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PERCHLORATE SITE CHARACTERIZATION SUMMARY REPORT

SHIELDALLOY METALLURGICAL CORPORATION NEWFIELD, NEW JERSEY

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K	USEPA Correspondence

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LIST OF ACRONYMS

AOCs	Areas of Environmental Concern
ACO	Administrative Consent Order
ASTM	American Society for Testing and Materials
bgs	below ground surface
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Contract Laboratory Program
COCs	Constituents of Concern
C-O-C	Chain-of-Custody
CSM	Conceptual Site Model
DO	Dissolved Oxygen
EDD	Electronic Data Deliverable
EQuIS	Environmental Quality Information System
FDA	U.S. Food and Drug Administration
FS	Feasibility Study
ft	feet
ftbgs	feet below ground surface
gpm	gallons per minute
GPS	Global Positioning System
GWQS	Groundwater Quality Standards
ITRC	Interstate Technology Regulatory Council
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
ND	Non-Detect
NJAC	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJOC	New Jersey One Call
NJPDES	New Jersey Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NTU	Nephelometric Turbidity Units
NWS	National Weather Service
OD	Outer Diameter
ORP	Oxidation-Reduction Potential
OU3	Operable Unit 3
PCB	Polychlorinated Biphenyl
ppb	parts per billion
PRG	Preliminary Remediation Goal
QA/QC	Quality Assurance/Quality Control
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RIWP	Remedial Investigation Work Plan
RL	Reporting Limit
ROD	Record of Decision
ROW	Right-of-Way
RPD	Relative Percent Difference
RSL	Regional Screening Level

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LIST OF ACRONYMS
(Continued)

SAT	Screened Auger Tool
SCSR	Site Characterization Summary Report
SDWA	Safe Drinking Water Act
SMC	Shieldalloy Metallurgical Corporation
SMC-AOC	SMC Administrative Order on Consent
SOW	Scope of Work
SVOCs	Semi-Volatile Organic Compounds
TCE	Trichloroethene
TRC	TRC Environmental Corporation
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
USAGE	U.S. Army Corp. of Engineers
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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Comment Response Addendum to the Perchlorate Site Characterization Summary Report for OU3 at the Shieldalloy Metallurgical Site, Newfield, New Jersey December 2011

1. Section 2.3. Site History, Last ¶, Page 2-5
"The 1996 Feasibility Study report indicated that based on water quality, no further action was required relative to surface water." Does this statement apply to perchlorate only or all site contaminants?

Please indicate what remedy was recommended in the 1996 FS for sediments.

Response: The 1996 Feasibility Study (FS) report for Soil (Volume 2), and Surface Water and Sediments (Volume 3) was based on the known site contaminants at the time of the report. Perchlorate was not included in the 1996 FS report as it only became an issue at the Site in 2004 when the NJDEP initially requested that SMC collect groundwater samples for perchlorate analysis.

As the USEPA is aware, the Administrative Order on Consent (AOC) for the SMC site dated April 28, 2010 includes new work requirements pertaining to perchlorate under OU3 and for other contaminants under OU2, including the requirement that a Feasibility Study for each of OU2 and OU3 be prepared. These Feasibility Studies will outline the potential remedies for both OU2 and OU3 on a going forward basis. Thus, it is expected that there may be changes to some of the recommendations in the 1996 FS report.

2. Section 3.2, Soil RI, 1st ¶, Page 3-7
This paragraph states that two soil samples were collected from each borehole: one just above the water table and one from a two foot interval between zero and eight feet below ground surface. For site characterization, this may be appropriate but please keep in mind that surface soil (0-2 feet bgs) samples are required to determine direct contact risks and will be necessary in the human health risk assessment.

Response: SMC understands that performing the Risk Assessment is the next required step of the AOC relative to OU3. As an early stage of the Risk Assessment, if the risk assessors determine that additional data is necessary, specific data collection means and methods will be outlined in a workplan. However, it should be noted that given that perchlorate does not bind to coarse-grained soil particles and the downward movement of perchlorate in soil is largely a function of the amount of precipitation that occurs, it can be anticipated that perchlorate concentrations in the surface soils at the Site would be, at worst, similar if not lower than those detected in the shallowest soils during the RI.

3. Section 7.2, Laboratory Procedures, 2nd ¶, Page 7-1
It is stated that the method detection limit achieved for perchlorate were from 0.58 to 7.4 ppb for groundwater samples. Because concentrations in groundwater were compared to Action Levels

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of 5 ppb, concentrations having Method Detection Limits (MDLs) greater than 5 ppb would need to be designated with the less than sign (<) in the tables that present groundwater perchlorate results. Yet, the tables appear to show samples with such concentrations as <3.0 with no explanation. Please discuss further.

Response: Data validation of the groundwater samples was conducted on either the laboratory Quantitation Limit (QL) or Reporting Limit (RL), not on the laboratory Method Detection Limit (MDL). Accordingly, all results presented on the data tables with a less than sign (<) indicate that the concentration is lower than the laboratory QL which is, in most cases, 3 µg/L. For the several instances where the RL and MDL are elevated, this was because of the need to dilute the sample due to high perchlorate concentrations which were then reported at the elevated concentrations.

4. Section 8.3, Background Samples, 2nd ¶, Page 7-1 and Figure 2-2
It is stated that background samples were collected from wells SC11S(R), SC12S, SC12D, SC13S(R), SC13D, SC14S, SC15S, SC16S, SC25S, OBS-2A, W2R and W3D, which are located hydraulically upgradient of the former wastewater lagoon and former chemical storage building. However, although wells SC13(R), SC16S, and W2R are upgradient of the lagoon and storage building, they are still within the property limits. Groundwater that is monitored by these wells flows in the shallow zone of the aquifer and could be impacted by soil SVOC or metal contamination upgradient of these wells in the restricted or former production areas. Therefore, they are not ideal background wells.

Response: Noted. However, it should be pointed out the report only studied perchlorate and not SVOC or metal contamination. Therefore, since all of the upgradient wells were in locations upgradient to the areas of historical use or storage of perchlorate on the Site, including the upgadient wells that are within the property limits (SC13S(R), SC16S, and W2R), it would not be expected that soil SVOC or metal contamination would lessen the utility of these background wells for purposes of studying perchlorate as a specific contaminant.

5. Section 8.5, Laboratory Data Quality Objectives, Last ¶, Page 8-5
The discussion indicated that the data in general were valid but with some exceptions. Please include a discussion on the exceptions.

Response: A detailed discussion of the Data Quality Objectives is provided in the data validation reports included in Appendix H in the SCSR. The specific exceptions included the following:

- ***Positive and non-detect results were qualified as estimated (J/UJ) in sediment samples SED-2, SED-4, and SED-10 due to low percent solids***
- ***Select results were reported which were below the lowest calibration standard; these results were qualified as estimated (J)***

As discussed in the data validation reports, these exceptions have a minor impact on the data usability and all results are still suitable to meet project objectives.

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6. Section 9.1, Soil Samples, Page 9-1; Section 10.I, Soil Investigation, Page 10-1; and Section 10.4, Data Gap Analysis, Page 10-8

The report indicates that, although perchlorate was detected in soil samples collected from the three Areas of Concern on the Site, the concentrations were more than three orders of magnitude lower than USEPA's RSL for perchlorate in residential soil; consequently no further soil investigation is warranted. However, although the levels were relatively low, there were perchlorate levels reported for the soil (as high as 58.3 ppb in SS-5 and 28.8 in SS-24) and, more importantly, the extent of soil perchlorate was not confirmed. SMC should consider additional soil sampling by stepping out from the known points of contamination in the soil in order to definitively establish the extent of soil contamination and to confirm that soils with higher perchlorate concentrations were not close by.

Response: SMC does not believe that additional soil sampling is warranted. Sample locations were biased towards the areas of highest expected concentrations and, as USEPA itself acknowledges, sample results were orders of magnitude below USEPA's residential soil Regional Screening Level (RSL), which is 55,000 ppb.

7. Secdon 9.2, Groundwater Samples, Page 9-2

The Report indicates that groundwater was collected from 67 monitoring and extraction wells for the 2009 sampling event, whereas groundwater was collected from only 35 wells for the 2010 sampling event. It is not clear why only half the number of wells were used for the subsequent sampling event. Please explain further.

Response: The approach for the 2010 groundwater sampling event was discussed with USEPA at a project meeting during June 2010 and was documented in a letter to USEPA on August 15, 2010. USEPA provided their acceptance of the sampling plan in an e-mail correspondence dated August 27, 2010. Copies of these correspondences are provided in Appendix K of the SCSR.

8. Secfion 10.2, Groundwater Investigation, Ist ¶, Page 10-6

The Report repeatedly alludes to a 'regional perchlorate issue' or background or ubiquitous concentration of perchlorate in the groundwater of the region of New Jersey encompassing the Site, which is attributed to use of Atacama salt deposits/fertilizer products in the area. However, it should be noted that, assuming such land use occurred in the region surrounding the Site, perchlorate would not occur ubiquitously throughout the aquifer, but, instead, would tend to occur in discreet zones of the aquifer and at varying concentrations. Agricultural land areas on which fertilizer products were persistently applied would serve as distributed sources of perchlorate to the aquifer. Perchlorate would migrate into the groundwater system via recharge and would travel through the aquifer along flow paths of varying length. Depending on the land's proximity to hydrologic divides and drainage outlets, flow paths originating near the land surface would migrate deep into the aquifer or would move through the shallow aquifer and discharge to streams. Following cessation of use, perchlorate-contaminated groundwater that is in the shallow zones would be flushed out of the aquifer by newer recharge in a matter of a several years due to short groundwater residence times. Perchlorate in groundwater moving through deeper zones of the aquifer would persist due to much longer residence times of groundwater that flows into the deep aquifer.

Response: Noted as a general expectation, although the specific data obtained in the field would be controlling.

9. Section 11.0, Conclusion, Page 11-1

It is stated that the extremely low levels of perchlorate observed in the soils are not indicative of a continuing source at the Site nor do they confirm the existence of a historical release at the Site which could have resulted in the migration of perchlorate into the groundwater. It is agreed that associating the most currently reported perchlorate levels in soil near the former lagoon and storage building areas with the more significant perchlorate groundwater contamination beneath and downgradient of the site is problematic. There also does not appear to be any appreciable levels of perchlorate in the shallow aquifer in the zone between the water table and the deeper lying plume that would suggest that perchlorate is a continuing source coming off the Site soils. Nevertheless, there is perchlorate contamination in groundwater that coincides with flow paths that pass beneath the site, and there is a low level of perchlorate contamination of onsite soils, suggesting that historical release or use of perchlorate at the site may have impacted the underlying groundwater.

SMC should consider a 'forensic' analysis of groundwater samples taken from where the higher perchlorate concentrations occur in the groundwater. Stable isotopes of oxygen and chlorine have been used to differentiate between Atacama salt deposits/fertilizer products and synthetic perchlorate produced by electrolytic oxidation. Differentiating natural and synthetic source of contamination by isotope analysis may help determine whether or not the perchlorate plume beneath the Site is derived from historic release from the Site or a relic from agricultural practices in the region.

Response: SMC will consider the utility of the stable isotope analysis of the groundwater, or other "forensic" analysis, as appropriate, during the Risk Assessment phase of the project.

10. Section 11.0, Conclusion, Last ¶, Last Sentence. Page 11-1

The sentence states: "Also, it appears that there may be a regional deep aquifer zone perchlorate issue, with moderate concentrations of perchlorate identified in wells located upgradient or sidegradient of the Site including USGS well OBS-2A (4.8 ppb), on-site monitoring well W3D (8.6 ppb) and monitoring well SC40D (4.0 ppb)." It is possible that changes in pumping of nearby irrigation or other wells could have led to perchlorate contamination in these wells, especially those located on-site. Additionally, how was the USGS well constructed? Are we confident that the results are comparable to our on-site wells?

Response: Regarding the USGS well OBS-2A, well construction details are provided on page 2 of 3 on Table 2-1 of the SCSR. The well is also identified by USGS as "NJ-WRD Well Number 15-0372". According to "USGS Water Resources Data, New Jersey Water Year 2002, Volume 2, Water Data Report NJ-02-2", well OBS-2A is screened from 129 to 149 feet below ground surface and the ground surface elevation is 120 ft above mean sea level. These depths translate to a screened interval of -9 to -29 ft above mean sea level which corresponds with and is similar to the SMC wells screened in the deep aquifer.

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11. Section 11.0, Conclusion, 1st ¶, Page 11-2

"The documentation of the presence of perchlorate in lettuce crops in Newfield and spinach crops in Vineland and the historical use of irrigation wells in the area seem to provide evidence of a regional groundwater perchlorate issue." From page 2-2, Section 2.1.2: "Perchlorate has been detected in crops in the general vicinity of the Site, including lettuce grown in Newfield, New Jersey and spinach grown in Vineland, New Jersey (USFDA, 2009). The lettuce sample collected from Newfield exhibited perchlorate at 14.2 ppb, which was slightly higher than the average lettuce sample concentration for a range of locations across the United States of 11.75 ppb. The spinach sample collected from Vineland exhibited perchlorate at 40.9 ppb, which was less than the average spinach sample concentration of 115 ppb." The crop data do not support a regional perchlorate issue as the lettuce sample was only slightly above the average in the country and the spinach sample was less than average. Additionally, we cannot use one sample of each vegetable to draw conclusions about the regionality of perchlorate contamination.

Response: SMC feels that the presence of elevated perchlorate in the crops is evidence that correlates with all of our groundwater evidence, and presented the data in that light. Please note that the crop study focused on areas expected to be high in perchlorate, so the entire study is biased high. The crop data correlates, but the groundwater data are the key basis of expected regional issues.

12. Figures 10-1A, 10-2A and 10-2B:

There do not seem to be enough data points to create isopleths with such certainty. More dotted lines should be used in these figures to indicate estimation.

Response: The referenced figures have been modified to include more dashed lines in areas where there are potentially not enough data points. The modified figures are attached and should replace the original figures in the Figures section of the SCSR.

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1.0 INTRODUCTION

On behalf of Shieldalloy Metallurgical Corporation (SMC), TRC Environmental Corporation (TRC) conducted the initial phase of a perchlorate Remedial Investigation (RI) at the SMC facility (the "Site") located in Newfield, New Jersey between October 12, 2009 and December 7, 2009. A second round of groundwater sampling was completed between September 8 and 9, 2010 and the installation of one additional monitoring well was conducted between April 4 and 5, 2011, followed by subsequent groundwater sampling on April 29, 2011. The RI was conducted in accordance with the requirements of the New Jersey Department of Environmental Protection (NJDEP) Administrative Consent Order (ACO, dated February 1, 2006), which, in part, required SMC to remediate perchlorate-contaminated groundwater at the Site to an action level of 5 micrograms per liter (μg/L) or parts per billion (ppb) or to a higher concentration limit if so adopted by that regulatory agency (NJDEP, March 2006).The RI was also conducted in accordance with the requirements of the subsequent April 28, 2010 Shieldalloy Administrative Settlement Agreement And Order On Consent For Remedial Investigation/Feasibility Study (SMC-AOC) among SMC, TRC and the United States Environmental Protection Agency (USEPA). These requirements include, specifically, the Operable Unit 3(OU3) portions of the SMC-AOC and the Scope of Work (SOW) contained therein relating to the RI and Feasibility Study (FS) for perchlorate contamination.

1.1 Purpose

The purpose of the perchlorate RI was to delineate the horizontal and vertical extent of perchlorate in select media on-site (soil, groundwater, surface water, and sediment) and emanating from the Site (as evident in groundwater, surface water, and sediment). As part of the perchlorate RI, TRC investigated soil quality in known or potential areas of environmental concern (AOCs), assessed general hydrogeological conditions on-site and off-site, and further characterized the extent of perchlorate in soil, groundwater, sediment, and surface water. This Perchlorate Site Characterization Summary Report (SCSR) details the approach, procedures and protocols employed during the perchlorate RI.

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1.2 Overview of Conceptual Site Model/Triad Approach

The foundation of the perchlorate RI was a comprehensive site investigation, which evaluated areas where perchlorate may have been utilized at the Site and potentially released to soil, groundwater, or other media. The investigation was conducted in the context of a Conceptual Site Model (CSM), which identified each potential release area, along with the potential migration pathways followed by perchlorate, and the ultimate receptors (USEPA, 1988).

An environmental site investigation that fully characterizes the nature and extent of contamination is typically iterative in nature. In order to streamline the perchlorate RI, TRC incorporated principles of the Triad approach, which consist of systematic planning, dynamic work strategies, and real-time measurement technologies (NJDEP, 2005). In addition, all the field sampling procedures utilized as part of the perchlorate RI followed the guidance outlined in the NJDEP Field Sampling Procedures Manual (ibid.).The perchlorate investigation presented herein evaluated soil quality with respect to perchlorate in the potential AOCs, assessed hydrogeological conditions at and near the Site to determine the extent of perchlorate in groundwater, and assessed the surface water and sediment quality in abutting and nearby water bodies with respect to perchlorate concentrations.

1.3 Scope of Work

The Perchlorate Remedial Investigation Work Plan (RIWP) (TRC, 2008) was reviewed by NJDEP and the USEPA and was approved for implementation on June 10, 2009. The RIWP proposed to collect soil, sediment, surface water and additional groundwater data to fully delineate the extent and magnitude of the observed groundwater concentrations of perchlorate and investigate if it is present in other media at the Site. In accordance with the RIWP, TRC conducted the following activities during the initial phase of the RI, conducted between October 12, 2009 and December 7, 2009:

- Reviewed historical aerial photographs of the SMC site, focusing on areas of reported perchlorate storage, perchlorate use, and general waste management practices, including any areas characterized by drum storage, stressed vegetation, and/or ground staining/discoloration.

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- Advanced 24 soil borings onsite using a track-mounted, direct-push unit (Geoprobe®) to evaluate soil conditions in three potential perchlorate AOCs across the Site including:

  1. AOC-1, Former Chemical Storage Building (seven borings);
  2. AOC-2, Footprint of Former Furnace Building (four borings);
  3. AOC-3, Former Unlined/Lined Lagoons (twelve borings); and
  4. Background Location (one boring);

- Obtained access from both the City of Vineland and Cumberland County to drill within the county or municipal roadside right-of-ways (ROWs);

- Supervised the drilling of five supplemental vertical groundwater profiles at key locations hydraulically downgradient of previous vertical groundwater profiles drilled as part of a supplemental off-site investigation conducted by TRC in late 2006/early 2007;

- Supervised the installation of two monitoring wells adjacent to two of the vertical profiling boreholes;

- Determined groundwater conditions by collecting groundwater samples from 67 monitoring wells and extraction wells (including the two newly installed wells). The existing monitoring wells and extraction wells include wells located on SMC's 67-acre property and the hydraulically downgradient "Farm Parcel", a downgradient sentinel monitoring well, and an upgradient U.S. Geological Survey (USGS) observation well. Wells are screened across the shallow portion of the Cohansey aquifer (approximately 0 to 45 feet below ground surface (ftbgs)), the intermediate portion of the Cohansey aquifer (approximately 45 to 90 ftbgs), and the deep portion of the Cohansey aquifer (approximately 90 to 152 ftbgs);

- Evaluated sediment and surface water quality, including ten samples from downstream and upstream (upgradient) locations along the Hudson Branch, Burnt Mill Pond (including downstream of the pond outfall) and Burnt Mill Branch; and

- Tabulated and assessed the analytical data collected.

Following completion of the initial RI activities detailed in the RIWP, TRC and SMC evaluated the results of the first round of groundwater sampling for perchlorate and other data described above. Based on 1) the detection of perchlorate in groundwater at several monitoring well locations and 2) the indication from USEPA at the June 9, 2010 project kickoff meeting that they would require at least two rounds of groundwater sampling in order to adequately review the OU3 groundwater perchlorate RI results, TRC recommended a second round of groundwater sampling incorporating a sub-set of the monitoring wells sampled as part of the initial phase of

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the RI. Specifically, on behalf of SMC, TRC notified USEPA – Region II in a letter dated August 15, 2010 (Appendix K) that a second round of groundwater sampling was being conducted as part of the perchlorate RI. Ms. Sherrel Henry of USEPA – Region II indicated the proposed groundwater sampling plan was acceptable via e-mail dated August 27, 2010 (Appendix K). In accordance with the Groundwater Monitoring Event Notification for the perchlorate RI, TRC conducted the following activities between September 8 and 9, 2010:

- Determined groundwater conditions by collecting groundwater samples from 35 monitoring wells and extraction wells (13 shallow zone wells, 6 intermediate zone wells, and 16 deep zone wells). The selected monitoring wells and extraction wells included wells located on SMC's 67-acre property, the hydraulically downgradient "Farm Parcel", and downgradient sentinel monitoring wells; and

- Tabulated and assessed the analytical data collected.

Based on the results of the perchlorate RI work described above, a data gap was identified in the northern limit of the perchlorate groundwater plume in the deep aquifer zone, where full delineation of the plume relative to the NJDEP ACO-defined action level of 5 ppb could not be confirmed. This portion of the plume was thought to be potentially related to a regional perchlorate issue unrelated to the historical/industrial operations at the Site. Therefore, TRC recommended the installation and sampling of one additional deep monitoring well along Salem Avenue at a location approximately 1,000 feet northeast of monitoring well SC36D and approximately 2,000 feet west of the property line of the former SMC manufacturing facility. In a letter dated January 31, 2011 (Appendix K), TRC recommended to the USEPA that the proposed monitoring well would be installed and sampled using the approved methods and procedures utilized for the other two monitoring wells installed and sampled as part of the perchlorate RI (i.e., SC35D and SC36D). It was also recommended that the proposed monitoring well be installed and sampled under the existing USEPA- and NJDEP-approved Perchlorate RIWP. Conducting this proposed work under the existing RIWP would avoid unnecessarily delaying completion of the OU-3 Perchlorate RI and would be consistent with the perchlorate RI work performed to date. In accordance with the Additional Monitoring Well Installation/Sampling Notification letter submitted to the USEPA, TRC conducted the following activities between April 4 and 5 and on April 25, 2011:

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- Supervised the installation of one monitoring well (SC40D) approximately 1,000 feet northeast of monitoring well SC36D;
- Determined groundwater conditions by collecting groundwater samples from the newly installed monitoring well SC40D, which is screened within the deep portion of the Cohansey aquifer (approximately 120 to 130ftbgs); and
- Tabulated and assessed the analytical data collected.

1.4 Site Characterization Summary Report Organization

This Perchlorate SCSR is organized with tables, figures, and appendices supporting the text as follows:

- Section 2.0 (Background) – Presents background information on perchlorate, the Site history, physical attributes of the property, findings from previous groundwater studies, known areas of environmental concern; and a review of historical reference documents and aerial photographs.
- Section 3.0 (Remedial Investigation Methods) – Describes the rationale for the proposed sampling locations and remedial investigation field methods for soil, groundwater, sediment and surface water sampling;
- Section 4.0 (Utility Clearance) –Describes the steps for locating subsurface utilities prior to commencing field tasks;
- Section 5.0 (Sample Collection and Handling) – Describes the field sampling procedures for collecting and handling soil, groundwater, sediment, and surface water samples;
- Section 6.0 (Documentation) – Describes the field sampling procedures for maintaining proper documentation during collection, possession, and handling of samples;
- Section 7.0 (Analytical Procedures) – Specifies the field analytical equipment and laboratory methods selected for this study;
- Section 8.0 (Quality Assurance/Quality Control) – Describes the measures taken to assure the quality of data collected during sampling events;
- Section 9.0 (Analytical Results) – Presents the analytical results for all samples collected during the remedial investigation;
- Section 10.0 (Data Interpretation) – Describes the analytical results relative to the applicable screening criteria for perchlorate and discusses remaining data gaps;

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- Section 11.0 (Conclusions and Recommendations) –Presents conclusions drawn from the RI results; and
- Section 12.0 (References) – Lists the materials referenced in this SCSR.

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2.0 BACKGROUND

This section provides background information on perchlorate, information on the Site and its history, a summary of historical perchlorate studies at the Site and the identification of potential AOCs based on available historical information.

2.1 Background Information on Perchlorate

2.1.1 Regulatory Screening Levels

Perchlorate is a contaminant for which there currently are no promulgated standards (e.g., no federal or New Jersey state drinking water standard, final groundwater quality standard, or soil, sediment or surface water standards). The concentration at which perchlorate in drinking water poses a human health risk is currently the subject of much debate.

In January 2006, the USEPA issued assessment guidance for perchlorate that included a preliminary remediation goal (PRG) of 24.5 ppb perchlorate in drinking water for Comprehensive Environmental Response Compensation and Liability Act (CERCLA) sites (USEPA, 2006). The USEPA requires monitoring of perchlorate by pubhc water systems under the Safe Drinking Water Act's (SDWA's) Unregulated Contaminant Monitoring Rule. On February 1, 2006, SMC entered into an ACO with NJDEP requiring SMC to remediate perchlorate-contaminated groundwater at the Site to an action level of 5 ppb or to a higher concentration limit if a different regulatory standard is adopted (NJDEP, March 2006). In March 2007, New Jersey published an interim groundwater quality criterion of 5 ppb, per the provisions of the New Jersey Administrative Code (NJAC) 7:9C-1.7(c)2. NJDEP generally establishes new groundwater quality criteria through amendments to or re-adoption of the Groundwater Quality Standards (GWQS) rules. However, the GWQS rules at NJAC 7:9C-1.7(c) allow the Department to establish new groundwater quality criteria on an interim basis prior to rulemaking. New Jersey has not, to date, adopted a final groundwater quality standard for perchlorate. In December 2008, the USEPA issued an Interim Drinking Water Health Advisory for perchlorate (which was reviewed and approved by the National Research Council) that includes an Interim Health Advisory level of 15 ppb. USEPA currently recommends that the 15 ppb screening level be used as a PRG for perchlorate in drinking water (EPA, 2008a). On March 16, 2009, New Jersey proposed to amend the New Jersey Safe Drinking Water Act at NJAC 7:10 to establish a perchlorate maximum contaminant level (MCL) of 5 ppb for drinking water purposes. However,

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on March 16, 2010, the NJDEP decided not to promulgate the proposed standard pending receipt of more reliable scientific data on the risks associated with perchlorate ingestion by sensitive population groups. Thus, the proposed MCL for perchlorate was never adopted in New Jersey.

In soils, the only available screening criteria are the USEPA Regional Screening Levels (RSLs) for perchlorate in residential soil (55,000 micrograms/kilogram (µg/kg) or ppb) and industrial soil (720,000 ppb). New Jersey has not developed soil remediation standards for perchlorate. Similarly, no federal or state standards or screening levels have been identified for perchlorate in surface water or sediment.

In the absence of currently controlling standards, for the purposes of this SCSR, groundwater action levels of 5 ppb, 15 ppb, and 24.5 ppb are used to evaluate groundwater perchlorate levels and the analytical methods used for all sample media were selected to achieve the lowest possible laboratory reporting limits. The USEPA RSLs are used as screening levels for perchlorate in soil.

2.1.2 Perchlorate Nature and General Use

The majority of perchlorate compounds are manufactured for use in defense activities and the aerospace industry. Ammonium and potassium perchlorate are oxidizing agents used for solid propellant rockets and missiles. Perchlorate has also been identified as a component of certain Chilean-mined fertilizers used on crops. Prior to the 1960s, a majority of the fertilizer used in the United States was mined from Chilean-derived nitrate deposits meaning, therefore, that perchlorate unassociated with specific industrial or manufacturing operations can be expected to be found in agricultural or formerly agricultural soils and other media rather ubiquitously throughout the United States. Currentiy, however, only a small percentage of these deposits are applied to cropland in the United States (ITRC, 2005).Perchlorate has been detected in crops in the general vicinity of the Site, including lettuce grown in Newfield, New Jersey and spinach grown in Vineland, New Jersey (USFDA, 2009). The lettuce sample collected from Newfield exhibited perchlorate at 14.2 ppb, which was slightly higher than the average lettuce sample concentration for a range of locations across the United States of 11.75 ppb. The spinach sample collected from Vineland exhibited perchlorate at 40.9 ppb, which was less than the average spinach sample concentration of 115 ppb. Fireworks, safety flares and blasting explosives are also potential sources of perchlorate in the environment. Finally, perchlorate

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seems to be a naturally occurring substance in some potash-bearing evaporite soils, and likely related water media, in specific arid locations around the country (e.g., some portions of New Mexico).

Perchlorate compounds used as oxidizing agents are salts, which dissolve rapidly in water, become mobile in groundwater, and persist for many decades under typical ground and surface water conditions. Perchlorate does not bind to soil particles and the movement of perchlorate in soil is largely a function of the amount of water present. If sufficient infiltration occurs, perchlorate will be completely leached from the soil. In dilute concentrations typically found in groundwater, perchlorate within the central mass of the plume generally moves at the same average velocity as the groundwater. However, dispersion will cause perchlorate at the leading edge of the plume to actually move faster than the average groundwater velocity. Perchlorate is kinetically very stable under environmental conditions and will not react or degrade in solution under ambient conditions. The combination of high solubility, low sorption, and lack of degradation tends to create plumes that are large and persistent.

2.2 Site Location

The SMC facility is located at 35 South West Boulevard, which is primarily within the Borough of Newfield, Gloucester County, New Jersey. The southwest comer of the manufacturing portion of the facility is located in the City of Vineland, Cumberland County, New Jersey. The manufacturing portion of the facility and associated support areas comprise approximately 67.7 acres. SMC owns 19.8 acres of farmland (Farm Parcel), located about 0.38 miles southwest of the main facility in Vineland. The Farm Parcel was never used for manufacturing or related activities. A site location map (Figure 2-1) illustrates the locations of these two parcels.

The remnants of an historical rail spur, woods, a closed municipal landfill, and farmland bound SMC's manufacturing parcel to the north, with railroad lines and South West Boulevard along the western boundary. Wooded vegetation, residences, and small businesses abut the Site to the east, along with the headwaters of the Hudson Branch. The Hudson Branch, associated wetlands, and an unnamed pond form the southern property boundary, with residences located along Weymouth Road, south of the Hudson Branch. The area surrounding the Farm Parcel

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includes residences, wooded properties, and farmland, with North West Avenue forming the southwest boundary of the parcel.

The SMC manufacturing facility is secured with steel-wire fencing. The Farm Parcel is unsecured, with access from an unpaved road off of North West Avenue.

2.3 Site History

The Site has a lengthy manufacturing history, with Durand & Wilcox Glass Co. as its first occupant in the early 1900's, and Specialty Glass Corporation, manufacturer of doorknob tops, console bowls, and candle sticks, operating on the premise through about 1947 (TRC, 2005). In 1952, SMC first occupied the Site and operated a specialty metal plant producing chromium alloys, ferro-alloys, and other metallic products. Production activities included processing ores and degreasing operations to clean metal beginning circa 1965 (TRC, 1992). Historically, untreated wastewater was discharged to an unlined lagoon in the 1960s to 1971, until replaced with lined lagoons that received treated wastewater. Other operational by-products included slag and baghouse dust from metal alloy smelting. Additional historical AOCs include permanently closed-out diesel and gasoline underground storage tanks (USTs). Current and historical use of the Farm Parcel, southwest of the manufacturing facility, is agricultural.

