010 10:00

10

5.00

10 GP54718-MB1

Sample Name:

Control Program:

Quantif. Method:

Recording Time:

Run Time (min):

Vial Number: Sample Type:

Injection Volume:	25.0
Channel:	UV_VIS_1
Wavelength:	n.a.
Bandwidth:	n.a.
-Dilution Factor:	1.0000
Sample Weight:	1.0000

Sample Amount:

1.0000

0.000200 610072601 #	10	GP547	18-MB1		UV VIS 1
0.000150- 0.000050- -0.000000				1 - 3.857	2 - 4.387
-0.000050 0.00	1.00	2.00	3.00	4.00	min 5.00

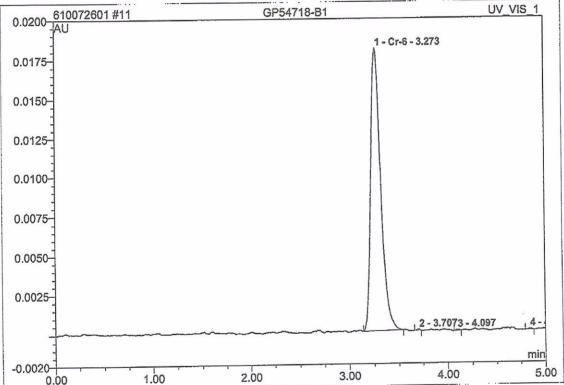
No.	Ret.Time		Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Туре
	min			0.000	0.000	57.05	n.a.	BMB
1	3.86	n.a.		0.000	0.000	42.95	n.a.	BMB
2 Total:	4.39	n.a.		0.000	0.000	100.00	0.000	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration

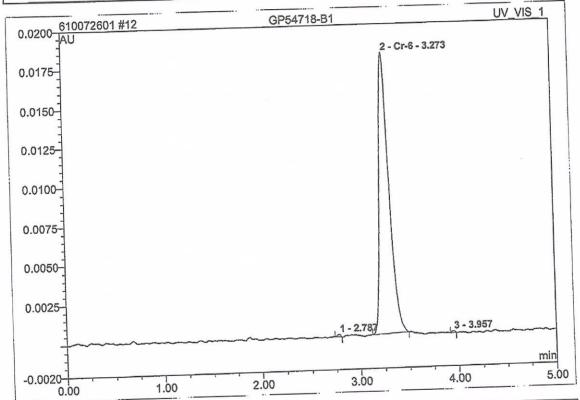


11 GP5471	8-B1		
Sample Name: Vial Number:	GP54718-B1	Injection Volume: Channel: Wavelength:	25.0 UV_VIS_1 n.a.
Sample Type: Control Program: Quantif. Method:	unknown hexachrome hexachrome	Bandwidth: Dilution Factor:	n.a. 4.0000
Recording Time: Run Time (min):	7/26/2010 10:07 5.00	Sample Weight: Sample Amount:	1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	3.27	Cr-6	0.018	0.002	99.52	0.9298	BMB
2	3.71	n.a.	0.000	0.000	0.16	n.a.	BMB
3	4.10	n.a.	0.000	0.000	0.15	n.a.	BMB
4	4.84	n.a.	0.000	0.000	0.16	n.a.	BMB
Total:			0.018	0.002	100.00	0.930	

### 12 GP54718-B1 25.0 Injection Volume: GP54718-B1 Sample Name: UV\_VIS\_1 Channel: 12 Vial Number: n.a. Wavelength: unknown Sample Type: n.a. Bandwidth: hexachrome Control Program: 4.0000 Dilution Factor: hexachrome Quantif. Method: 1.0000 Sample Weight: 7/26/2010 10:15 Recording Time: 1.0000 Sample Amount: Run Time (min):



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
	min		0.000	0.000	0.31	n.a.	BMB
1	2.79	n.a.			99.46	0.9165	BMB
2	3.27	Cr-6	0.018	0.002	0.23	n.a.	BMB
3	3.96	n.a.	0.000		100.00	0.916	
otal:		1.00	0.018	0.002	100.00	0.070	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871 ත

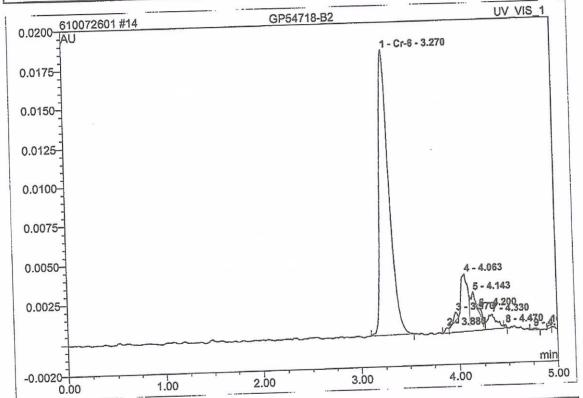
13 GP5471	8-B2		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-B2 13 unknown hexachrome hexachrome 7/26/2010 10:22 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 90.0000 1.0000

0.0200 610072601 #13	GP54718-B2	UV_VIS_1
0.0200 JAU	2 - Cr-6	- 3.270
0.0175		
0.0450		
0.0150		
0.0125		
0.0100		
-		
0.0075		
0.0050		
0.0025	1 - 2.597	3 44,5056 <sup>2</sup> 60- 4.563
1	1-2.397	
-0.0020	2.00 3.00	4.00 5.00
0.00 1.00	2.00	

							***
No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
	min		0.000	0.000	0.41	n.a.	BMB
1	2.60	n.a.	0.000	0.002	98.51	21.3230	BMB
2	3.27	Cr-6	0.000	0.000	0.14	n.a.	BMB
3	4.00	n.a.		0.000	0.27	n.a.	BMB
4	4.09	n.a.	0.000	0.000	0.50	n.a.	BMB
5	4.26	n.a.	0.000	0.000	0.17	n.a.	BMB
6	4.56	n.a.	0.000	-	100.00	21,323	
Total:			0.019	0.002	100.00	21.040	



14 GP5471	8-B2		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-B2 14 unknown hexachrome hexachrome 7/26/2010 10:30 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VI\$_1 n.a. n.a. 90.0000 1.0000



		120					
N-	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
No.			AU	AU*min	%	ppm	
	min		0.018	0.002	74.12	21.0793	BMB
1	3.27	Cr-6		0.000	0.47	n.a.	BM
2	3.88	n.a.	0.000		0.72	n.a.	Ru
3	3.97	n.a.	0.001	0.000		n.a.	M
4	4.06	n.a.	0.004	0.000	12.35		M
- 1	4.14	n.a.	0.002	0.000	7.71	n.a.	Rd
5			0.000	0.000	0.47	n.a.	
6	4.20	n.a.	0.001	0.000	3.61	n.a.	MB
7	4.33	n.a.	0.000	0.000	0.11	n.a.	Rd
8	4.47	n.a.	0.000	0.000		n.a.	BMB
9	4.76	n.a.		0.000		n.a.	BMB
10	4.93	n.a.	0.000			21.079	
Total:			0.027	0.003	100.00	21.070	
Total:						Chromele	eon (c) Dic



Quantif. Method:

Recording Time:

Run Time (min):

1.0000

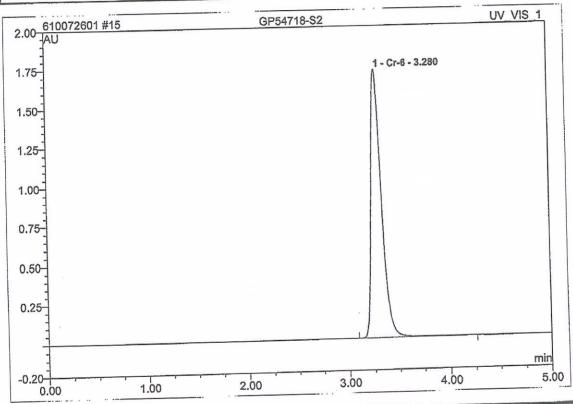
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Sample Weight:

Sample Amount:

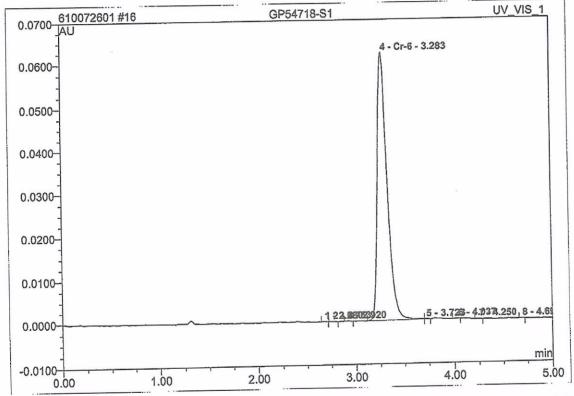
7/26/2010 10:37

5.00



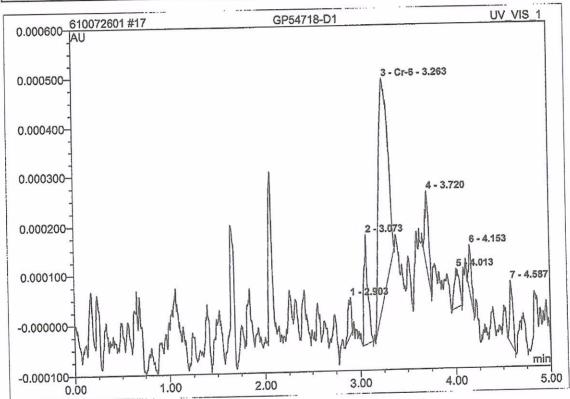
Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Туре
	Cr-6	1.719	0.206	100.00	22.9094	BMB
3.20	CI-0	1.719	0.206	100.00	22.909	
	Ret.Time min 3.28	min	min AU 3.28 Cr-6 1.719	min         AU         AU*min           3.28         Cr-6         1.719         0.206	Ret.Time min         Peak Name         Height AU*min         %           3.28         Cr-6         1.719         0.206         100.00	Ret.Time min         Peak Name         Height Alou Au*min         % ppm           3.28         Cr-6         1.719         0.206         100.00         22.9094

16 GP5471	8-S1		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-S1 16 unknown hexachrome hexachrome 7/26/2010 10:44 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount	Туре
	min		0.000	0.000	0.07	n.a.	BMB
1	2.68	n.a.	0.000	0.000	0.09	n.a.	BMB
2	2.76	n.a.	0.000	0.000	0.06	n.a.	BMB
3 4	2.92 3.28	n.a. Cr-6	0.062	0.007	99.56	0.8117	BM
5	3.72	n.a.	0.000	0.000	0.07	n.a.	MB
6	4.04	n.a.	0.000	0.000	0.05	n.a.	BMB
7	4.25	n.a.	0.000	0.000	0.06	n.a.	BMB
8	4.70	n.a	0.000	0.000	0.05	n.a.	BMB
Total:			0.063	0.007	100.00	0.812	

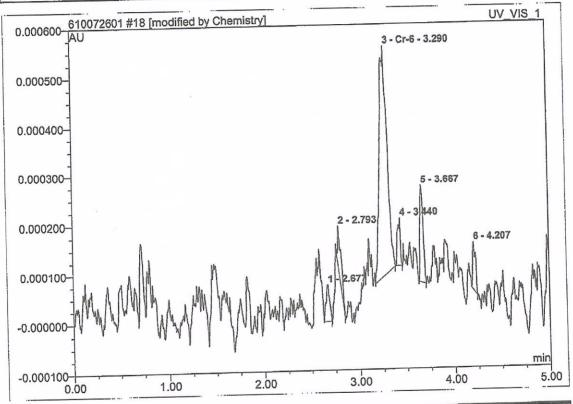
17 GP5471	8-D1		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-D1 17 unknown hexachrome hexachrome 7/26/2010 10:52 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Type
	min		0.000	0.000	3.58	n.a.	BMB
1	2.90	n.a.	0.000	0.000	11.85	n.a.	BMB
2	3.07	n.a.	0.000	0.000	61.12	0.0055	BMB
3	3.26	Cr-6		0.000	8.13	n.a.	<b>BMB</b>
4	3.72	n.a.	0.000	0.000	5.48	n.a.	BMB
5	4.01	n.a.	0.000		3.95	n.a.	BMB
6	4.15	n.a.	0.000	0.000		n.a.	BMB
7	4.59	n.a.	0.000	0.000	5.89		
Total:			0.001	0.000	100.00	0.005	



#### 18 GP54718-D1 25.0 Injection Volume: GP54718-D1 Sample Name: UV\_VIS\_1 Channel: 18 Vial Number: Wavelength: n.a. unknown Sample Type: n.a. Bandwidth: hexachrome Control Program: Dilution Factor: 1.0000 hexachrome Quantif, Method: 1.0000 Sample Weight: 7/26/2010 10:59 Recording Time: 1.0000 Sample Amount: Run Time (min): 5.00



No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
140.			AU	AU*min	%	ppm	
	min		0.000	0.000	4.79	n.a.	BMB
1	2.68	n.a.	0.000	0.000	5.71	n.a.	BMB
2	2.79	n.a.	0.000	0.000	67.24	0.0047	BMB*
3	3.29	Cr-6			5.14	n.a.	BMB
4	3.44	n.a.	0.000	0.000		n.a.	вмв
5	3.67	n.a.	0.000	0.000	11.61		BMB
6	4.21	n.a.	0.000	0.000	5.50	n.a.	DIVID
		11.4.	0.001	0.000	100.00	0.005	
Total:					***		

hexachrome/Integration

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871



**6** 

Sample Name: Vial Number:

Sample Type:

Control Program:

GP54718-D1

18

unknown hexachrome

Quantif. Method: hexachrome Recording Time: 7/26/2010 10:59

Run Time (min): 5.00 Injection Volume: 25.0 UV\_VIS\_1 Channel: n.a.