Environmental investigations at SMC's facility began in the early 1970s, after the discovery of hexavalent chromium in a nearby municipal supply well triggered studies evaluating the potential environmental impacts associated with SMC's operations. In 1983, the facility was listed by the USEPA as a Superfund Site as a result of the discovery of the hexavalent chromium. Constituents of concern (COCs) in the various media at the Site were subsequentiy expanded to include metals (mainly chromium), volatile organic compounds (VOCs) (mainly trichloroethene [TCE]), and to a lesser extent, semi-volatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs). Consequently, the Site has an extensive site characterization history, including soil, groundwater, sediment and surface water investigations and remedial activities, which are chronologically summarized below:

- SMC installed an 80 gallon per minute (gpm) groundwater pump and treat remediation system in 1979;
- SMC installed a 400 gpm groundwater pump and treat remediation system to control off-site migration of hexavalent chromium under an October 1988 NJDEP ACO;
- Remedial Investigation/Feasibility Study (RI/FS) Technical Report (TRC, 1992);

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- Final Focused (Groundwater) Feasibility Study (TRC, 1994);
- Characterized, remediated, and closed nine wastewater treatment lagoons from 1994 to 1997 (TRC, 2000);
- Draft Final Feasibility Study Report (Soil, Surface Water and Sediment) (TRC, 1996);
- Record of Decision (ROD) in 1996 for the groundwater operable unit;
- Investigation of plume geometry through vertical profiling as part of the 2002 Off-Site Groundwater Investigation;
- Further investigation of plume geometry through vertical profiling and monitoring well installation as part of the 2006/2007 Supplemental Off-Site Groundwater Investigation (TRC, 2007); and
- Quarterly/Annual Groundwater Monitoring Reports.

The results of these characterization activities and an evaluation of remedial alternatives are presented in various prior environmental reports and feasibility studies, as listed above. In addition, low-level radioactive materials, mainly slag and baghouse dust, are stored at the facility under a Nuclear Regulatory Commission (NRC) license and are being addressed separately from the Site Superfund investigations.

TCE and chromium are COCs in groundwater and are being remediated by a pump-and-treat system in operation since 1979. Both plumes (TCE and chromium) have migrated to SMC's Farm Parcel. The main COCs in soil consist of chromium (at depth) and limited areas of potential SVOC, pesticide and PCB contamination. A soif Feasibility Study report was prepared by TRC in 1996 and submitted to NJDEP.

Sediment in the adjoining Hudson Branch is impacted by the presence of inorganics, although environmental impairment was not detected upon comparison to similar background locations. A sediment Feasibility Study was prepared by TRC in 1996 and supplemental characterization studies were conducted by TRC in 2009.

Surface water quality in the Hudson Branch and Burnt Mill Pond has been characterized in several previous studies supporting RI/FS activities (1990 and 1995) and the New Jersey Pollutant Discharge Elimination System (NJPDES) permitting at the SMC facility. The 1996 Feasibility Study report indicated that based on water quality, no further action was required relative to surface water.

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2.4 Physical Setting of the Site

USGS Topographic Quadrangle

The referenced property is located within the Newfield, New Jersey 7.5' USGS Quadrangle (Figure 2-1).

Surficial Geology

Seaward-dipping unconsolidated sediments of the Atlantic Coastal Plain underlie the Site and range from Cretaceous to Holocene in age. Across southern New Jersey these materials thicken and dip toward the southeast. Observations in numerous soil borings completed at the SMC facility are consistent with regional surficial geology. The three surficial units of interest that underlie the Site include the Bridgeton Formation, the Cohansey Sand, and the Kirkwood Formation. At the site, the Bridgeton Formation consists of up to 28 feet of brown sand and overlies the Cohansey Sand, which is comprised of coarse sands and little silt in the upper 40 feet, with generally finer sand and some clay and silt lenses in the lower 60 to 80 feet. Discontinuous silt and clay up to 6 feet in thickness were encountered within the lower Cohansey Sand formation. The Kirkwood Formation, predominantly a gray silt and clay layer, was encountered between 121 and 153 ftbgs and underlies the Cohansey Sand.

The Middle to Lower Cretaceous sediments are continental deposits consisting of alternating layers of clay, silt, sand, and gravel. The Upper Cretaceous and most Tertiary sediments were deposited within marine beach and shelf facies environments and reflect various fluctuations in sea level. A coarsening-upward depositional sequence reflects a regressive sea, while fining-upward unit represents a transgressive sea. These stratigraphic units are illustrated in boring logs SC1D, SC21D, SC28D, SC29D and SC32D, which are presented in Appendix A.

Bedrock Geology

Bedrock beneath the Site consists of banded, micaceous schists or gneiss within the Wissahickon Formation of Precambrian age. The Wissahickon Formation contains mica, quartz, feldspar, and chlorite with numerous fractures, joints, and folding of individual layers. Bedrock was not observed at or encountered in the subsurface studies conducted across the Site. The formation outcrops northwest of Gloucester County. Based on the average degree of dip for

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overburden in the Newfield area, it is estimated that the depth to bedrock beneath the Site is approximately 2,000 ftbgs.

Local Drainage

The SMC facility is located within the Upper Maurice River portion of the Maurice River watershed (FGCW, 2005). The Hudson Branch flows westward through portions of SMC's facility and along the southern property boundary of the manufacturing parcel (Figure 2-2). An unnamed pond exists along the Hudson Branch, south of SMC's former thermal cooling pond (Figure 2-2). The Hudson Branch drains into Burnt Mill Pond approximately 1.2 miles southwest of the Site. Burnt Mill Pond exists at the confluence of the Hudson Branch and Burnt Mill Branch (Figure 2-3).

The Hudson Branch and Burnt Mill Branch are not "listed streams" within the Delaware River Drainage Basin (NJAC 7:9B) and therefore assume the classification of the water body into which they flow (i.e., the Maurice River), which is classified as FW2–NT (non–trout). Designated uses of FW2–NT surface waters include the following:

- Maintenance, migration, and propagation of the natural and established biota;
- Primary and secondary contact recreation;
- Industrial and agricultural water supply;
- Public potable water supply after conventional filtration, treatment, and disinfection; and
- Any other reasonable uses.

Surface water runoff from the Site is toward the Hudson Branch. Drainage from developed portions of SMC's facility is via the storm drain system and overland flow, which is directed toward the retention pond along the southwestern fence line of the facility. The discharge from the retention pond flows into the Hudson Branch. Drainage from the western employee parking lot discharges to a ditch along the western boundary of the facility and drainage within the Storage Yard (eastern portion of Site) is contained by perimeter berms. Within the eastern undeveloped area of the facility, drainage is generally via sheet flow. Other local discharges to the Hudson Branch include the discharge of treated groundwater to the on-site retention basin and the discharge of stormwater from a portion of the Borough of Newfield located north of the SMC facility. This off-site stormwater flows through a 36-inch diameter stormwater pipe that enters the SMC facility at the northern property line, crosses the SMC

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facility and discharges into the Hudson Branch at an outfall located just west of the former thermal cooling pond.

Wetlands

Wetlands along the Hudson Branch in the vicinity of the SMC facility were delineated and surveyed as part of several historical studies (Dan Raviv, 1990 and TRC, 1996).

Local Hydrogeology

The principal aquifer in the vicinity of the SMC site is the Cohansey Sand, which is approximately 130 feet thick. The Cohansey Sand is underlain by the Kirkwood Formation. The upper portion of the Kirkwood Formation is composed of silt and clay, which functions as a confining unit in the vicinity of the SMC facility, restricting the downward flow of groundwater from the Cohansey Sand. Depths to groundwater across the Site range from surface grade at the Hudson Branch to approximately 17 ftbgs in the northwest quadrant of the Site. Based on off-site investigations, groundwater is typically identified at depths ranging between 4 ftbgs and 32 ftbgs. Seasonal fluctuations in the water table elevations are on the order of a few feet. Groundwater flow direction in both the upper and lower Cohansey Sand is southwest toward the Hudson Branch, which closely matches general Site topography. On-site groundwater movement in the lower Cohansey Sand is influenced by the treatment system's pumping wells. Other anthropogenic factors including sewer systems and other buried utilities may also control local groundwater movement. The average linear on-site groundwater flow velocity in the shallow portion of the aquifer is about 2.9 ft/day (TRC, 1994). A downward hydraulic gradient has been observed in most on-site well clusters, which is consistent with groundwater pumping conditions at and downgradient of the Site.

An electrochemical treatment system is used for the removal of chromium and an air-stripping process is used for the removal of TCE from groundwater prior to discharge into the Hudson Branch. Five extraction wells, two onsite in the southwest comer of the manufacturing portion of the facility (i.e., W9 and Layne) and three offsite (i.e., RW6S, RW6D and RIW2), withdraw groundwater at a maximum rate of 400 gpm and hydraulically control migration of the chromium plume.

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Not including the three wells installed as part of these investigations, 65 groundwater monitoring wells and extraction wells are located on and off site and are utilized for on-going chromium and VOC groundwater monitoring (i.e., semi-annual and annual sampling).

Local Water Use

The New Jersey GWQS (NJAC 7:9C) classify groundwater quality at the Site as Class II-A. The primary designated uses for Class II-A groundwater are potable water and conversion to potable water through conventional water supply treatment, mixing, or other similar techniques. Secondary uses include agricultural and industrial water. Groundwater is the primary source of domestic, agricultural, community, and municipal water supplies in the general area of the SMC facility. The depths of nearby public supply wells range from 150 to 200 ftbgs and are typically screened within the Kirkwood-Cohansey Formation. Depths of private wells vary greatly across the area.

Potable water is provided locally by the Newfield Water Department and the Vineland Water and Sewer Utility. Both utilities rely solely on groundwater sources for their potable water. Due to chromium and TCE contamination, the City of Vineland has designated an area of the city downgradient from the SMC facility as a well restriction area requiring mandatory connection to the public water systems. The nearest municipal supply well to the SMC facility is Newfield Well #3, located approximately 1,600 feet north and sidegradient of the SMC facility. The nearest municipal supply well to the Farm Parcel area is Vineland Well #10, located along Delsea Drive, northwest of Burnt Mill Pond, approximately 4,000 feet west of the Farm Parcel. This well reportedly has not been used since October 2004. The Vineland Water Company currently uses Well #14, which is located several thousand feet to the northwest of Well #10. Both wells cannot operate at the same time due to pumping and system capacity limitations (City of Vineland, personal communication, 2008).

2.5 Historical Perchlorate Monitoring Results

At the request of NJDEP, SMC agreed to sample and analyze the groundwater at the Site for perchlorate in July 2004. Groundwater samples were collected from on-site wells IWC-1 through IWC-5. Subsequent sampling events were conducted in September and October 2004. Historical perchlorate results are summarized in Table 2-1 and are compared to the 5 ppb and 15

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ppb screening levels. Perchlorate was detected at concentrations greater than 5 ppb and 15 ppb in both shallow and deep wells along the southwest comer of the 67-acre manufacturing portion of the Site and in off-site Farm Parcel wells in 2004. During February 2006, additional groundwater samples were collected from three deep monitoring wells (SC1D, SC3D(R) and SC24D) and four shallow/intermediate wells (SC1S, SC3S, R1W2 and SC24S) on the Farm Parcel. Perchlorate in groundwater ranged from 0.21 to 23.0 ppb in the shallow/intermediate aquifer and from non–detect (ND) to 76.0 ppb in the deep aquifer during the 2004 and 2006 sampling events (Table 2-1). The highest concentration of perchlorate (76.0 ppb) in groundwater was identified in monitoring well SC1D, a hydraulically downgradient location on the Farm Parcel, during the October 2004 sampling event.

An assessment of the downgradient extent (downgradient of the Farm Parcel) of the groundwater perchlorate plume was conducted by TRC in late 2006/early 2007, concurrent with a supplemental off-site groundwater investigation associated with the chromium/TCE plumes. This scope included the drilling of five vertical groundwater profiles (VP-1, VP-2, VP-3, VP-4, and VP-10) to a maximum depth of approximately 135 ftbgs downgradient and sidegradient of the Farm Parcel (Figure 2-3). Groundwater samples were collected via screened hollow-stem augers from five discrete depth intervals at each location, with the results indicating the presence of perchlorate concentrations greater than 5 ppb extending approximately 5,500 feet downgradient (southwest) of the Farm Parcel. The highest concentrations of perchlorate (up to 49.9 ppb) were found mainly in the deeper portion of the aquifer. The analytical results of the late 2006 off-site groundwater perchlorate sampling are summarized in Table 2-2. Based on these data, it was determined that the lateral and vertical extents of the off-site perchlorate plume had not been adequately delineated at that time.

2.6 Areas of Environmental Concern

To identify potential sources of perchlorate at the SMC facility, a review of historical documents, an interview with SMC employees, and a review of historical aerial photographs were conducted.

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2.6.1 Perchlorate Usage and Storage

According to information provided by SMC staff generally familiar with past operational practices, potassium perchlorate was used as an oxidizer in the on-site furnace to increase temperature and enhance furnace performance. The perchlorate was destroyed in the process by reacting with aluminum metal, according to the following chemical reaction, and generating simple chloride salts as the product:

$$3\ KClO_4 + 8\ Al = 3\ KCl + 4\ Al_2O_3$$

The furnace was located within the footprint of former Building D102(A), attached to but isolated from Building D112. Both buildings have since been demohshed (see Figure 9-1). Building D102(A) was characterized by an earthen floor (although the area surrounding the building is paved). According to historical purchase order records, SMC purchased approximately 400,000 pounds of potassium perchlorate from 1974 to 1992 for this operational activity. A summary of the available purchase orders is included in Appendix B.

Potassium perchlorate was typically packaged and shipped to the Site in 110-, 250-, and 350-pound, plastic-lined steel drums. This product was reportedly stored onsite in a former small metal outbuilding, east of former Building D102(A) and near the unpaved road forming the northwest boundary of the slag piles, prior to being used in the furnace. This Former Chemical Storage Building was characterized by a concrete interior floor and berm around the building's perimeter. The small Former Chemical Storage Building and adjacent unpaved road are identified as an area of concern (AOC-1) with respect to historical perchlorate storage practices. Furthermore, since the product was used in former Building D102(A), the general footprint of this building has been identified as AOC-2 relative to historical perchlorate usage. It is believed that the storage and usage of perchlorate onsite were limited to these areas. The locations of AOC-1 and AOC-2 are shown on Figure 9-1.

Since perchlorate was completely destroyed in the heating process by reacting with aluminum to form chlorides, there was no general release from this process. Only incidentally spilled material or small amounts of incompletely reacted material would potentially be released into the environment. One possible disposition for the incompletely reacted/residual perchlorate was release to the area of the lined and unlined lagoons and this possible discharge point of the

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historical liquid wastes has therefore been identified as AOC-3. The location of AOC-3 is shown on Figure 9-1.

2.6.2 Review of Historical Aerial Photographs

TRC reviewed historical aerial photographs for the SMC site from the years 1974, 1977, and 1986 (as appended to SMC's RI Work Plan [ENSR, 1989]), which spans the known period of perchlorate usage at the Site. The photographic review focused on the aforementioned AOCs and perchlorate storage, use, and disposal practices, including any areas within the AOCs characterized by drum storage, stressed vegetation, and/or ground staining/discoloration. Areas of material storage were observed to the northwest of the small Former Chemical Storage Building (AOC-1) and adjacent to the northeast corner of the former Building D102(A) (AOC-2). Following the review of the historical aerial photographs, two of the seven soil boring locations proposed in the perchlorate RIWP were relocated to the northwest side of the unpaved road adjacent to AOC-1, to further investigate the material storage area that was identified.

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3.0 REMEDIAL INVESTIGATION METHODS

The perchlorate RI included the collection of soil, groundwater, surface water and sediment samples at the Site and in the immediate vicinity of the Site. Sampling procedures and methods were conducted pursuant to the requirements in NJAC 7:26E-4(NJDEP Technical Requirements for Site Remediation – Remedial Investigations) and the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive #9355.3-01, October 1988). Quality assurance/quality control (QA/QC) requirements were implemented pursuant to the requirements of NJAC 7:26E-2 (NJDEP Technical Requirements for Site Remediation – Quality Assurance for Sampling and Laboratory Analysis), USEPA's "Data Quality Objectives Process for Hazardous Waste Site Investigations" (EPA AQ/G-4HW, January 2000), and USEPA's "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990).

A summary of the soil, groundwater, surface water and sediment samples collected as part of the perchlorate RI is provided in the subsections below. Sample location rationale and sample collection methodologies and procedures are also described.

3.1 Sampling Locations

Soil

The soil RI was conducted to investigate soil for evidence of perchlorate releases in the identified potential AOCs. Soil samples were collected between October 26 and 28, 2009. Since historical releases of perchlorate may have been continuous or intermittent, both near-surface samples and soil samples at depth were collected. The determination of potential AOCs is detailed in Section 2.6, with boring placement within each AOC as follows (Figure 9-1):

1. AOC-1, Former Chemical Storage Building (seven borings) - three test borings (SS-02, SS-03 and SS-04) were located near the Former Chemical Storage Building and four borings (SS-05, SS-06, SS-07 and SS-08) were located along the unpaved road adjacent to the building. Soil borings SS-07 and SS-08 were located along the northwest side of the unpaved road to investigate material storage areas identified in historical aerial photographs;

2. AOC-2, Former Footprint of Furnace Building (four borings) - all four test borings(SS-21 to SS-24) were located within the footprint of the former furnace building;

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3. AOC-3, Former Unlined/Lined Lagoons (twelve borings) - six test borings(SS-09 to SS-14) were located on an approximate 150-foot grid system within the footprint of the former lagoons and six test borings (SS-15 to SS-20) were located immediately to the south of the former lagoons (including one along the edge of a drainage swale); and

4. Background, one boring location in the northwest corner of the manufacturing parcel (SS-01).

Groundwater

The groundwater RI was conducted to further define the lateral and vertical extent of perchlorate contamination in the groundwater, building upon the results of previous groundwater investigations (see Section 2.5). Vertical groundwater profiling samples were previously collected concurrent with a supplemental off-site groundwater investigation in late 2006/early 2007 to address the presence of elevated concentrations of perchlorate in the most downgradient wells on the Farm Parcel. Based on the presence of perchlorate at each of the five vertical profiling locations (VP-1, VP-2, VP-3, VP-4, and VP-10), supplemental vertical profiling of groundwater was conducted between October 12 and 23, 2009 in five vertical profiling borings located downgradient and sidegradient to the previously drilled vertical profiles as follows (Figure 2-3):

1. Vertical Profile-13 (VP-13) located approximately 900 feet northwest of the northwest corner of the Farm Parcel, within the West Weymouth ROW;

2. Vertical Profile-13A (VP-13A) located approximately 1,800 feet northwest of the northwest corner of the Farm Parcel within the Salem Avenue ROW;

3. Vertical Profile-14 (VP-14) located approximately 3,500 feet southwest of the southwest corner of the Farm Parcel within the West Forest Grove Road ROW;

4. Vertical Profile-15 (VP-15) located approximately 6,800 feet southwest of the southwest corner of the Farm Parcel within the Freddy Lane ROW; and

5. Vertical Profile-15A (VP-15A) located approximately 9,000 feet southwest of the southwest corner of the Farm Parcel within the West Garden Road ROW.

Based on the presence of perchlorate in vertical profile locations VP-13 and VP-15, additional vertical profile locations VP-13A and VP-15A were drilled. Then, based on the presence of perchlorate in vertical profile locations VP-13A and VP-15A, supplemental monitoring wells were installed and sampled at each of those two locations. A total of 27 groundwater samples were collected from the vertical profiles during this RI, including two

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duplicate samples for QA/QC purposes. Monitoring well installation and sampling details are presented in Section 3.3.

Groundwater conditions in the upper, middle, and lower portions of the aquifer were assessed from the existing array of 65 monitoring and extraction wells and the two newly installed monitoring wells (SC35D, and SC36D) during sampling events conducted between October 20 and 22, 2009, on November 19, 2009, on December 7, 2009, and on January 21, 2010. The wells included in these investigations are shown on Figure 2-2 and Figure 2-3 and are listed below:

Manufacturing Facility Monitoring/Extraction Wells (Screened Interval)

A (114-124')	MWH-4 (119-129')	SC20S (7-22')
B (36-46')	SC9S (15-30')	SC20D (129-139')
IWC-1 (15-20')	SC11S(R) (9-24')	SC22S (3-18')
IWC-2 (35-40')	SC12S (15-25')	SC23S (9-24')
IWC-3 (55-60')	SC12D (126-136')	SC25S (7-22')
IWC-4 (75-80')	SC13S(R) (14.7-24.7')	SC27S (7-22')
IWC-5 (95-100')	SC13D (127-137')	W2(R) (2-17')
K (36-46')	SC14S (12-27')	W3D (88-108')
L (42-52')	SC15S (12.5-27.5')	W4 (55-75')
Layne (42-47')	SC16S (12-27')	W9 (110-130')

Farm Parcel and Off-Site Monitoring/Extraction Wells (Screened Interval)

IW1 (32-62')	SC5S (5-20')	SC19S (2-17')
IW2 (40-70')	SC5D (90-120')	SC19D (120-130')
RIW2 (30-55')	SC6S (45-75')	SC21S (3-18')
RW6D (90-125')	SC6D (110-120')	SC21D (125-135')
RW6S (55-75')	SC10S (35-55')	SC24S (5-20')
SC1S (35-55')	SC10D (105-125')	SC24D (105-115')
SC1D (85-957100-115')	SC17S (19-28')	SC26D (127-137')
SC3S (35-55')	SC17D (143-153')	SC28D (133-153')
SC3D(R) (102-112')	SC18S (4-19')	SC2D(R) (106-116')
SC4S (35-45')	SC18D (119-129')	SC30D (147-157')

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SC31D (120-130')	SC34D (130-140')	SC40D (120-130')
SC32D (92-102')	SC35D (89.5-99.5')	OBS-2A (129-149')
SC33D (82.5-92.5')	SC36D (107-117')	

In order to confirm an elevated perchlorate concentration detected in the shallow monitoring well K when it was sampled on October 22, 2009, it was re-sampled on January 21, 2010 (see Section 9.2.1 for discussion of analytical results).

A second round of groundwater sampling incorporating a sub-set of the 67 monitoring wells listed above was completed on September 8 and 9, 2010. Groundwater conditions in the upper, middle, and lower portions of the aquifer were assessed from 35 monitoring and extraction wells, which are shown on Figure 2-2 and Figure 2-3 and are listed below:

Manufacturing Facility Monitoring/Extraction Wells (Screened Interval)

IWC-4 (75-80')	SC14S (12-27')	W2(R) (2-17')
K (36-46')	SC16S (12-27')	W3D (88-108')
Layne (42-47')	SC20D (129-139')	W4 (55-75')
SC11S(R) (9-24')	SC22S (3-18')	
SC12D (126-136')	SC25S (7-22')	

Farm Parcel and Off-Site Monitoring/Extraction Wells (Screened Interval)

SC1S (35-55')	SC17D (143-153')	SC30D (147-157')
SC1D (85-95'/100-115')	SC18S (4-19')	SC32D (92-102')
SC3S (35-55')	SC21S (3-18')	SC33D (82.5-92.5')
SC3D(R) (102-112')	SC21D (125-135')	SC34D (130-140')
SC6S (45-75')	SC24S (5-20')	SC35D (89.5-99.5')
SC10S (35-55')	SC26D (127-137')	SC36D (107-117')
SC10D (105-125')	SC28D (133-153')	
SC17S (19-28')	SC2D(R) (106-116')	

Following the installation of monitoring well SC40D between April 4 and 5, 2011, groundwater was sampled at that location on April 29, 2011 (see Section 9.2.1 for discussion of analytical results).

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Sediment and Surface Water

The objective of surface water and sediment sampling was to determine whether perchlorate has discharged to surface water bodies in close proximity to the Site via stormwater runoff or groundwater discharge to the Hudson Branch. Initial vertical groundwater profiling results, collected in late 2006/early 2007, indicated that elevated perchlorate concentrations were not present in the shallow aquifer. Therefore, it is unlikely that groundwater is acting as an active source of perchlorate to the surface water. Between October 28 and 29, 2009, TRC collected co-located surface water and sediment samples from the following ten locations (Figure 9-3):

1. Burnt Mill Pond Outfall (SW-1A and SED-1A). This sampling point represented the most downstream and downgradient surface water and sediment sampling location, at the outfall of Burnt Mill Pond near Delsea Drive;

2. Burnt Mill Pond (SW-1 and SED-1);

3. Utihty ROW south of the Hudson Branch (SW-2 and SED-2);

4. Hudson Branch as it intersects North West Avenue (SW-3 and SED-3);

5. Hudson Branch as it bisects the middle of the Farm Parcel (SW-4 and SED-4);

6. Hudson Branch near the northern drainage culvert as it intersects Weymouth Road (SW-5 and SED-5);

7. Hudson Branch near the eastern drainage culvert as it intersects West Boulevard. This location was the most downgradient relative to SMC's manufacturing facility (SW-6 and SED-6);

8. Downgradient end of the unnamed pond, south of the former thermal coohng pond (SW-7 and SED-7);

9. Hudson Branch closest to the Site's eastern property boundary. This represented the most upstream and upgradient surface water and sediment sampling location to the SMC site within the Hudson Branch RI (SED-8). No surface water was present at the time of sampling and therefore no surface water sample was collected from this location; and

10. Burnt Mill Branch at Weymouth Road. This was a location in a different drainage basin than the SMC site and represents a background location, upgradient of Burnt Mill Pond (SW-9 and SED-9).

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Sediment sampling locations were selected in the field to correspond with points within the stream channel that represent areas of active deposition (sedimentation). Despite the lack of water at sample location SED-8, the same sediment sampling rationale was used and the sample was collected from a location estimated to be within an area of sediment deposition during times of actual stream flow.

A Global Positioning System (GPS) unit was used to obtain precise latitude/longitude readings at each sampling location. Each location was marked in the field with a stake and/or pin flag. Digital photographs were taken showing sampling locations with respect to easily discemable landmarks and nearby land uses.

3.2 Soil RI

TRC investigated soil conditions and obtained soil samples at the Site using Direct Push technology. TRC contracted with and supervised Uni-Tech Drilling Co., Inc. (Uni-Tech) of Franklinville, New Jersey, a drilling contractor licensed with the State of New Jersey, to advance soil borings and collect soil samples in the specified AOCs using a track–mounted, direct-push unit (Geoprobe®). The soil borings were advanced with a "direct-push" method using a vibratory hammer.

Uni-Tech utilized both the DT22 soil sampling system and Macro-Core® tooling. The DT22 system used Geoprobe® 2.25-inchouter diameter (OD) probe rods as an outer casing and Geoprobe® center rods for the inner rod string. A DT22 cutting shoe was threaded into the leading end of the outer casing, which sheared and collected a 1.125-inch OD soil core into a clear acetate liner. The center rods held the liner in place as it collected the soil core and also provided a means of retrieving the liner once the sample was collected. The 2.25-inch probe rods provided a cased hole through which to sample.

A 48-inch long, 2.25-inch OD Macro-Core® sampling tool was utilized at several boring locations. Soil samples were retrieved from acetate liners placed within the Macro-Core® sampling tool. At all soil sample locations, Uni-Tech drove the soil sampling tools continuously to depths corresponding to the approximate water table interface. Boring depths ranged between 8 to 20 ftbgs.For each soil boring, TRC kept a geologic boring log and recorded field observations of soils (Appendix C).

TRC collected two soil samples per borehole, which were submitted to Accutest Laboratories (Accutest) of Dayton, New Jersey, a New Jersey-certified laboratory, for analysis.

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At each soil boring location, one sample was collected from immediately above the water table (i.e., within the vadose zone/water table interface). The RIWP proposed collecting the second sample from any zone with evidence of contamination (i.e., discoloration of soils, as perchlorate is a white crystalline powder). However, no evidence of perchlorate contamination was discerned in the field. Grain size observations (fine-grained materials (silt/clay) may have a higher affinity for perchlorate adsorption) were also used to select the second sample interval. Therefore, the second shallow soil sample collected from each soil boring was collected from a two-foot interval located between zero and eight ftbgs.

TRC researched the possibility of using colorimetric field screening methods under development by the U.S. Army Corps of Engineers (U.S. Army Corps of Engineers, 2004); however, no field screening test kit for perchlorate was commercially available at the time of the soil RI (TRC, 2006).

3.3 Groundwater RI

To expand upon the results of the previous vertical groundwater profiling (as previously discussed in Section 2.5), TRC conducted supplemental vertical groundwater profiling using a screened auger tool (SAT) in conjunction with hollow stem auger drilling equipment. The SAT vertically profiled groundwater quality down to about 135 ftbgs, as practical, and did not penetrate the clay forming the basal confining layer of the aquifer.

The SAT consisted of a 5-foot, 4¼-inch inside diameter, hollow stem auger constructed of stainless steel. Large oval-shaped openings were cut out of the hollow stem auger between the auger flights. Wire mesh with a slot size of approximately 0.007–inch lined the inside of the hollow stem auger, allowing groundwater to enter the auger while minimizing the passage of fine soil particles. The SAT was equipped with a plastic, water-tight, knock-out plug at the cutting head, which prevented soil from entering the bottom of the auger. The SAT was the lead auger and was attached to standard 5-foot hollow stem auger flights as the boring was advanced deeper below grade.

The SAT was equipped with an inflatable packer and submersible pump assembly, which allowed the isolation of the groundwater within the auger to the SAT and the auger length immediately above the SAT. By utilizing this setup, the potential for cross-contamination was significantly reduced and the volume of purge water was minimized. Decontamination of the SAT and sampling equipment is discussed in Section 8.4. The packer was inflated with nitrogen

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gas. Prior to sample collection, at least three to five volumes of standing water below the inflatable packer (approximately 21 to 35 gallons) were purged to ensure that the formation water was moving into the SAT. The purge rate was reduced using an in-line ball valve. Purge water was pumped through an in-line, flow-through cell equipped with a multi-parameter meter (YSI® 6820) to monitor pH, specific conductivity, turbidity, dissolved oxygen (DO), temperature and oxidation-reduction potential (ORP) of the groundwater. Readings were recorded approximately every three to five minutes on groundwater sampling log sheets (Appendix D). Purging of the SAT was continued at a reduced discharge rate until groundwater parameters stabilized and turbidity readings were less than 50 nephelometric turbidity units (NTUs). Turbidity readings less than 50 NTUs were not achieved at five sample intervals [VP-13(25-30'), VP-14(35-40'), VP-14(130-135'), VP-15(114-119'), VP-15A(77-82')]. In addition, the multi-parameter meter was not functioning properly at the time of purging/sampling VP-14 (80-85') and VP-14 (105-110'). No groundwater parameters were measured during purging/sampling of those two intervals and samples were only collected after the required volume of groundwater was purged and the water appeared clear.

After the purging of an appropriate amount of water and stabilization of groundwater parameters, a sample port was opened prior to the flow-through cell using a ball valve. Groundwater samples were collected as described in Section 5.3 and any groundwater not captured in the containers was captured in a 5-gallon bucket. All purge water was containerized in a polyethylene tank and transported to the SMC water treatment plant for treatment.

TRC targeted five depth intervals for vertical groundwater profiling at each of the five off-site locations. These depth intervals ranged from 15 to 20 feet (VP-15A) to 130 to 135 feet (VP-14). The specific sample depth intervals for each of the profiling locations are noted on Table 2-2. TRC guided the driller to advance the SAT to each of these targeted depths for groundwater sample collection. At each location, drilling ceased if the underlying clay confining layer was encountered or the estimated depth of the clay layer (based on previous drilling data) was reached, to avoid compromising the integrity of the confining layer.

Since groundwater samples were collected at depths well below the water table, the augers were equipped with a water tight seal (O-ring) at the auger connections. This further prevented the potential for cross-contamination of samples due to formation water leaking through the auger connections and into the augers from other depths.

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All excess soil cuttings generated during the vertical profiling were containerized in 55-gallon steel dmms and returned to the SMC facility pending proper management and/or disposal. All drums were immediately removed from the boring location and stored within Warehouse G at SMC prior to proper disposal. Representative samples of the drill cuttings were collected for waste characterization. After characterization, the drums of drill cuttings were transported off-site on July 7, 2010 via a non-hazardous waste manifest by TIER of Gap, Pennsylvania and properly disposed of at the American Landfill in Waynesburg, Ohio. The drill cuttings were characterized as "Non-Regulated Material, Non-RCRA/Non DOT".

After the last sample was collected at each borehole location, the borehole was properly sealed and abandoned by tremie grouting to the ground surface in accordance with NJDEP regulations (NJAC 7:9D). First, decontaminated drill rods were used to knock out the bottom plug inside the SAT. A tremie pipe was then used to pump bentonite slurry inside the augers while the augers were slowly retracted from the ground. The entire borehole was filled with grout to grade. As necessary, the boreholes were sealed at the surface using Type II Portland Cement to prevent settling. All boreholes were re–graded with topsoil to return the site to pre-drilling conditions with the exception of VP-15, which was advanced through asphalt and was surfaced with asphalt cold patch.

Based on analytical results from the vertical profile groundwater samples, two monitoring wells were installed adjacent to the vertical profile locations VP-13A and VP-15A (SC36D and SC35D, respectively). In addition, a third deep monitoring well (SC40D) was later installed to investigate a data gap in the northern limit of the perchlorate groundwater plume in the deep aquifer zone. The monitoring wells were installed using mud-rotary techniques. Soil samples were collected using a split-spoon device at a frequency of every 10 feet. The soils were geologically logged in the field notebook with a general soil description (e.g., grain size distribution, color, moisture, staining and odors). The monitoring wells were installed using two–inch diameter Schedule 40 PVC riser pipe and screen. Ten feet of 0.010-inch slot screen was used with flush-threaded riser pipe to the ground surface. A gravel pack of FilPro#0 or #1 sand was placed in the annular space to 3.5 to 5 feet above the top of the screen. A 2-foot thick layer of Ricci Bros. #00 sand was used as a seal above the gravel pack. To ensure a proper gravel pack and seal, the #0/#1 and #00 sands were placed in the annular space via the tremie method. Once the gravel pack and seal were completed, a Portland cement/bentonite grout mixture was tremied into the remaining annular space. The monitoring wells were completed by

a locking, flush-mounted curb-box. As previously mentioned, all soil cuttings and drilling mud generated during monitoring well installation was containerized and returned to the SMC facility pending proper disposal. Monitoring well construction details are presented in Appendix E. Decontamination of drilling and soil sampling equipment is discussed in Section 8.4.

The monitoring wells were developed using a surge-and-pump technique. The wells were developed for 1.5 to 2 hours with a goal of providing turbidity-free water. A turbidity meter was used to measure NTUs. Monitoring well SC35D (VP-15A) was pumped for 2 hours 5 minutes, generated approximately 170 gallons of purge water, and the final turbidity reading was 20.1 NTU. Monitoring well SC36D (VP-13A) was pumped for 1 hour 30 minutes, generated approximately 115 gallons of purge water, and the final turbidity reading was 4.0 NTU. Monitoring well SC40D was pumped for approximately 1 hour and generated approximately 220 gallons of purge water. The turbidity of the purge water from SC40D was not monitored with a turbidity meter and was pumped until visually clear. All development water was containerized in a truck-mounted polyethylene tank (700 gallon capacity) and transported to and treated at the SMC on–site groundwater treatment plant facility.

3.4 Surface Water and Sediment R1

Surface water and sediment were investigated from the most downstream location to the most upstream location so that disturbance related to sampling did not affect sample quality. To the extent practicable, surface water and sediment samples were co-located spatially and temporally. Sample locations were "biased" to points within the stream course that represent areas of active deposition (sedimentation). Sample collection details are provided in Section 5.4.

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4.0 UTILITY CLEARANCE

On-site test boring locations were marked with pin flags set into the ground prior to beginning any subsurface tasks. Uni-Tech contacted "New Jersey One Call" (NJOC), which marked the locations of buried conduits on public property immediately adjoining the Site. TRC requested from SMC any information concerning the locations of buried utilities at the Site. No utilities were identified near the proposed on-site soil boring locations according to the available records provided by SMC. In addition, Underground Services, Inc. of West Chester, Pennsylvania, a contractor specializing in locating underground utilities, evaluated the potential presence of buried utilities near the proposed boring locations. No utilities were identified near the proposed boring locations, with the exception of a suspected buried line along the unpaved roadway near AOC-1. The suspected buried line bisected two proposed soil boring locations (SS-7 and SS-8) along the northwest side of the unpaved roadway. However, the proposed boring locations were greater than 5 feet away from the suspected buried line; therefore, no adjustments were necessary.

For the off-site drilling locations, municipal and/or county officials and available mapping were initially consulted to determine the horizontal extent of roadway ROWs and the presence of utilities in the planned drilling locations. The proposed drilling locations were then marked within the ROW using white paint and Uni-Tech subsequentiy notified NJOC. Furthermore, TRC obtained "road-opening" permits for each proposed boring location from the municipal and/or county authority prior to the start of the off-site drilling activities (Appendix F).

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5.0 SAMPLE COLLECTION AND HANDLING

5.1 General

Sampling of all media was performed by a field scientist experienced in environmental sampling. Sampling was completed as described in the approved RIWP. During periods of rain, every effort was made to prevent precipitation from coming into contact with the sample, sample bottle, and sampling equipment.

Sample Containers

Containers used for retaining the various samples were provided by Accutest in custody-sealed coolers. The custody seals were inspected upon receipt to verify whether or not the sample containers were tampered with. All coolers were received with custody seals intact.

Following sampling activities, all sample containers were inspected to ensure they were tightly capped and properly labeled. Labels were secured on the containers using clear packing tape. Following sample collection, each container was placed into a cooler and kept on ice to maintain a cooler temperature of approximately 4 degrees Centigrade (4°C). Prior to shipment to Accutest, care was taken to avoid contamination of the sample containers. When under chain-of-custody, sample botties were secured in locked vehicles, custody-sealed in coolers, or in the presence of authorized personnel. Sample coolers and containers were stored and transported in clean environments. Sample containers and equipment were not stored near solvents, gasoline, vehicle exhaust or other equipment that could be a potential source of contamination.

Sample Shipment

Typically, sample coolers were submitted to Accutest under chain-of-custody via hand-delivery or courier pickup each day samples were collected. Samples were never held by the field sampling team more than 24 hours after collection.

5.2 Soil Sampling Procedures

Sample Equipment

As discussed in Section 3.2, soil samples were retrieved within 4-foot long acetate liners. The liner was opened and TRC's field scientist logged the soil descriptions on soil boring log sheets (Appendix C). TRC removed the top several inches of soil from each liner to minimize

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possible cross-contamination of the sample from fall-in of material from the upper portions of the boring. In general, retrieved soil within the 4-foot long acetate liner was separated into 2-foot sub-samples for the purpose of collecting a sample aliquot for laboratory analysis. Soil from the two-foot interval selected for laboratory analysis was then removed from the sleeve and placed directly into a stainless-steel mixing bowl. The soil was homogenized and then placed into the laboratory-supplied bottles.

5.3 Groundwater Sampling Procedures

5.3.1 Existing Monitoring Wells

Well Security

Any monitoring well fitted with a steel protective outer casing and lock was unlocked immediately prior to the initiation of sampling activities and locked when sampling was completed or at any time the field team left the immediate area.

Water Level Measurements

Water level measurements were collected with an electronic water level indicator to the nearest one-hundredth of a foot. All water level measurements were made prior to the purging of any wells, which could influence groundwater elevations in the area of investigation. In order to assure accuracy, the depth to water was measured in each well from marked survey points. The water level indicator was properly decontaminated between wells, as discussed in Section 8.4.

Well Purging

All of the wells were purged using the volume-averaged purging technique outlined in the NJDEP Field Sampling Procedures Manual (NJDEP, 2005) and the approved RIWP.

This groundwater sampling procedure has been used historically at SMC and will continue to be used for consistency purposes (i.e., to support the comparisons of historic groundwater results to current and future results). In accordance with the purging technique, approximately three to five well volumes were purged from each well. During evacuation, care was taken to avoid over-pumping or pumping the well to dryness. The volume of water in each well was calculated using the known well diameter, the known well depth and the measured depth to water. One well volume was calculated by subtracting the depth to water from the total

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well depth (from the measuring point) and multiplying this amount (water column height) by a well diameter conversion factor (i.e., 2-inch well - 0.163; 4-inch well - 0.653; 6-inch well - 1.469) to obtain one well volume in gallons. Also, the flow rate of the pump was calculated at each well using a stopwatch and a calibrated 5-gallon bucket. The pumping time at each well was calculated by dividing four well volumes by the pump flow rate at each well. Samples were collected immediately following well evacuation. At locations where pairs of nested monitoring well screens are present (e.g., IWC-2 and IWC-5, and SC22S and MWH-4), the well screened in the shallow portion of the aquifer (i.e., IWC-2 and SC22S) was purged and sampled first, followed by the deeper-screened well.

Purge Equipment

Each well was purged with a gas-powered centrifugal pump positioned near the monitoring well and polyethylene hose 0.5- to 0.75-inch in diameter. A separate length of polyethylene hose was dedicated to each well. A check valve was installed between the pump and the hose at the pump head to prevent backflow of water from the pump housing into the well. Following well evacuation and prior to turning off the pump, the polyethylene hose was lifted out of the water column until all water was from the hose to further prevent backflow of purge water into the well.

Storage of Evacuation Materials

In general, polyethylene hose used to purge the wells remained in each well after purging. If necessary, the hose was attached to the top of the well with a stainless-steel leader line to prevent it from falling into the well. Conditions within several wells do not allow for the storage of the hose within the well. At those locations, the hose was rolled up, placed into a plastic bag, labeled and stored in a secure area. The current storage area for well hose is the TRC field office (i.e., a private, locked staging area in Building D201) and the W9 extraction well house. Hose that is stored outside of a well was wiped down with a clean cloth and distilled water prior to re-use in the well. Dedicated hose removed from a well for any purpose was also wiped down in the same fashion prior to re-use in the well.

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Sampling Equipment

Groundwater samples were obtained after the evacuation procedures described above. Samples were collected using a dedicated, bottom-loading, laboratory-decontaminated Teflon® bailer. Decontamination of bailers is discussed in Section 8.4.

Clean polyethylene chord was attached to a PTFE-coated stainless-steel leader used to lower the bailer into the well. New nitrile gloves were used at each sample location to prevent cross-contamination. Clean sampling equipment and any other objects entering the well were not allowed to contact the ground or any other potentially contaminated surfaces (e.g. gasoline-powered pumps).

During sampling, the bailer was lowered gentiy into the well to minimize agitation of the water column within the well. An aliquot of water was field-tested with a LaMotte 2020 turbidity meter. The remaining water was retained for laboratory analysis. Additional field parameters, including pH, temperature, DO, ORP, and specific conductance, were measured in-situ using a multi-parameter probe (YSI 600 XLM). Measurements were recorded both prior to purging and after sampling. Decontamination of field parameter probes is discussed in Section 8.4.

Although the analytical method for perchlorate (Method 314.0, USEPA, 1999) does not require chemical preservation, there is anecdotal evidence of the potential for microbial degradation (ITRC, 2005). According to the USEPA, new sampling requirements will be added to updated or new perchlorate methods (USEPA, 2005; USEPA, 2008b; ITRC, 2005) to address this potential issue. TRC incorporated two of these requirements, the first of which is to ultra-filter the sample in the field through a sterile 0.2-micron filter into a 125 ml, pre–sterilized nalgene bottie. TRC also incorporated a second requirement, collecting the sample with significant headspace (i.e., at a minimum, the top third of the sample bottie was left empty). TRC poured the water from the bailer into a laboratory-supplied bottle (standard unpreserved 200 ml polyethylene bottie) in a manner that minimized splashing and agitation. The water was then transferred through the filtering device, via a dedicated sterile syringe, into the sterile nalgene sample bottie. The filtering device was a 0.2-micron pore-diameter filter fitted to the syringe, supplied by the laboratory. All filters and syringes were sterile and dedicated to each sample location.

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5.3.2 Vertical Profile Samples

Groundwater samples collected via the SAT were obtained using the evacuation procedures described in Section 3.3. At each groundwater sampling interval, samples were collected directly from a sample port and ball valve installed in-line along the submersible pump discharge tubing. The sample container and means of filtering the sample were identical to those used for sampling the existing monitoring wells, as described in Section 5.3.1.

5.4 Surface Water and Sediment Sampling Procedures

At each surface water/sediment sample location, surface water physical/chemical field parameters were measured using a YSI® 6820multi-parameter meter and a measuring rod (depth). Measured parameters included water depth, temperature, DO, pH, specific conductivity and ORP.

Aqueous samples were collected first. Facing upstream and beginning at the most downgradient sampling location, TRC immersed the sample bottle by hand into the surface water and allowed water to run slowly into the bottle until full. Care was taken to not disturb the sediment. Immediately following the collection of the surface water sample at each discrete location, the co-located sediment sample was collected. A decontaminated stainless-steel spoon was used to collect the sediment sample from 0 to 6 inches below the water body bottom (biotic zone). Water elevations were approximately 1 to 2 feet above normal flow conditions at the time of sampling. At locations where the water level was elevated at the time of sampling, the stainless-steel spoon was attached with zip-ties to a polyethylene-coated rod to collect the sediment samples. TRC took care to minimize disturbance and sample washing as the sample was retrieved through the overlying liquid column. The sediment sample was then placed in a decontaminated stainless-steel mixing bowl and homogenized in the bowl using the stainless-steel spoon. While placing the sample into the laboratory-cleaned sample bottle, care was taken to avoid decanting off excess liquid, as decantation promotes the loss of water-soluble compounds present in the sediment.

R2-0001430

6.0 DOCUMENTATION

6.1 Introduction

Proper documentation was maintained to track the possession and handling of samples from time of collection through sample analysis and disposition. Doeumentation relative to sampling procedures included sample labels, field logbooks, and chain-of-custody records. The details of all site activities were recorded in a bound, consecutively page-numbered field logbook.

6.2 Field Logbook

The field team leader maintained a field logbook that documented all pertinent information regarding site activities and sampling procedures. Information recorded in the logbook generally included the following:

- Name and location of project site
- Date and time of arrival and departure
- Affiliation of persons contacted
- Name of person keeping log
- Weather conditions
- Names of all individuals onsite and engaged in sampling activities
- Purpose of visit
- Field instrument calibration
- information
- Static water level depths
- Identification of well/sample
- identification numbers
- Name of collector
- Description of samples
- Date and time of sample collection
- Time well purged
- Volume of water purged from well
- Field analysis data
- Laboratory analysis parameters
- Field observations
- Preservation
- Quality assurance information,
- including field blanks and duplicates
- Factors that may affect sample quality
- Changes in work plan field sampling locations and/or procedures

6.3 Sample Collection Paperwork

Sample Labels

Sample labels were affixed to each sample container. The sample containers were pre-labeled before sample collection and the labels were protected from the sample matrix with a clear tape covering. Sample labels included the site name, sample number, parameter to be analyzed, date and time of collection, sampler's initials, and preservative (4° C).

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Chain-of-Custody

The Chain of Custody (C-O-C) forms used serve as a legal record of possession of the samples. Each sample selected for submission to Accutest was listed on a C-O-C form. The field team leader prepared and signed the C-O-C forms prior to sample shipment to the laboratory. The completed and signed C-O-C forms were relinquished with the sample cooler(s) to the courier or directly to the laboratory via hand delivery. The C-O-C forms included the following information:

- Company name and address
- Site/project name and address
- Contact information
- Sample identification
- Date and time of sample collection
- Sample matrix
- Number of containers
- Preservative
- Parameters requested for analysis
- Signature of collector
- Signature of person(s) involved in the chain of possession
- Custody seal number (if used)
- Requested turnaround time
- Data deliverables
- Special instructions

All C-O-Cs are included with their respective laboratory reports in Appendix G.

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7.0 ANALYTICAL PROCEDURES

7.1 Field Procedures

The temperature, DO, specific conductance, ORP and pH of each surface water and groundwater sample collected was measured in the field with a YSI® 6820 or YSI 600 XLM multi-parameter probe, as described in Sections5.3 and 5.4. Turbidity was also measured in groundwater samples using a Lamotte 2020 turbidity meter. Prior to use, the multi-parameter probe was calibrated in accordance with the manufacturer's instructions. Field parameters and results of probe calibration were recorded in either the field notebook or on specific log sheets.

7.2 Laboratory Procedures

All soil, groundwater, sediment, and surface water samples collected as part of this RI were submitted to Accutest of Dayton, New Jersey, a New Jersey-certified laboratory that is accredited to perform perchlorate analysis for drinking water. The aqueous samples were analyzed for perchlorate by USEPA Method 314.0, the method specified in the March 2, 2000 Federal Register (42 FR 11371) for the analysis of perchlorate in public water supply systems.

The non-aqueous samples were analyzed for perchlorate using a modified Method 314.0. The Method Detection Limits (MDLs) achieved for perchlorate were 0.58 to 7.4 ppb in groundwater samples, 0.92 ppb in surface water samples, 1.7 to 1.9 ppb in soil samples, and 2.0 to 8.7 ppb in sediment samples. Laboratory reporting limits (RLs) for these methods were 3.0 to 24 ppb in groundwater samples, 3.0 ppb in surface water samples, 9.3 to 10 ppb in soil samples, and 11 to 47 ppb in sediment samples. Instances where RLs were elevated were due to dilution of the sample during laboratory analysis. Laboratory detection and reporting limits are further discussed in Section 9 below.

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8.0 QUALITY ASSURANCE/QUALITY CONTROL

Several quality assurance measures were associated with each sampling and analysis event to assure that samples delivered to the laboratory for analysis were representative of site conditions.

8.1 Field Blanks

Field blanks were collected to assess sample equipment and its related handling, preparation, storage and shipment. Field blanks were collected, stored, and traveled with the other samples at all times. Field blanks consisted of one set of botties identical to the set used to collect media samples, filled with demonstrated analyte free water provided by Accutest.

Field blank water traveled with the sample containers and arrived onsite within one day of preparation in the laboratory. Blanks and their associated samples were held onsite for no longer than two calendar days and arrived back in the laboratory within one day of shipment from the field.

8.1.1 Aqueous Matrix

During sampling of groundwater from existing monitoring wells, field blanks were collected during each day of sampling. Each field blank was collected by pouring laboratory-supplied analyte-free water through a clean, decontaminated bailer and into an empty set of laboratory-supplied bottles. The water was then transferred through a 0.2-micron pore-diameter filter fitted to a dedicated sterile syringe into a sterile nalgene sample bottie for analysis. All filters and syringes were sterile and dedicated to each sample location.

Field blanks were also collected during the vertical groundwater profiling task. The field blank was collected by pouring the laboratory-supplied analyte-free water over a decontaminated submersible pump and into an empty set of bottles for analysis.

The field blanks were preserved in the same manner as the samples being submitted for laboratory analysis and were analyzed by the laboratory for perchlorate.

Surface water field blanks were not collected, as the surface water samples were collected directly into the sample container from the surface water source.

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8.1.2 Non-Aqueous Matrix

Field blanks were also collected during the non-aqueous soil and sediment sampling tasks. During soil sampling, analyte-free water was poured through a clean, unused acetate liner, into a clean, stainless-steel mixing bowl, and then into the laboratory-supplied sample bottle. For sediment samples, the field blank water was poured over a stainless-steel spoon, into a clean mixing bowl, and then in the sample bottle.

The non-aqueous field blanks were collected at a frequency of at least one per day and 10% of the total number of samples collected during the sampling event. As such, five field blanks were collected during the collection of 48 soil samples and two field blanks were collected during the collection of nine sediment samples.

8.2 Duplicates

Field duplicates were collected for perchlorate at a rate of 5% (i.e., one for every 20 samples collected) of the total number of samples collected per media sampled and were submitted to the laboratory as "blind" samples. Duplicates were obtained by alternately filling sample containers from the sampling device, stainless-steel bowl, or, in the case of groundwater samples, from the filtering device and syringe. "Blind" samples were labeled by the sampler with a fictional sample identification number and sample collection time. A summary table of field duplicates and their associated sample identification numbers is presented in the table below:

Original Sample	Duplicate Sample	Date Collected	Media
SS-07 (6-8)	SS-27 (6-8)	10/26/09	Soil
SS-12 (5-7)	SS-32 (5-7)	10/27/09	Soil
SS-23 (2-4)	SS-33 (2-4)	10/28/09	Soil
VP-14 (105-110)	VP-24 (105-110)	10/19/09	Groundwater
VP-15A (99-104)	VP-25A (99-104)	10/21/09	Groundwater
SC3D(R)	SC34D	10/21/09	Groundwater
SC32D	SC35D	10/22/09	Groundwater
IWC-5	IWC-6	10/21/09	Groundwater
SC9S	SC33S	10/21/09	Groundwater
SC34D	SC37D	11/19/09	Groundwater
SC36D	SC37D	9/8/10	Groundwater
K	J	9/9/10	Groundwater
SC40D	SC-49D	4/29/11	Groundwater
SW-4	SW-10	10/28/09	Surface Water
SED-4	SED-10	10/28/09	Sediment

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Also note that monitoring well K was resampled on January 21, 2010 to confirm analytical results from the previous sampling event on October 22, 2009. Therefore, the January results appear as duplicate results in the results summary table (Table 2-1).

8.3 Background Samples

A background soil sample was collected from the northwest comer of SMC's manufacturing parcel (Figure 9-1), an area in which there were no historical industrial activities. Also, this location was approximately 1,300 feet upwind of the on-site furnace smokestack, indicating there would be a minimal impact in the event there were any potential air emissions of perchlorate.

Background groundwater samples were collected from wells SC11S(R), SC12S, SC12D, SC13S(R), SC13D, SC14S, SC15S, SC16S, SC25S, OBS–2A, W2R and W3D, which are located hydraulically upgradient of the former wastewater lagoons and Former Chemical Storage Building, to compare Site conditions to the surrounding environment. These wells were generally sampled before any other on–site wells.

Background surface water and sediment samples were collected from SW-8 (Hudson Branch head waters, sediment only due to lack of surface water) and SW-9 (Burnt Mill Branch).

8.4 Decontamination of Sampling Equipment

Bailers used for ongoing monthly groundwater sampling at SMC were also utilized for groundwater sampling during the RI. These bailers are dedicated to a well for a total of two consecutive sampling events. Between sampling events each bailer is stored inside its dedicated monitoring well. After completion of two consecutive sampling events, the bailer is removed from the well, decontaminated by the laboratory, and a new laboratory-decontaminated bailer is used during the subsequent two groundwater sampling events. The bailers removed from the wells are submitted to a laboratory for decontamination using the Eight-Step Decontamination Procedure based on the American Society for Testing and Materials (ASTM)*Practice for Decontamination of Field Equipment Used at Nonradioactive Waste Sites*, number D 5088-90 (NJDEP, 2005)as follows:

- Laboratory grade glassware detergent plus tap water wash;
- Generous tap water rinse;
- Distilled and deionized (ASTM Type II) water rinse;

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- 10% nitric acid rinse (trace metal or higher grade HNO3 diluted with distilled and deionized (ASTM Type II) water;
- Distilled and deionized (ASTM Type II) water rinse;
- Acetone (pesticide grade) rinse;
- Total air dry or pure nitrogen blow out; and
- Distilled and deionized (ASTM Type II) water rinse.

Stainless-steel spoons and bowls used for soil and sediment sampling were also decontaminated by a laboratory prior to first use in the field and then by field personnel, as needed, during field work, using the same eight-step decontamination procedure listed above.

Decontamination of the field parameter probes and electronic water level indicator was accomplished prior to the sampling of each well or each vertical profile depth using a distilled water rinse per the manufacturer's directions. Probes were not placed in containers storing samples for laboratory analysis.

Prior to commencing any drilling and prior to drilling each vertical groundwater profiling borehole, the SAT, standard augers, and the packer and submersible pump assembly were properly decontaminated by steam cleaning. The packer and submersible pump assembly was also decontaminated both before and after sampling each interyal by scrubbing the outside of the assembly with a laboratory-grade soap (Alconox) and water mixture and pumping the mixture through the pump. The entire assembly was then rinsed with tap water, which was also pumped through the pump.

Prior to drilling each monitoring well borehole, all drilling and sampling equipment (i.e., drill rods, split spoons, etc.) were properly decontaminated by steam cleaning. The split spoons were also decontaminated between each sampling interval by scrubbing them with a laboratory-grade soap (Alconox) and water mixture and then rinsing with tap water.

8.5 Laboratory Data Quality Objectives

The analytical laboratory used for sample analysis incorporated quality control parameters, procedures and corrective actions to fulfill data quality objectives. All procedures used for test methods incorporated quality control parameters to monitor elements that are critical to method performance. Data obtained for these parameters were evaluated and compared to the method criteria in use. If the criteria were not achieved, the procedures specified corrective action and conformation of control before proceeding with sample analysis.

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Quality control parameters, procedures and corrective actions were documented within the standard operating procedures for each method.

Following laboratory analysis, additional steps (e.g., internal laboratory procedures and data validation) were taken to achieve data quality objectives. Quality assurance monitoring was conducted on data packages and included a review of quality control data for compliance and trends indicative of systematic difficulties. Multiple levels of data package review were conducted to assure that reported data satisfied all quality control criteria, and that client specifications and requirements were met.

A data validator familiar with USEPA Region II data validation procedures and perchlorate methods (there currently are no approved perchlorate data validation procedures) reviewed approximately 40% of the aqueous and non-aqueous data packages to ensure data quality objectives were met. Full validation, using the *Region II Evaluation of Metals Data for the Contract Laboratory Program (CLP)*, Revision 13, SOP HW-2, September 2006, was performed on the data for 48 groundwater samples, 21 soil samples, six sediment samples, and six surface water samples. In general, data are valid as reported with several exceptions. Any data revisions following data validation have been incorporated into the summary data tables (Table 2-1, Table 2-2, Table 9-1, and Table 9-4). Copies of the data validation reports are included in Appendix H.

8.6 Laboratory Deliverables

Electronic data and hard copies of the laboratory data reports were provided by the laboratory upon completion of analyses. The hard copy data deliverable package includes a summary of analytical results, copies of C–O–Cs (including internal C–O–Cs), sample tracking chronicles/method references, and support data for each analytical method, including quality control data summaries and raw data. The data package also includes a sample summary and a case narrative/conformance summary.

In accordance with the NJDEP's Technical Requirements for Site Remediation (NJAC 7:26E), electronic files containing the laboratory analytical results and sample information were also supplied by the laboratory. The data conform to the HAZSITE format, and are attached as Appendix I for submittal to the NJDEP Site Remediation and Waste Management Division. Furthermore, USEPA Region II-formatted Environmental Quality Information System (EQuIS)

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electronic data deliverables (EDDs) for the laboratory analytical results and sample information from 2009, 2010, and 2011 have also been attached as Appendix I for submittal to USEPA.

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9.0 ANALYTICAL RESULTS

The analytical results of the perchlorate RI are presented in the following sections.

9.1 Soil Samples

At each of 24 on-site soil boring locations (Figure 9-1), two soil samples were collected from select depth intervals for laboratory analysis. A total of 51 soil samples, including three duplicate samples for QA/QC purposes, were collected. The soil samples were analyzed for perchlorate using a modified USEPA Method 314.0. The laboratory analytical results for all of the soil samples are presented in Table 9-1 and on Figure 9-1. Field quality control sample (i.e., field blank and blind duplicate) analytical results are presented in Table 9-2.

Perchlorate concentrations ranged between ND and 58.3 ppb. Perchlorate was detected at concentrations above the laboratory's detection limit (1.7 ppb to 1.9 ppb) in 18 of the 51 samples. Of these 18 samples, perchlorate was detected at concentrations above the laboratory's reporting limit (9.3 ppb to 10 ppb) in 7 of the 18 samples, as summarized below.

Location	Depth (feet)	Perchlorate Concentration (ppb)
SS-05	5-7	58.3
SS-05	13-15	18.3
SS-21	1-3	11.0
SS-21	5-7	10.7
SS-22	6-8	12.0
SS-24	1-3	26.5
SS-24	4-6	28.8

In general, the highest perchlorate concentrations were detected in soil samples collected from within AOC-1 (Former Chemical Storage Building and adjacent unpaved road) and AOC-2 (former Building D102(A)). All concentrations of perchlorate detected in on-site soil were at least three orders of magnitude lower than the USEPA's RSL for perchlorate in residential soil (55,000 ppb). Although perhaps indicative that perchlorate was used in these areas, the levels are low and not indicative of significant releases of the material. Because of the 1,000 fold difference between the highest observed concentration and the USEPA RSL, no further soil investigation is warranted.