Wavelength: Bandwidth:

1.0000 Dilution Factor: Sample Weight: Sample Amount:

1.0000 1.0000

n.a.

UV VIS 1 610072601 #18 GP54718-D1 0.000600-0.000500 0.000400-0.000300-4 - 3.667 0.000200-0.000100 -0.000000 -0.000100 5.00 3.00 4.00 1.00 2.00

No.	Ret.Time	Peak Name	Height	Area AU*min	Rel.Area %	Amount	Type
	min		0.000	0.000	14.63	n.a.	BMB
1	2.68	n.a.	0.000	0.000	17.44	n.a.	BMB
2	2.79 3.44	n.a. n.a.	0.000	0.000	15.70	n.a.	BMB
4	3.67	n.a.	0.000	0.000	35.44	n.a.	BMB
5	4.21	n.a.	0.000	0.000	16.78	n.a.	BMB
Total:	1		0.001	0.000	100.00	0.000	

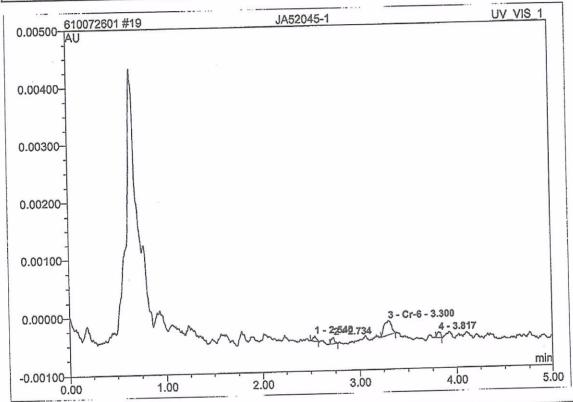
MP BD 7/24/10

hexachrome/Integration

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

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19 JA5204	5-1		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	JA52045-1 19 unknown hexachrome hexachrome 7/26/2010 11:07 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000

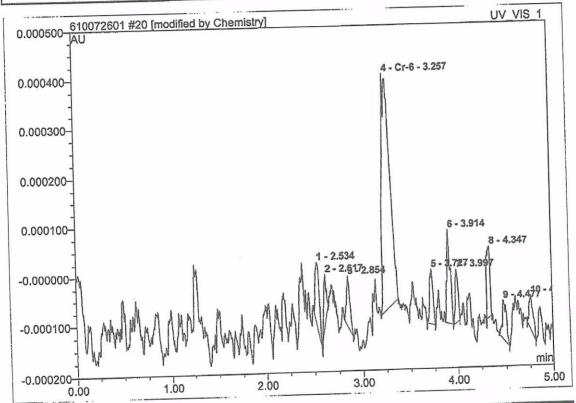


No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
		200	0.000	0.000	10.10	n.a.	BMB
1	2.54	n.a.	0.000	0.000	13.76	n.a.	BMB
2	2.73	n.a.	0.000	0.000	64.55	0.0022	BMB
3	3.30	Cr-6	0.000	0.000	11.59	n.a.	BMB
4	3.82	n.a.		0.000	100.00	0.002	
Total:			0.001	0.000	100.00	0.00-	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration

### 20 JA52045-1conf 25.0 Injection Volume: JA52045-1conf Sample Name: UV\_VIS\_1 Channel: 20 Vial Number: n.a. Wavelength: unknown Sample Type: Bandwidth: n.a. Control Program: hexachrome 1.0000 Dilution Factor: hexachrome Quantif. Method: 1.0000 Sample Weight: 7/26/2010 11:14 Recording Time: 1.0000 Sample Amount: 5.00 Run Time (min):

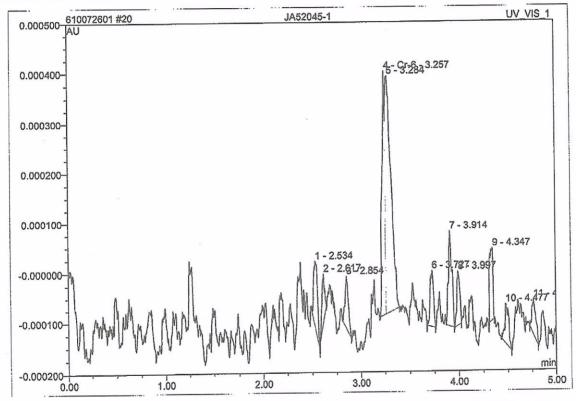


No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Туре
	min			0.000	6.70	n.a.	BMB
1	2.53	n.a.	0.000	0.000	3.66	n.a.	<b>BMB</b>
2	2.62	n.a.	0.000	0.000	4.90	n.a.	BMB
3	2.85	n.a.	0.000	0.000	51.68	0.0048	BMB*
4	3.26	Cr-6	0.000	0.000	5.14	n.a.	BMB
5	3.73	n.a.	0.000	0.000	9.12	n.a.	BMB
6	3.91	n.a.	0.000	0.000	4.48	n.a.	BMB
7	4.00	n.a.	0.000	0.000	6.32	n.a.	BMB
8	4.35	n.a.	0.000	0.000		n.a.	BMB
9	4.48	n.a.	0.000	0.000		n.a.	BMB
10	4.77	n.a.	0.000			0.005	
Total:			0.002	0.000	100.00	0.000	4 > 275.1

hexachrome/Integration



20 JA5204	5-1		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	JA52045-1 20 unknown hexachrome hexachrome 7/26/2010 11:14 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Type
	min		AU	AU*min	%	ppm	
1	2.53	n.a.	0.000	0.000	6.58	n.a.	BMB
2	2.62	n.a.	0.000	0.000	3.60	n.a.	BMB
3	2.85	n.a.	0.000	0.000	4.82	n.a.	BMB
4	3.26	Cr-6	0.000	0.000	17.02	0.0014	BM
5	3.28	n.a.	0.000	0.000	35.46	n.a.	MB
6	3.73	n.a.	0.000	0.000	5.05	n.a.	BMB
7			0.000	0.000	8.96	n.a.	BMB
- 1	3.91	n.a.	0.000	0.000	4.40	n.a.	BMB
8	4.00	n.a.	0.000	0.000	6.21	n.a.	BMB
9	4.35	n.a.	0.000	0.000	4.15	n.a.	BMB
10	4.48	n.a.		0.000	3.73	n.a.	BMB
11	4.77	n.a.	0.000	0.000	3.70	11.04.	2

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration



GN40300

Operator:Chemistry Timebase:accutest Sequence:610072601

Page 2-2 7/26/2010 11:22 AM

Total: 0.002 0.000 100.00 0.001

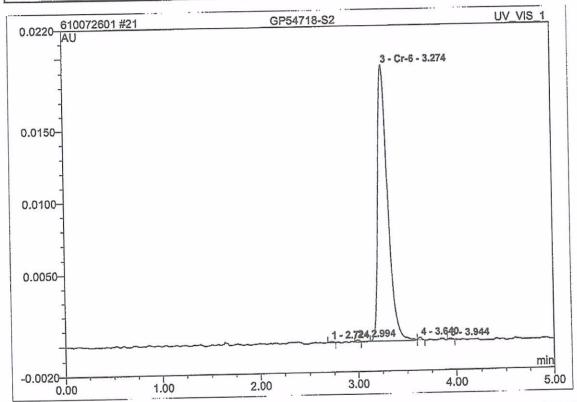
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hexachrome/Integration

21 GP54718	3-S2		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-S2 21 unknown hexachrome hexachrome 7/26/2010 11:21 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 100.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Type
	min	20	0.000	0.000	0.21	n.a.	BMB
1	2.72 2.99	n.a. n.a.	0.000	0.000	0.23	n.a.	BMB
2	3.27	Cr-6	0.019	0.002	99.05	24.9033	BM
-	3.64	n.a.	0.000	0.000	0.36	n.a.	MB
4	3.94	n.a.	0.000	0.000	0.16	n.a.	BMB
5 Total:		11.4.	0.020	0.002	100.00	24.903	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration



Sample Name:

Vial Number:

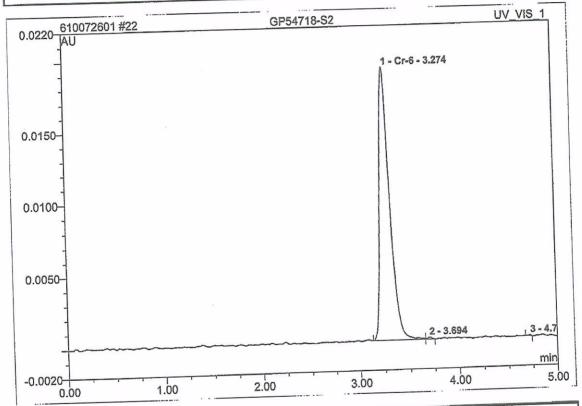
Sample Type:

Control Program:

Quantif. Method:

Recording Time:

Run Time (min):



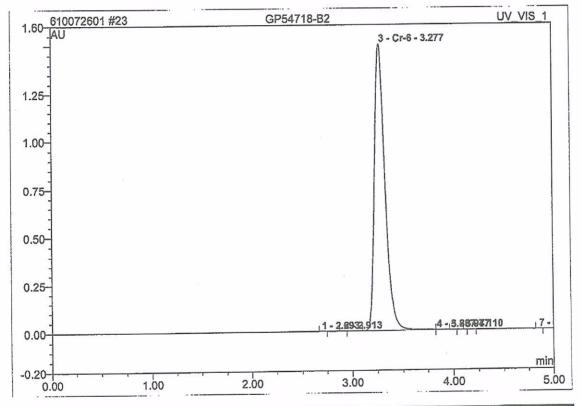
No.	Ret.Time	Peak Name	Height	Area AU*min	Rel.Area %	Amount	Type
	min		0.019	0.002	99.54	24.7664	BM
1	3.27	Cr-6	0.000	0.002	0.32	n.a.	MB
2	3.69	n.a.	0.000	0.000	0.14	n.a	BMB
3	4.72	n.a.	0.000	0.002	100.00	24.766	
Γotal:			0.019	0.002	, 0 0		

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration



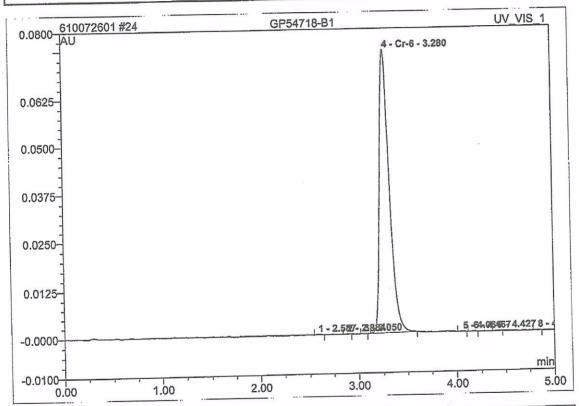
23 GP5471	8-B2		
Sample Name: Vial Number:	GP54718-B2 23	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/26/2010 11:36	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time	Peak Name	Height	Area	Rel.Area	Amount	Туре
	min	v.	AU	AU*min	%	ppm	
1	2.69	n.a.	0.000	0.000	0.00	n.a.	BMB
2	2.91	n.a.	0.000	0.000	0.00	n.a.	BMB
3	3.28	Cr-6	1.500	0.178	99.86	19.7714	BM
4	3.84	n.a.	0.001	0.000	0.13	n.a.	MB
5	3.98	n.a.	0.000	0.000	0.00	n.a.	Rd
6	4.11	n.a.	0.000	0.000	0.00	n.a.	Rd
7	4.86	n.a.	0.000	0.000	0.00	n.a.	BMB
	4.00	II.a.	1.501	0.178	100.00	19.771	
Total:			1.001	5.1.0		- marini-	- IVE - CONTROL OF