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9.2 Groundwater Samples

9.2.1 Monitoring Wells

2009 Groundwater Sampling Event

During the first round of groundwater sampling (October 20-22, 2009), groundwater samples were collected from a total of 67 monitoring and extraction wells (Figure 2-2 and Figure 2-3). Groundwater samples were collected at a time of high water table/piezometric surface conditions (Table 9-3) as the year-to-date precipitation total for the closest National Weather Service (NWS) station to the Site (Atlantic City International Airport) was about 11 inches (33%) above normal through October 22, 2009. A total of 73 groundwater samples were submitted to Accutest for analysis, including five blind duplicate samples for QA/QC purposes and one duplicate sample that was collected to verify the results of an initial sample analysis, as described below. The groundwater samples were analyzed for perchlorate using USEPA Method 314.0. The laboratory analytical results for all of the groundwater samples are presented in Table 2-1. Field quality control sample (i.e., field blank and blind duplicate) analytical results are presented in Table 9-2.

Perchlorate concentrations ranged between ND and 152 ppb. Perchlorate was detected at concentrations above the laboratory's detection limit (0.58 ppb to 7.4 ppb) in 52 of the 73 samples and at concentrations above the laboratory's reporting limit (3 ppb to 24 ppb) in 37 of the 52 samples in which it was detected. In addition, perchlorate was detected at concentrations above USEPA's Preliminary Remediation Goal of 24.5 ppb in 10 of the 73 samples, above USEPA's Interim Health Advisory level of 15 ppb in 11 of the 73 samples (including three duplicate samples), and above the New Jersey AOC action level of 5 ppb in 30 of the 73 samples (including five duplicate samples). See Figure 9-2 for a presentation of the number of perchlorate detections versus the relative concentrations.

The highest perchlorate concentrations were detected in the deep, off-site monitoring well SC34D (150 ppb and 152 ppb in the duplicate sample) located immediately southeast of the Farm Parcel; the deep, off-site monitoring well SC3D(R) (141 ppb and 136 ppb in the duplicate sample) located on the Farm Parcel; and the shallow, on-site monitoring well K (90.5 ppb) located near the southwest corner of the SMC property. As discussed in Section 3.1, the shallow monitoring well K was re-sampled on January 21, 2010 and perchlorate was detected at 78.1 ppb.

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2010 Groundwater Sampling Event

During the second round of groundwater sampling (September 8 and 9, 2010), groundwater samples were collected from a total of 35 monitoring and extraction wells (Figure 2-2 and Figure 2-3). Groundwater samples were collected at a time of relatively low water table/piezometric surface conditions (Table 9-3) as the year-to-date precipitation total for the Atiantic City International Airport NWS station was about 0.66 inches (2%) below normal through September 9, 2010. A total of 37 groundwater samples were submitted to Accutest for analysis, including two blind duplicate samples for QA/QC purposes. The groundwater samples were analyzed for perchlorate using USEPA Method 314.0. The laboratory analytical results for all of the groundwater samples are presented in Table 2-1. Field quality control sample (i.e., field blank and blind duplicate) analytical results are presented in Table 9-2.

Perchlorate concentrations ranged between ND and 158 ppb. Perchlorate was detected at concentrations above the laboratory's detection limit (0.58 ppb) in 27 of the 37 samples and at concentrations above the laboratory's reporting limit (3.0 ppb for all samples except SC3D(R), which had a reporting limit of 18 ppb) in 18 of the 27 samples in which it was detected. In addition, perchlorate was detected at concentrations above USEPA's Preliminary Remediation Goal of 24.5 ppb in 5 of the 37 samples, above USEPA's Interim Health Advisory level of 15 ppb in 7 of the 37 samples and above the New Jersey AOC action level of 5 ppb in 16 of the 37 samples (including one duplicate sample). See Figure 9-2 for a presentation of the number of perchlorate detections versus the relative concentrations.

The highest perchlorate concentrations were detected in the deep, off-site monitoring well SC34D (158 ppb) located immediately southeast of the Farm Parcel and the deep, off-site monitoring well SC3D(R) (143 ppb) located on the Farm Parcel. This data is comparable with the 2009 deep aquifer zone groundwater results.

2011 Groundwater Sampling Event

During the third and final round of groundwater sampling (April 29, 2011), a groundwater sample was collected from one new monitoring well, SC40D (Figure 2-2 and Figure 2-3). The groundwater sample was collected at a time of relatively average water table/piezometric surface conditions as the year-to-date precipitation total for the Atiantic City International Airport NWS station was about 0.24 inches (1%) above normal through April 29,

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2011. A total of two groundwater samples were submitted to Accutest for analysis, including one blind duplicate sample for QA/QC purposes. The groundwater samples were analyzed for perchlorate using USEPA Method 314.0. The laboratory analytical results for the groundwater samples are presented in Table 2-1. Field quality control sample (i.e., field blank and blind duplicate) analytical results are presented in Table 9-2.

Perchlorate was detected in the groundwater sample from SC40D, and in its duplicate, labeled as SC49D. The detected concentrations, 4.0 ppb and 3.9 ppb, respectively, were less than the applicable screening levels. The laboratory detection limit was 0.73 ppb and the reporting limit was 3.0 ppb for these samples.

9.2.2 Vertical Profiles

At each of the five vertical groundwater profiling locations, groundwater samples were collected in October 2009 from five depth intervals for laboratory analysis. Therefore, a total of 27 groundwater samples, including two duplicate samples for QA/QC purposes, were collected. These groundwater samples were analyzed for perchlorate using USEPA Method 314.0. The laboratory analytical results for the vertical groundwater profiling samples are presented in Table 2-2. Field quality control sample (i.e., field blank and blind duplicate) analytical results are presented in Table 9-2.

Perchlorate concentrations ranged between ND and 12.5 ppb. Perchlorate was detected at concentrations above the laboratory's detection limit (0.58 ppb to 7.4 ppb) in 15 of the 27 samples and above the laboratory's reporting limit (3 ppb to 24 ppb) in 10 of the 15 samples in which it was detected. Concentrations did not exceed USEPA's Preliminary Remediation Goal of 24.5 ppb or USEPA's Interim Health Advisory level of 15 ppb, but exceeded the New Jersey AOC action level of 5 ppb in six samples (including one duplicate sample), as summarized below.

Location	Depth (feet)	Perchlorate Concentration (ppb)
VP-13	100-105	10.6
VP-13	125-130	5.7
VP-13A	111-116	6.0
VP-14 + Duplicate VP-24	105-110	6.2 / 5.9
VP-14	130-135	12.5

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In general, the highest perchlorate concentrations were detected in groundwater samples collected from the bottom three depth intervals of the five depth intervals sampled at each location.

9.3 Surface Water and Sediment Samples

At each of the 10 selected sampling locations along the Hudson Branch, Burnt Mill Pond, and Burnt Mill Branch, co-located surface water and sediment samples were collected (Figure 9-3), with the exception of the furthest upstream sample location along the Hudson Branch (SED-8), because the location was dry at the time of sampling. Therefore, a total of 10 surface water samples and 11 sediment samples, including one duplicate sample from each media for QA/QC purposes, were collected. The surface water and sediment samples were analyzed for perchlorate using USEPA Method 314.0 and a modified Method 314.0, respectively. The laboratory analytical results for the surface water and sediment samples are presented in Table 9-4 and on Figure 9-3. Field quality control sample (i.e., field blank and blind duphcate) analytical results are presented in Table 9-2.

Perchlorate was detected at a concentration above the laboratory's detection limit (0.92 ppb) in only one of the ten surface water samples (SW-1A at 1.8ppb (estimated)) and in only one of the eleven sediment samples (SED-4 at 10.9 ppb (estimated)). Note that detected concentrations were reported as "estimated" by the laboratory because the perchlorate detections were above the laboratory minimum detection limit but below the laboratory reporting limit. The detection limit for surface water was 0.92 ppb and the reporting limit was 3 ppb. The laboratory detection limit and reporting limit for sediment ranged between 2 ppb and 8.7 ppb and 11 ppb and 47 ppb, respectively.

9.4 Field Parameters

Following purging the SAT of three to five volumes of water, but prior to sample collection, field parameters including pH, specific conductivity, turbidity, DO, temperature, and ORP were measured using a YSI 6820 multi-parameter probe and in-line flow-through cell along the discharge tubing. All parameters were monitored for approximately 25 minutes, with field recordings every three to five minutes, to determine to what degree the purge water had

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stabilized prior to sample collection. The water quality parameters tended to stabilize fairly well prior to sample collection, with the only exception being that ORP tended to increase during purging. The final recorded water quality parameters for each sample are presented in Table 9-5.

9.5 Quality Assurance/Quality Control Samples

None of the field blanks submitted for laboratory analysis throughout the investigation exhibited concentrations of perchlorate above the laboratory's report limit. Additionally, field blind duplicate samples exhibited a high level of field and laboratory precision with calculated relative percent difference (RPD) between the environmental sample and the duplicate sample less than 15 percent for all samples where concentrations were greater than the laboratory reporting limit. The analytical results for the field blank and blind duplicate samples are presented in Table 9-2.

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10.0 DATA INTERPRETATION

The major objective of the perchlorate remedial investigation, under the existing NJDEP ACO, was to further define the nature and extent of the previously identified perchlorate plume. The investigation focused on 1) investigating soils within identified areas of concern, 2) collecting groundwater samples from existing monitoring wells, newly installed monitoring wells, and vertical profiling borings, and 3) collecting surface water and sediment samples from nearby surface water bodies at locations upstream of the SMC property, adjacent to the SMC property, and downstream of the SMC property.

10.1 Soil Investigation

For comparison purposes, the analytical results for the perchlorate soil investigation were compared to the USEPA RSLs for perchlorate in residential soil (55,000 ppb) and industrial soil (720,000 ppb). All concentrations of perchlorate detected in on-site soil were at least three orders of magnitude lower than the USEPA RSL for perchlorate in residential soil and greater than four orders of magnitude lower than the USEPA RSL for perchlorate in industrial soil. The maximum perchlorate concentration detected in soil was 58.3 ppb.

The Former Chemical Storage Building and adjacent unpaved road (AOC-1) were investigated with the advancement and sampling of seven soil borings (SS-02 through SS-08). Only very low concentrations of perchlorate, ranging between ND and 8.6 ppb, were detected in soil borings near the Former Chemical Storage Building. The highest perchlorate concentrations detected in on-site soil (SS-05 (5-7') at 58.3 ppb and SS-05 (13-15') at 18.3 ppb) were detected in a boring located along the unpaved road near the northeast comer of the Former Chemical Storage Building. Detected perchlorate concentrations in the remaining three soil borings located along the unpaved road were very low and ranged between ND and 3.0 ppb. The detection of very low levels of perchlorate in soil near the Former Chemical Storage Building is not indicative of significant spills or releases of perchlorate to shallow soil within AOC-I and is probably indicative of the known storage of material in these areas. The observed perchlorate levels are extremely low compared to the residential RSL (by three orders of magnitude), which indicates that AOC-I is not a potential source of perchlorate in the environment.

The footprint of the former furnace building (AOC-2) was investigated with the sampling of four soil borings. Perchlorate was detected at various concentrations in three out of the four

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soil borings at concentrations ranging between ND and 28.8 ppb. The highest concentrations detected within AOC-2 were in soil boring SS-24, which was advanced near the western edge of the former furnace building footprint. The shallow soil sample (1-3') exhibited 26.5 ppb perchlorate and the deeper soil sample (4-6') exhibited 28.8 ppb perchlorate. The detection of perchlorate in soil within the former furnace building footprint is again indicative of the known use of perchlorate in this area. However, the low levels are not indicative of significant spills or releases to shallow soil within AOC-2. The observed perchlorate levels are extremely low compared to the residential and industrial RSLs (by three orders of magnitude), which indicates that AOC-2 is not a potential source of perchlorate in the environment.

The former unlined/lined lagoons (AOC-3) were investigated with the advancement and sampling of twelve soil borings (SS-09 through SS-20). Perchlorate was detected above the laboratory's minimum detection limit in only five of the 25 soil samples, which included one duplicate soil sample. Detected concentrations were extremely low and ranged between 2.0 and 2.9 ppb. The extremely low perchlorate concentrations detected within AOC-3 indicate that the former unlined/lined lagoons are not a potential source of perchlorate in the environment.

One boring (SS-01) was advanced in the northwest corner of the manufacturing parcel to assess background soil conditions. Perchlorate was not detected in the two soil samples collected at SS–01.

A soil mass flux and groundwater mass balance calculation was performed to determine if the residual perchlorate contamination in the soil could impact the underlying groundwater with perchlorate concentrations of ≥5 pg/Lover a long-term period (Appendix J). The calculation used a very conservative assumption that the entire soil vadose zone depth (approximately 15 feet) was impacted by the highest soil perchlorate concentration of 58.3 ppb, even though that concentration was only detected within a two-foot interval (i.e., 5-7 ftbgs) at soil boring SS-05. The concentration of perchlorate in the soil below this depth interval was 18.3 ppb (i.e., 13-15 ftbgs). The area of impact was assumed to be a circular 1,000 ft^2 area (distance between soil borings in the SS-05 area along the unpaved road). Using the partitioning coefficient for potassium perchlorate (Log K_{oc} = 1.687), the resulting groundwater perchlorate concentration in the mixing zone direetiy beneath the impacted soil zone would not exceed 5 µg/L. Furthermore, given the fact that perchlorate does not bind well to soil particles and the movement of perchlorate in soil is largely a function of the amount of water present, the

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concentration of perchlorate in the soil will continue to decrease over time. Based on these results, there is no indication that the residual perchlorate remaining in the on-site soils could be acting as a continuing source of perchlorate contamination to the groundwater.

10.2 Groundwater Investigation

As part of the perchlorate remedial investigation, groundwater samples were collected from 67 monitoring wells/extraction wells and five vertical profiling locations during the 2009 sampling event, with samples collected from five discrete sample depths at each vertical profile location (25 total vertical profile samples and 92 total groundwater samples, not counting duplicates). Furthermore, groundwater samples were collected from 35 monitoring wells/extraction wells during the 2010 sampling event. Finally, groundwater samples were collected from one newly installed monitoring well during the April 2011 sampling event. For evaluation purposes, the unconfined aquifer (Cohansey Sand) between the water table and the underlying clay layer (Kirkwood Formation) was separated into three zones (i.e., shallow, intermediate, and deep). At each well and vertical profiling location, the saturated thickness was calculated as the zone between the water table and the clay layer. The saturated thickness was separated into three equal zones, referred to by the relative aquifer depth (i.e., shallow, intermediate, and deep). The relative aquifer depth was determined for each monitoring well and vertical profiling sample depth by evaluating the depth of the midpoint of the screened interval relative to these zones. Relative aquifer depths for each groundwater monitoring/extraction well sample location are listed in Table 2-1 and Table 2-2 for the vertical profile sample locations. Groundwater perchlorate isopleth maps were developed based on the comprehensive 2009 vertical profiling and monitoring/extraction well sampling data, and supplemented with historic (2006/2007) data from vertical profile locations VP-1, VP-2, VP-3, VP-4 and VP-10 and the 2011 data from the newly installed well SC40D. The groundwater perchlorate isopleth maps are presented as Figures 10-1A, 10-1B, 10-2A, 10-2B, 10-3A and 10-3B.

2009 Groundwater Sampling Event

Perchlorate was not prevalent in the groundwater samples collected from the shallow aquifer zone. Perchlorate was only detected in 8 of the 40 (20%) shallow groundwater samples (monitoring/extraction wells and vertical profiles, including duplicate QA/QC samples) at

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concentrations above the laboratory's reporting limit. The highest concentrations of perchlorate in the shallow aquifer and the only concentrations that exceeded the USEPA Interim Health Advisory level of 15 ppb were detected in monitoring well K (90.5 ppb) and extraction well Layne (67.4 ppb). Excluding those two wells (K and Layne), perchlorate concentrations ranged between ND and 8.2 ppb. Monitoring well K and extraction well Layne are located near the southwest comer of the SMC property. Concentrations of perchlorate in the shallow aquifer zone that exceeded the New Jersey AOC action level of 5 ppb were only detected in on-site monitoring/extraction wells (K, Layne, SC9S, IWC-2, and IWC-1). Perchlorate concentration isopleths in the shallow aquifer zone are presented in Figure 10-1A for the immediate vicinity of the SMC site and Farm Parcel area and in Figure 10-1B for the regional study area.

Perchlorate was more prevalent in the groundwater samples collected from the intermediate aquifer zone than in the shallow aquifer zone. Perchlorate was detected in 6 of the 15 (40%) intermediate zone groundwater samples (monitoring/extraction wells and vertical profiles) at concentrations above the laboratory's reporting limit. Perchlorate concentrations ranged between ND and 12.9 ppb, with none of the samples exhibiting perchlorate above the USEPA Interim Health Advisory level of 15 ppb. The highest concentration of perchlorate in the intermediate aquifer zone was detected in extraction well RW6S (12.9 ppb). A concentration of perchlorate that marginally exceeded the New Jersey AOC action level of 5 ppb was also detected in monitoring well SC6S (6.4 ppb). Extraction well RW6S and monitoring well SC6S are located offsite, near the southwest comer of the SMC property. When compared to the locations of the highest concentrations identified in the shallow aquifer zone, the locations of the highest perchlorate concentrations identified in the intermediate aquifer are generally further downgradient from the SMC property relative to groundwater flow direction. Perchlorate concentration isopleths in the intermediate aquifer zone in the immediate vicinity of the SMC site and Farm Parcel are presented in Figure 10-2A and in Figure 10-2B for the regional study area.

Perchlorate was more prevalent in the groundwater samples collected from the deep aquifer zone, when compared to the shallow and intermediate aquifers zones. Perchlorate was detected in 33 of 45 (approximately 73%) groundwater samples (monitoring/extraction wells and vertical profiles, including duplicate QA/QC samples) at concentrations above the laboratory's reporting limit. Perchlorate concentrations ranged between ND and 152 ppb. The highest

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concentration of perchlorate in the deep aquifer zone was detected in monitoring well SC34D (150 ppb and 152 ppb in the blind duplicate sample), with the next highest concentrations being detected in monitoring wells SC3D(R) (141 ppb and 136 ppb in the blind duplicate sample), SC28D (49.0 ppb), and SC1D (46.3 ppb). Monitoring well SC34D is located immediately southeast of the Farm Parcel, monitoring wells SC3D(R) and SC1D are located within the Farm Parcel, and monitoring well SC28D is located south of the SMC facility along the west side of South West Boulevard. Other deep wells exhibiting perchlorate above the USEPA Interim Health Advisory level of 15 ppb include off-site wells SC10D and SC21D, while wells/vertical profile intervals exhibiting perchlorate above the New Jersey AOC action level of 5 ppb include on-site wells 1WC-5, SC20D, W3D, and W9; off-site wells SC-6D, SC-17D, SC19D, SC26D, SC36D, SC2D(R), SC31D and RW6D; and vertical profile intervals VP-13 (100-105), VP-13 (125-130), VP-13A (111-116), VP-14 (105-110) (and its duplicate), and VP-14 (130-135). When compared to the locations of the highest concentrations identified in the intermediate aquifer zone, the locations of the highest perchlorate concentrations identified in the deep aquifer zone are generally further downgradient from the SMC property. Perchlorate concentration isopleths in the deep aquifer zone in the immediate vicinity of the SMC site and Farm Parcel are presented in Figure 10-3A and in Figure 10-3B for the regional study area.

As is evident by comparing the isopleths in Figures 10-1A, 10-1B, 10-2A, 10-2B,10-3A, and 10-3B, the locations of the highest perchlorate concentrations in each of the shallow, intermediate, and deep aquifer zones are progressively further downgradient from the SMC site, which could be consistent with an historical source in the vicinity of the SMC site undergoing advective transport within the southwesterly flowing groundwater, subject to a downward vertical gradient created by pumping wells (e.g., irrigation, extraction, etc.) screened in the deep aquifer zone. This process is further evident by the evaluation of geologic cross sections for the study area. Figures 10-4 and 10-5 represent cross sections in the northeast – southwest direction (parallel to groundwater flow) and the northwest – southeast direction (perpendicular to groundwater flow), respectively (see Figure 2-3 for cross section locations). The wells and vertical profiles (and associated screened intervals and perchlorate concentrations) located along the cross-section lines, the interpreted perchlorate isoconcentration lines, and the top of the clay confining unit (Kirkwood Formation) are illustrated on the cross sections. It is apparent from the

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cross sections that perchlorate concentrations generally increase with depth and distance from the Site.

It should also be noted that there is evidence of a regional perchlorate issue, with moderate perchlorate concentrations in the deep aquifer zone. This is represented by the presence of perchlorate in wells screened in the deep aquifer zone that are located upgradient of the Site's potential perchlorate source areas. Specifically, perchlorate was detected in deep zone upgradient wells W3D and OBS-2A at concentrations of 8.6 ppb and 4.8 ppb, respectively, which exceed or are close to the New Jersey AOC action level of 5 ppb. The perchlorate in groundwater has been delineated to the USEPA's PRG 24.5 ppb level (Figures 10-1 through 10-3). Using this limit, the groundwater plume at or above this level has an area of approximately 9 acres in the shallow aquifer, no acreage in the intermediate aquifer, and approximately 367 acres in the deep aquifer. Additionally the perchlorate in groundwater has been delineated to the USEPA interim health advisory level of 15 ppb (Figures 10-1 through 10-3). Using this limit, the groundwater plume at or above this level has an area of approximately 13 acres in the shallow aquifer, no acreage in the intermediate aquifer, and 462 acres in the deep aquifer. It may not be possible to delineate the perchlorate to the NJDEP AOC level of 5ppb because of the apparent ubiquitous presence of background perchlorate in groundwater within the study area. Groundwater samples collected from background (i.e., upgradient) and/or far downgradient locations identified perchlorate concentrations close to or above the 5 ppb level.

2010 Groundwater Sampling Event

Similar to the 2009 sampling event, perchlorate was not prevalent in the groundwater samples collected from the shallow aquifer zone. Perchlorate was only detected in 2 of the 14 (14%) shallow groundwater samples (including duplicate QA/QC samples) at concentrations above the laboratory's reporting limit. The highest concentration of perchlorate in the shallow aquifer and the only concentration that exceeded both the New Jersey AOC action level of 5 ppb and the USEPA Interim Health Advisory level of 15 ppb was detected in extraction well Layne (36.6 ppb). Excluding extraction well Layne, perchlorate concentrations ranged between ND and 3.0 ppb. Shallow on site well K exhibited a significant decrease in the perchlorate concentration (1.9 ppb and 3.0 ppb in the blind duplicate sample) compared to the 2009 results (90.5 ppb).

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Perchlorate was more prevalent in the groundwater samples collected from the intermediate aquifer zone than in the shallow aquifer zone. Perchlorate was detected in 3 of the 6 (50%) groundwater samples (monitoring wells) at concentrations above the laboratory's reporting limit. The highest concentrations of perchlorate in the intermediate aquifer were detected in monitoring wells SC6S (19.6 ppb) and SC3S (13.0 ppb). Excluding monitoring wells SC6S and SC3S, perchlorate concentrations ranged between ND and 4.4 ppb. Consistent with the findings of the 2009 groundwater monitoring event, the locations of the highest perchlorate concentrations identified in the intermediate aquifer are generally further downgradient from the SMC property relative to groundwater flow direction when compared to the locations of the highest concentrations identified in the shallow aquifer zone.

Perchlorate was more prevalent in the groundwater samples collected from the deep aquifer zone, when compared to the shallow and intermediate aquifers zones. Perchlorate was detected in 14 of 17 (82%) groundwater samples (monitoring wells, including duplicate QA/QC samples) at concentrations above the laboratory's reporting limit. Perchlorate concentrations ranged between ND and 158 ppb. The highest concentration of perchlorate in the deep aquifer zone was detected in monitoring well SC34D (158 ppb), with the next highest concentrations being detected in monitoring wells SC3D(R) (143 ppb), SC1D (44.5 ppb), SC21D (32.8 ppb), and SC28D (16.8 ppb). Other wells exhibiting perchlorate concentrations above the New Jersey AOC action level of 5 ppb include on-site wells SC20D and W3D; and off-site wells SC-10D, SC-17D, SC26D, SC36D, and SC2D(R). Consistent with the findings of the 2009 groundwater monitoring event, the locations of the highest perchlorate concentrations identified in the deep aquifer are generally further downgradient from the SMC property relative to groundwater flow direction when compared to the locations of the highest concentrations identified in the shallow and intermediate aquifer zones.

2011 Groundwater Sampling Event

Groundwater samples were collected from one newly-installed well, SC40D, during this sampling event (see Figure 2-3). This well was installed to address a data gap that existed west of the Site and in a cross-gradient orientation to the Site relative to the groundwater flow direction. SC40D is screened to the deep portion of the Cohansey aquifer. Perchlorate was detected in the groundwater samples (including a duplicate QA/QC sample) at concentrations

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above the laboratory's reporting limit, at 4.0 ppb and 3.9 ppb. These results, coupled with the location of well SC40D relative to the Site (i.e., in a cross-gradient orientation), add further evidence that there is a regionally-present background concentration of perchlorate. Furthermore, the installation of this well and collection of groundwater samples from it closes the data gap that existed in that area.

10.3 Surface Water and Sediment

As part of the perchlorate remedial investigation, surface water and co-located sediment samples were collected from ten locations downstream and upstream (upgradient) along the Hudson Branch, Burnt Mill Pond (including downstream of the pond outfall) and Burnt Mill Branch. Perchlorate was detected at a concentration above the laboratory's detection limit in only one of the ten surface water samples (SW-1A at 1.8 ppb (estimated)) and in only one of the eleven sediment samples (SED-4 at 10.9 ppb (estimated)). While surface water levels were elevated approximately 1-2 feet above typical flow conditions at the time of sampling, the absence of perchlorate in the surface water and sediment samples indicates that neither contaminated groundwater nor the discharge of stormwater to surface water is adversely impacting surface water or sediment quality. As the highest concentrations of perchlorate in groundwater were typically identified within the deep aquifer zone, well beneath any potential interface with the surface water bodies, discharges of groundwater to surface water would not be expected to have a significant impact on surface water/sediment perchlorate levels.

10.4 Data Gap Analysis

The initial results of the perchlorate remedial investigation indicated that the main data gap was with respect to the delineation of the perchlorate groundwater plume relative to the New Jersey AOC action level of 5 ppb. The southern and southwestern edges of the perchlorate plume were well defined based on the absence of perchlorate at levels exceeding the New Jersey AOC action level of 5 ppb results in monitoring wells SC30D, SC32D, and SC35D and at vertical profiling location VP-15. However, the detections of 5.3 ppb perchlorate (October 20-22, 2009) and 6.4 / 5.6 ppb perchlorate (original and duplicate sample collected September 8-9, 2010) in deep monitoring well SC36D indicated that the northern limit of the perchlorate plume in the deep aquifer zone was not fully defined. Because of this, monitoring well SC40D was

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installed in early April 2011 and sampled on April 29, 2011. The results of perchlorate analysis on the groundwater sample from SC40D (and a duplicate sample) indicate that this data gap has been closed, as perchlorate was not detected above the New Jersey AOC action level of 5 ppb, and that a regional background concentration of perchlorate is present, as the concentration of perchlorate in the new well (4.0 ppb) was very close to the action level.

With respect to soil, while perchlorate was detected in the soil at AOC-1 and AOC-2 at levels that were slightly elevated relative to the background sample and samples collected within AOC-3, the concentrations of perchlorate were at least three orders of magnitude lower than the USEPA RSL for perchlorate in residential soil (55,000 ppb). There is no indication from the studies that large quantities of perchlorate remain in the on-site soils that could be acting as a continuing source of perchlorate contamination to the groundwater. Therefore no data gaps were identified relative to the soil investigation.

With respect to surface water and sediment, perchlorate was only detected at estimated concentrations (i.e., greater than the laboratory minimum detection limit but less than the laboratory reporting limit) in one of the ten surface water samples and in one of the eleven sediment samples. While the surface water levels and flow conditions were above normal at the time of sampling, the general lack of detection of perchlorate in the samples indicates that surface water and sediment quality have not been adversely impacted by perchlorate, either discharging directly via groundwater discharge or as a result of stormwater discharge to the Hudson Branch. Therefore, no data gaps were identified relative to the surface water and sediment investigation.

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11.0 CONCLUSIONS

The RI soil investigation identified the presence of extremely low levels of perchlorate in the soils of AOC-1 and AOC-2, with all concentrations of perchlorate detected in on-site soil at least three orders of magnitude lower than the USEPA RSL for perchlorate in residential soil (55,000 ppb). The on-site soils are not considered a significant on-going source of perchlorate contamination. Given that 1) perchlorate is highly soluble in water; 2) the aquifer materials consist of the Cohansey Sand, which is comprised of coarse sands and little silt overlying generally finer sand and some clay and silt lenses; and 3) there is little to no organic matter within the Cohansey Sand to attenuate the movement of perchlorate through both the vadose and saturated zones, it is possible that a historical release or use of perchlorate in the vicinity of the Site has impacted the underlying groundwater. The extremely low levels of perchlorate observed in the soils are not indicative of a continuing source at the Site, nor do they confirm the existence of a historical release at the Site which could have resulted in the migration of perchlorate into the groundwater. Also, significant levels of perchlorate must be present elsewhere in Newfield in agricultural soils or irrigation waters, since a U.S. Food and Dmg Administration study identified crops (lettuce and spinach) from Newfield that contained significant levels of perchlorate.

On-site and off-site monitoring wells and extraction wells have exhibited perchlorate groundwater concentrations as high as 158 ppb and perchlorate concentration isopleths created for the shallow, intermediate, and deep zones of the aquifer indicate a sinking perchlorate plume migrating in a southwesterly direction under the influence of advective groundwater transport and a downward hydraulic gradient. Using the New Jersey ACO action level of 5 ppb, the extent of the perchlorate plume was well defined by the completion of the perchlorate groundwater RI. The southeastern, southern, and southwestern edges of the perchlorate plume are well defined based on the absence of perchlorate above 5 ppb in monitoring wells SC30D, SC32D, and SC35D and vertical profiling location VP-15. The northern limit of the perchlorate plume is completely defined (using a criterion of 5 ppb), due to the detection of 5.3 ppb (2009) and 6.4/5.6 ppb (2010) perchlorate in deep monitoring wells SC36D and detections of 4.0 ppb and 3.9 ppb in a groundwater sample and it's duplicate from SC40D. Based on the delineation of perchlorate in groundwater to a concentration of 5 ppb, the characterization of perchlorate in groundwater surrounding the Site is now complete. Also, it appears that there may be a regional

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deep aquifer zone perchlorate issue, with moderate concentrations of perchlorate identified in wells located upgradient or sidegradient of the Site including USGS well OBS-2A (4.8 ppb), on-site monitoring well W3D (8.6 ppb) and monitoring well SC40D (4.0 ppb). This regional issue may have resulted from the extensive agricultural land use within the area and the potential use of Chilean-mined fertilizers (of which perchlorate is a component) on the cultivated soils of the area farms. The documentation of the presence of perchlorate in lettuce crops in Newfield and spinach crops in Vineland and the historical use of irrigation wells in the area seem to provide evidence of a regional groundwater perchlorate issue.