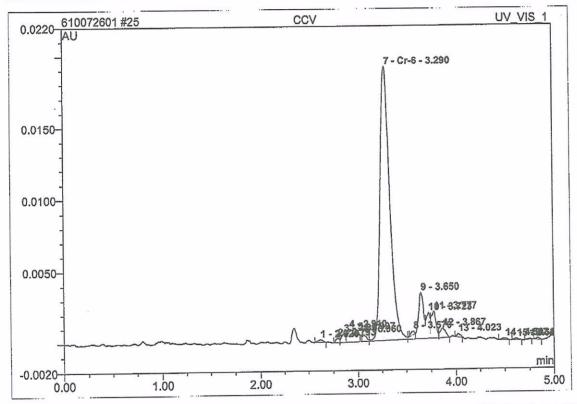
24 GP5471	8-B1		
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time: Run Time (min):	GP54718-B1 24 unknown hexachrome hexachrome 7/26/2010 11:44 5.00	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VI\$_1 n.a. n.a. 1.0000 1.0000



		Peak Name	Height	Area	Rel.Area	Amount	Type
No.	Ret.Time	Peak Name	AU	AU*min	%	ppm	
	min		0.000	0.000	0.09	n.a.	BMB
1	2.59	n.a.	0.000	0.000	0.04	n.a.	BMB
2	2.88	n.a.	0.000	0.000	0.04	n.a.	BMB
3	3.05	n.a.	0.074	0.009	99.54	0.9565	BMB
4	3.28	Cr-6	0.000	0.000	0.07	n.a.	BMB
5	4.06	n.a.	0.000	0.000	0.07	n.a.	BMB
6	4.17	n.a.	0.000	0.000	0.06	n.a.	BMB
7	4.43	n.a.	0.000	0.000	0.08	n.a.	BMB
8	4.83	n.a.	0.075	0.009	100.00	0.957	
Total:			0.070	3,000			



25 CCV			
Sample Name: Vial Number: Sample Type: Control Program: Quantif. Method: Recording Time:	CCV 25 unknown hexachrome hexachrome 7/26/2010 11:51	Injection Volume: Channel: Wavelength: Bandwidth: Dilution Factor: Sample Weight: Sample Amount:	25.0 UV_VIS_1 n.a. n.a. 1.0000 1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Туре
1	2.62	n.a.	0.000	0.000	0.37	n.a.	BMB
2	2.79	n.a.	0.000	0.000	0.47	n.a.	BM
3	2.86	n.a.	0.001	0.000	1.05	n.a.	M
4	2.91	n.a.	0.001	0.000	3.49	n.a.	M
5	3.00	n.a.	0.000	0.000	0.16	n.a.	Rd
6	3.06	n.a.	0.000	0.000	0.83	n.a.	M
7	3.29	Cr-6	0.019	0.002	77.03	0.2478	M
8	3.57	n.a.	0.000	0.000	0.37	n.a.	Ru
9	3.65	n.a.	0.003	0.000	7.34	n.a.	M
10	3.72	n.a.	0.002	0.000	2.71	n.a.	M
11	3.78	n.a.	0.002	0.000	3.55	n.a.	M

Operator:Chemistry Timebase:accutest Sequence:610072601

Page 28-36 7/26/2010 1:22 PM

Total:				0.030	0.003	100.00	0.248	
17	4.83	n.a.		0.000	0.000	0.19	n.a.	BMB
16	4.75	n.a.		0.000	0.000	0.11	n.a.	BMB
15	4.62	n.a.		0.000	0.000	0.23	n.a.	BMB
14	4.50	n.a.		0.000	0.000	0.26	n.a.	BMB
13	4.02	n.a.		0.000	0.000	0.35	n.a.	BMB
12	3.87	n.a.	•	0.001	0.000	1.50	n.a.	MB

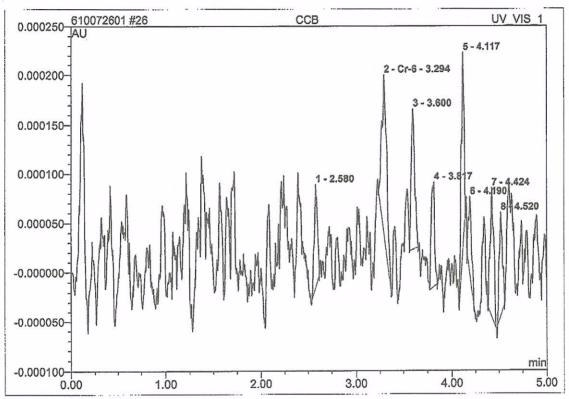
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hexachrome/Integration



26 CCB			
Sample Name:	CCB	Injection Volume:	25.0
Vial Number:	26	Channel:	UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	1.0000
Recording Time:	7/26/2010 11:58	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.58	n.a.	0.000	0.000	9.11	n.a.	BMB
2	3.29	Cr-6	0.000	0.000	22.28	8000.0	BMB
3	3.60	n.a.	0.000	0.000	13.73	n.a.	BMB
4	3.82	n.a.	0.000	0.000	9.61	n.a.	BMB
5	4.12	n.a.	0.000	0.000	15.26	n.a.	BMB
6	4.19	n.a.	0.000	0.000	7.09	n.a.	BMB
7	4.42	n.a.	0.000	0.000	13.43	n.a.	BMB
8	4.52	n.a	0.000	0.000	9.49	n.a.	BMB
Total:		•	0.001	0.000	100.00	0.001	

hexachrome/Integration



Sample Name: Vial Number:

Sample Type:

JA52045-1

27 unknown hexachrome

Control Program: Quantif. Method: Recording Time:

hexachrome 7/26/2010 12:06

Run Time (min):

5.00

Injection Volume:

Channel: Wavelength:

Bandwidth: Dilution Factor: Sample Weight:

Sample Amount:

4.00

3.00

1.0000 1.0000

1.0000

25.0

n.a.

n.a.

UV\_VIS\_1

0.000600 610072601 #27 JA52045-1 UV VIS 1

0.0005000.0003000.0002000.000100-0.000100-0.000100-0.000100-

No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Type
1	2.75	n.a.	0.000	0.000	8.92	n.a.	BMB
2	3.01	n.a.	0.000	0.000	6.10	n.a.	BMB
3	3.27	Cr-6	0.000	0.000	33.92	0.0021	BMB
4	3.50	n.a.	0.000	0.000	6.27	n.a.	BMB
5	3.85	n.a.	0.000	0.000	5.48	n.a.	BMB
6	4.09	n.a.	0.000	0.000	6.10	n.a.	BM
7	4.17	n.a.	0.000	0.000	11.52	n.a.	MB
8	4.61	n.a.	0.000	0.000	4.88	n.a.	BMB
9	4.83	n.a.	0.000	0.000	7.12	n.a.	BMB
10	4.91	n.a.	0.000	0.000	9.69	n.a.	BMB
Total:			0.001	0.000	100.00	0.002	

2.00

1.00

hexachrome/Integration

-0.000200

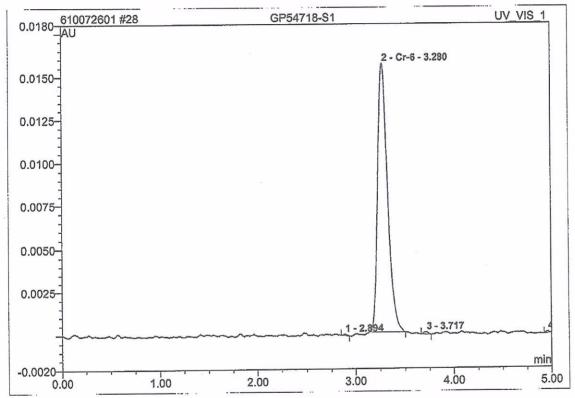
0.00

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

5.00



28 GP5471	8-S1		
Sample Name: Vial Number:	GP54718-S1 28	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif. Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	7/26/2010 12:13	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000

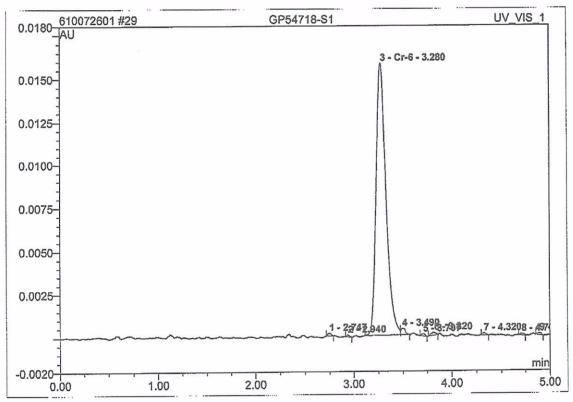


No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.89	n.a.	0.000	0.000	0.18	n.a.	BMB
2	3.28	Cr-6	0.016	0.002	99.22	0.7931	BMB
3	3.72	n.a.	0.000	0.000	0.37	n.a.	BMB
4	4.96	п.а.	0.000	0.000	0.23	n.a.	BMB
Total:			0.016	0.002	100.00	0.793	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration

29 GP5471	8-S1		
Sample Name: Vial Number:	GP54718-S1 29	Injection Volume: Channel:	25.0 UV_VIS_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	hexachrome	Bandwidth:	n.a.
Quantif, Method:	hexachrome	Dilution Factor:	4.0000
Recording Time:	7/26/2010 12:21	Sample Weight:	1.0000
Run Time (min):	5.00	Sample Amount:	1.0000



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	2.75	n.a.	0.000	0.000	0.33	n.a.	BMB
2	2.94	n.a.	0.000	0.000	0.18	n.a.	BMB
3	3.28	Cr-6	0.016	0.002	97.08	0.8089	BM
4	3.49	n.a.	0.000	0.000	0.99	n.a.	MB
5	3.71	n.a.	0.000	0.000	0.25	n.a.	BMB
6	3.82	n.a.	0.000	0.000	0.49	n.a.	BMB
7	4.32	n.a.	0.000	0.000	0.25	n.a.	BMB
8	4.71	n.a.	0.000	0.000	0.20	n.a.	BMB
9	4,89	n.a.	0.000	0.000	0.23	n.a.	BMB
Total:			0.017	0.002	100.00	0.809	

hexachrome/Integration

7/26/2010 12:28

5.00

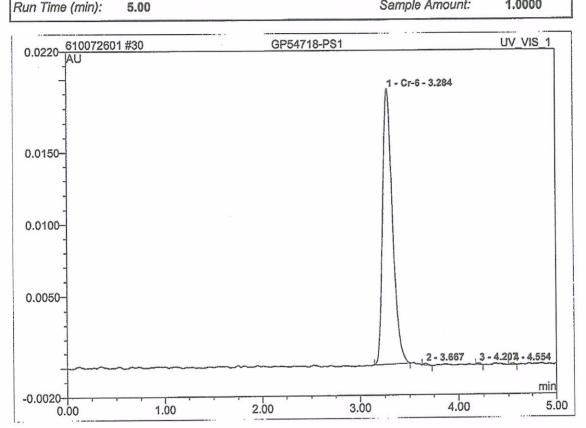
Recording Time:

Sample Weight:

Sample Amount:

1.0000

1.0000



No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Туре
1	3,28	Cr-6	0.019	0.002	99.31	0.9747	BMB
2	3.67	n.a.	0.000	0.000	0.30	n.a.	BMB
3	4.21	n.a.	0.000	0.000	0.19	n.a.	BMB
4	4.55	n.a.	0.000	0.000	0.20	n.a.	BMB
Fotal:		AL HAM	0.020	0.002	100.00	0.975	

Chromeleon (c) Dionex 1996-2001 Version 6.70 SP2a Build 1871

hexachrome/Integration



Sample Type: Control Program: Quantif. Method:

Sample Name:

Vial Number:

31 GP54718-PS1

unknown hexachrome hexachrome 7/26/2010 12:35

GP54718-PS1

Wavelength: Bandwidth: Dilution Factor: Sample Weight:

Sample Amount:

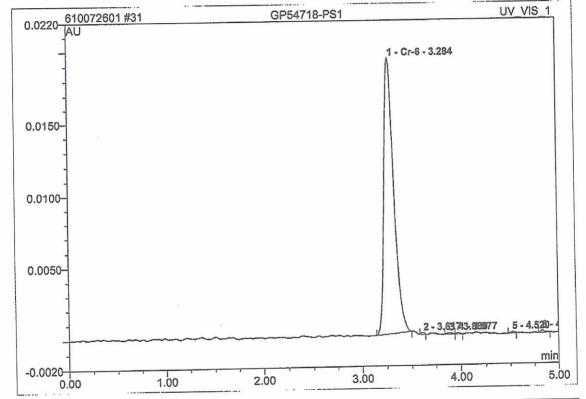
Channel:

4.0000 1.0000 1.0000

Recording Time: Run Time (min):

5.00

31



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
- 1	3.28	Cr-6	0.019	0.002	98.70	0.9746	BMB
2		n.a.	0.000	0.000	0.20	n.a.	BMB
2	3.62		0.000	0.000	0.27	n.a.	BM
3	3.88	n.a.	0.000	0.000	0.23	n.a.	MB
4	3.98	n.a.	0.000	0.000	0.24	n.a.	BMB
5	4.52	n.a.	0.000	0.000	0.37	n.a.	BMB
6	4.83	n.a.		0.002	100.00	0.975	
Total:			0.020	0.002	100.00	0.0.0	

hexachrome/Integration



Injection Volume:	25.0
Channel:	UV_VIS_1
Wavelength:	n.a.
Bandwidth:	n.a.
Dilution Factor:	1.0000

Sample Type: Control Program: Quantif. Method: Recording Time:

32 CCV

Sample Name:

Vial Number:

unknown hexachrome hexachrome 7/26/2010 12:43

Bandwidth: Dilution Factor: Sample Weight:

1.0000

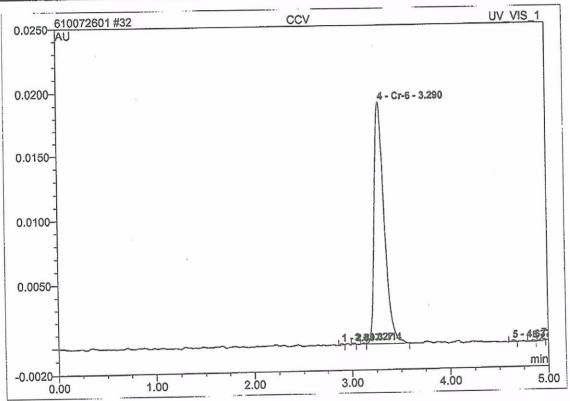
Run Time (min):

5.00

CCV

32

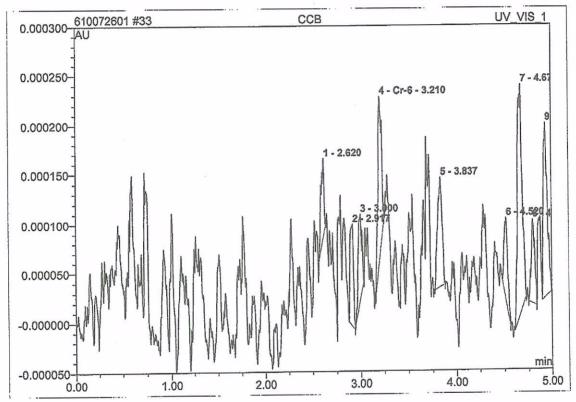
1.0000 Sample Amount:



No.	Ret.Time	Peak Name	Height AU	Area AU*min	Rel.Area	Amount ppm	Type
	min		0.000	0.000	0.17	n.a.	BMB
7	2.90	n.a.	0.000	0.000	0.16	n.a.	BMB
2	3.03	n.a.	0.000	0.000	0.15	n.a.	BM
3	3.11	n.a.		0.002	98.68	0.2468	MB
4	3.29	Cr-6	0.019		0.26	n.a.	BMB
5	4.64	n.a.	0.000	0.000			BMB
6	4.84	n.a.	0.000	0.000	0.19	n.a.	BMB
7	4.93	n.a.	0.000	0.000	0.39	n.a.	DIVID
Total:			0.020	0.002	100.00	0.247	

hexachrome/Integration





No.	Ret.Time min	Peak Name	Height AU	Area AU*min	Rel.Area %	Amount ppm	Type
1	2.62	n.a.	0.000	0.000	5.75	n.a.	BMB
2	2.92	n.a.	0.000	0.000	7.85	n.a.	BMB
3	3.00	n.a.	0.000	0.000	7.59	n.a.	BMB
4	3.21	Cr-6	0.000	0.000	13.83	0.0006	BMB
5	3.84	n.a.	0.000	0.000	11.35	n.a.	BMB
6	4.52	n.a.	0.000	0.000	6.67	n.a.	BMB
7	4.68	n.a.	0.000	0.000	24.24	n.a.	BMB
8	4.79	n.a.	0.000	0.000	6.32	n.a.	BMB
9	4.94	n.a.	0.000	0.000	16.40	n.a.	BMB
Total:			0.001	0.000	100.00	0.001	

hexachrome/Integration

APPENDIX I DEED NOTICE

## WATERS, MCPHERSON, MCNERECEIVED APR 3 0 2010

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

SECAUCUS - TRENTON - NEW YORK
MEADOWLANDS OFFICE
300 LIGHTING WAY

P.O. Box 1560

SECAUCUS, NEW JERSEY 07096

201-863-4400

www.lawwmm.com

E-MAIL nealz@lawwmm.com

TELECOPIER 201-863-2866

April 29, 2010

Michael Daneker, Esq. Arnold & Porter 555 Twelfth Street, N.W. Washington, DC 20004-1206

E. NEAL ZIMMERMANN

MEMBER OF N.J. & N.Y. BARS

DIRECT DIAL

201-330-7467

Resa Drazin, Esq. Woehling & Freeman, LLP 50 Elmer Street Westfield, NJ 07090

Re:

Honeywell International Inc. Bob Ciasulli Deed Notice

Dear Mike and Resa:

The Deed Notice from Bob Ciasulli was recorded today in the office of the Hudson County Register of Deeds in Book 8728, Page 276. Enclosed please find a copy of the recorded instrument, which is stamped on the first page as a receipt. When the original is returned to us, we will forward it to Mike.

Very truly yours,

WATERS, McPHERSON, McNEILL, P.C.

-,

E. Neal Zimmermann

ENZ:kad

Enc.

CC:

John Morris

Bill Hague

528789.1

IN ACCORDANCE WITH N.J.S.A. 58:10B-13, THIS DOCUMENT IS TO BE RECORDED IN THE SAME MANNER AS ARE DEEDS AND OTHER INTERESTS IN REAL PROPERTY.

Prepared by:	ALL AS ALVERY AND AND AND AND AND AND AND AND AND AND
[Signature]	20100429010032120 1/34
[Print name below signature]	20100429010032120 1/34 04/29/2010 11:28:01 AM DEED Bk: 8728 Pg: 276
AND AFTER RECORDING RETURN TO:	Willie L.Flood Hudson County, Register of Deeds
E. Neal Zimmermann, Esq.	Receipt No. 320952
Waters, McPherson, McNeill, PC	
300 Lighting Way	
Secaucus, NJ 07096	•

## DEED NOTICE CONCERNING CONTROLS INSTALLED TO CONTAIN CHROMIUM CONTAMINATION UNDERLYING PROPERTY AND RESTRICTIONS CONCERNING THE USE OF PROPERTY

This Deed Notice is made as of the 22nd day of April, 2010, by Robert G. Ciasulli, also known as Bob Ciasulli, whose post office address is Bob Ciasulli Auto Group, 1485 Route 46 East, Little Falls, NJ 07424. Owner shall mean Robert G. Ciasuili, also known as Bob Ciasulli, together with his successors and assigns, including all successors in interest in the Property which is the subject of this Deed Notice as described fully below.

1. THE PROPERTY. Robert G. Ciasulli is the current owner in fee simple of certain real property designated as that portion of Block 1291, Lot 76 on the tax map of the City of Jersey City, Hudson County, New Jersey as more particularly described by metes and bounds on Exhibit A-2 attached hereto and made a part hereof (the "Property). The New Jersey Department of Environmental Protection Program Interest Number for the contaminated site which includes this property is Hudson County Chromate Site No. 079 Program Interest (PI) #G000008706. The property is known as the Site 79 Ciasulli Property pursuant to the Consent Decree Regarding Site 79 and 153 South ("Consent Decree") which is attached hereto and is entered as an order of the Court in the following consolidated actions JCMUA v. Honeywell International, Inc., D.N.J., Civ. No. 05-05955; JCIA v. Honeywell International, Inc., D.N.J., Civ. No. 05-5993; and Hackensack Riverkeeper, Inc. v. Honeywell International, Inc., D.N.J., Civ. No. 06-22. The Consent Decree restricts use and development of the Property without further remediation pursuant to the terms of the Consent Decree. To the extent that there is any conflict or

inconsistency between the terms of this Deed Notice and the terms of the Consent Decree, the Consent Decree shall govern. To the extent that any action to be taken pursuant to this Deed Notice is in conflict with or inconsistent with the Consent Decree, the Consent Decree shall govern.

- 2. DEPARTMENT'S ASSIGNED BUREAU. The Bureau of State Case Management (BCM) was the New Jersey Department of Environmental Protection program that was responsible for the oversight of the remediation of the Property. The matter was Case No. Hudson County Chromate Site No. 079 Program Interest (PI) # G000008706.
- 3. SOIL AND GROUNDWATER CONTAMINATION. Honeywell International Inc. ("Honeywell") a corporation in the State of New Jersey whose post office address is 101 Columbia Road, Morristown, New Jersey 07962, has remediated the Property to address chromium-related soil contamination. The Remedial Action Work Plan was approved by the New Jersey Department of Environmental Protection on September 30, 2009 for Hudson County Chromate Site No. 079, which includes the Property. Remedial actions were further approved pursuant to the Consent Decree. Under both the Consent Decree and the Remedial Action Work Plan soil remains on the Property which contains contaminants in concentrations that do not allow for the unrestricted use of the Property. The soil contamination is described, including the type, concentration and specific location of such contaminants, in Exhibit B, which is attached hereto and made a part hereof. As a result of the contamination, there is a statutory requirement for this Deed Notice and engineering controls in accordance with N.J.S.A. 58:10B-13. Under the terms of the Consent Decree and this Deed Notice, Honeywell is responsible for monitoring and maintaining the soil remediation and monitoring shallow groundwater levels for the Property until such time as the Property is remediated to the level that would permit the removal of this Deed Notice pursuant to the Consent Decree.
- 4. CONSIDERATION. In accordance with the New Jersey Department of Environmental Protection's approval of the Remedial Action Work Plan for the remediation of Hudson County Chromate Site No. 079 and in consideration of the terms and conditions of that approval, and in accordance with the Consent Decree, and other good and valuable considerations, Owner has agreed to subject the Property to certain statutory and regulatory requirements which impose restrictions upon the use of the Property, to restrict certain uses of the Property, and to provide notice to subsequent owners, lessees and operators of the restrictions and the monitoring, maintenance, and certification requirements outlined in this Deed Notice and required by law until the Property is further remediated and no longer must be encumbered by this Deed Notice pursuant to the terms of the Consent Decree.
- 5A. RESTRICTED AREA. Due to the presence of these contaminants, Owner has agreed, as part of the remedial action for the Property, to restrict the use of those portions of the Property for which engineering controls have been put into place (the "Restricted Area," also referred to as the "Site 79 Capped Area" in the Consent Decree); a narrative description of these restrictions, along with the associated monitoring and maintenance activities and the biennial certification requirements are provided in Exhibit C, which is

attached hereto and made a part hereof. Owner has also agreed to maintain a list of these restrictions on site for inspection by governmental enforcement officials.

5B. ENGINEERING CONTROLS. Due to the presence and concentration of these contaminants, Owner has also agreed, as part of the remedial action for the Property, to the placement and maintenance of certain engineering controls on the Restricted Area. A narrative description of these engineering controls, along with the associated monitoring and maintenance activities and the biennial certification requirements are provided in Exhibit C. Honeywell shall be responsible for monitoring and maintenance of engineering controls and biennial certification requirements as specified in Paragraphs 7A&B.

5C. ADDITIONAL PROVISIONS PURSUANT TO CONSENT DECREE. The asphalt cap for the Restricted Area constitutes an engineering control that must be maintained in accordance with the New Jersey Technical Requirements for Site Remediation. Owner agrees to grant Honeywell an access easement providing Honeywell access to the Restricted Area for the purposes of inspecting, repairing, and maintaining the asphalt cover. Future uses of the Site 79 Capped Area are limited to commercial, retail, or open-space, including continued use as an automobile dealership.