As detailed in this report, the Site has been fully characterized in accordance with the RIWP and the SMC-AOC.

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TABLE 2-1
Groundwater Perchlorate Results Summary
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

WELL IDENTIFIER	SCREENED INTERVAL (FTBGS)[1]	RELATIVE AQUIFER DEPTH	PERCHLORATE (µg/L) SAMPLING EVENT							
			JULY 27, 2004	SEPTEMBER 10, 2004	SEPTEMBER 30, 2004	OCTOBER 27, 2004	FEBRUARY 21, 2006	OCTOBER 20-22, 2009[2]	SEPTEMBER 8-9, 2010	APRIL 29, 2011
ON-SITE MONITORING WELLS										
IWC-1	15-20	Shallow	9.9	10.0	NA	NA	NA	7.3	NA	NA
IWC-2	35-40	Shallow	10	9.4	NA	NA	NA	7.7	NA	NA
IWC-3	55-60	Intermediate	4.0 / 4.1	4.0 / 4.0	NA	NA	NA	2.5 J [3]	NA	NA
IWC-4	75-80	Intermediate	5.4	6.9	NA	NA	NA	4.6	4.4	NA
IWC-5	95-100	Deep	**10.0**	**11.0**	NA	NA	NA	**11.7 / 10.7**[4]	NA	NA
A	114-124	Deep	NA	<0.18	NA	NA	NA	<3.0	NA	NA
B	36-46	Shallow	NA	8.0	NA	NA	NA	1.2 J [3]	NA	NA
K	36-46	Shallow	NA	NA	NA	NA	NA	**90.5 / 78.1**	1.9 J[5] / 3.0	NA
L	42-52	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC9S	15-30	Shallow	NA	8.0	NA	NA	NA	8.2 / a.0[5]	NA	NA
SC11S(R)	9-24	Shallow	NA	NA	NA	NA	NA	<3.0	<3.0	NA
SC12S	15-25	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC12D	126-136	Deep	NA	NA	NA	NA	NA	<3.0	<3.0	NA
SC13S(R)	14.7-24.7	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC13D	127-137	Deep	NA	NA	NA	NA	NA	2.2 J [6]	NA	NA
SC14S	12-27	Shallow	NA	0.21 J	NA	NA	NA	<3.0	<3.0	NA
SC15S	12.5-27.5	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC16S	12-27	Shallow	NA	NA	NA	NA	NA	<3.0	<3.0	NA
SC20S	7-22	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC20D	129-139	Deep	NA	NA	NA	NA	NA	7.0	6.0	NA
SC22S	3-18	Shallow	NA	NA	NA	NA	NA	<3.0	2.0 J[6]	NA
SC23S	9-24	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC25S	7-22	Shallow	NA	NA	NA	NA	NA	<3.0	0.54 J[6]	NA
SC27S	7-22	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
MWH-4	119-129	Deep	NA	NA	NA	NA	NA	<3.0	NA	NA
W2(R)	2-17	Shallow	NA	NA	NA	NA	NA	0.94 J [6]	<3.0	NA
W3D	88-108	Deep	NA	NA	NA	NA	NA	8.6	7.4	NA
W4	55-75	Intermediate	NA	NA	NA	NA	NA	1.2 J[6]	0.93 J[6]	NA

NOTES:

(1) - FTBGS, Feet Below Ground Surface
(2) - Monitoring wells SC33D & SC34D were sampled on 11/19/09, monitoring wells SC35D & SC36D were sampled on 12/7/09, monitoring well K was re-sampled on 1/21/10, & recovery wells Layne & W9 were sampled on 1/21/10
(3) - Data qualifier changed to "J" by data validation
(4) - "Blind" duplicate sample labeled as IWC-8
(5) - "Blind" duplicate sample labeled as SC33S
(6) - Data not validated, but qualifier changed to "J" consistent with data validation
(7) - Data validation corrected reporting limit
(8) - "Blind" duplicate sample labeled as SC35D
(9) - "Blind" duplicate sample labeled as SC37D
(10) - "Blind" duplicate sample labeled as SC34D

µg/L - micrograms per liter
NA - Not Analyzed
All samples were analyzed by EPA Method 314.0
BOLD - indicates that value is greater than the proposed New Jersey Ground Water Quality Criteria of 5 ug/L
Shaded - Indicates that value is greater than the U.S. EPA Interim Health Advisory Level of 15 ug/L
J - Indicates a result is less than the reporting limit and estimated by the laboratory
Results with slash (e.g., 13.0 / 12.9) indicate duplicate results

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TABLE 2-1
Groundwater Perchlorate Results Summary
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

WELL IDENTIFIER	SCREENED INTERVAL (FTBGS)[1]	RELATIVE AQUIFER DEPTH	PERCHLORATE (µg/L) SAMPLING EVENT							
			JULY 27, 2004	SEPTEMBER 10, 2004	SEPTEMBER 30, 2004	OCTOBER 27, 2004	FEBRUARY 21, 2006	OCTOBER 20-22, 2009[2]	SEPTEMBER 8-9, 2010	APRIL 29, 2011
OFF-SITE MONITORING WELLS										
OBS-2A	129-149	Deep	NA	NA	NA	NA	NA	4.8 J [6]	NA	NA
IW1	32-62	Intermediate	NA	NA	NA	NA	NA	1.1 J [6]	NA	NA
SC4S	35-45	Shallow	NA	NA	1.1	NA	NA	<3.0	NA	NA
SC6S	45-75	Intermediate	NA	NA	1.6	NA	NA	6.4	19.6	NA
SC6D	110-120	Deep	NA	NA	3.5	NA	NA	9.8	NA	NA
SC10S	35-55	Shallow	NA	NA	NA	NA	NA	1.7 J [6]	<3.0	NA
SC10D	105-125	Deep	NA	NA	NA	NA	NA	19.5	8.5	NA
SC17S	19-28	Shallow	NA	NA	NA	NA	NA	<3.0	<3.0	NA
SC17D	143-153	Deep	NA	NA	NA	NA	NA	6.3	5.6	NA
SC18S	4-19	Shallow	NA	NA	NA	NA	NA	<15.0 [7]	<3.0	NA
SC18D	119-129	Deep	NA	NA	NA	NA	NA	3.8	NA	NA
SC19S	2-17	Shallow	NA	NA	NA	NA	NA	<3.0	NA	NA
SC19D	120-130	Deep	NA	NA	NA	NA	NA	14.3	NA	NA
SC21S	3-18	Shallow	NA	NA	NA	NA	NA	<3.0	<3.0	NA
SC21D	125-135	Deep	NA	NA	NA	NA	NA	29.1	32.8	NA
SC26D	127-137	Deep	NA	NA	NA	NA	NA	11.0	6.8	NA
SC28D	133-153	Deep	NA	NA	NA	34.0	NA	49.0	16.8	NA
SC30D	147-157	Deep	NA	NA	NA	1.9	NA	2.6 J [6]	2.8 J [6]	NA
SC32D	92-102	Deep	NA	NA	NA	NA	NA	3.2 / 3.3 [8]	3.7	NA
SC33D	82.5-92.5	Intermediate	NA	NA	NA	NA	NA	<3.0	<3.0	NA
SC34D	130-140	Deep	NA	NA	NA	NA	NA	150 / 152 [9]	158	NA
SC35D	89.5-99.5	Deep	NA	NA	NA	NA	NA	2.0 J [6]	2.7 J [6]	NA
SC36D	107-117	Deep	NA	NA	NA	NA	NA	5.3	6.4 / 5.6 [8]	NA
SC40D	120-130	Deep	NA	NA	NA	NA	NA	NA	NA	4.0 / 3.9 [11]
ON-SITE EXTRACTION WELLS										
Layne	42-47	Shallow	NA	23.0	NA	NA	NA	67.4	36.6	NA
W9	110-130	Deep	NA	10.0	NA	NA	NA	6.1	NA	NA

NOTES:

(1) - FTBGS, Feet Below Ground Surface
(2) - Monitoring wells SC33D & SC34D were sampled on 11/19/09, monitoring wells SC35D & SC36D were sampled on 12/7/09, monitoring well K was re-sampled on 1/21/10, & recovery wells Layne & W9 were sampled on 1/21/10
(3) - Data qualifier changed to "J" by data validation
(4) - "Blind" duplicate sample labeled as IWC-6
(5) - "Blind" duplicate sample labeled as SC33S
(6) - Data not validated, but qualifier changed to "J" consistent with data validation
(7) - Data validation corrected reporting limit
(8) - "Blind" duplicate sample labeled as SC35D
(9) - "Blind" duplicate sample labeled as SC37D
(10) - "Blind" duplicate sample labeled as SC34D
(11) - "Blind" duplicate sample labeled as SC49D

µg/L - micrograms per liter
NA - Not Analyzed
All samplee were analyzed by EPA Method 314.0
SOLD - indcates that value is greater than the proposed New Jersey Ground Water Quality Criteria of 5 ug/L
Shaded - Indcates that value is greater than the U.S. EPA Interim Health Advisory Level of 15 ug/L
J - Indcates a result is less than the reporting limit and estimated by the laboratory
Results with slash (e.g., 13.0 / 12.9) indicate duplicate results

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TABLE 2-1
Groundwater Perchlorate Results Summary
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

WELL IDENTIFIER	SCREENED INTERVAL (FTBGS)[1]	RELATIVE AQUIFER DEPTH	PERCHLORATE (µg/L) SAMPLING EVENT							
			JULY 27, 2004	SEPTEMBER 10, 2004	SEPTEMBER 30, 2004	OCTOBER 27, 2004	FEBRUARY 21, 2006	OCTOBER 20-22, 2009[2]	SEPTEMBER 8-9, 2010	APRIL 29, 2011
FARM PARCEL MONITORING WELLS										
IW2	40-70	Intermediate	NA	NA	NA	NA	NA	3.7	NA	NA
SC1S	35-55	Intermediate	NA	NA	NA	3.5	8.8	1.8 J [3]	0.69 J[3]	NA
SC1D	85-95/100-115	Deep	NA	NA	NA	76.0 / 76.0	53.9	46.3	44.5	NA
SD2D(R)	106-116	Deep	NA	NA	9.2	NA	NA	7.0	6.6	NA
SC3S	35-55	Intermediate	NA	NA	13	NA	20.9	1.8 J [3]	13.0	NA
SC3D(R)	102-112	Deep	NA	NA	49	NA	62.1	141 / 136[10]	143	NA
SC5S	5-20	Shallow	NA	NA	NA	NA	NA	1.4 J [6]	NA	NA
SC5D	90-120	Deep	NA	NA	NA	NA	NA	1.2 J [6]	NA	NA
SC24S	5-20	Shallow	NA	NA	NA	4.8	4.3	0.99 J [6]	2.1 J[3]	NA
SC24D	105-115	Deep	NA	NA	NA	6	3.0	3.0	NA	NA
SC31D	120-130	Deep	NA	NA	NA	NA	NA	6.6	NA	NA
OFFSITE EXTRACTION WELLS										
RIW2	30-55	Shallow	NA	NA	14.0 / 15.1	NA	9.4	4.1	NA	NA
RW6S	55-75	Intermediate	NA	NA	8.0 / 8.01	NA	NA	12.9	NA	NA
RW6D	90-125	Deep	NA	NA	12.0 / 13.8	NA	NA	14.3	NA	NA

NOTES:

(1) - FTBGS, Feet Below Ground Surface
(2) - Monitoring wells SC33D & SC34D were sampled on 11/19/09, monitoring wells SC35D & SC36D were sampled on 12/7/09, monitoring well K was re-sampled on 1/21/10, & recovery wells Layne & W9 were sampled on 1/21/10
(3) - Data qualifier changed to "J" by data validation
(4) - "Blind" duplicate sample labeled as IWC-6
(5) - "Blind" duplicate sample labeled as SC33S
(6) - Data not validated, but qualifier changed to "J" consistent with data validation
(7) - Data validation corrected reporting limit
(8) - "Blind" duplicate sample labeled as SC35D
(9) - "Blind" duplicate sample labeled as SC37D
(10) - "Blind" duplicate sample labeled as SC34D

µg/L - micrograms per liter
NA - Not Analyzed / Not Applicable
All samples were analyzed by EPA Method 314.0
BOLD - indicates that value is greater that the proposed New Jersey Ground Water Quality Criteria of 5 ug/L
Shaded - Indicates that value is greater than the U.S. EPA Interim Health Advisory Level of 15 ug/L
J - Indicates a result is less than the reporting limit and estimated by the laboratory
Results with slash (e.g., 13.0 / 12.9) indicate duplicate results

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TABLE 2-2
Current and Previous Off-Site Groundwater Vertical Profiling Perchlorate Results
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

Sample ID	Date Sampled	Approx. Ground Surface Elevation (ftmsl)	Sample Depth (ftbgs)	Approx. Sample Elevation (ftmsl)	Relative Aquifer Depth	Perchlorate (ug/L)
Vertical Profile Samples (2009 Investigation)						
VP-13 (25-30)	10/14/2009	102	25-30	77 to 72	Shallow	<3.0
VP-13 (50-55)	10/14/2009	102	50-55	52 to 47	Shallow	<3.0
VP-13 (75-80)	10/14/2009	102	75-80	27 to 22	Intermediate	3.9
VP-13 (100-105)	10/15/2009	102	100-105	2 to -3	Deep	10.6
VP-13 (125-130)	10/15/2009	102	125-130	-23 to -28	Deep	5.7
VP-13A (15-20)	10/22/2009	89	15-20	74 to 69	Shallow	<3.0
VP-13A (37-42)	10/22/2009	89	37-42	52 to 47	Shallow	<3.0
VP-13A (62-67)	10/22/2009	89	62-67	27 to 22	Intermediate	4.3
VP-13A (87-92)	10/23/2009	89	87-92	2 to -3	Deep	3.4
VP-13A (111-116)	10/23/2009	89	111-116	-22 to -27	Deep	6.0
VP-14 (35-40)	10/16/2009	100	35-40	65 to 60	Shallow	0.93 J (2)
VP-14 (55-60)	10/16/2009	100	55-60	45 to 40	Shallow	<3.0
VP-14 (80-85)	10/19/2009	100	80-85	20 to 15	Intermediate	1.6 J (1)
VP-14 (105-110)	10/19/2009	100	105-110	-5 to -10	Deep	6.2
VP-24 (105-110) Field Dup	10/19/2009	100	105-110	-5 to -10	Deep	5.9
VP-14 (130-135)	10/19/2009	100	130-135	-30 to -35	Deep	12.5
VP-15 (30-35)	10/12/2009	91	30-35	61 to 56	Shallow	<3.0
VP-15 (45-50)	10/12/2009	91	45-50	46 to 41	Shallow	<3.0
VP-15 (65-70)	10/13/2009	91	65-70	26 to 21	Intermediate	<3.0
VP-15 (88-93)	10/13/2009	91	88-93	3 to -2	Deep	4.9
VP-15 (114-119)	10/13/2009	91	114-119	-23 to -28	Deep	<3.0
VP-15A (15-20)	10/20/2009	76	15-20	61 to 56	Shallow	<3.0
VP-15A (38-43)	10/21/2009	76	38-43	38 to 33	Shallow	<3.0
VP-15A (55-60)	10/21/2009	76	55-60	21 to 16	Intermediate	<3.0
VP-15A (77-82)	10/21/2009	76	77-82	-1 to -6	Deep	1.6 J (2)
VP-15A (99-104)	10/21/2009	76	99-104	-23 to -28	Deep	2.5 J (2)
VP-25A (99-104) Field Dup	10/21/2009	76	99-104	-23 to -28	Deep	2.9 J (2)

NOTES:

(1) - Data qualifier changed to "J" by data validation

(2) - Data not validated, but qualifier changed to "J" consistent with data validation

BOLD - indicates that value is greater that the proposed New Jersey Ground Water Quality Criteria of 5 ug/L

Shaded - Indicates that value is greater than the U.S. EPA Interim Health Advisory Level of 15 ug/L

micrograms per Liter (ug/L) is equivalent to parts per billion

ftmsl - feet above mean sea level (NAVD 27)

ftbgs - feet below ground surface

J - Indicates a result is less than the reporting limit and estimated by the laboratory

R2-0001462

TABLE 2-2
Current and Previous Off-Site Groundwater Vertical Profiling Perchlorate Results
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

Sample ID	Date Sampled	Approx. Ground Surface Elevation (ftmsl)	Sample Depth (ftbgs)	Aprox. Sample Elevation (ftmsl)	Relative Aquifer Depth	Perchlorate (ug/L)
Vertical Profile Samples (2006/2007 Investigation)						
VP-1 (15-20)	11/28/2006	85	15-20	70 to 65	Shallow	<0.3
VP-1 (35-40)	11/28/2006	85	35-40	50 to 45	Shallow	<0.3
VP-1 (60-65)	11/29/2006	85	60-65	25 to 20	Intermediate	<0.3
VP-1 (85-90)	11/29/2006	85	85-90	0 to -5	Deep	5.6
VP-1 (105-110)	11/29/2006	85	105-110	-20 to -25	Deep	3.0
VP-2 (15-20)	11/30/2006	85	15-20	70 to 65	Shallow	<0.3
VP-2 (35-40)	12/1/2006	85	35-40	50 to 45	Shallow	4.2
VP-2 (60-65)	12/1/2006	85	60-65	25 to 20	Intermediate	**9.6**
VP-2 (85-90)	12/1/2006	85	85-90	0 to -5	Deep	**49.9**
VP-2 (110-115)	12/1/2006	85	110-115	-25 to -30	Deep	**9.4**
VP-3 (25-30)	12/4/2006	95	25-30	70 to 65	Shallow	<0.3
VP-3 (45-50)	12/5/2006	95	45-50	50 to 45	Shallow	<0.3
VP-30 (45-50) Field Dup	12/5/2006	95	45-50	50 to 45	Shallow	<0.3
VP-3 (70-75)	12/6/2006	95	70-75	25 to 20	Intermediate	**7.9**
VP-3 (95-100)	12/6/2006	95	95-100	0 to -5	Deep	**34**
VP-3 (115-120)	12/6/2006	95	115-120	-20 to -25	Deep	**28.3**
VP-4 (30-35)	12/11/2006	100	30-35	70 to 65	Shallow	1.3
VP-4 (50-55)	12/11/2006	100	50-55	50 to 45	Intermediate	1.3
VP-4 (75-80)	12/11/2006	100	75-80	25 to 20	Intermediate	3.3
VP-4 (75-80) Field Dup	12/11/2006	100	75-80	25 to 20	Intermediate	3.1
VP-4 (100-105)	12/11/2006	100	100-105	0 to -5	Deep	<0.3
VP-4 (121-126)	12/11/2006	100	121-126	-21 to -26	Deep	6.8
VP-10 (20-25)	12/15/2006	85	20-25	65 to 60	Shallow	2.4
VP-10 (35-40)	12/15/2006	85	35-40	50 to 45	Shallow	<0.3
VP-10 (60-65)	12/18/2006	85	60-65	25 to 20	Intermediate	3.4
VP-100 (60-65) Field Dup	12/18/2006	85	60-65	25 to 20	Intermediate	3.4
VP-10 (85-90)	12/18/2006	85	85-90	0 to -5	Deep	**17.4**
VP-10 (109-114)	12/18/2006	85	109-114	-24 to -29	Deep	**6.7**

NOTES:

(1) - Data qualifier changed to "J" by data validation

(2) - Data not validated, but qualifier changed to "J" consistent with data validation

BOLD - indicates that value is greater that the proposed New Jersey Ground Water Quality Criteria of 5 ug/L

Shaded - Indicates that value is greater than the U.S. EPA Interim Health Advisory Level of 15 ug/L

micrograms per Liter (ug/L) is equivalent to parts per billion

ftmsl - feet above mean sea level (NAVD 27)

ftbgs - feet below ground surtace

J - Indicates a result is less than the reporting limit and estimated by the laboratory

R2-0001463

TABLE 9-1
Soil Investigation Perchlorate Results
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

Sample ID	Date Sampled	Sample Depth (ftbgs)	Perchlorate (ug/kg)
Background Sample			
SS-01 (5-7')	10/26/2009	5-7	<9.6
SS-01 (12-14')	10/26/2009	12-14	<10
AOC-1 Former Chemical Storage Building			
SS-02 (1-3')	10/26/2009	1-3	2.1 J(1)
SS-02 (14-16')	10/26/2009	14-16	<9.7
SS-03 (0-2')	10/26/2009	0-2	<10
SS-03 (13-15')	10/26/2009	13-15	8.6 J(1)
SS-04 (2-4')	10/26/2009	2-4	7.9 J(1)
SS-04 (14-16')	10/26/2009	14-16	4.2 J(1)
SS-05 (5-7')	10/26/2009	5-7	58.3
SS-05 (13-15')	10/26/2009	13-15	18.3
SS-06 (1-3')	10/26/2009	1-3	<10
SS-06 (14-16')	10/26/2009	14-16	2.9 J(1)
SS-07 (6-8')	10/26/2009	6-8	<9.6
SS-27 (6-8') Field Dup	10/26/2009	6-8	<9.6
SS-07 (13-15')	10/26/2009	13-15	3.0 J(1)
SS-08 (3-4')	10/26/2009	3-4	<9.9
SS-08 (12-14')	10/26/2009	12-14	<9.6
AOC-2 Former Building D102(A)			
SS-21 (1-3')	10/28/2009	1-3	11.0
SS-21 (5-7')	10/28/2009	5-7	10.7
SS-22 (1-3')	10/28/2009	1-3	<9.8
SS-22 (6-8')	10/28/2009	6-8	12.0
SS-23 (2-4')	10/28/2009	2-4	<10
SS-33 (2-4') Field Dup	10/28/2009	2-4	<10
SS-23 (6-8')	10/28/2009	6-8	<9.7
SS-24 (1-3')	10/28/2009	1-3	26.5
SS-24 (4-6')	10/28/2009	4-6	28.8

Sample ID	Date Sampled	Sample Depth (ftbgs)	Perchlorate (ug/kg)
AOC-3 Former Lagoon Area			
SS-09 (6-8')	10/26/2009	6-8	<10
SS-09 (12-14')	10/26/2009	12-14	<10
SS-10 (2-4')	10/26/2009	2-4	<9.8
SS-10 (4-6')	10/26/2009	4-6	<9.4
SS-11 (1-3')	10/27/2009	1-3	<9.8
SS-11 (5-7')	10/27/2009	5-7	2.8 J(2)
SS-12 (2-4')	10/27/2009	2-4	<9.7
SS-12 (5-7')	10/27/2009	5-7	<9.6
SS-32 (5-7') Field Dup	10/27/2009	5-7	<9.6
SS-13 (1-3')	10/27/2009	1-3	2.0 J(2)
SS-13 (5-7')	10/27/2009	5-7	2.9 J(2)
SS-14 (1-3')	10/27/2009	1-3	<9.5
SS-14 (6-8')	10/27/2009	6-8	<9.6
SS-15 (2-4')	10/27/2009	2-4	<9.7
SS-15 (4-6')	10/27/2009	4-6	<9.9
SS-16 (1-3')	10/27/2009	1-3	<9.6
SS-16 (6-8')	10/27/2009	6-8	<9.9
SS-17 (1-3')	10/27/2009	1-3	<9.7
SS-17 (5-7')	10/27/2009	5-7	2.8 J(2)
SS-18 (1-3')	10/27/2009	1-3	<10
SS-18 (6-8')	10/27/2009	6-8	<9.3
SS-19 (1-3')	10/27/2009	1-3	<9.8
SS-19 (6-8')	10/27/2009	6-8	<9.6
SS-20 (1-3')	10/27/2009	1-3	2.3 J(2)
SS-20 (4-6')	10/27/2009	4-6	<10

NOTES:

(1) - Data qualifier changed to "J" by data validation

(2) - Data not validated, but qualifier changed to "J" consistent with data validation

EPA Regional Screening Level for perchlorate in residential soil is 55,000 ug/kg and 720,000 ug/kg in industrial soil.

Shaded results are in excess of the EPA Regional Screening Level for perchlorate.

micrograms per kilogram (ug/kg) is equivalent to parts per billion

ftbgs - feet below ground surface

J - Indicates a result is less than the reporting limit and estimated by the laboratory

R2-0001464

TABLE 9-2
Soil Investigation, Monitoring/Extraction Well Sampling, Groundwater Vertical Profiling, and Surface Water and Sediment QA/QC Results
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

Sample ID	Date Sampled	Perchlorate (ug/L)
Soil / Sediment Investigation Field Blank Samples		
FB102609(1)	10/26/2009	<3.0
FB102609(2)	10/26/2009	<3.0
FB102709(1)	10/27/2009	<3.0
FB102709(2)	10/27/2009	<3.0
FB102809(for SS Samples)	10/28/2009	<3.0
FB102809(for SED Samples)	10/2S/2009	<3.0
Monitoring/Extraction Well Sampling Field Blank Samples		
FB102009A	10/20/2009	<3.0
FB102109	10/21/2009	<3.0
FB102209	10/22/2009	<3.0
FB111909	11/19/2009	<3.0
FB090810	9/8/2010	<3.0
FB090910	9/9/2010	<3.0
FB042911	4/29/2011	<3.0
Groundwater Vertical Profiling Field Blank Samples		
FB101209	10/12/2009	<3.0
FB101309	10/13/2009	<3.0
FB101409	10/14/2009	<3.0
FB101509	10/15/2009	<3.0
FB101609	10/16/2009	<3.0
FB101909	10/19/2009	<3.0
FB102009	10/20/2009	<3.0
FB102109	10/21/2009	<3.0
FB102209	10/22/2009	<3.0
FB102309	10/23/2009	<3.0
Environmental Samples / "Blind" Duplicate Samples		
Monitoring Well Sampling		
IWC-5 / IWC-6	10/21/2009	11.7 / 10.7
SC9S / SC33S	10/21/2009	8.2 / S.0
SC32D / SC35D	10/22/2009	3.2 / 3.3
SC3D(R) / SC34D	10/21/2009	141 / 136
SC34D / SC37D	11/19/2009	150 / 152
SD36D / SC37D	9/8/2010	6.4 / 5.6
SD40D / SD49D	4/29/2011	4.0 / 3.9
K / J	9/9/2010	1.9J / 3.0
Groundwater Vertical Profiling		
VP-14(105-110) / VP-24(105-110)	10/19/2009	6.2 / 5.9
VP-15A(99-104) / VP-25A(99-104)	10/21/2009	2.5J / 2.9J
Soil Investigation*		
SS-07(6-8') / SS-27(6-8')	10/26/2009	<9.6 / <9.6
SS-12(5-7') / SS-32(5-7')	10/27/2009	<9.6 / <9.6
SS-23(2-4') / SS-33(2-4')	10/2S/2009	<10 / <10
Surface Water / Sediment Investigation		
SED-4 / SED-10*	10/28/2009	10.9J / <42
SW-4 / SW-10	10/28/2009	<3.0 / <3.0

NOTES:

Action Level for Perchlorate is 5 ug/L (per Administrative Consent Order signed February 1, 2006).

micrograms per Liter (ug/L) is equivalent to parts per billion

J - Indicates a result is less than the reporting limit and estimated by the laboratory

* - Soil and sediment perchlorate results are presented in micrograms per kilogram

R2-0001465

TABLE 9-3
GROUNDWATER ELEVATIONS / WELL CONSTRUCTION SPECIFICATIONS
SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NJ
October 2009, September 2010, and April 2011