## 6A. ALTERATIONS, IMPROVEMENTS, AND DISTURBANCES.

i. Except as provided in the Consent Decree and Paragraph 6B, below, no person shall make, or allow to be made, any alteration, improvement, or disturbance in, to, or about the Restricted Area which disturbs any engineering control except as (a) permitted in the Consent Decree and (b) without first obtaining the express written consent of the Department of Environmental Protection. Nothing herein shall constitute a waiver of the obligation of any person to comply with all applicable laws and regulations including, without limitation, the applicable rules of the Occupational Safety and Health Administration. To request the consent of the Department of Environmental Protection, contact:

Department of Environmental Protection
Division of Remediation Management and Response
Bureau of Operation, Maintenance and Monitoring
Deed Notice Inspection Program
P.O. Box 413
401 E. State Street
Trenton, NJ 08625-0413

- ii. Notwithstanding subparagraph 6A.i., above, the Department of Environmental Protection's express written consent is not required for any alteration, improvement, or disturbance of the Restricted Area provided that the owner, lessee or operator:
  - (A) Takes such action in conformance with the Consent Decree; and

- (B) Notifies the Department of Environmental Protection of the activity by calling the DEP Hotline, at 1-877-WARN-DEP or 1-877-927-6337, within twenty-four (24) hours after the beginning of each alteration, improvement, or disturbance;
- (C) Notifies Honeywell of the activity by calling 973-455-3302;
- (D) Restores or causes Honeywell to restore any disturbance of an engineering control to pre-disturbance conditions within sixty (60) calendar days after the initiation of the alteration, improvement or disturbance;
- (E) Ensures that all applicable worker health and safety laws and regulations are followed during the alteration, improvement, or disturbance, and during the restoration;
- (F) Ensures that exposure to contamination in excess of the applicable remediation standards does not occur;
- (G) Submits or causes Honeywell to submit a written report, describing the alteration, improvement, or disturbance, to the Department of Environmental Protection within sixty (60) calendar days after the end of each alteration, improvement, or disturbance. The report shall include in the report the nature of the alteration, improvement, or disturbance, the dates and duration of the alteration, improvement, or disturbance, the name of key individuals and their affiliations conducting the alteration, improvement, or disturbance, a description of the notice the Owner gave to those persons prior to the disturbance, the amounts of soil generated for disposal, if any, the final disposition and any precautions taken to prevent exposure. Such reports shall be submitted to::

Department of Environmental Protection
Division of Remediation Management and Response
Bureau of Operation, Maintenance and Monitoring
Deed Notice Inspection Program
P.O. Box 413
401 E. State Street
Trenton, NJ 08625-0413

- 6B. EMERGENCIES. In the event of an emergency which presents, or may present, an unacceptable risk to the public health and safety, or to the environment, any person may temporarily breach any engineering control provided that that person complies with each of the following:
  - i. Immediately notifies the Department of Environmental Protection of the emergency, by calling the DEP Hotline at 1-877-WARNDEP or 1-877-927-6337;

- ii. Immediately notifies Honeywell of the emergency by calling 973-455-3302;
- iii. Limits both the actual disturbance and the time needed for the disturbance to the minimum reasonably necessary to adequately respond to the emergency;
- iv. Implements all measures necessary to limit actual or potential, present or future risk of exposure to humans or the environment to the contamination;
- v. Notifies the Department of Environmental Protection when the emergency has ended by calling the DEP Hotline at 1-877-WARNDEP or 1-877-927-6337;
- vi.. Notifies Honeywell when the emergency has ended by calling 973-455-3302; and
- vii. Restores or causes Honeywell to restore the engineering control to the preemergency conditions as soon as possible, and provides a written report to the
  Department of Environmental Protection of such emergency and restoration
  efforts within sixty (60) calendar days after completion of the restoration of the
  engineering control. The report must include all information pertinent to the
  emergency, potential discharges of contaminants, and restoration measures that
  were implemented, which, at a minimum, should specify: (a) the nature and likely
  cause of the emergency, (b) the potential discharges of or exposures to
  contaminants, if any, that may have occurred, (c) the measures that have been
  taken to mitigate the effects of the emergency on human health and the
  environment, (d) the measures completed or implemented to restore the
  engineering control, and (e) the changes to the engineering control or site
  operation and maintenance plan to prevent recurrence of such conditions in the
  future. Such reports shall be submitted to:

Department of Environmental Protection
Division of Remediation Management and Response
Bureau of Operation, Maintenance and Monitoring
Deed Notice Inspection Program
P.O. Box 413
401 E. State Street
Trenton, NJ 08625-0413

7A. MONITORING AND MAINTENANCE OF DEED NOTICE, AND PROTECTIVENESS CERTIFICATION. Honeywell and the Owner shall monitor and maintain this Deed Notice, and certify to the Department on a biennial basis that the remedial action that includes this Deed Notice remains protective of the public health and

safety and of the environment. The specific obligations to monitor and maintain the deed notice shall include all of the following:

- i. Monitoring and maintaining this Deed Notice according to the requirements in Exhibit C, to ensure that the remedial action that includes the Deed Notice continues to be protective of the public health and safety and of the environment;
- ii. Conducting any additional remedial investigations and implementing any additional remedial actions, that are necessary to correct, mitigate, or abate each problem related to the protectiveness of the remedial action for the Property prior to the date that the certification is due to the Department pursuant to iii, below, in order to ensure that the remedial action that includes this Deed Notice remains protective of the public health and safety and of the environment.
- iii. Certify to the Department of Environmental Protection as to the continued protectiveness of the remedial action that includes this Deed Notice, on a form provided by the Department and consistent with N.J.A.C. 7:26C-1.2 (a)1, every two years on the anniversary of the date stamped on the Deed Notice that indicates when the Deed Notice was recorded.

7B. MONITORING AND MAINTENANCE OF ENGINEERING CONTROLS, AND PROTECTIVENESS CERTIFICATION. Honeywell and the Owner shall maintain all engineering controls at the Property and certify to the Department on a biennial basis that the remedial action of which each engineering control is a part remains protective of the public health and safety and of the environment. The specific obligations to monitor and maintain the engineering controls shall include the following:

- i. Monitoring and maintaining each engineering control according to the requirements in Exhibit C, to ensure that the remedial action that includes the engineering control continues to be protective of the public health and safety and of the environment;
- ii. Conducting any additional remedial investigations and implementing any additional remedial actions, that are necessary to correct, mitigate, or abate each problem related to the protectiveness of the remedial action for the Property prior to the date that the certification is due to the Department pursuant to iii, below, in order to ensure that the remedial action that includes the engineering control remains protective of the public health and safety and of the environment.
- iii. Certify to the Department of Environmental Protection as to the continued protectiveness of the remedial action that includes the engineering control, on a form provided by the Department and consistent with N.J.A.C. 7:26C-1.2 (a)1, every two years on the anniversary of the date stamped on the Deed Notice that indicates when the Deed Notice was recorded.

8. ACCESS. Owner agrees to allow the Department, its agents and representatives access to the Property to inspect and evaluate the continued protectiveness of the remedial action that includes this Deed Notice and to conduct additional remediation to ensure the protection of the public health and safety and of the environment if persons responsible for monitoring the protectiveness of the remedial action, as described in Paragraph 7, above, fail to conduct such remediation pursuant to this Deed Notice as required by law. Owner shall also cause all leases, subleases, grants, and other written transfers of an interest in the Restricted Area to contain a provision expressly requiring that all holders thereof provide such access to the Department.

#### 9. NOTICES.

- i. Owner shall cause all leases, grants, and other written transfers of an interest in the Restricted Area to contain a provision expressly requiring all holders thereof to take the Restricted Area subject to the restrictions contained herein and to comply with all, and not to violate any of the conditions of this Deed Notice. Nothing contained in this Paragraph shall be construed as limiting any obligation of any person to provide any notice required by any law, regulation, or order of any governmental authority.
- ii. Owner shall notify any person intending to conduct invasive work or excavate within the Restricted Area on its behalf of the nature and location of contamination and, of the precautions necessary to minimize potential human exposure to contaminants.
- iii. Owner shall provide written notice to the Department of Environmental Protection at least thirty (30) calendar days before the effective date of any conveyance, grant, gift, or other transfer, in whole or in part, of the owner's interest in the Restricted Area. Any such conveyance, grant or gift must be consistent with the terms of the Consent Decree.
- iv. Owner shall provide written notice to the Department within thirty (30) calendar days following the Owner's receiving notice of any petition for a rezoning of the Property. The Owner shall submit the written notice to:

Department of Environmental Protection
Division of Remediation Management and Response
Bureau of Operation, Maintenance and Monitoring
Deed Notice Inspection Program
P.O. Box 413
401 E. State Street
Trenton, NJ 08625-0413.

### 10. ENFORCEMENT OF VIOLATIONS.

i. This Deed Notice itself is not intended to create any interest in real estate in favor of the Department of Environmental Protection, nor to create a lien against the Property, but merely is intended to provide notice of certain conditions and restrictions on the Property and to reflect the regulatory and statutory obligations imposed as a conditional remedial action for this Property.

- ii. The restrictions provided herein may be enforceable by the Department against any person who violates this Deed Notice. To enforce violations of this Deed Notice, the Department may initiate one or more enforcement actions pursuant to N.J.S.A. 58:10-23.11u and require additional remediation and assess damages pursuant to N.J.S.A. 58:10-23.11g.
- 11. SEVERABILITY. If any court of competent jurisdiction determines that any provision of this Deed Notice requires modification, such provision shall be deemed to have been modified automatically to conform to such requirements. If a court of competent jurisdiction determines that any provision of this Deed Notice is invalid or unenforceable and the provision is of such a nature that it cannot be modified, the provision shall be deemed deleted from this instrument as if the provision had never been included herein. In either case, the remaining provisions of this Deed Notice shall remain in full force and effect.
- 12. SUCCESSORS AND ASSIGNS. This Deed Notice shall be binding upon Honeywell. This Deed Notice shall also be binding upon Owner and upon Owner's successors and assigns, and subsequent owners, lessees and operators while each is an owner, lessee, or operator of the Property.

#### 13. MODIFICATION AND TERMINATION.

- i. Any person may request in writing, at any time, that the Department modify this Deed Notice where performance of subsequent remedial actions, a change of conditions at the Property, or the adoption of revised remediation standards suggest that modification of the Deed Notice would be appropriate.
- ii. Any person may request in writing, at any time, that the Department terminate this Deed Notice because the conditions which triggered the need for this Deed Notice are no longer applicable.
- iii. Any person seeking a modification of this Deed Notice must also have such modification approved by the United States District Court for the District of New Jersey pursuant to the Consent Decree.
- iv. This Deed Notice may be revised or terminated only upon filing of an instrument, executed by the Department, in the office of the Hudson County Register, New Jersey, expressly modifying or terminating this Deed Notice.
- 14A. EXHIBIT A. Exhibit A includes the following maps of the Property and the vicinity:
  - i. Exhibit A-1: Vicinity Map A map that identifies by name the roads, and other important geographical features in the vicinity of the Property;

- ii. Exhibit A-2: Metes and Bounds Description A metes and bounds description of the Property, including reference to tax lot and block numbers for the Property and a Tax Map;
- iii. Exhibit A-3: Property Map A scaled map of the Property, scaled at one inch to 200 feet or less, and if more than one map is submitted, the maps shall be presented as overlays, keyed to a base map; the map(s) shall include diagrams of major surface topographical features such as buildings, roads, and parking lots.
- 14B. EXHIBIT B. Exhibit B includes the following descriptions of the Restricted Areas:
  - i. Exhibit B-1 (Figures B-1A through B-1B): Restricted Area Maps Maps for the Area that include, as applicable:
    - (A) As-built diagrams of each engineering control, including caps, fences, slurry walls, ground water monitoring wells, and ground water pumping system;
    - (B) As-built diagrams of any buildings, roads, parking lots and other structures that function as engineering controls; and
    - (C) Designation of all soil and/or sediment sample locations within the Restricted Area that exceed any soil or sediment standard that are keyed into one of the tables described in the following paragraph.
  - ii. Exhibit B-2 (Tables B-2A through B-2B): Restricted Area Data Tables Tables for the Area that include:
    - (A) Sample location designation from Restricted Area maps (Exhibit B-1);
    - (B) Sample elevation based upon mean sea level;
    - (C) Name and chemical abstract service registry number of each contaminant with a concentration that exceeds the unrestricted use standard;
    - (D) The restricted and unrestricted use standards for each contaminant in the table with instructions that direct the reader to the Consent Decree for further information; and
    - (E) The remaining concentration of each contaminant at each sample location at each elevation (or if historic fill, include data from the Department's default concentrations at N.J.A.C. 7:26E-4.6, Table 4-2) and an explanation that such concentrations may be reduced as a result of *in situ* treatment to be conducted.