WELL #	PERMIT #	INSTALLATION DATE	CASING TYPE / DIAMETER	GROUND ELEVATION (msl) [1]	TOP OF INNER CASING ELEVATION (msl) [1]	TOTAL WELL DEPTH (ft) [2]	SCREENED INTERVAL (ft) [2]	SCREENED INTERVAL ELEVATION (msl) [1] [3]	DEPTH TO WATER (ft) (October 2009)	DEPTH TO WATER (ft) (September 2010)	DEPTH TO WATER (ft) (April 2011)	GROUNDWATER ELEVATION (msl) [1] (October 2009)	GROUNDWATER ELEVATION (msl) [1] (September 2010)	GROUNDWATER ELEVATION (msl) [1] (April 2011)
A	51-142	1970	STEEL/2"	-	94.82	124	114 to 124	-21.18 to -31.18	5.47	NM	5.50	89.35	NM	89.32
IWC3	51-222	1/74	STEEL/2"	-	97.83	60	55 to 60	40.83 to 35.83	7.41	NM	6.22	90.42	NM	91.61
IWC4	51-223	1/74	STEEL/2"	-	98.61	80	75 to 80	21.61 to 16.61	8.18	8.62	6.99	90.43	89.99	91.62
IWC5	51-224	1/74	STEEL/2"	-	98.03	100	95 to 100	1.03 to -3.97	7.64	NM	6.45	90.39	NM	91.58
W3D	31-25759	12/5/86	PVC/4"	-	108.37	108	88 to 108	18.37 to -1.63	15.94	16.24	14.53	92.43	92.13	93.84
W-4	51-219	5/8/74	PVC/4"	-	104.58	75	55 to 75	47.58 to 27.58	14.03	15.55	13.83	90.55	89.03	90.75
MWH-4	UNK	2/7/2002	PVC/6"	97.54	99.37	129	119 to 129	-21.46 to -31.46	9.06	NM	8.50	90.31	NM	90.87
SC-12D	31-35226-0	11/28/90	PVC/4"	102.16	103.19	140	126 to 136	-23.84 to -33.84	11.59	11.81	10.12	91.60	91.38	93.07
SC-13D	31-35227-8	11/29/90	PVC/4"	99.67	101.99	140.5	127 to 137	-27.33 to -37.33	10.66	NM	9.27	91.33	NM	92.72
SC-20D	31-38187	1/10/92	PVC/4"	101.55	104.53	139	129 to 139	-27.45 to -37.45	13.76	14.28	12.67	90.77	90.25	91.86
SC-22D	31-35222-7	11/21/90	PVC/4"	96.18	98.65	125	111 to 121	-14.82 to -24.82	8.29	NM	7.11	90.36	NM	91.54
SC-1D	31-21619-6	5/30/84	PVC/2"	88.00	90.90	115	85-95/100-115	3 to -7 / -12 to -27	8.27	9.02	6.73	82.63	81.88	84.17
SC-2D(r)	31-38194	1/3/92	PVC/4"	90.62	92.53	-	106 to 116	-15.38 to -25.38	7.84	8.44	6.37	84.69	84.09	86.16
SC-3D(r)	31-38195	1/7/92	PVC/4"	88.75	91.06	-	102 to 112	-13.25 to -23.25	7.11	7.73	5.56	83.95	83.33	85.50
SC-4D	31-21690-1	6/8/84	PVC/2"	-	92.64	120	110 to 120	-19.36 to -29.36	NM	NM	NM	NM	NM	NM
SC-5D	31-21876-8	6/12/84	PVC/2"	-	97.00	120	90 to 120	5.00 to -25.00	12.39	NM	10.83	84.61	NM	86.17
SC-6D	31-21878-4	6/26/84	PVC/2"	-	94.38	125	110 to 120	-17.62 to -27.62	6.55	NM	5.58	87.83	NM	88.80
SC-10D	31-23370	11/12/85	PVC/4"	-	95.72	125	105 to 125	-11.28 to -31.28	7.39	8.24	6.47	88.33	87.48	89.25
SC-17D	31-35223-5	11/27/90	PVC/4"	106.48	108.07	153	143 to 153	-36.52 to -46.52	19.05	19.92	18.06	89.02	88.15	90.01
SC-18D	31-35228-6	11/20/90	PVC/4"	93.56	96.01	130	119 to 129	-25.44 to -35.44	9.56	NM	8.47	86.45	NM	87.54
SC-19D	31-35221-9	11/26/90	PVC/4"	89.65	92.03	133	120 to 130	-30.35 to -40.35	5.31	NM	4.31	86.72	NM	87.72
SC-21D	31-35220-1	11/27/90	PVC/4"	90.44	91.65	140	125 to 135	-34.56 to -44.56	5.81	6.41	4.64	85.84	85.24	87.01
SC-24D	3142083	8/24/93	PVC/4"	-	93.52	115	105 to 115	-13.48 to -23.48	10.23	NM	8.69	83.29	NM	84.83
SC-26D	31-39500	7/9/1992	PVC/4"	100.68	100.45	143	127 to 137	-26.32 to -36.32	10.55	10.82	9.32	89.90	89.63	91.13
IW-2	31-23369	11/12/85	PVC/6"	-	92.05	70	40 to 70	50.05 to 20.05	7.91	NM	6.08	84.14	NM	85.97
SC-28D	31-47408	8/16/95	PVC/4"	107.41	106.87	153	133 to 153	-25.59 to -45.59	18.96	19.47	17.93	87.91	87.40	88.94
SC-29D	31-47409	2/20/97	PVC/4"	106.50	106.23	148	128 to 148	-21.50 to -41.50	NM	NM	NM	NM	NM	NM
SC-30D	31-63686	6/14/02	PVC/2"	114.59	115.58	157	147 to 157	-32.41 to -42.41	27.36	27.45	25.98	88.22	88.13	89.60
SC-31D	31-66758	6/25/02	PVC/2"	99.78	102.61	130	120 to 130	-20.22 to -30.22	19.05	NM	17.53	83.56	NM	85.08
SC-32D	35-27314	12/18/06	PVC/2"	-	91.62	102	92 to 102	-0.38 to -10.38	11.06	11.79	9.37	80.56	79.83	82.25
SC-33D	P200912475	10/22/09	PVC/2"	-	108.08	92.5	82.5 to 92.5	23.58 to 13.58	NM	21.21	19.53	NM	86.87	88.55
SC-34D	P200912473	10/22/09	PVC/2"	-	103.82	142	132 to 142	-30.18 to -40.18	NM	19.11	17.12	NM	84.71	86.70
SC-35D	P200913690	10/29/09	PVC/2"	-	81.24	99.5	89.5 to 99.5	-10.26 to -20.26	NM	17.08	14.20	NM	64.16	67.04
SC-36D	P200912476	11/4/09	PVC/2"	-	91.80	117	107 to 117	-17.20 to -27.20	NM	9.39	6.61	NM	82.41	85.19
SC-40D	E201104448	4/5/11	PVC/2"	-	98.12	130	120 to 130	-21.88 to -31.88	NI	NI	12.52	NI	NI	85.60
OBS-2A ^	31-06092	-	-	120.00	122.80	154	129 to 149	-8.20 to -28.20	NM	NM	NM	NM	NM	NM
B	51-143	1970	STEEL/2"	-	94.33	46	36 to 46	56.33 to 46.33	4.75	NM	4.00	89.59	NM	90.33
K	51-152	1971	STEEL/2"	-	99.18	46	36 to 46	61.18 to 51.18	9.69	10.54	8.87	89.49	88.64	90.31
L	51-153	1971	STEEL/2"	-	103.51	52	42 to 52	59.51 to 49.51	11.87	NM	10.76	91.64	NM	92.75
IWC1	51-220	1/74	STEEL/2"	-	98.13	20	15 to 20	81.13 to 76.13	7.70	NM	6.51	90.43	NM	91.62
IWC2	51-221	1/74	STEEL/2"	-	98.51	40	35 to 40	61.51 to 56.51	8.11	NM	6.91	90.40	NM	91.60
W2(r)	31-38189	12/20/91	PVC/4"	95.88	97.96	17	2 to 17	93.88 to 78.88	5.44	6.02	3.93	92.52	91.94	94.03
SC-9S	31-23368-6	8/1/85	PVC/4"	-	96.23	30	15 to 30	79.23 to 64.23	6.56	NM	5.76	89.67	NM	90.47
SC-11S(r)	31-39512	7/1/92	PVC/4"	106.91	108.12	24	9 to 24	97.91 to 82.91	15.67	15.81	14.88	92.45	92.31	93.24
SC-12S	31-29140-6	9/2/88	PVC/2"	-	104.76	25	15 to 25	87.76 to 77.76	12.63	NM	10.83	92.13	NM	93.93
SC-13SR[@]	31-00076422	6/25/2008	PVC/2"	-	101.10	25	15 to 25	83.60 to 73.60	8.69	NM	6.78	92.41	NM	94.32
SC-14S	31-35215-4	11/15/90	PVC/4"	105.83	108.38	27	12 to 27	93.83 to 78.83	16.07	16.44	14.32	92.31	91.94	94.06
SC-15S	31-35216-2	11/13/90	PVC/4"	106.06	108.32	27.5	12.5 to 27.5	93.56 to 78.56	14.83	NM	13.72	93.49	NM	94.60
SC-16S	31-35217-5	11/14/90	PVC/4"	105.32	108.05	27	12 to 27	93.32 to 78.32	18.05	18.69	16.97	90.00	89.36	91.08
SC-20S	31-35218-3	11/13/90	PVC/4"	101.74	104.45	22	7 to 22	94.74 to 79.74	NM	NM	12.24	NM	NM	92.21
SC-22S	31-35219-7	11/14/90	PVC/4"	96.17	99.65	18	3 to 18	93.17 to 78.17	8.83	9.32	7.51	90.82	90.33	92.14
SC-23S	31-35437-8	11/16/90	PVC/4"	102.83	102.21	24	9 to 24	93.83 to 78.83	11.46	NM	10.33	90.75	NM	91.88
SC-25S	31-38188	12/23/91	PVC/4"	-	102.27	21	6 to 21	94.27 to 79.27	9.76	9.57	8.05	92.51	92.70	94.22
SC-27S	31-41031	12/15/92	PVC/4"	-	100.54	22	7 to 22	91.54 to 76.54	9.11	NM	7.81	91.43	NM	92.73
SC-1S	31-28825-1	6/22/88	PVC/4"	-	87.26	55	35 to 55	50.26 to 30.26	3.73	4.46	2.26	83.53	82.80	85.00
SC-3S	31-28914-2	6/8/88	PVC/4"	-	90.32	55	35 to 55	53.32 to 33.32	6.32	6.97	4.85	84.00	83.35	85.47
SC-4S	31-21689-7	6/7/84	PVC/2"	-	93.65	45	35 to 45	56.65 to 46.65	6.77	NM	5.73	86.88	NM	87.92
SC-5S	31-35434-1	11/28/90	PVC/4"	94.18	96.55	20	5 to 20	89.18 to 74.18	11.85	NM	10.22	84.70	NM	86.33
SC-6S	31-21691-5	6/21/84	PVC/2"	-	94.62	75	45 to 75	47.62 to 17.62	5.55	8.29	4.79	89.07	86.33	89.83
SC-10S	31-23369	11/11/85	PVC/4"	-	95.38	55	35 to 55	58.38 to 38.38	7.08	7.88	6.29	88.30	87.50	89.09
SC-17S	31-35229-4	11/19/90	PVC/4"	106.53	109.26	28	13 to 28	93.53 to 78.53	20.19	20.92	19.27	89.07	88.34	89.99
SC-18S	31-35230-8	11/15/90	PVC/4"	93.43	95.72	19	4 to 19	89.43 to 74.43	9.26	9.98	8.24	86.46	85.74	87.48
SC-19S	31-35224-3	11/15/90	PVC/4"	90.14	92.98	17	2 to 17	88.14 to 73.14	5.99	NM	5.51	86.99	NM	87.47
SC-21S	31-35225-1	11/15/90	PVC/4"	90.57	92.64	18	3 to 18	87.57 to 72.57	6.41	7.12	5.47	86.23	85.52	87.17
SC-24S	31-35435-1	11/28/90	PVC/4"	91.57	93.57	20	5 to 20	86.57 to 71.57	9.90	10.74	8.18	83.67	82.83	85.39
IW-1	-	4/5/83	PVC/6"	89.06	90.33	62	32 to 62	57.06 to 27.06	5.23	NM	4.10	85.10	NM	86.23

Note:
(1) - All elevations based on vertical datum NGVD 1929
(2) - Feet Below Grade
(3) - Screened interval elevations for well locations without surveyed ground elevations calculated assuming a ground elevation of 2 feet below the surveyed well elevation (i.e., top of inner casing elevation).
^ - USGS observation well (NJ-WRD Well Number 15-0372) land surface is 120 feet above NGVD 1929, with the measuring point 2.80 ft above the land surface. The total well depth is 154 feet, with a screened interval of 129-149 feet below grade. (USGS Water Resources Data, New Jersey Water Year 2002 Vol. 2: Water Data Report NJ-02-2)
@ - Original monitoring well SC-13S destroyed; Well was reinstalled and named SC-13S(r).
msl - Feet Above Mean Sea Level
ft - Feet
NM - Not Measured
NI - Well not installed
UNK - Unkown

R2-0001466

TABLE 9-4
Surface Water and Sediment Investigation Perchlorate Results
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

Sample ID	Date Sampled	Perchlorate	
		Surface Water (ug/l)	Sediment (ug/kg)
Surface Water / Sediment Sample Identifications			
SW-1A / SED-1A	10/28/2009	1.8 J (1)	<12
SW-1 / SED-1	10/28/2009	<3.0	<18
SW-2 / SED-2	10/28/2009	<3.0	<19 (2)
SW-3 / SED-3	10/28/2009	<3.0	<13
SW-4 / SED-4	10/28/2009	<3.0	10.9 J (1)
SW-10 / SED-10 Field Dup	10/28/2009	<3.0 (2)	<42
SW-5 / SED-5	10/28/2009	<3.0	<27
SW-6 / SED-6	10/28/2009	<3.0	<16
SW-7 / SED-7	10/29/2009	<3.0	<21
SED-8	10/29/2009	Dry	<11
SW-9 / SED-9	10/29/2009	<3.0	<47

NOTES:

(1) - Data qualifier changed to "J" by data validation

(2) - Data validation indicated analytical result should be reported as less than the laboratory reporting limit

There are no established guidance or criteria for perchlorate in surface water or sediment

micrograms per Liter (ug/L) is equivalent to parts per billion

ftmsl - feet above mean sea level (NAVD 27)

ftbgs - feet below ground surface

J - Indicates a result is less than the reporting limit and estimated by the laboratory

R2-0001467

TABLE 9-5
VERTICAL GROUNDWATER PROFILING WATER QUALITY INDICATOR PARAMETERS
Perchlorate Remedial Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

Sample ID	Date Analyzed	Sample Depth (ftbgs)	Temperature (°C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Alkalinity (mg/L)
VP-13 (25-30)	10/14/2009	25-30	12.82	4.31	0.153	8.59	57.3	302.3	50
VP-13 (50-55)	10/14/2009	50-55	13.44	4.65	0.175	2.17	46.9	277.6	10
VP-13 (75-80)	10/14/2009	75-80	14.16	4.41	0.125	7.50	8.2	287.0	10
VP-13 (100-105)	10/15/2009	100-105	13.99	4.68	0.113	8.20	35.4	252.4	10
VP-13 (125-130)	10/15/2009	125-130	14.16	5.05	0.033	8.44	15.1	235.6	10
VP-13A (15-20)	10/22/2009	15-20	19.17	4.73	0.462	0.43	44.2	205.2	10
VP-13A (37-42)	10/22/2009	37-42	14.50	4.42	0.182	0.23	32.8	213.9	10
VP-13A (62-67)	10/22/2009	62-67	16.44	4.80	0.148	0.29	3.7	174.7	15
VP-13A (87-92)	10/23/2009	87-92	14.19	4.55	0.100	6.60	26.3	201.2	5
VP-13A (111-116)	10/23/2009	111-116	14.49	4.88	0.037	7.70	15.1	200.7	5
VP-14 (35-40)	10/16/2009	35-40	14.94	4.76	0.252	2.87	180	177.5	5
VP-14 (55-60)	10/16/2009	55-60	14.59	4.60	0.085	8.01	36.4	260.9	5
VP-14 (80-85)	10/19/2009	80-85	YSI multi-parameter probe not functioning						10
VP-14 (105-110)	10/19/2009	105-110	YSI multi-parameter probe not functioning						5
VP-14 (130-135)	10/19/2009	130-135	14.32	4.60	0.061	3.67	55.0	251.6	10
VP-15 (30-35)	10/12/2009	30-35	17.94	4.94	0.119	8.53	48.7	254.2	5
VP-15 (45-50)	10/12/2009	45-50	17.10	4.83	0.071	2.79	33.3	256.7	5
VP-15 (65-70)	10/13/2009	65-70	16.38	4.72	0.072	4.87	9.6	246.3	5
VP-15 (88-93)	10/13/2009	88-93	15.35	4.61	0.059	5.64	42.4	281.1	5
VP-15 (114-119)	10/13/2009	114-119	16.83	4.15	0.036	0.32	65.2	107.7	5
VP-15A (15-20)	10/20/2009	15-20	17.28	5.56	0.518	5.77	34.1	131.0	30
VP-15A (38-43)	10/21/2009	38-43	14.53	4.75	0.084	4.01	44.6	214.3	5
VP-15A (55-60)	10/21/2009	55-60	14.44	4.52	0.049	4.20	43.0	268.5	5
VP-15A (77-82)	10/21/2009	77-82	14.83	4.39	0.046	5.72	90.0	261.1	5
VP-15A (99-104)	10/21/2009	99-104	14.37	3.67	0.054	6.60	9.2	271.6	5
Minimum			12.82	3.67	0.03	0.23	3.70	107.70	5.00
Maximum			19.17	5.56	0.52	8.59	180.00	302.30	50.00
Average			15.23	4.48	0.13	4.92	42.46	231.87	9.80
Standard Deviation			1.57	0.35	0.13	2.90	36.36	49.70	9.95

Notes:

-All vertical profiling samples collected via a screened auger tool equipped with a packer/submersible pump assembly.

-Temperature, pH, conductivity, DO, turbidity and ORP was determined with a YSI 6820 multi-parameter meter installed in a flow-through cell.

-Alkalinity was determined with a Hach Alkalinity Test Kit, Model AL-AP.

ORP - Oxidation-reduction potential

ftbgs - feet below ground surface

°C - Degrees Celsius

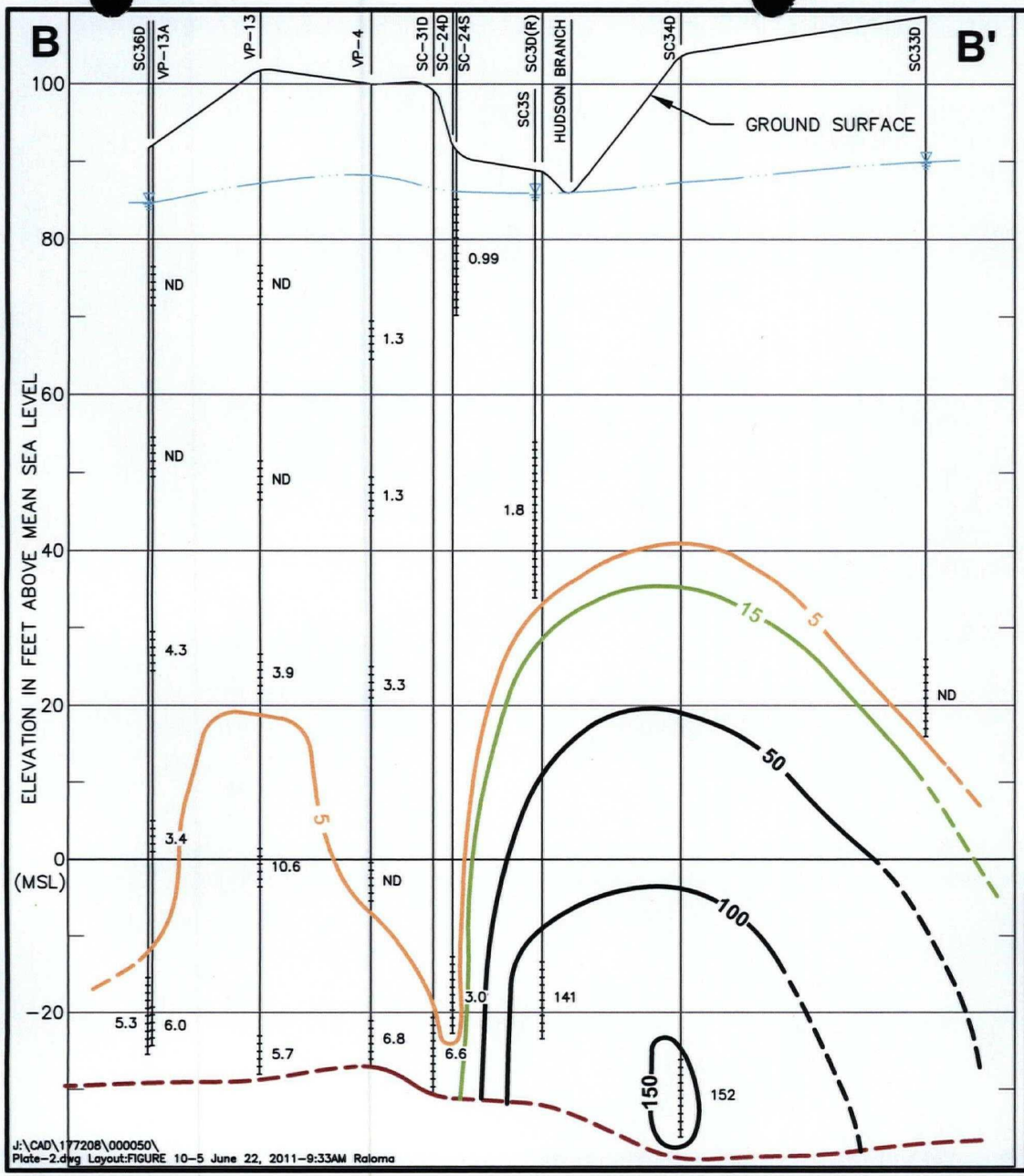
mS/cm - MilliSiemens per centimeter

mg/L - Milligrams per liter (parts per million)

NTU - nephelometric turbidity units

mV - Millivolts

R2-0001468



LEGEND

- APPROXIMATE TOP OF CONFINING CLAY LAYER (DASHED WHERE INFERRED)
- APPROXIMATE WATER TABLE DEPTH
- 50 — PERCHLORATE ISOPLETH (µg/L) (DASHED WHERE INFERRED)
- GROUNDWATER SAMPLE INTERVAL
- 17.7 — PERCHLORATE CONCENTRATION (µg/L)
- ND — NOT DETECTED

NOTES:

1) CLAY LAYER ENCOUNTERED AT VP-4 AND SC31D LOCATIONS.
2) GROUND ELEVATIONS BASED ON GOOGLE EARTH AND SURVEYED MONITORING WELL/GROUND SURFACE ELEVATIONS. VERTICAL DATUM IS NGVD 1929.
3) PERMANENT MONITORING WELLS INSTALLED AT VP-7 (SC33D) AND VP-8 (SC34D) IN 2009.

0 1,000' 2,000'

HORIZONTAL GRAPHIC SCALE

0 20' 40'

VERTICAL GRAPHIC SCALE
VERTICAL EXAGGERATION = 50X

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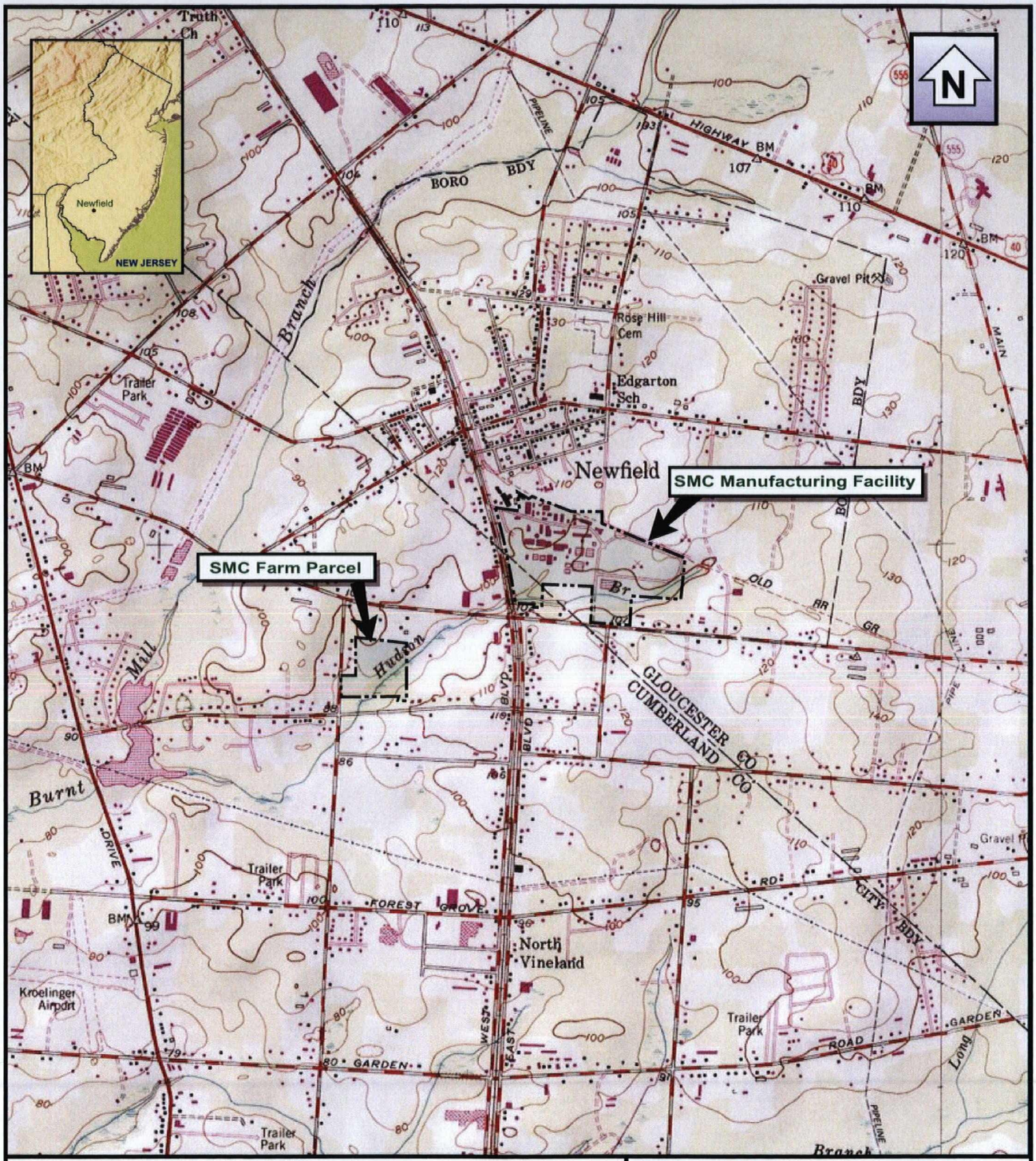
NEWFIELD, NEW JERSEY

FIGURE 10-5
VERTICAL PROFILING CROSS SECTION (SC36D TO SC33D)
PERCHLORATE CONCENTRATION

Date: 03/11/10 | Project No. 171441-000050-000000

J:\CAD\177208\000050\Plate-2.dwg Layout:FIGURE 10-5 June 22, 2011-9:33AM Raloma



0 2000
SCALE FEET

0 1
SCALE MILE

1:24000

BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS, www.topo.com
7.5' NEWFIELD, NJ USGS TOPOGRAPHIC MAP

pers/jwaleszczyk/haz/smc/171441.fh10

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FIGURE 2-1
SITE LOCATION MAP

Date: 01/10 | **Project No.** 171441-000050-000000

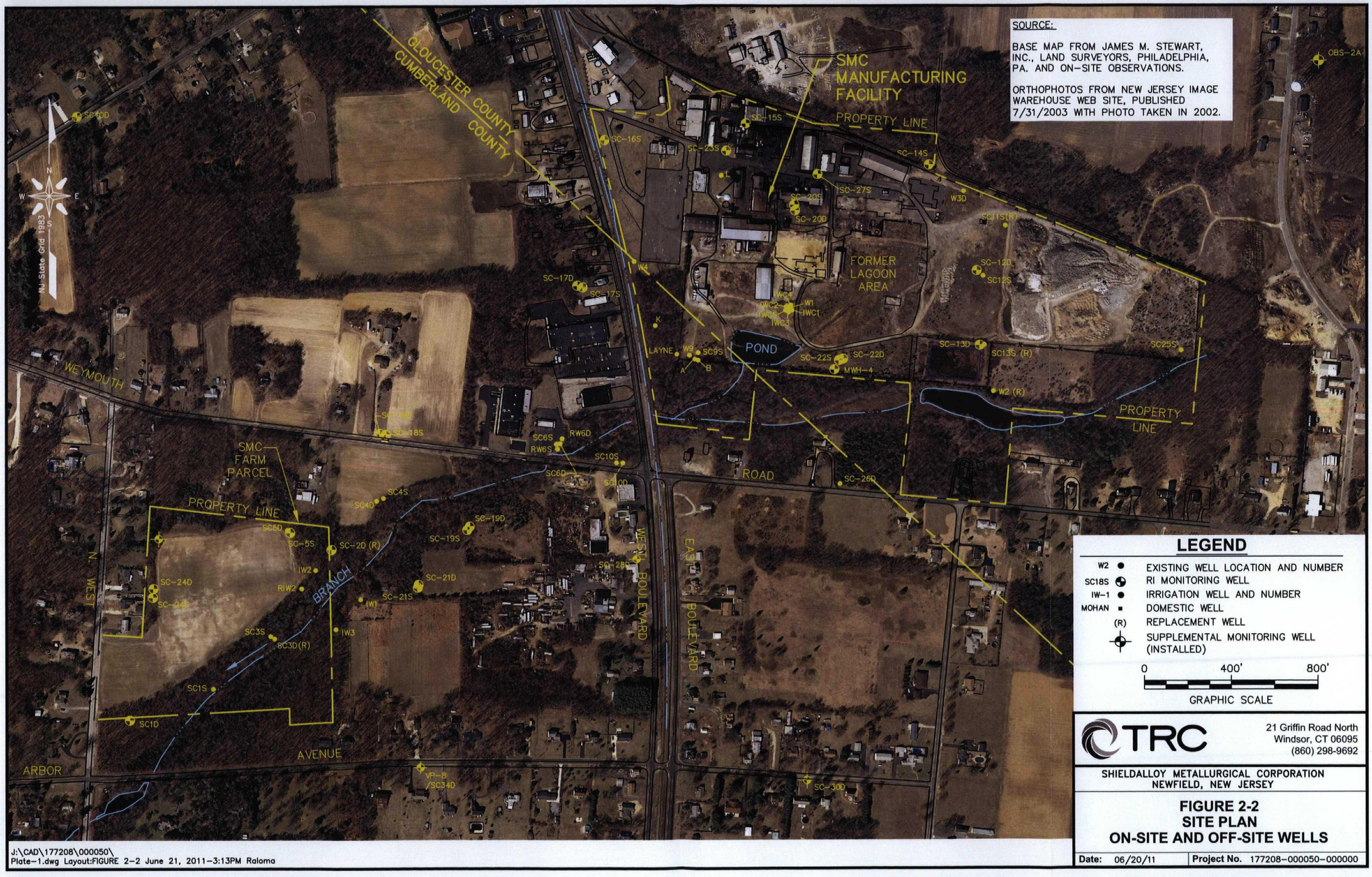

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FIGURE 2-2
SITE PLAN
ON-SITE AND OFF-SITE WELLS

Date: 06/20/11 | Project No. 177208-000050-000000

J:\CAD\177208\000050\
Plate-1.dwg Layout:FIGURE 2-2 June 21, 2011-3:13PM Raloma

R2-0001471

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 10/2008 WITH PHOTOS TAKEN IN 2007 & 2008.

NOTES: MONITORING WELL SC32D WAS INSTALLED ADJACENT TO VP-5 IN 2007. MONITORING WELLS SC33D, SC34D, SC35D, AND SC36D WERE INSTALLED ADJACENT TO VP-7, VP-8, VP-15A AND VP-13A RESPECTIVELY IN 2009.