14C. EXHIBIT C. Exhibit C includes narrative descriptions of the institutional controls and engineering controls as follows:

i. Exhibit C-1A through B. Exhibit C-1-A: Deed Notice as Institutional Control; Exhibit C-1-B: Consent Decree as Institutional Control; Exhibit C-1 (A through B) includes a narrative description of the restrictions and obligations of this Deed Notice that are in addition to those described above, as follows:

- (A) General Description of the Institutional Controls:
  - (1) Description and estimated size of the Restricted Area as described above;
  - (2) Description of the restrictions on the Property by operation of this Deed Notice and the other Institutional Controls; and
  - (3) The objective of the restrictions;
- (B) Description of the monitoring necessary to determine whether:
  - (1) Any disturbances of the soil in the Restricted Area did not result in the unacceptable exposure to the soil contamination:
  - (2) There have been any land use changes subsequent to the filing of this Deed Notice and the other Institutional Controls or the most recent biennial certification, whichever is more recent;
  - (3) The current land use on the Property is consistent with the restrictions in this Deed Notice and the other Institutional Controls;
  - (4) Any newly promulgated or modified requirements of applicable regulations or laws apply to the Property; and
  - (5) Any new standards, regulations, or laws apply to the Property that might necessitate additional sampling in order to evaluate the protectiveness of the remedial action which includes this Deed Notice and the other Institutional Controls, and conduct the necessary sampling; and
- (C) Description of the following items that will be included in the biennial certification:
  - (1) A monitoring report that describes the specific activities, pursuant to (A) and (B), above, conducted in support of the biennial certification of the protectiveness of the remedial action that includes this Deed Notice and the other Institutional Controls;
  - (2) Land use at the Property is consistent with the restrictions in this Deed Notice and the other Institutional Controls; and
  - (3) The remedial action that includes this Deed Notice and the other Institutional Controls continues to be protective of the public health and safety and of the environment.

ii. Exhibit C-2-A through B. Exhibit C-2-A: Engineering Controls: Asphalt Cap; Exhibit C-2-B: Engineering Controls: Shallow Groundwater Water Level Monitoring Wells and Piezometers.

Exhibit C-2 (series A-B) includes a narrative description of the engineering controls as follows:

- (A) General Description of the engineering control:
  - (1) Description of the engineering control;
  - (2) The objective of the engineering control; and
  - (3) How the engineering control is intended to function.
- (B) Description of the operation and maintenance necessary to ensure that:
  - (1) Periodic inspections of each engineering control are performed in order to determine its integrity, operability, and effectiveness;
  - (2) Each engineering control continues as designed and intended to protect the public health and safety and the environment;
  - (3) Each alteration, excavation or disturbance of any engineering control is timely and appropriately addressed to maintain the integrity of the engineering control;
  - (4) The engineering control is being inspected and maintained and its integrity remains so that the remedial action continues to be protective of the public health and safety and of the environment;
  - (5) A record of the self-inspection dates, name of the inspector, results of the inspection and condition(s) of the engineering control. Sampling, for example, may be necessary if it is not possible to visually evaluate the integrity/performance of the engineering control; and
  - (6) Any new standards, regulations, or laws apply to the Property that might necessitate additional sampling in order to evaluate the protectiveness of the remedial action which includes this Deed Notice, and conduct the necessary sampling; and
- (C) Description of the following items that will be included in the biennial certification:
  - (1) A monitoring report that describes the specific activities, pursuant to (A) and (B), above, conducted in support of the biennial certification of the protectiveness of the remedial action that includes this Deed Notice;
  - (2) The engineering control continues to operate as designed; and
  - (3) The remedial action that includes the engineering control continues to be protective of the public health and safety and of the environment.

### 15. SIGNATURES.

IN WITNESS WHEREOF, Owner has executed this Deed Notice as of the date first written above.

WITNESS:

ROBERT G. CIASULLI, OWNER

ACKNOWLEDGEMENT(S)

STATE OF NEW JERSEY

COUNTY OF Morris ) SS.:

I CERTIFY that on April 22, 2010, ROBERT G. CIASULLI personally came before me and stated to my satisfaction that this person (or if more than one, each person):

- (a) was the maker of the attached instrument; and
- (b) executed and delivered this instrument as his/her/their act and deed..

SANDRIK ANGEMIERINIVO NOTARY PUBLICOF NEW JERSEY, Cumulistion Diplies 8/13/2013

# Exhibit A A-1 Vicinity Map A-2 Metes and Bounds Description A-3 Property Map

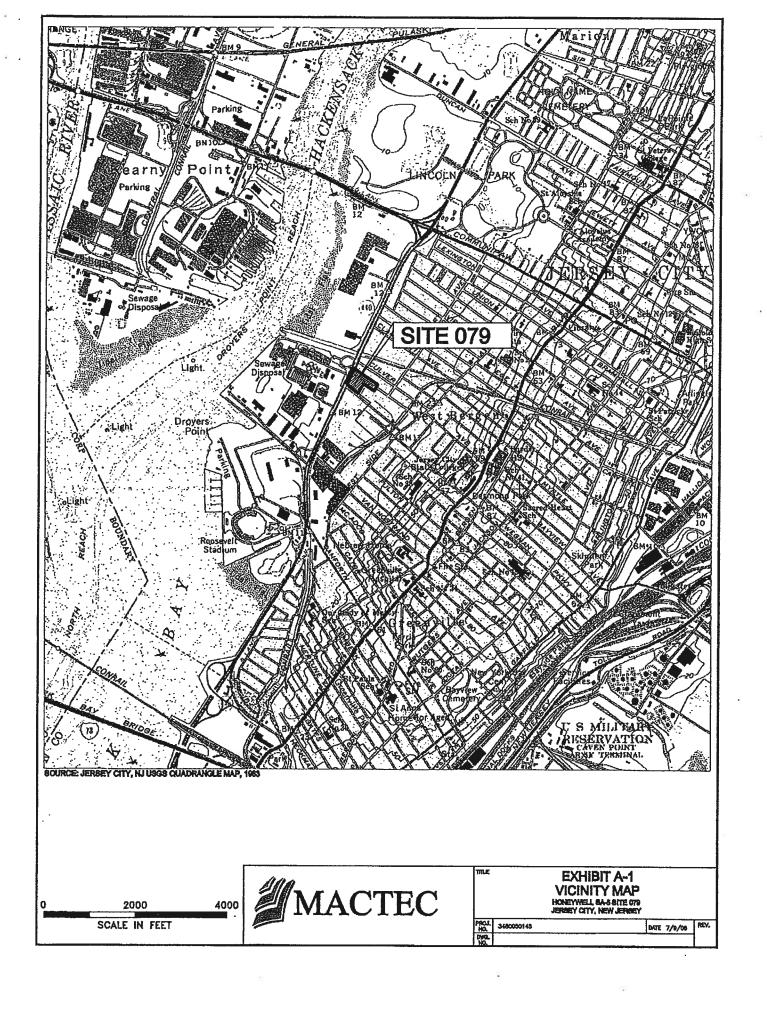
NJDEP Site No. 079 Route 440 Vehicle Corp. Block 1291 Lot 76 City of Jersey City, Hudson County, New Jersey

Exhibit A-1 consists of a road map for the vicinity of the Property.

Exhibit A-2 consists of a metes and bounds description for the Property (To be submitted with the Final Deed Notice.)

Exhibit A-3 consists of a figure indicating major surface features and existing features for the Property.

Exhibit Figure A-1 Site Vicinity Map



## Exhibit A-2 Metes and Bounds Description of Property

Block 1291, Lot 76 City of Jersey City, New Jersey

#### LEGAL DESCRIPTION

ALL that certain lot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the City of Jersey City County of Hudson and State of New Jersey:

#### Parcel A

Beginning at the point of intersection of the southwesterly sideline of Fisk Street and the southeasterly sideline of New Jersey State Highway Route 440 and running;

Thence (1) Along the southwesterly sideline of Fisk Street South 46 degrees 29 minutes 50 seconds East 235.35 feet to a point of curve;

Thence (2) In a southeasterly direction on a curve to the right having a radius of 40.00 feet and an arc length of 58.29 feet to a point of compound curve;

Thence (3) Along the northwesterly sideline of Mortorano Way in a southwesterly direction on a curve to the right having a radius of 990.00 feet and an arc length of 225.95 feet to a point of compound curve;

Thence (4) In a southwesterly direction on a curve to the right having a radius of 40.00 feet and an arc length of 58.18 feet to a point in the northeasterly sideline of Carbon Place;

Thence (5) Along the northeasterly sideline of Carbon Place North 52 degrees 15 minutes 15 seconds West 51.81 feet to a point;

Thence (6) Still along the northeasterly sideline of Carbon Place North 46 degrees 42 minutes 45 seconds West 131.08 feet to a point;

Thence (7) Still along the northeasterly sideline of Carbon Place North 41 degrees 14 minutes 00 seconds West 47.67 feet to a point of curve;

Thence (8) In a northwesterly direction on a curve to the right having a radius of 42.00 feet and an arc length of 47.37 feet to a point of tangency;

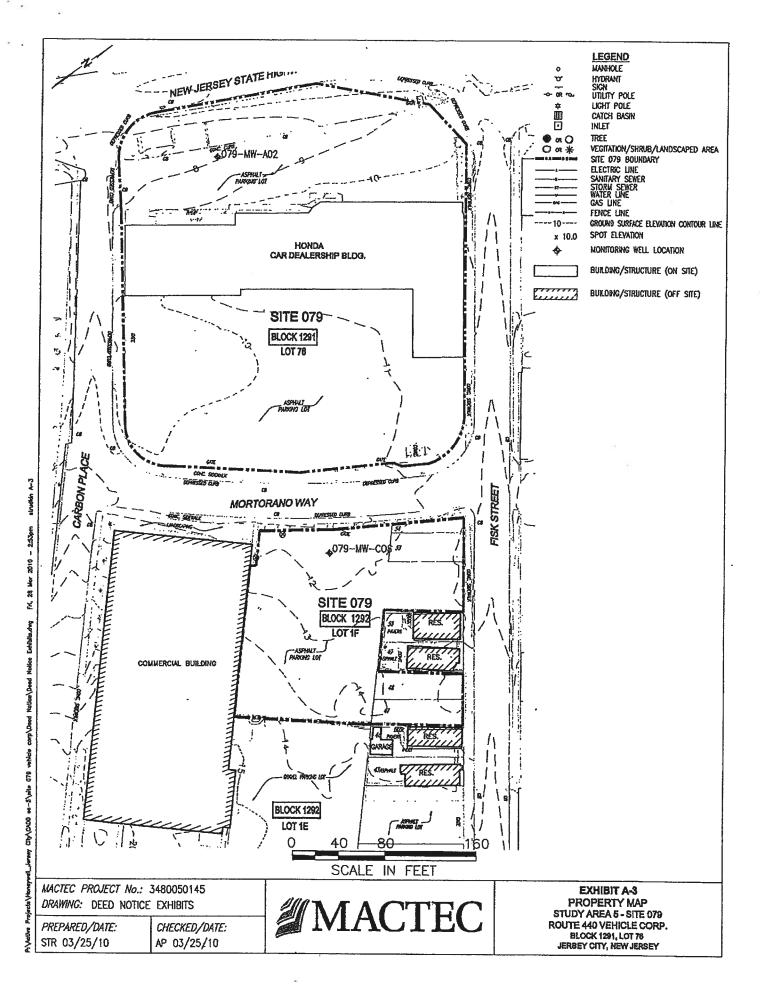
Thence (9) Along the southeasterly sideline of New Jersey State Highway Route 440 North 33 degrees 32 minutes 08 seconds East 125.26 feet to a point of curve;

Thence (10) Still along the New Jersey State Highway Route 440 in a northwesterly direction on a curve to the right having a radius of 292.00 feet and an arc length of 106.36 feet to a point of compound curve;

Thence (11) Still along the New Jersey State Highway Route 440 in a northeasterly direction on a curve to the right having a radius of 46.00 feet and an arc length of 18.79 feet to a point;

Thence (12) Still along the New Jersey State Highway Route 440 South 77 degrees 26 minutes 00 seconds East 49.16 feet to the point and place of Beginning.

Exhibit Figure A-3 Property Map



#### EXHIBIT B

B-1A Restricted Area Map and Engineering Controls
B-1B Engineering and Institutional Controls
B-2A Key Map
B-2B Restricted Area Map/Data Table

NJDEP Site No. 079 Route 440 Vehicle Corp.

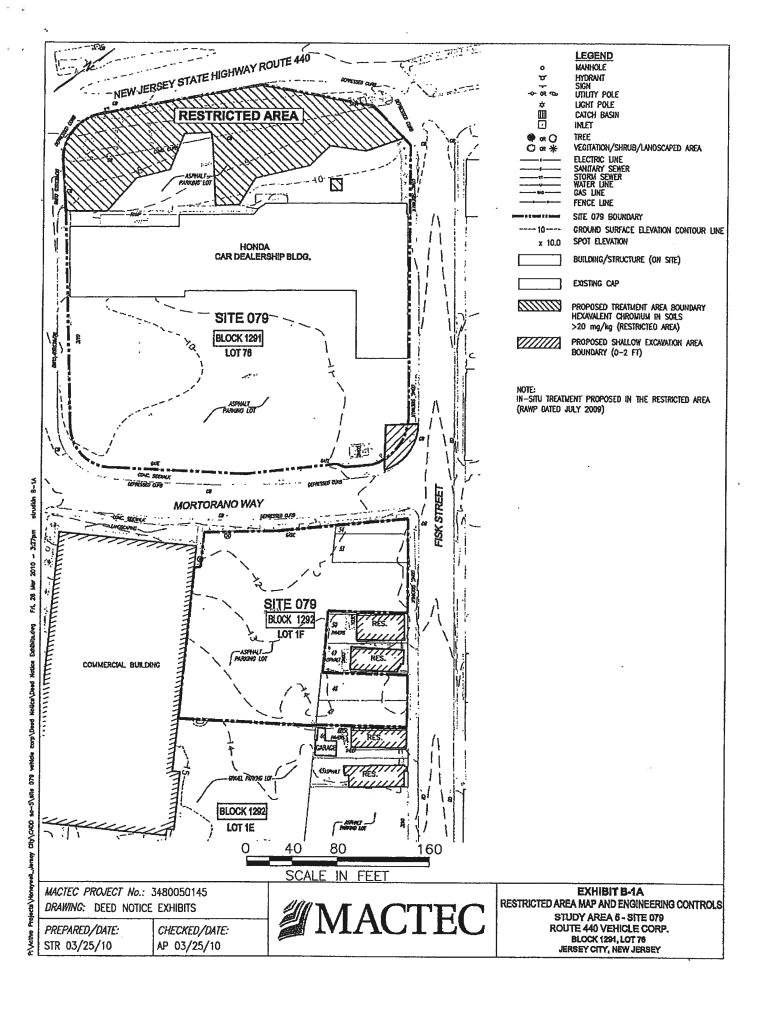
Block 1291 Lot 76

City of Jersey City, Hudson County, New Jersey

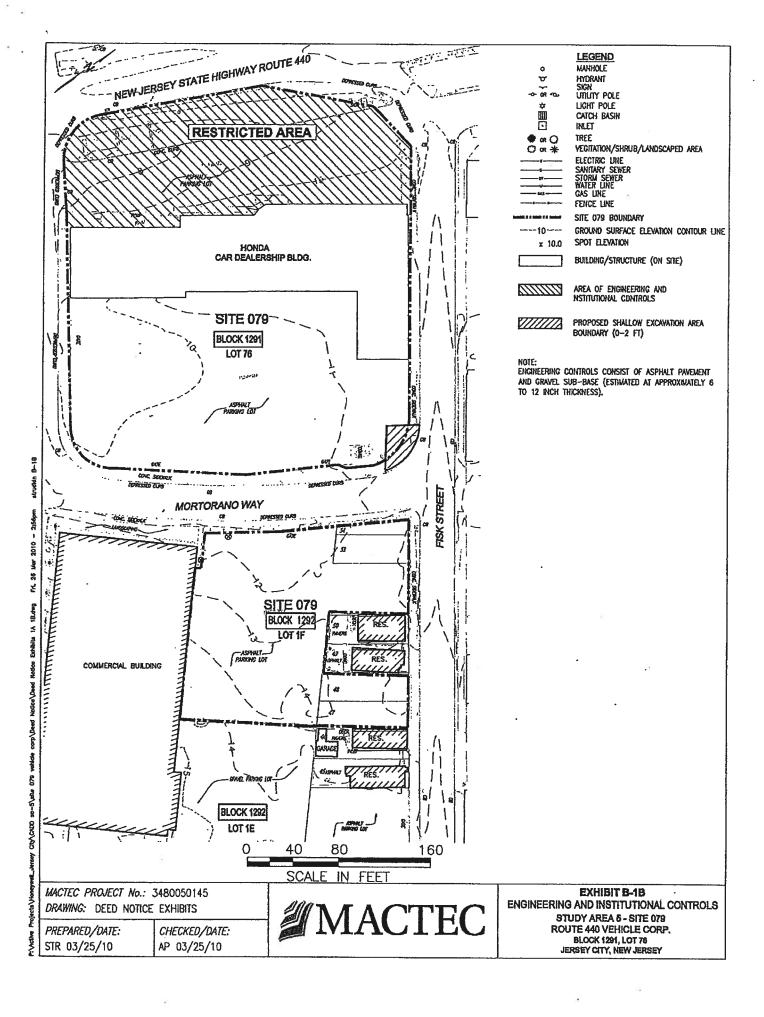
Exhibit B-1 includes maps that illustrate the Restricted Area and engineering/institutional controls.

Exhibit B-2 includes maps and tables which identify the Restricted Area containing soils that are in excess of NJDEP unrestricted soil cleanup criteria.

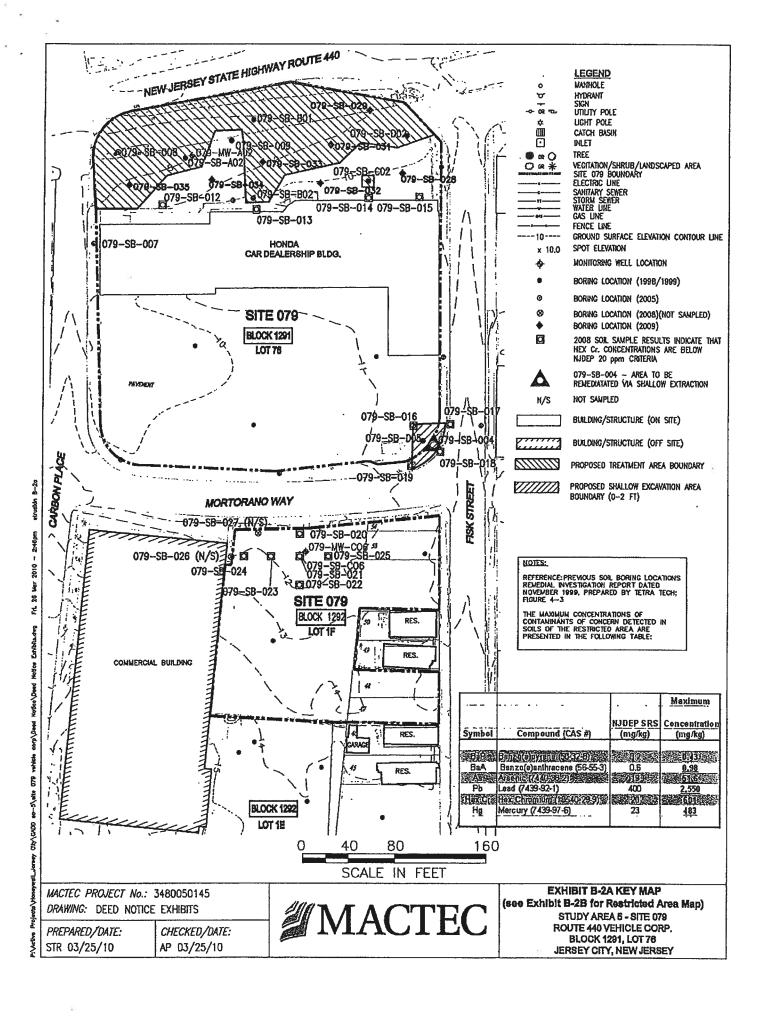
## Exhibit Figure B-1A Restricted Area Map and Engineering Controls



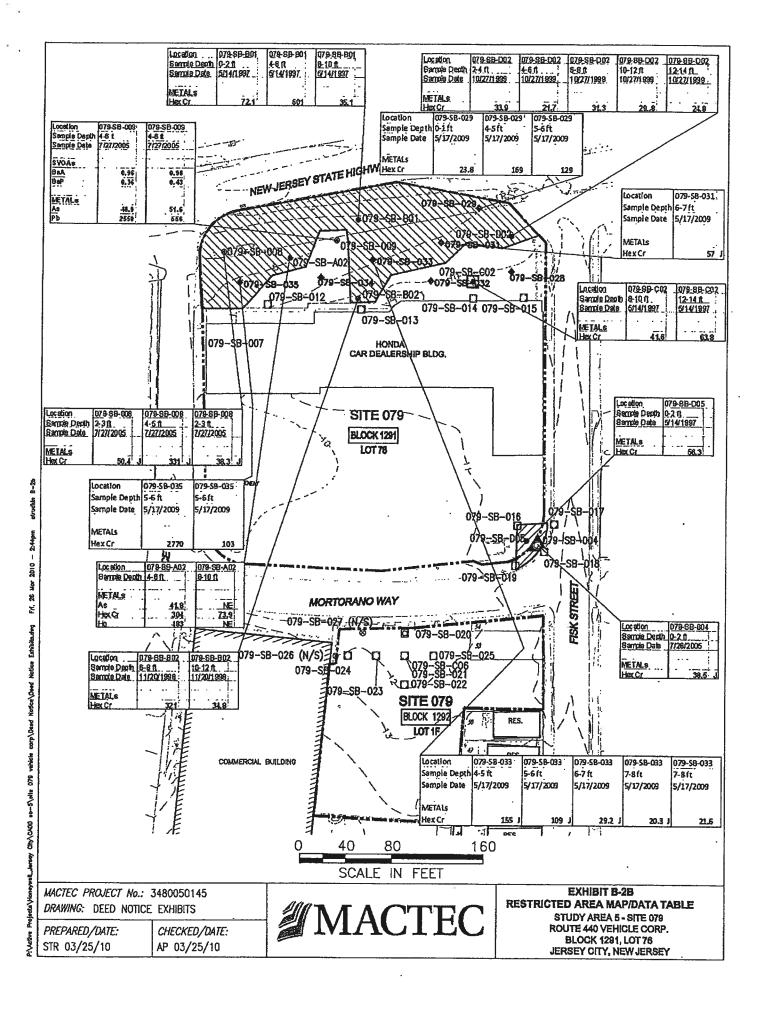
## Exhibit Figure B-1B Engineering and Institutional Controls