LEGEND

- 2006/2007 OFFSITE GROUND WATER VERTICAL PROFILING LOCATION
- 2009 SUPPLEMENTAL OFFISTE VERTICAL PROFILING LOCATION
- APPROXIMATE LOCATION OF HIGH-CAPACITY WELL

0 1,000' 2,000'

GRAPHIC SCALE

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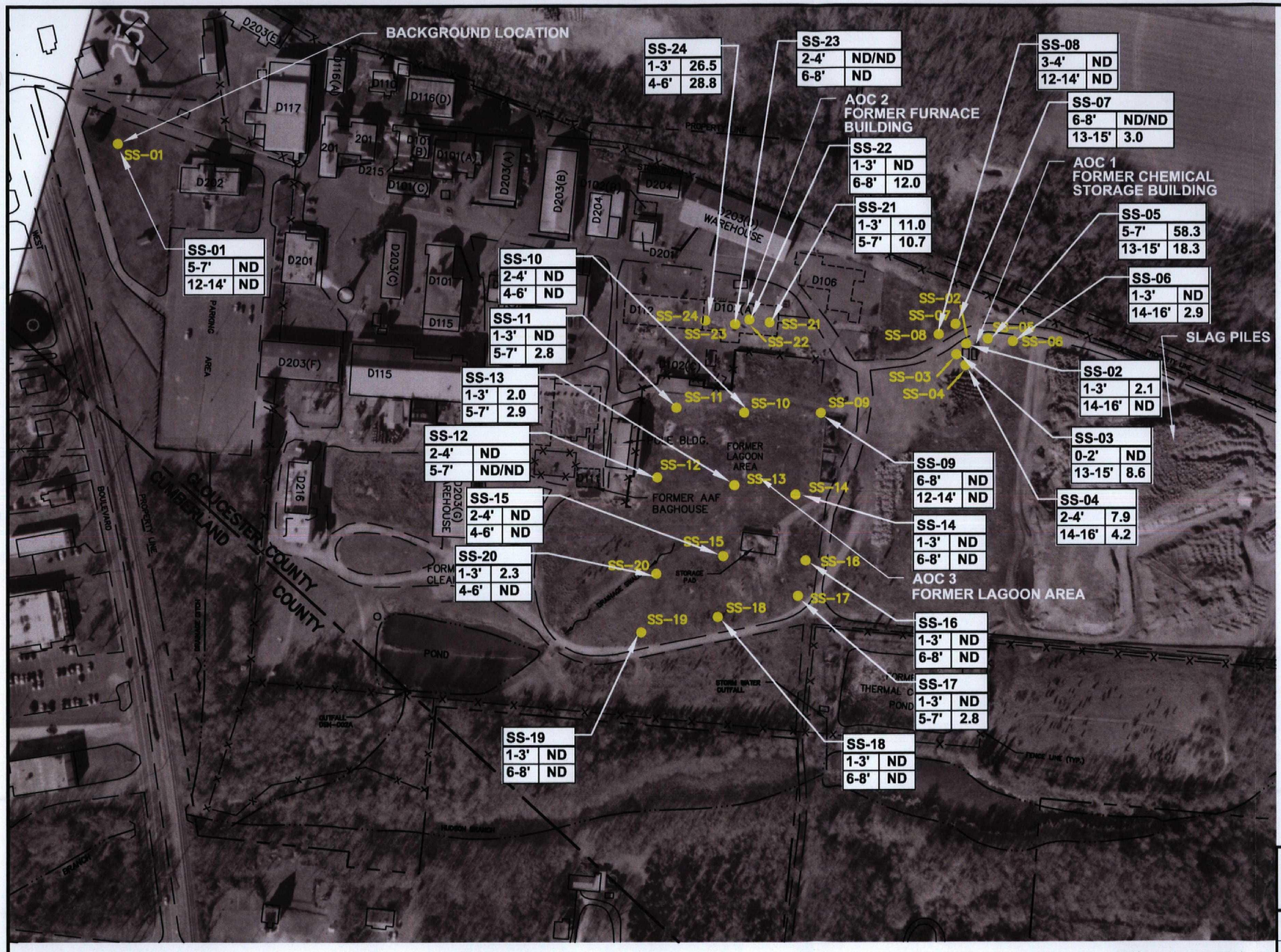
FIGURE 2-3
SITE PLAN
OFF-SITE GROUNDWATER VERTICAL PROFILES AND WELLS

Date: 06/20/11 | Project No. 177208-000050-000000

J:\CAD\177208\000050\
Plate-2.dwg Layout:FIGURE 2-3 June 22, 2011-10:17AM Raloma



KEY

- INDICATES DEMOLISHED STRUCTURE
- SOIL SAMPLING LOCATION

SS-11	
1-3'	ND
5-7'	2.8

- SOIL SAMPLE IDENTIFICATION
- PERCHLORATE CONCENTRATION (µg/kg)
- SAMPLE DEPTH

ND/ND – RESULTS SEPARATED BY A FORWARD SLASH INDICATES DUPLICATE SAMPLE RESULTS

ND = NON-DETECT

NOTE:
EPA REGIONAL SCREENING LEVEL FOR PERCHLORATE IN RESIDENTIAL SOIL IS 55,000 µg/kg AND 720,000 µg/kg IN INDUSTRIAL SOIL.

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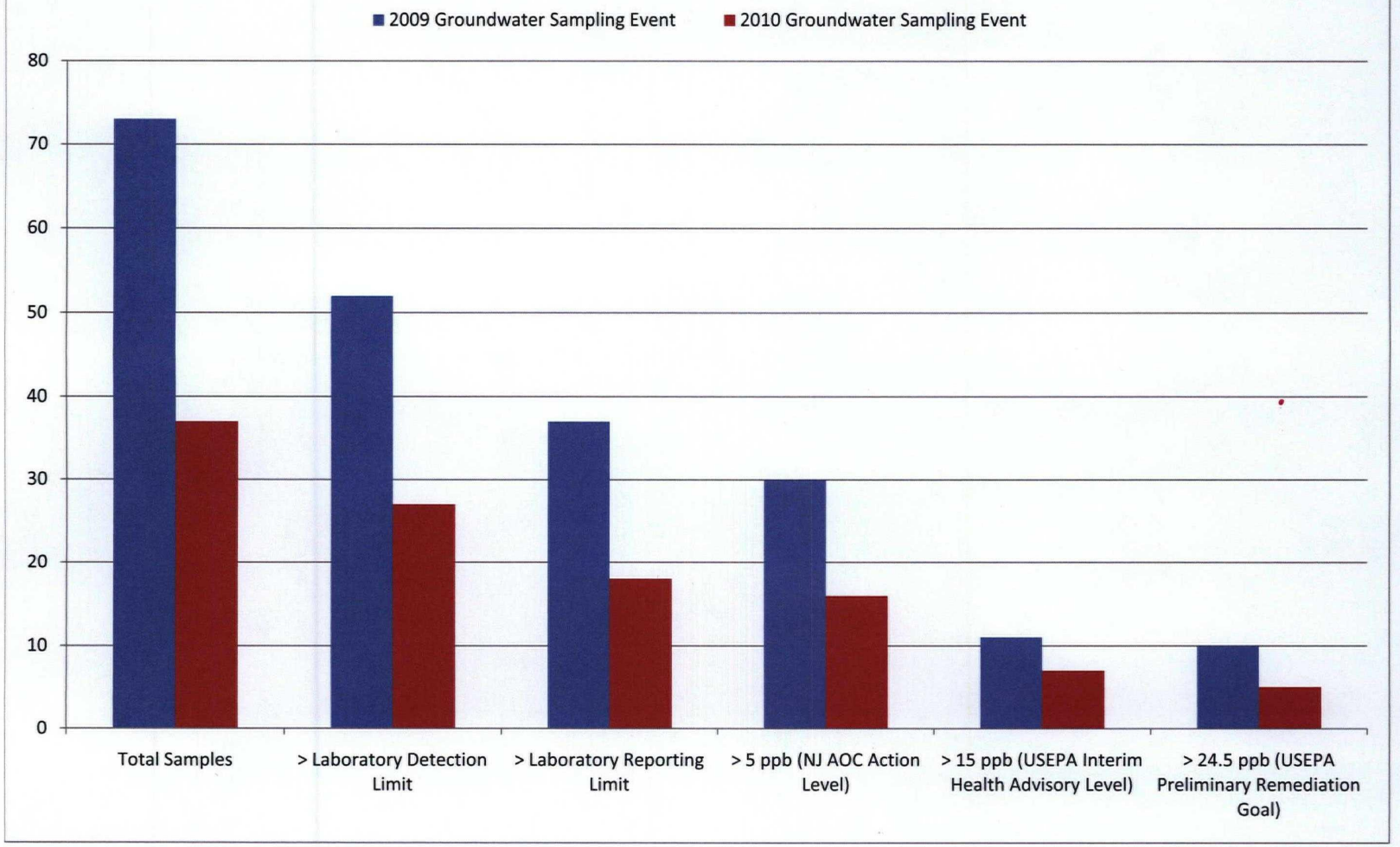
FIGURE 9-1
SOIL SAMPLING RESULTS

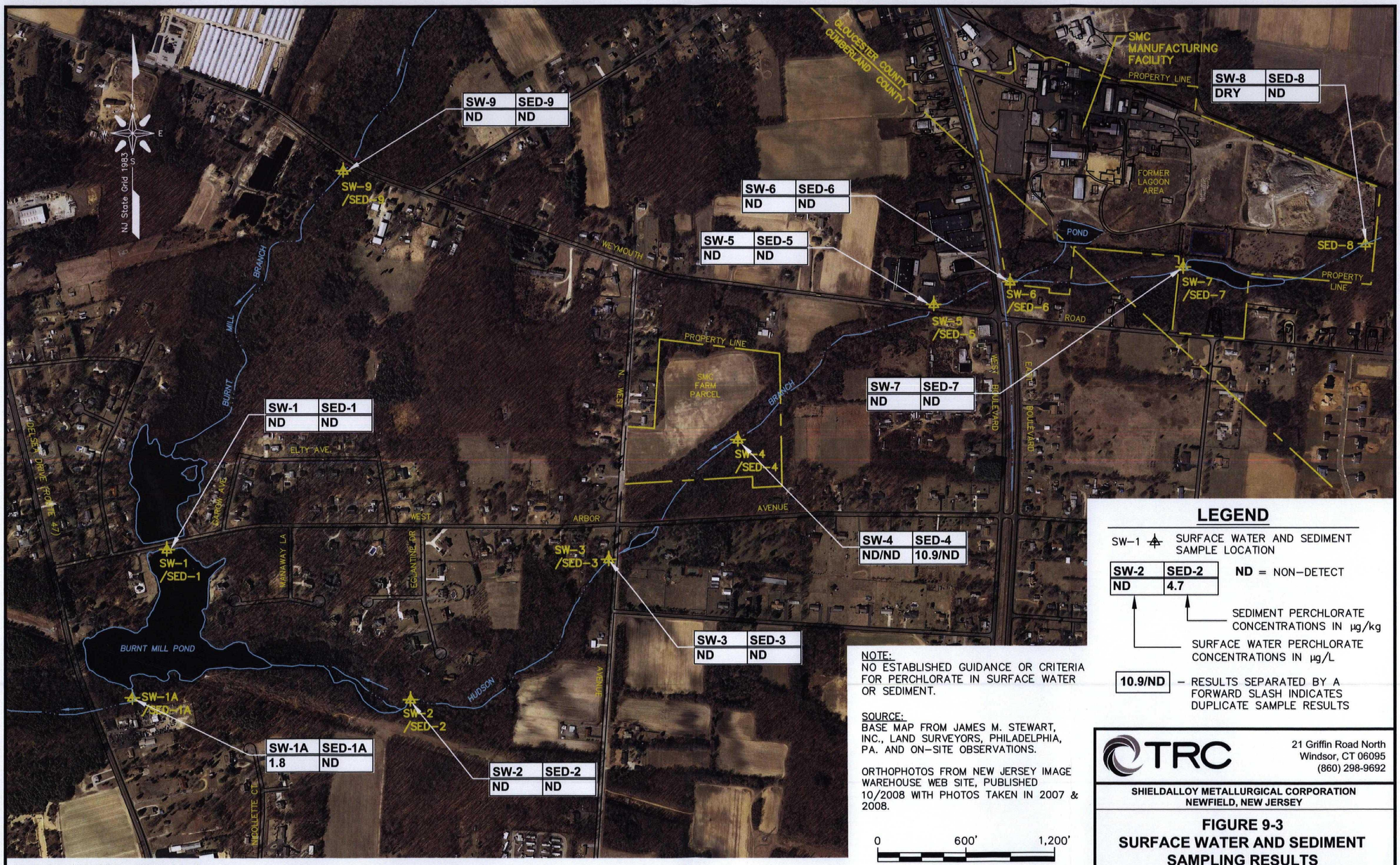
Date: 03/11/10 | Project No. 171441-000050-000000

J:\CAD\171441\000050\Remedial Inv Report\
Plate-2.dwg Layout:FIGURE 9-1 March 15, 2010-1:16PM Khollenbeck

R2-0001473

Figure 9-2
2009 and 2010 Groundwater Sampling Events
Distribution of Detected Perchlorate Concentrations





LEGEND

SW-1 ✛ SURFACE WATER AND SEDIMENT SAMPLE LOCATION

SW-2	SED-2
ND	4.7

ND = NON-DETECT

SEDIMENT PERCHLORATE CONCENTRATIONS IN µg/kg

SURFACE WATER PERCHLORATE CONCENTRATIONS IN µg/L

10.9/ND – RESULTS SEPARATED BY A FORWARD SLASH INDICATES DUPLICATE SAMPLE RESULTS

NOTE:
NO ESTABLISHED GUIDANCE OR CRITERIA FOR PERCHLORATE IN SURFACE WATER OR SEDIMENT.

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 10/2008 WITH PHOTOS TAKEN IN 2007 & 2008.

0 600' 1,200'
GRAPHIC SCALE

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FIGURE 9-3
SURFACE WATER AND SEDIMENT SAMPLING RESULTS

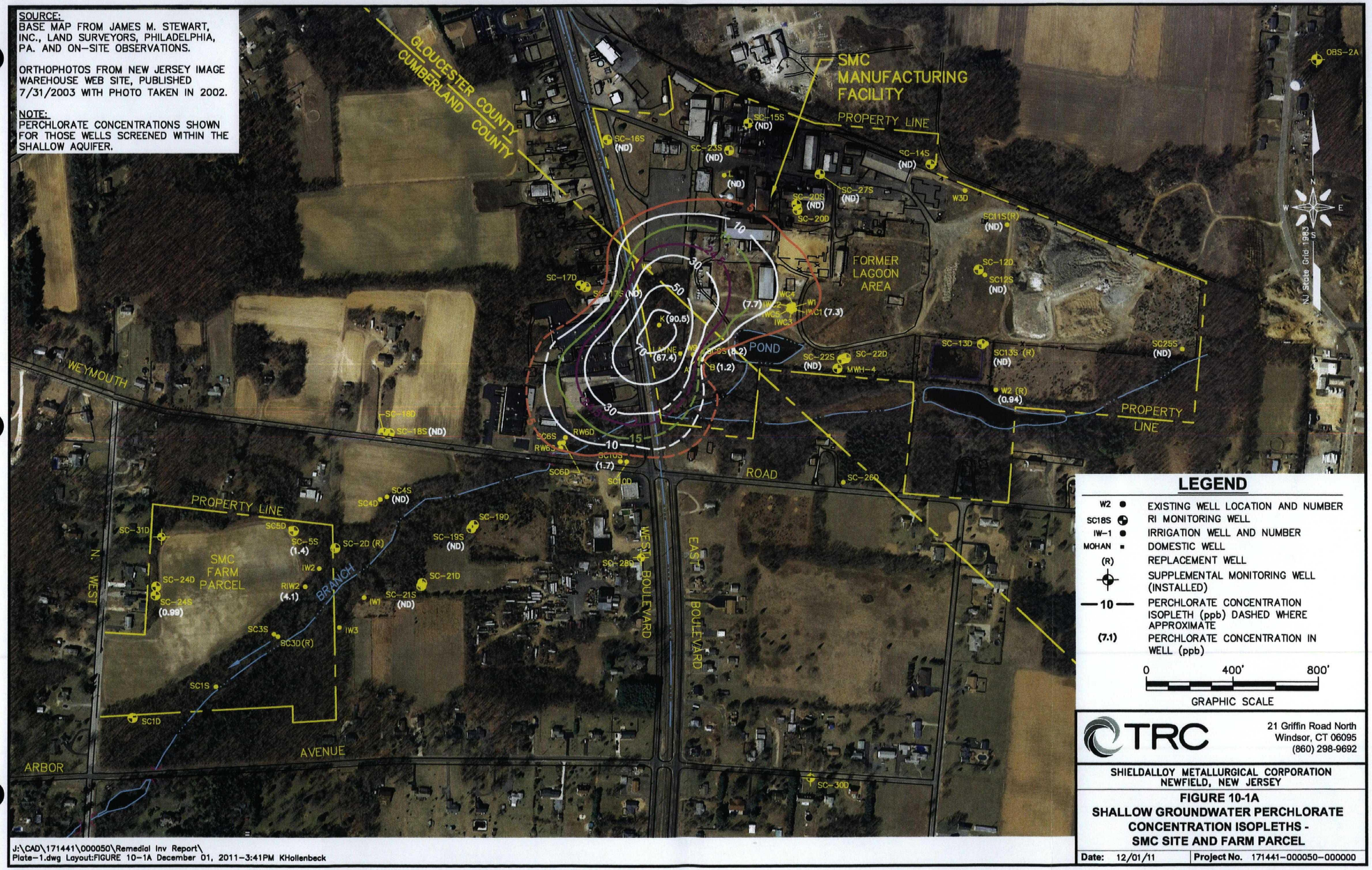
Date: 03/11/10 | Project No. 171441-000050-000000

J:\CAD\171441\000050\Remedial Inv Report\
Plate-1.dwg Layout:FIGURE 9-3 November 19, 2010-1:36PM KHollenbeck

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 7/31/2003 WITH PHOTO TAKEN IN 2002.

NOTE:
PERCHLORATE CONCENTRATIONS SHOWN FOR THOSE WELLS SCREENED WITHIN THE SHALLOW AQUIFER.



LEGEND

W2 ●	EXISTING WELL LOCATION AND NUMBER
SC18S ⊕	RI MONITORING WELL
IW-1 ●	IRRIGATION WELL AND NUMBER
MOHAN ▪	DOMESTIC WELL
(R)	REPLACEMENT WELL
⊕	SUPPLEMENTAL MONITORING WELL (INSTALLED)
— 10 —	PERCHLORATE CONCENTRATION ISOPLETH (ppb) DASHED WHERE APPROXIMATE
(7.1)	PERCHLORATE CONCENTRATION IN WELL (ppb)

0 400' 800'
GRAPHIC SCALE

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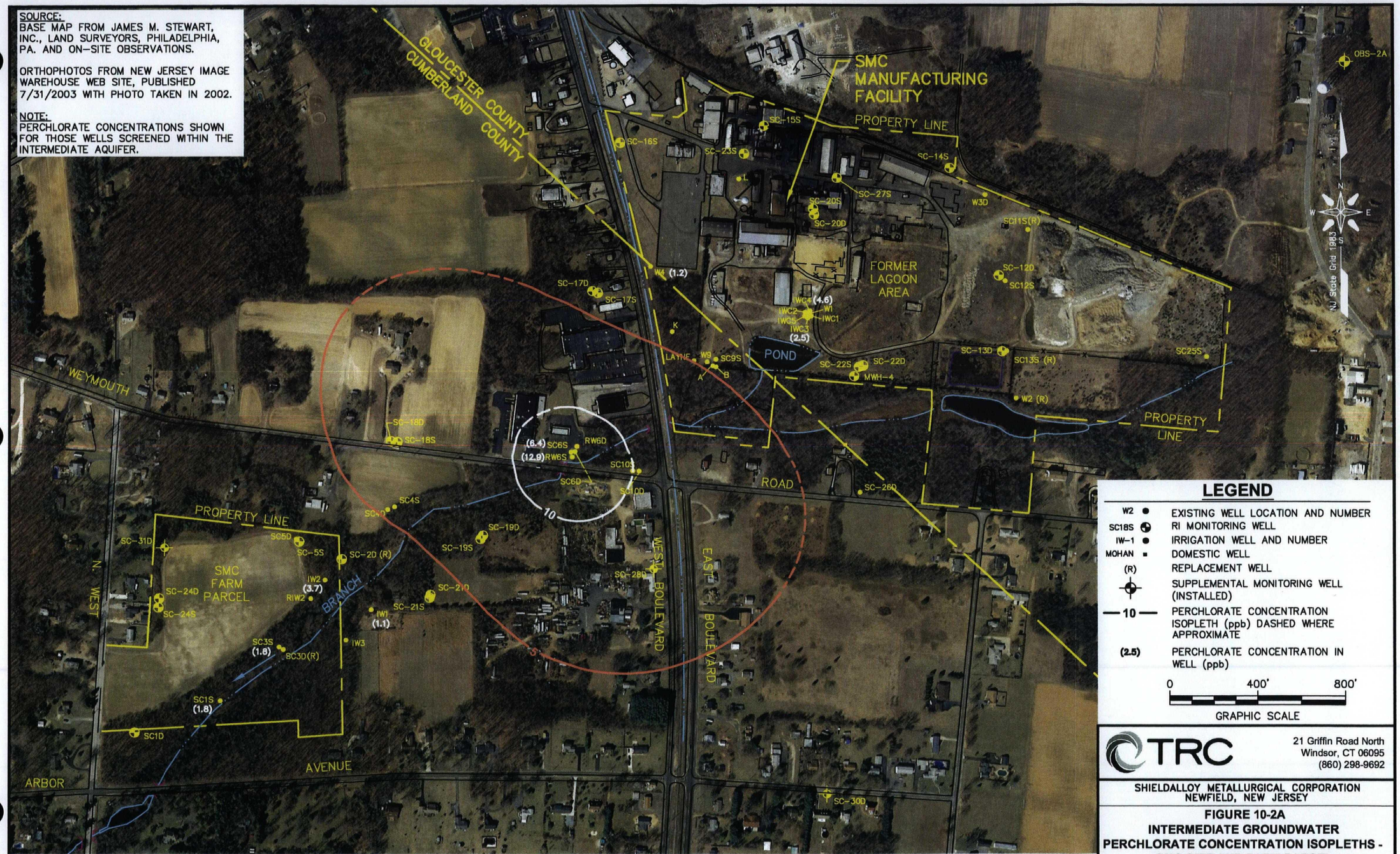
FIGURE 10-1A
SHALLOW GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - SMC SITE AND FARM PARCEL

Date: 12/01/11 | Project No. 171441-000050-000000

J:\CAD\171441\000050\Remedial Inv Report\
Plate-1.dwg Layout:FIGURE 10-1A December 01, 2011-3:41PM KHollenbeck


SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.
ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 7/31/2003 WITH PHOTO TAKEN IN 2002.
NOTE:
PERCHLORATE CONCENTRATIONS SHOWN FOR THOSE WELLS SCREENED WITHIN THE INTERMEDIATE AQUIFER.
GLOUCESTER COUNTY
CUMBERLAND COUNTY
SMC MANUFACTURING FACILITY
PROPERTY LINE
FORMER LAGOON AREA
POND
WEYMOUTH
ROAD
SMC FARM PARCEL
BRANCH
N. WEST
WEST BOULEVARD
EAST BOULEVARD
ARBOR
AVENUE
NJ State Grid 1983
LEGEND
W2 EXISTING WELL LOCATION AND NUMBER
SC18S RI MONITORING WELL
IW-1 IRRIGATION WELL AND NUMBER
MOHAN DOMESTIC WELL
(R) REPLACEMENT WELL
SUPPLEMENTAL MONITORING WELL (INSTALLED)
10 PERCHLORATE CONCENTRATION ISOPLETH (ppb) DASHED WHERE APPROXIMATE
(2.5) PERCHLORATE CONCENTRATION IN WELL (ppb)
0 400' 800'
GRAPHIC SCALE
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SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY
FIGURE 10-2A
INTERMEDIATE GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - SMC SITE AND FARM PARCEL
Date: 12/01/11
Project No. 171441-000050-000000
J:\CAD\171441\000050\Remedial Inv Report\
Plate-1.dwg Layout:FIGURE 10-2A December 01, 2011-4:47PM KHollenbeck

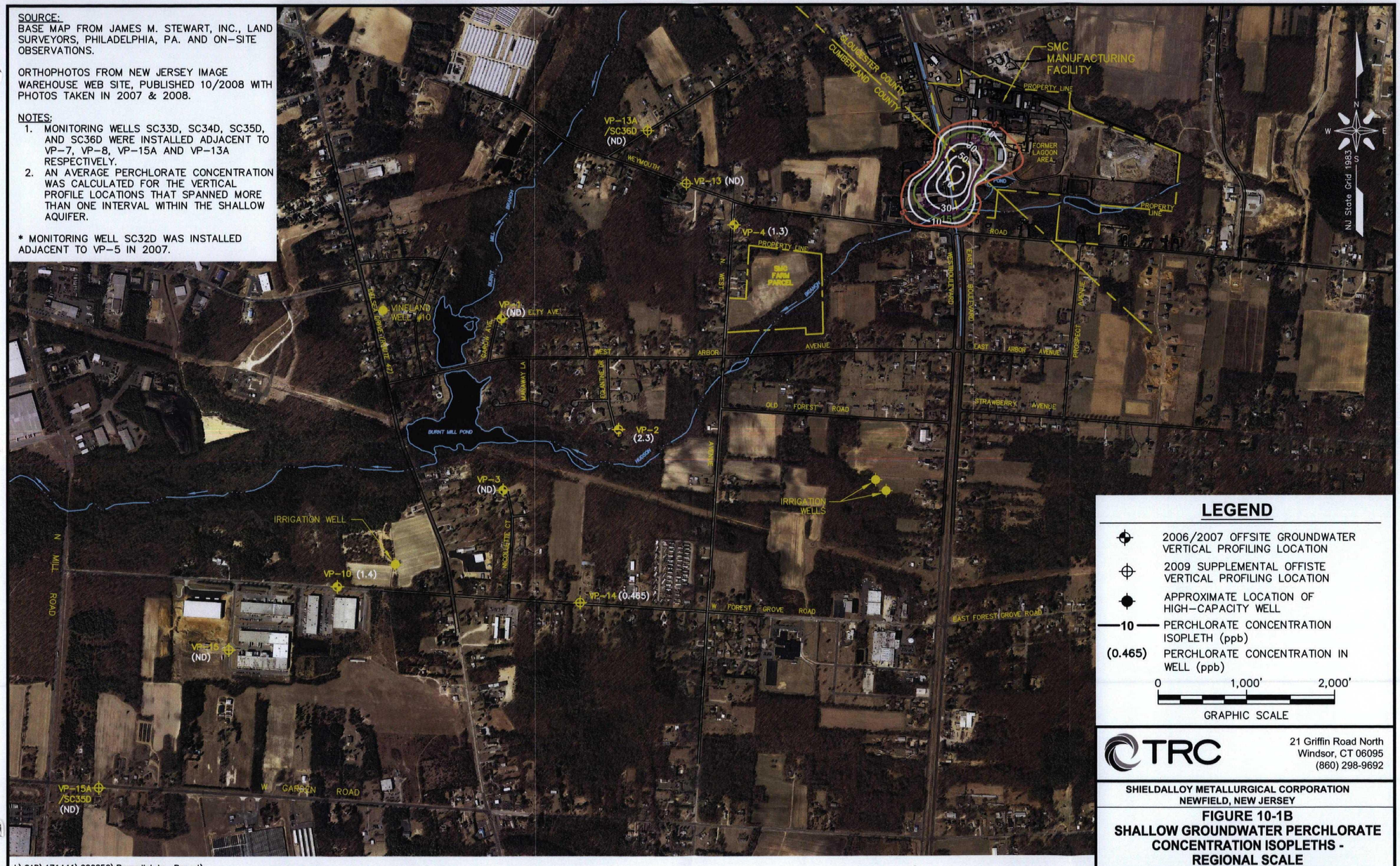
R2-0001477

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 10/2008 WITH PHOTOS TAKEN IN 2007 & 2008.

NOTES:
1. MONITORING WELLS SC33D, SC34D, SC35D, AND SC36D WERE INSTALLED ADJACENT TO VP-7, VP-8, VP-15A AND VP-13A RESPECTIVELY.
2. AN AVERAGE PERCHLORATE CONCENTRATION WAS CALCULATED FOR THE VERTICAL PROFILE LOCATIONS THAT SPANNED MORE THAN ONE INTERVAL WITHIN THE SHALLOW AQUIFER.

* MONITORING WELL SC32D WAS INSTALLED ADJACENT TO VP-5 IN 2007.



LEGEND

- 2006/2007 OFFSITE GROUNDWATER VERTICAL PROFILING LOCATION
- 2009 SUPPLEMENTAL OFFISTE VERTICAL PROFILING LOCATION
- APPROXIMATE LOCATION OF HIGH-CAPACITY WELL
- —10— PERCHLORATE CONCENTRATION ISOPLETH (ppb)
- (0.465) PERCHLORATE CONCENTRATION IN WELL (ppb)

0 1,000' 2,000'

GRAPHIC SCALE

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NEWFIELD, NEW JERSEY

FIGURE 10-1B
SHALLOW GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - REGIONAL SCALE

Date: 11/18/10 | Project No. 171441-000050-000000

J:\CAD\171441\000050\Remedial Inv Report\
Plate-4.dwg Layout:FIGURE 10-1B November 19, 2010-1:40PM KHollenbeck

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 7/31/2003 WITH PHOTO TAKEN IN 2002.

NOTE:
PERCHLORATE CONCENTRATIONS SHOWN FOR THOSE WELLS SCREENED WITHIN THE INTERMEDIATE AQUIFER.

GLOUCESTER COUNTY
CUMBERLAND COUNTY
SMC MANUFACTURING FACILITY
PROPERTY LINE
FORMER LAGOON AREA
POND
PROPERTY LINE
SMC FARM PARCEL
PROPERTY LINE
WEYMOUTH
ROAD
N. WEST
BRANCH
WEST BOULEVARD
EAST BOULEVARD
ARBOR
AVENUE
NJ State Grid 1983

SC-15S, SC-16S, SC-23S, SC-14S, SC-27S, SC-20S, SC-20D, W3D, SC11S(R), SC-12D, SC12S, OBS-2A, SC-17D, SC-17S, W4 (1.2), IWC4 (4.6), IWC2, IWC5, IWC3 (2.5), W1, IWC1, K, LAYNE, W9, SC9S, A, B, SC-22S, SC-22D, MWH-4, SC-13D, SC13S (R), SC25S, W2 (R), SC-18D, SC-18S, (6.4) SC6S, (12.9) RW6S, RW6D, SC10S, SC6D, SC10D, SC-26D, SC4S, SC4D, SC-19D, SC-19S, SC-28D, SC5D, SC-5S, SC-2D (R), SC-31D, SC-24D, SC-24S, IW2 (3.7), RIW2, SC-21D, SC-21S, IW1 (1.1), IW3, SC3S (1.8), SC3D(R), SC1S (1.8), SC1D, SC-30D

10
3

LEGEND

W2 ●	EXISTING WELL LOCATION AND NUMBER
SC18S ⊕	RI MONITORING WELL
IW-1 ●	IRRIGATION WELL AND NUMBER
MOHAN ■	DOMESTIC WELL
(R)	REPLACEMENT WELL
⊕	SUPPLEMENTAL MONITORING WELL (INSTALLED)
—10—	PERCHLORATE CONCENTRATION ISOPLETH (ppb)
(2.5)	PERCHLORATE CONCENTRATION IN WELL (ppb)

0 400' 800'
GRAPHIC SCALE

TRC
21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY

FIGURE 10-2A
INTERMEDIATE GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - SMC SITE AND FARM PARCEL

Date: 03/11/10 | Project No. 171441-000050-000000

J:\CAD\171441\000050\Remedial Inv Report\
Plate-1.dwg Layout:FIGURE 10-2A March 15, 2010-10:27AM KHollenbeck

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 10/2008 WITH PHOTOS TAKEN IN 2007 & 2008.

NOTES: MONITORING WELLS SC33D, SC34D, SC35D, AND SC36D WERE INSTALLED ADJACENT TO VP-7, VP-8, VP-15A AND VP-13A RESPECTIVELY.