## Exhibit Figure B-2A Key Map



## Exhibit Figure B-2B Restricted Area Map & Data Table



### Exhibit Table B-2 Restricted Area Data Table Site 079 Route 440 Vehicle Corp. Block 1291, Lot 76, Jersey City, NJ

Soil Boring	Sample	Soll Sample	Elevation (ft	Contaminant	CASR#	NJDEP Soil	Soil Concentation
Location	Date	Depth	msi)			Criteria (mg/kg)	(mg/kg)
		4-6 ft	4.5 - 2.5	Hex. Chromium	18540-29-9	20	304
079-SB-A02		4-6ft	4.5 - 2.5	Arsenic	7440-38-2	19	41.8
	5/14/1997	4 - 6 ft	4.5 - 2.5	Mercury	7439-97-6	23	483
	٠	4-6ft	4.5 - 2.5	Benzo(a)pyrene	50-32-8	0.2	0.22
		8 -10 ft	0.5 to -1.5	Hex. Chromlum	18540-29-9	20	73.9
079-SB-B01	5/14/1997	0 - 2 ft	9.5 - 7.5	Hex. Chromium	πt	17	72.1
		4-6ft	5.5 - 3.5	Hex. Chromium	**	17	601
		8 - 10 ft	1.5 to -0.5	Hex. Chromium		9	35.1
079-SB-B02	11/20/1998	6-8ft	4.5 - 2.5	Hex. Chromium	"	n	321
		10 - 12 ft	0.5 to -1.5	Hex. Chromium		n	34.8
079-SB-C02	5/14/1997	8 - 10 ft	2.5 - 0.5	Hex. Chromium	Pi Pi	11	41.6
		12 - 14 ft	-1.5 to -3.5	Hex. Chromium	Я	0	63.8
079-SB-D02		2-4ft	8.0 - 6.0	Hex. Chromlum		Ħ	33.9
		4-6 ft	6.0 - 4.0	Hex. Chromium	и	11	21.7
	10/27/1999	6-8ft	4.0 - 2.0	Hex. Chromium	н	21	31.3
		10 - 12 ft	0.0 to - 2.0	Hex. Chromium	"	at .	20.8
		12 - 14 ft	-2.0 to - 4.0	Hex. Chromium	n	11	24.8
079-SB-D05	5/14/1997	0-2ft	11,5 - 9,5	Hex Chromlum			58.3
079-SB-004	7/26/2005	0-2ft	11.5 - 9.5	Hex. Chromium	11	H .	38.5 J
079-SB-008	7/27/2005	2-3ft	6.5 - 5.5	Hex. Chromium		ei ei	50.4 J
		2 - 3 ft Dup	6.5 - 5.5	Hex. Chromium	H	N	38.3 J
		4 - 5 ft	4.5 - 3.5	Hex. Chromlum	и	ы	331 J
079-SB-009	7/27/2005	4-6 ft/Dup	5.0 - 3.0	Arsenic	7440-38-2	19	48.9 / 51.6
		4-6 ft/Dup	5.0 - 3.0	Lead	7439-92-1	400	2550 / 556
		4-6 ft/Dup	5.0 - 3.0	Benzo(a)anthacene	56-55-3	0.6	0.96 / 0.98
		4-6 ft/Dup	5.0 - 3.0	Benzo(a)pyrene	50-32-8	0.2	0.36 / 0.43
079-SB-029	5/17/2009	0 - 1 ft	9.0 - 8.0	Hex. Chromium	18540-29-9	20	24
		4 - 5 ft	6.0 - 5.0	Hex. Chromium	ų	н	169
		5-6ft	5.0 - 4.0	Hex. Chromlum	9	- m	129
079-SB-031	5/17/2009	6-7ft	40 - 3.0	Hex, Chromium		et .	57 J
079-SB-033	5/17/2009	4 - 5 ft	6.0 - 5.0	Hex. Chromium		n	155 J
		5-6ft	5.0 - 4.0	Hex. Chromium	п .	н	109 J
		6-7ft	4.0 - 3.0	Hex. Chromium	7	н	29.2 J
		7 - 8 ft	3.0 - 2.0	Hex. Chromium	19	er	20.3 J
		7 - 8 ft Dup	3.0 - 2.0	Hex. Chromium	n	et I	21.6 J
079-SB-035	5/17/2009	5-6ft	3.0 - 2.0	Hex. Chromium	Я	71	2770
		5-6ft A	3.0 - 2.0	Hex. Chromium	я	м	103

#### **Notes**

NJDEP Soil Criteria based on Soil Remediation Standards (SRS) N.J.A.C. 7:26D (last revised 11/4/09).

NJDEP Current Soil Criteria for hexavalent chromlum = 20 mg/kg

CASR #: Chemical Abstract Service Registry Number

J = indicates estimated value based on data validation

Shaded sample location planned for excavation; not within designated restricted area

Refer to the Consent Decree regarding Study Area 5 Site 79 (1/22/10) for further information regarding deed restriction.

## **EXHIBIT C**

## C-1 Deed Notice as Institutional Control C-2 Asphalt Cap

NJDEP Site No. 079 Route 440 Vehicle Corp.
Block 1291 Lot 76
City of Jersey City, Hudson County, New Jersey

#### C-1 Deed Notice as Institutional Control

NJDEP Site No. 079 Route 440 Vehicle Corp.

Block 1291 Lot 76

City of Jersey City, Hudson County, New Jersey

## (A) General Description:

- (1) The portion of the Property shown on Exhibit B-1 known as Block 1291, Lot 76 is a Restricted Area. The estimated size of the Restricted Area is approximately 18,000 square feet.
- (2) Proper precautions must be taken (i.e., excavation or digging) that may penetrate the bottom of the engineering controls on the Restricted Area. See subsections 6A and 6B of the Deed Notice for directions on Alterations, Improvements, Disturbances, and Emergencies.
- (3) The restrictions will prevent contact with soils above the NJDEP Soil Cleanup Criteria.

## (B) Description of monitoring:

- (1) Annual visual inspections of the Restricted Area will be conducted to determine whether any disturbances of the soil in the Restricted Area resulted in the unacceptable exposure to the soil contamination;
- (2) Annual visual inspections of the Restricted Area will be conducted to determine whether there have been any land use changes subsequent to the filing of this Deed Notice or the most recent biennial certification, whichever is more recent;
- (3) Annual visual inspections of the Restricted Area will be conducted to determine whether the current land use on the property is consistent with the restrictions in this Deed Notice;
- (4) A review will be conducted to determine if any newly promulgated or modified requirements of applicable regulations or laws apply to the site; and
- (5) A review will be conducted to determine if any new standards, regulations, or laws apply to the site that might necessitate additional sampling in order to evaluate the protectiveness of the remedial action which includes this Deed Notice. If necessary, this additional sampling will be performed.

## (C) Biennial certification items:

A monitoring report will be included in the biennial certification. Components of the monitoring report will include the following:

- A report of all conditions set forth in Deed Notice subparagraph 14C.i.(C) to assure that they have been adhered to. Includes evaluation of any available documents created as a result of changes in land use or incidents.
- A report that determines whether or not the land use at the site has remained consistent with the restrictions in the Deed Notice.
- A report that determines whether or not the Deed Notice continues to be protective of the public health and safety and of the environment.

## C-2 Asphalt Cap

NJDEP Site No. 079 Route 440 Vehicle Corp.

Block 1291 Lot 76

City of Jersey City, Hudson County, New Jersey

## (A) General Description:

(1) The existing asphalt cap across the Restricted Area prevents direct contact with underlying soils, which may contain contaminants of concern in excess of applicable NJDEP Soil Cleanup Criteria.

Based on soil boring logs completed at Block 1291, Lot 76, the existing asphalt cap in the Restricted Area is estimated to be constructed with approximately 6-inches of base gravel aggregate and approximately 6-inches of bituminous asphalt.

- (2) The objective of the Asphalt Cap is to prevent direct contact with soils that are above the applicable NJDEP Soil Cleanup Criteria.
- (3) The Asphalt Cap is intended to function as a barrier to underlying soils, which may be above the applicable NJDEP Soil Cleanup Criteria.

## (B) Description of the operation and maintenance:

Visual inspections of the Property will be performed annually to ensure that:

- (1) Periodic inspections of each engineering control are performed in order to determine its integrity, operability, and effectiveness;
- (2) Each engineering control continues as designed and intended to protect the public health and safety and the environment;
- (3) Each alteration, excavation or disturbance of any engineering control is timely and appropriately addressed to maintain the integrity of the engineering control (also, see subsections 6A and 6B of this Deed Notice for directions on Alterations, Improvements, Disturbances, and Emergencies.)
- (4) This engineering control is being inspected and maintained and its integrity remains so that the remedial action continues to be protective of the public health and safety and of the environment; and,
- (5) Records of the inspections are to be maintained as listed in Deed Notice subparagraph 14C.ii.(B)(5). Should the visual inspection indicate that other activities are necessary, those activities will be listed and executed.

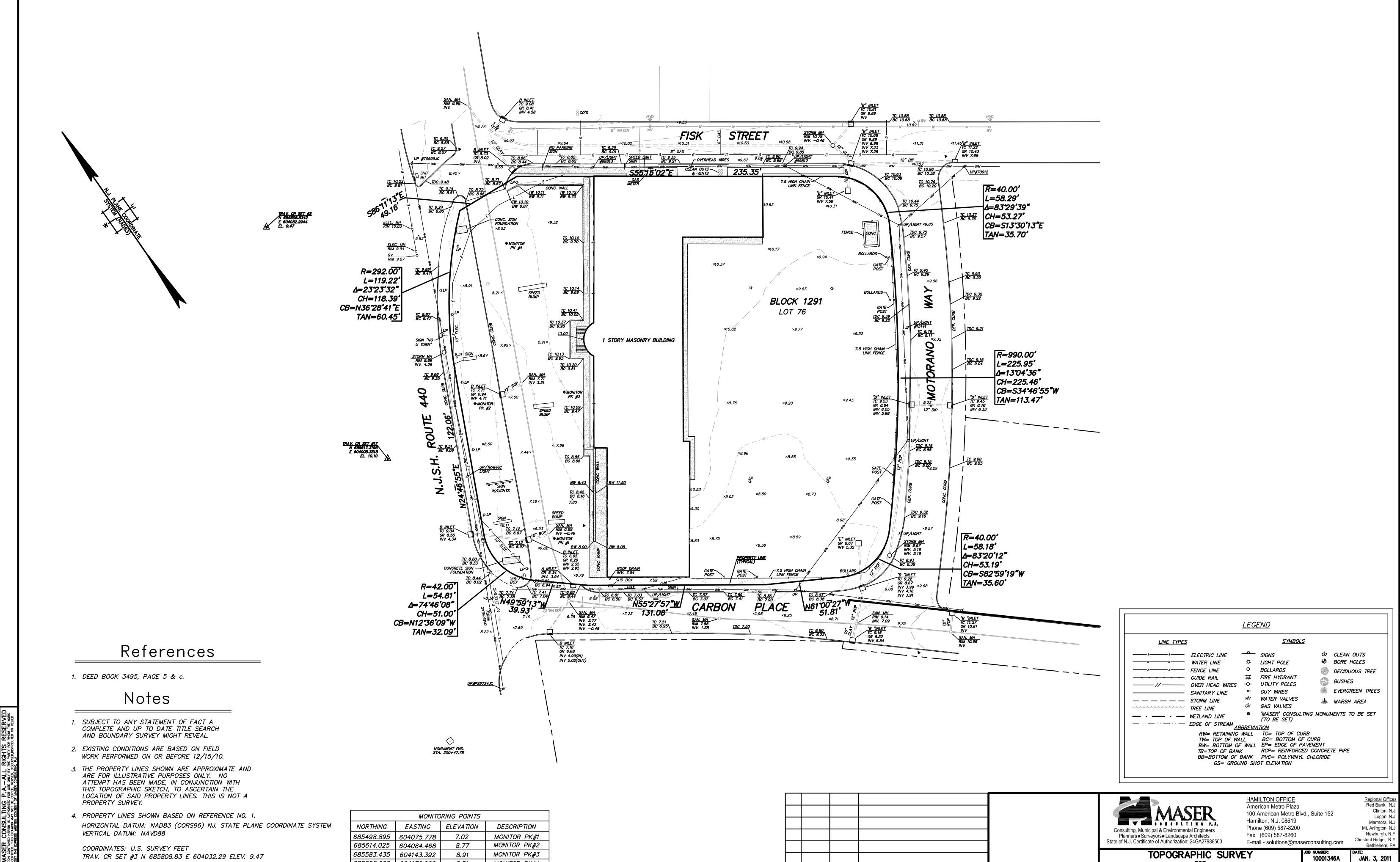
(6) A review of any new standards, regulations, or laws will be conducted to evaluate the protectiveness of the remedial action, which includes this Deed Notice. Should the review indicate that other activities are necessary, those activities will be listed and executed.

## (C) Biennial certification items:

The monitoring report will be included in the biennial certification. Components of the monitoring report will include the following:

- A report of all conditions set forth in Deed Notice subparagraph 14(C).ii.(C) to
  ensure that they have been adhered to. Includes an evaluation to determine whether
  or not the Asphalt Cap is continuing to meet its original objective and intended
  function.
- A report to determine whether or not the Asphalt Cap continues to operate as designed.
- A report to determine whether or not the Asphalt Cap continues to be protective of the public health and safety and of the environment.

## APPENDIX J TOPOGRAPHIC SURVEY - LOT 76 BLOCK 1291



SCALE IN FEET (1"=20")

REV. DATE DRAWN BY

DESCRIPTION

MACTEC ENGINEERING &

CONSULTING, INC.

METRO HONDA - LOT 76 BLOCK 1291 SITUATE IN

CITY OF JERSEY CITY HUDSON COUNTY

MICHAEL F. BURNS

NEW JERSEY PROFESSIONAL
LAND SURVEYOR LIC. NO. 34841

INDEX NUMBER:

HASU026917

DESIGN BY:

of 1

685698.000 | 604170.999 | 8.51

MONITOR PK#4

TRAV. CR SET #17 N 685617.32 E 604008.35 ELEV. 10.10