* MONITORING WELL SC32D WAS INSTALLED ADJACENT TO VP-5 IN 2007.

SMC MANUFACTURING FACILITY
PROPERTY LINE
FORMER LAGOON AREA
POND
PROPERTY LINE
ROAD
SMC FARM PARCEL
PROPERTY LINE
GLOUCESTER COUNTY
CUMBERLAND COUNTY
SALEM AVENUE
VP-13A /SC36D (4.3)
WEYMOUTH
VP-13 (3.9)
VP-4 (2.3)
VINELAND WELL #10
DELSEA DRIVE (ROUTE 47)
VP-1 (ND)
ELTY AVE
OAKVIEW AVE
HALF BRANCH
N. WEST AVENUE
NEGRO LEA BOULEVARD
EAST BOULEVARD
AVENUE J
PROSPECT
WEST ARBOR AVENUE
EAST ARBOR AVENUE
VANAWAY LA
GUANTINE DR
BURNT MILL POND
VP-2 (9.6)
OLD FOREST ROAD
STRAWBERRY AVENUE
VP-7 /SC33D (ND)
VP-3 (7.9)
IRRIGATION WELL
IRRIGATION WELLS
NICOLETTE CT
N MILL ROAD
VP-10 (3.4)
VP-14 (1.6)
W FOREST GROVE ROAD
EAST FOREST GROVE ROAD
VP-15 (ND)
VP-15A /SC35D (ND)
W GARDEN ROAD
10
5
5
NJ State Grid 1983

LEGEND

- 2006/2007 OFFSITE GROUND WATER VERTICAL PROFILING LOCATION
- 2009 SUPPLEMENTAL OFFISTE VERTICAL PROFILING LOCATION
- APPROXIMATE LOCATION OF HIGH-CAPACITY WELL
- —10— PERCHLORATE CONCENTRATION ISOPLETH (ppb) DASHED WHERE APPROXIMATE
- (1.6) PERCHLORATE CONCENTRATION IN WELL (ppb)

0 1,000' 2,000'
GRAPHIC SCALE

TRC
21 Griffin Road North
Windsor, CT 06095
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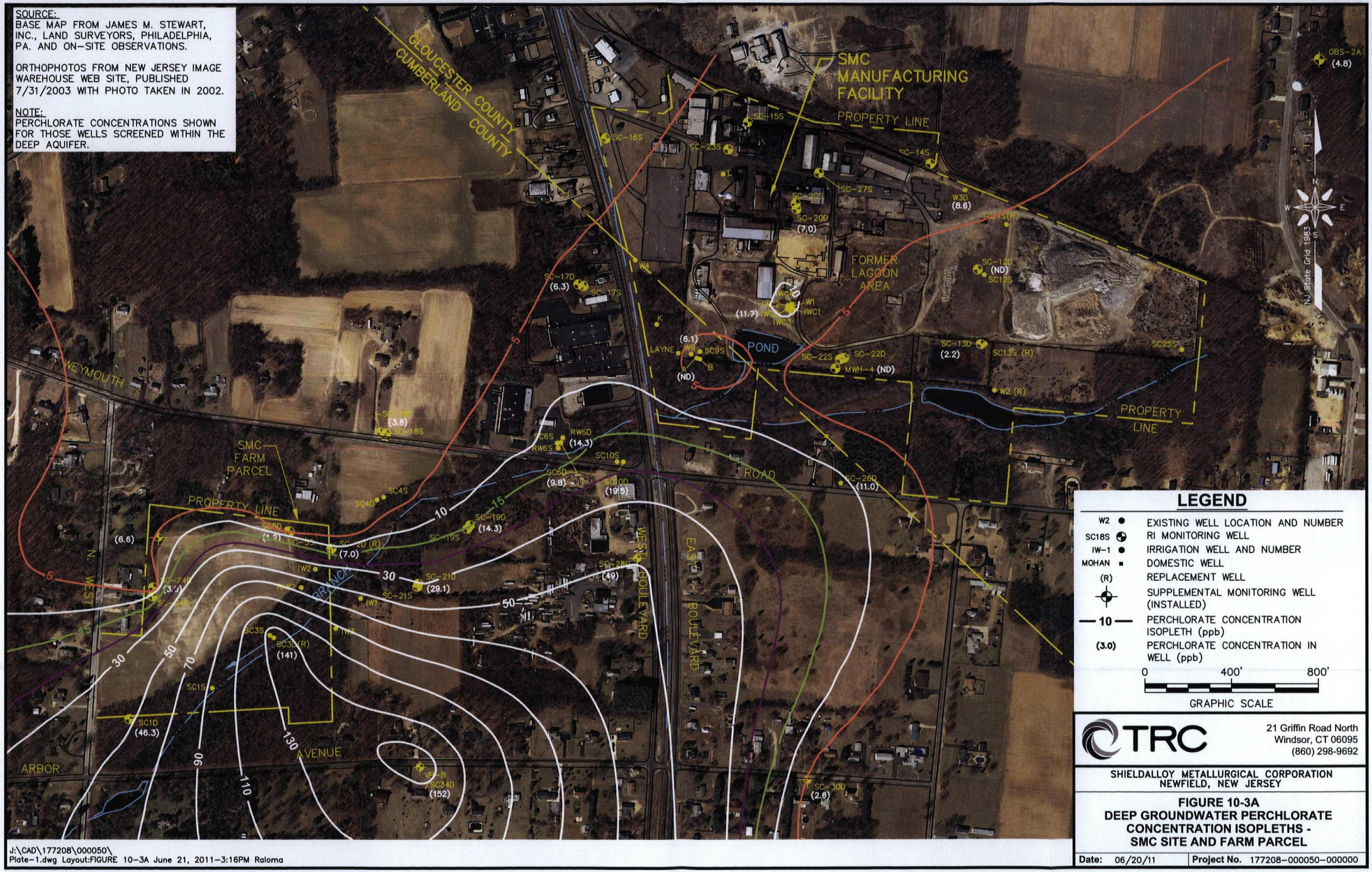
SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY

FIGURE 10-2B
INTERMEDIATE GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - REGIONAL SCALE

Date: 12/01/11 | Project No. 171441-000050-000000

J:\CAD\171441\000050\Remedial Inv Report\
Plate-4.dwg Layout:FIGURE 10-2B December 01, 2011-4:38PM KHollenbeck


SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.
ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 7/31/2003 WITH PHOTO TAKEN IN 2002.
NOTE:
PERCHLORATE CONCENTRATIONS SHOWN FOR THOSE WELLS SCREENED WITHIN THE DEEP AQUIFER.
GLOUCESTER COUNTY
CUMBERLAND COUNTY
SMC MANUFACTURING FACILITY
PROPERTY LINE
FORMER LAGOON AREA
POND
WEYMOUTH
SMC FARM PARCEL
ROAD
WEST BOULEVARD
EAST BOULEVARD
AVENUE
ARBOR
NJ State Grid 1983
LEGEND
W2 EXISTING WELL LOCATION AND NUMBER
SC18S RI MONITORING WELL
IW-1 IRRIGATION WELL AND NUMBER
MOHAN DOMESTIC WELL
(R) REPLACEMENT WELL
SUPPLEMENTAL MONITORING WELL (INSTALLED)
10 PERCHLORATE CONCENTRATION ISOPLETH (ppb)
(3.0) PERCHLORATE CONCENTRATION IN WELL (ppb)
0 400' 800'
GRAPHIC SCALE
TRC
21 Griffin Road North
Windsor, CT 06095
(860) 298-9692
SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY
FIGURE 10-3A
DEEP GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - SMC SITE AND FARM PARCEL
Date: 06/20/11
Project No. 177208-000050-000000
J:\CAD\177208\000050\
Plate-1.dwg Layout:FIGURE 10-3A June 21, 2011-3:16PM Raloma

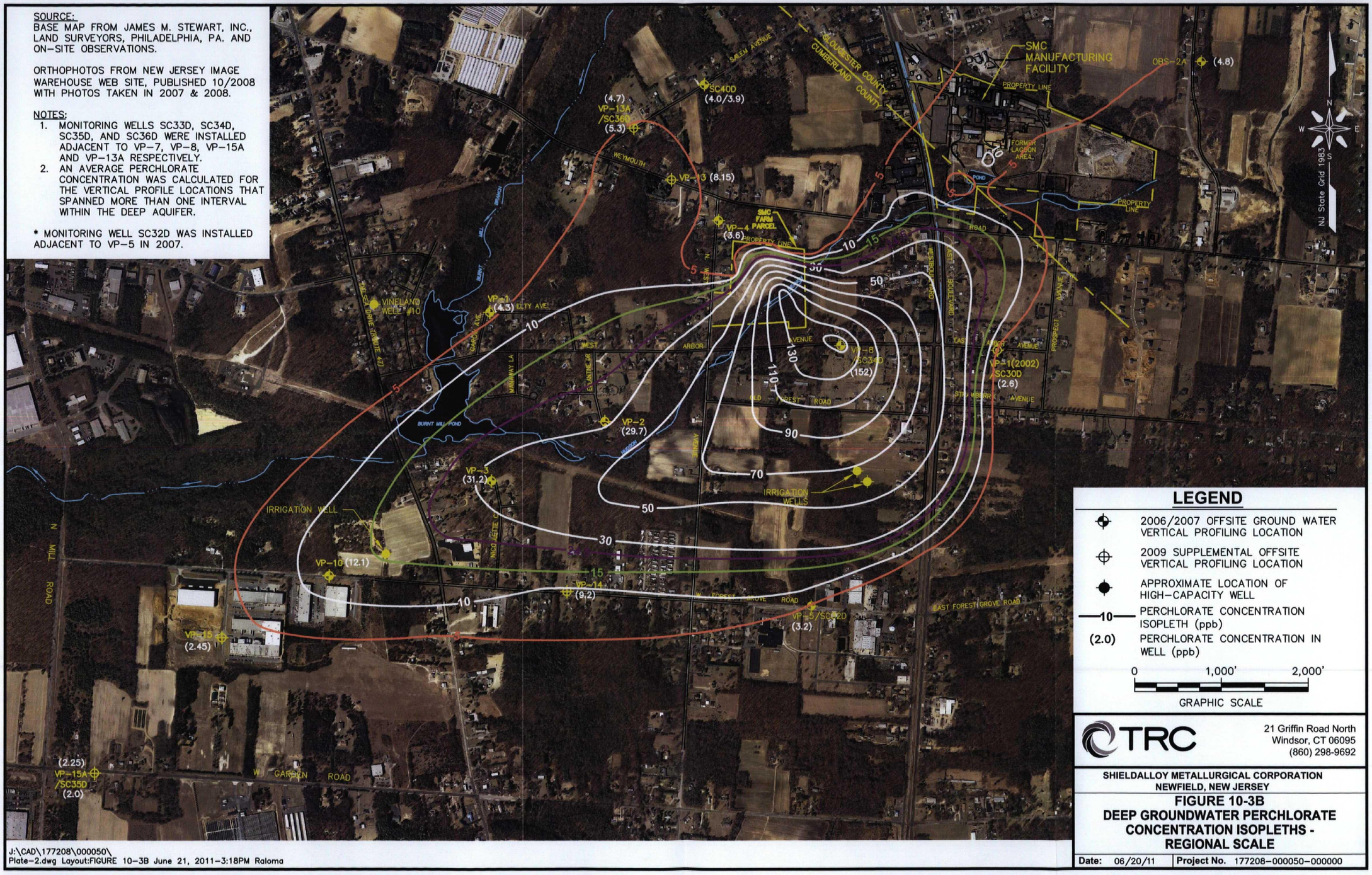
R2-0001481

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 10/2008 WITH PHOTOS TAKEN IN 2007 & 2008.

NOTES:
1. MONITORING WELLS SC33D, SC34D, SC35D, AND SC36D WERE INSTALLED ADJACENT TO VP-7, VP-8, VP-15A AND VP-13A RESPECTIVELY.
2. AN AVERAGE PERCHLORATE CONCENTRATION WAS CALCULATED FOR THE VERTICAL PROFILE LOCATIONS THAT SPANNED MORE THAN ONE INTERVAL WITHIN THE DEEP AQUIFER.

* MONITORING WELL SC32D WAS INSTALLED ADJACENT TO VP-5 IN 2007.



LEGEND

- 2006/2007 OFFSITE GROUND WATER VERTICAL PROFILING LOCATION
- 2009 SUPPLEMENTAL OFFSITE VERTICAL PROFILING LOCATION
- APPROXIMATE LOCATION OF HIGH-CAPACITY WELL
- —10— PERCHLORATE CONCENTRATION ISOPLETH (ppb)
- (2.0) PERCHLORATE CONCENTRATION IN WELL (ppb)

0 1,000' 2,000'
GRAPHIC SCALE

TRC
21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY

FIGURE 10-3B
DEEP GROUNDWATER PERCHLORATE CONCENTRATION ISOPLETHS - REGIONAL SCALE

Date: 06/20/11 | Project No. 177208-000050-000000

J:\CAD\177208\000050\Plate-2.dwg Layout:FIGURE 10-3B June 21, 2011-3:18PM Raloma

A

A'

GROUND SURFACE

ELEVATION IN FEET ABOVE MEAN SEA LEVEL

100 80 60 40 20 0 (MSL) 2.0 20 40

SC35D VP-15A VP-15 VP-10 IRRIGATION WELL** VP-3 VP-2 SC1D SC1S SC3S SC3D(R) RIW2 IW2 IW1 SC20(R) SC-21S SC-21D SC4S SC-19S SC-19D RW6S SC6S SC6D RW6D SC10S SC10D K LAYNE W9 A SC9S IWC5 IWC2 IWC3 IWC1 IWC4 W3D SC11S(R) OBS-2A

ND ND ND 2.4 ND ND ND 4.2 1.8 1.8 4.1 3.7 1.1 ND ND 1.7 6.4 12.9 90.5 67.4 8.2 1.2* 7.3 7.7 2.5 4.6 8.6 11.7 ND 4.8

1.6 2.9 ND ND 3.4 4.9 17.4 6.7 7.9 34 28.3 9.6 49.9 9.4 46.3 141 7.0 29.1 14.3 9.8 14.3 19.5 6.1 ND

5 15 50 100

NOTES:

1) CLAY LAYER ENCOUNTERED AT VP–2, VP–10, AND VP–15 LOCATIONS.
2) GROUND ELEVATIONS BASED ON GOOGLE EARTH AND SURVEYED MONITORING WELL/GROUND SURFACE ELEVATIONS. VERTICAL DATUM IS NGVD 1929.
3) PERMANENT MONITORING WELL INSTALLED AT VP–8 (SC34D) AND VP–15A (SC35D) IN 2009.
4) *=PERCHLORATE RESULT OF 1.2 µg/L AT WELL B NOT USED IN DRAFTING PERCHLORATE ISOPLETHS.
5) **=IRRIGATION WELL REPORTED TO BE APPROXIMATELY 100 FEET DEEP. SCREEN INTERVAL UNKNOWN.

LEGEND

- GROUNDWATER SAMPLE INTERVAL
- 17.7 PERCHLORATE CONCENTRATION (µg/L)
- ND NOT DETECTED
- APPROXIMATE TOP OF CONFINING CLAY LAYER (DASHED WHERE INFERRED)
- APPROXIMATE WATER TABLE DEPTH
- 50 PERCHLORATE ISOPLETH (µg/L)

0 1,000' 2,000'
HORIZONTAL GRAPHIC SCALE

0 20' 40'
VERTICAL GRAPHIC SCALE
VERTICAL EXAGGERATION = 50X

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(860) 298–9692

SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY

FIGURE 10-4
VERTICAL PROFILING CROSS SECTION (SC35D TO OBS-2A) PERCHLORATE CONCENTRATION

Date: 03/11/10 | Project No. 171441–000050–000000

J:\CAD\177208\000050\
Plate–2.dwg Layout:FIGURE 10–4 June 22, 2011–9:29AM Raloma

R2-0001483

APPENDIX A

RELEVANT BORING LOGS AND MONITORING WELL CONSTRUCTION DIAGRAMS

Dan Raviv Associates, Inc.

588 Eagle Rock Avenue, West Orange, New Jersey 07052

FIELD LOG OF Mooltoring WELL NO. SC1D

Project	Boring Location	Elevation in Datum	Project No.	Date Started	Data Finished
Shieldalloy	Newfield, N.J.	91.03' asl t.o.c.	83C152	5/29/84	5/30/84

Drilling Company	Driller	Drilling Equipment	Drill Method
Vance Skinner Drilling Co., Inc.	Dana Lewis	Gardner-Denver ICR	Mud Rotary

Completion Depth	Number of Samples	Size and Type of Casing	Water Elevation
125' drilled 115' cased	26	2" I.D. PVC 0-85/95-100 blank 85-95/100-115 screen	6/9/84 84.90' asl

Bit	Core Barrel Type	Length	Sampler Hammer	Weight	Drop	Logged By	Checked By
5" Drag	-	-	-	-	-	RNN	-

Casing Stickup = 3.00'.

Depth Feet	Description	Well Data	Remarks
0	**SAND** 80% SAND; FINE TO COARSE, MOSTLY MEDIUM TO COARSE; QUARTZ; OVERALL COLOR IS ORANGE, GRAINS ARE CLEAR TO GREY, ORANGE; SUBROUNDED TO ROUNDED; BLOCKY. 15% GRAVEL; FINE; QTZ; OVERALL COLOR IS ORANGE, GRAINS ARE CLEAR, ORANGE; SUBROUNDED TO ROUNDED; BLOCKY TO TABULAR. 5% CLAY; SOFT; PLASTIC; ORANGE.	Cement Grout; 2-inch I.D. blank PVC casing	COMPOSITE SAMPLES OVER 5-FOOT INTERVALS.
5	**SANDY GRAVEL** 55% GRAVEL; FINE; QTZ.; OVERALL COLOR IS TANNISH ORANGE; GRAINS ARE CLEAR TO GREY, ORANGE; SUBANGULAR TO ROUNDED; BLOCKY. 25% SAND; FINE TO COARSE, MOSTLY MED. TO COARSE; QTZ.; OVERALL COLOR IS ORANGISH TAN, GRAINS ARE CLEAR TO GREY, ORANGE, WHITE; SUBANGULAR TO ROUNDED. 20% CLAY; SOFT; PLASTIC; PALE TANNISH ORANGE.		
10	**CLAYEY GRAVEL** 55% GRAVEL - SIMILAR TO ABOVE. 30% CLAY; SOFT TO FAIRLY STIFF; PLASTIC; ORANGE. 15% SAND - SIMILAR TO ABOVE.		

R2-0001485

Depth Feet	Description	Well Data	Remarks
	CLAYEY GRAVEL DESCRIPTION ON PRECEDING PAGE.	Cement Grout; 2-inch I.D. blank PVC casing	COMPOSITE SAMPLES OVER 5-FOOT INTERVALS.
15	**GRAVELLY SAND** 70% SAND; FINE TO VERY COARSE, MOSTLY MED. TO V. COARSE; SUBANGULAR TO ROUNDED; BLOCKY. 25% GRAVEL; FINE; SUBANGULAR TO ROUNDED; BLOCKY TO TABULAR. 5% CLAY; SOFT; PLASTIC; ORANGE.		← DRILLING RATE INDICATES A CLAY LAYER AT 15 FT.
25	**GRAVELLY SAND** 70% SAND - SIMILAR TO ABOVE, EXCEPT DECREASING NUMBER OF ORANGE GRAINS. 25% GRAVEL - SIMILAR TO ABOVE, EXCEPT DECREASING NUMBER OF ORANGE GRAINS. 5% CLAY - SIMILAR TO ABOVE.		
30	**GRAVELLY SAND** 70% SAND - SIMILAR TO 15-20-FOOT INTERVAL, EXCEPT DECREASING NUMBER OF ORANGE GRAINS. 25% GRAVEL - SIMILAR TO 15-20-FOOT INTERVAL, EXCEPT DECREASING NUMBER OF ORANGE GRAINS. 5% CLAY - SIMILAR TO 15-20-FOOT INTERVAL.		
	GRAVELLY SAND 70% SAND - SIMILAR TO 15-20-FOOT INTERVAL, EXCEPT DECREASING NUMBER OF ORANGE GRAINS. 25% GRAVEL - SIMILAR TO 15-20-FOOT INTERVAL, EXCEPT DECREASING NUMBER OF ORANGE GRAINS. 5% CLAY - SIMILAR TO 15-20-FOOT INTERVAL.		

R2-0001486

Project No. 83C152 FIELD LOG OF Mon. WELL NO. SC1D

Depth Feet	Description	Well Data	Remarks
35	**GRAVELLY SAND** 70% SAND - SIMILAR TO 15-20-FOOT INTERVAL, EXCEPT SOME YELLOW GRAINS AND INCREASING NUMBER OF ORANGE GRAINS. 25% GRAVEL - SIMILAR TO 15-20-FOOT INTERVAL, EXCEPT SOME YELLOW GRAINS & INCREASING NUMBER OF ORANGE GRAINS. 5% CLAY - SIMILAR TO 15-20-FOOT INTERVAL.	Cement Grout 2-inch I.D. blank PVC casing	COMPOSITE SAMPLES OVER 5-FOOT INTERVALS.
40	**SAND** 90% SAND; FINE TO COARSE, MOSTLY MED. TO COARSE; B.T.E.; OVERALL COLOR IS TANNISH ORANGE, GRAINS ARE CLEAR TO GREY, WHITE, ORANGE; SUBANGULAR TO SUBROUNDED; BIOCRY TO TABUCAR. 5% GRAVEL; VERY FINE; SIMILAR TO SAND. 5% CLAY; SOFT; PLASTIC; PALE ORANGE.		
45	**SAND** 80% SAND - SIMILAR TO ABOVE. 10% GRAVEL - SIMILAR TO ABOVE. 10% CLAY - SIMILAR TO ABOVE.		
50	**SAND** 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45 FOOT INTERVAL, EXCEPT SOME CLAY IS WHITE.		
55	**SAND** DESCRIPTION ON FOLLOWING PAGE		

DRAI 7/82

R2-0001487

Project No. 83C152

FIELD LOG OF Mon. WELL NO. SC1D

Depth Feet	Description	Well Data	Remarks
	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SAND IS SOMEWHAT COARSER. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45-FOOT INTERVAL.	Cement Grout	COMPOSITE SAMPLES OVER 5-FOOT INTERVALS.
60	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SAND IS SOMEWHAT COARSER. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45-FOOT INTERVAL.	Bentonite pellets	
65	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL EXCEPT SAND IS SOMEWHAT COARSER. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45-FOOT INTERVAL.	Collapsed borehole material	
70	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SOME WHITE CLAY.	2-inch I.D. blank PVC casing	
75	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SAND IS SOMEWHAT COARSER. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45 FOOT INTERVAL.		

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R2-0001488

Project No. 83C152 FIELD LOG OF Mon. WELL NO. SC1D Page 5 of 7

Depth Feet	Description	Well Data	Remarks
	SAND DESCRIPTION ON PRECEDING PAGE.		COMPOSITE SAMPLES OVER 5-FOOT INTERVALS.
80	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SAND IS SOMEWHAT COARSER. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45-FOOT INTERVAL.		
85	SAND 90% SAND - SIMILAR TO 40-45-FOOT INTERVAL. 5% GRAVEL - SIMILAR TO 40-45 FOOT INTERVAL. 5% CLAY - SIMILAR TO 40-45 FOOT INTERVAL.		DRILLING RATE INDICATES MORE CLAY.
90	SAND 80% SAND - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SAND IS SOMEWHAT COARSER. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL. 10% CLAY - SIMILAR TO 40-45 FOOT INTERVAL.		
95	CLAYEY SAND 50% SAND; FINE TO V. COARSE, MOSTLY MED. TO V. COARSE; QTZ; OVERALL COLOR IS RUSTY TAN, GRAINS ARE CLEAR TO GREY, WHT, ORANGE; SUBANGULAR TO SUBROUNDED; BLOCKY TO TABULAR. 30% CLAY; SOFT TO STIFF; PLASTIC; PALE ORANGE TO WHITE. 20% GRAVEL; FINE, QTZ; OVERALL COLOR IS ORANGE, GRAINS ARE CLEAR TO GREY, ORANGE, RUST; SUBANGULAR TO SUBROUNDED; BLOCKY.	Collapsed borehole material 2-inch I.D. blank PVC casing 2-inch I.D. PVC screen (0.02 slot) 2-inch I.D. blank PVC casing	DRILLING RATE INDICATES A FEW FEET OF CLAY IN THIS INTERVAL.

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R2-0001489

Project No. 83C152 FIELD LOG OF Mon. WELL NO. SC1D

Depth Feet	Description	Well Data	Remarks
	CLAYEY SAND DESCRIPTION ON PRECEDING PAGE.		DRILLING RATE INDICATES A FEW FEET OF CLAY IN THIS INTERVAL. COMPOSITE SAMPLES OVER 5-FOOT INTERVALS.
100	SAND 75% SAND - SIMILAR TO 40-45-FOOT INTERVAL. 15% CLAY - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SOME CLAY IS WHITE. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL.	2-inch I.D. blank PVC casing	
	SAND 75% SAND - SIMILAR TO 40-45-FOOT INTERIAL. 15% CLAY - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SOME CLAY IS WHITE. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL.	Collapsed borehole material	
110	SAND 70% SAND - SIMILAR TO 40-45-FOOT INTERVAL. 20% CLAY - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SOME CLAY IS WHITE. 10% GRAVEL - SIMILAR TO 40-45-FOOT INTERVAL, EXCEPT SOME DARK GREY SHALE FRAGMENTS WHICH GIVE SAMPLE A MOTTLED APPEARANCE.	2-inch I.D. PVC screen (0.02 slot)	
115	SHALEY SAND 50% SAND - SIMILAR TO 40-45-FOOT INTERVAL. 30% SHALL FRAGMENTS; SAND & GRAVEL SIZED; DARK GREY. 20% CLAY; SOFT; PLASTIC; GREY, MINOR ORANGE.	Backfill (sand from cuttings)	DRILLING RATE INDICATES ALTERNATE LAYERS OF SAND & CLAY.

DRAI 7782

R2-0001490

Project No. 83C152 FIELD LOG OF Mon. WELL NO. SC1D Page 7 of 7

Depth Feet	Description	Well Data	Remarks
0	**CLAY** 80% CLAY; SOFT TO STIFF; PLASTIC; DARK GREY. 20% SAND; FINE TO COARSE; QTZ.	Backfill (sand from cuttings)	COMPOSITE SAMPLE OVER 5-FOOT INTERVAL.
5	**CLAY.** 100% CLAY; STIFF; PLASTIC; DARK GREY.		SPLIT SPOON SAMPLE - HAD PROBLEMS OBTAINING SAMPLE DUE TO FILL.
7			

DRAI 7/82

R2-0001491

BORING NO.:	SC-12D	CONTRACTOR:	EMPIRE SOILS	DATE STARTED:	11/16/90
PROJECT NO.:	7650-N51	DRILLERS:	KENNEY, EDWARDS	DATE COMPLETED:	11/19/90
PROJECT:	SHIELD ALLOY	TRC INSPECTOR:	MCMORROW	WATER TABLE LEVEL:	9.0 FT
CLIENT:	SMC	DRILLING METHOD:	MUD ROTARY	LOCATION: N	256008.45
LOCATION:	NEWFIELD, NJ	GROUND ELEVATION:	102.16	E	1901049.83
BORING DEPTH:	142 FT	INNER CASING ELEVATION:	103.19	NJDEP PERMIT NUMBER:	3135226-0

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	LITHOLOGY	WELL CONSTRUCTION
				LOCKING COVER
0 - 2	9 11	DARK BROWN, FINE TO MEDIUM SAND, TRACE SILT, MOIST	0.0	0.0
	S 7	RECOVERY = 22"		
2 - 4	7 S	BROWN FINE TO MEDIUM SAND, MOIST		CEMENT/BENTONITE GROUT
	S 6	RECOVERY = 18"		
4 - 6	S 8	BROWN/ORANGE FINE TO COARSE SAND, TRACE GRAVEL, MOIST		
	9 6	RECOVERY = 22"		
6 - 8	6 5	0-12" BROWN FINE SAND, LITTLE SILT, TRACE CLAY, MOIST		8" STEEL CASING
	10 IS	12-20" BROWN/ORANGE FINE TO MEDIUM SAND, MOIST		
8 - 10	13 11	BROWN/ORANGE FINE TO COARSE SAND, TRACE SILT, WET		
	8 8	RECOVERY = 24"		
				4" SCHEDULE 40 PVC RISER
15 - 17	4 S	BROWN FINE TO COARSE SAND, TRACE GRAVEL, WET		
	4 6	RECOVERY = 8"		
20 - 22	8 7	BROWN/ORANGE FINE TO COARSE SAND		
	7 6	RECOVERY = 10"		
				BENTONITE SLURRY
25 - 27	10 9	BROWN/ORANGE FINE TO COARSE SAND, LITTLE GRAVEL		
	8 11	RECOVERY = 6"		
30 - 32	6 1	0-3" SAME AS ABOVE		
	1 3	3-10" DARK GRAY CLAY, VERY STIFF		
35 - 37	3 4	0-12" LT. GRAY CLAY, LITTLE SILT	35.0	BOTTOM OF STEEL CASING
	5 8	12-18" BROWN SILT, SOME FINE SAND, TRACE CLAY, MOIST		
40 - 42	2 3	BROWN FINE TO COARSE SAND		
	3 5	RECOVERY = 8"		
		CONTINUED ON NEXT PAGE	CONTINUED	CONTINUED

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	LITHOLOGY	WELL CONSTRUCTION
45 - 47	2 8 9 13	BROWN FINE TO COARSE SAND RECOVERY = 12"		
50 - 52	3 5 30 30	LT. BROWN FINE TO MEDIUM SAND, TRACE SILT RECOVERY = 4"		
55 - 57	5 11 15 20	SAME AS ABOVE WITH THIN WHITE LAYERS OF SILT THROUGHOUT RECOVERY = 14"		
60 - 62	10 15 20 20	LT. BROWN TO WHITE FINE TO MEDIUM SAND RECOVERY = 14"	60.0	4" SCHEDULE 40 PVC RISER
65 - 67	9 15 21 21	LT. BROWN FINE TO MEDIUM SAND RECOVERY = 12"	65.0	
70 - 72	10 15 33 37	SAME AS ABOVE RECOVERY = 8"		
75 - 77	22 24 28 32	SAME AS ABOVE RECOVERY = 12"		BENTONITE SLURRY
80 - 82	20 19 17 18	BROWN FINE SAND, TRACE SILT RECOVERY = 2"		
65 - 67	10 12 11 20	LT. BROWN FINE SAND, TRACE SILT RECOVERY = 22"		
90 - 92	15 29 16 18	LT. BROWN FINE TO COARSE SAND RECOVERY = 12"		
		CONTINUED ON NEXT PAGE	CONTINUED	CONTINUED

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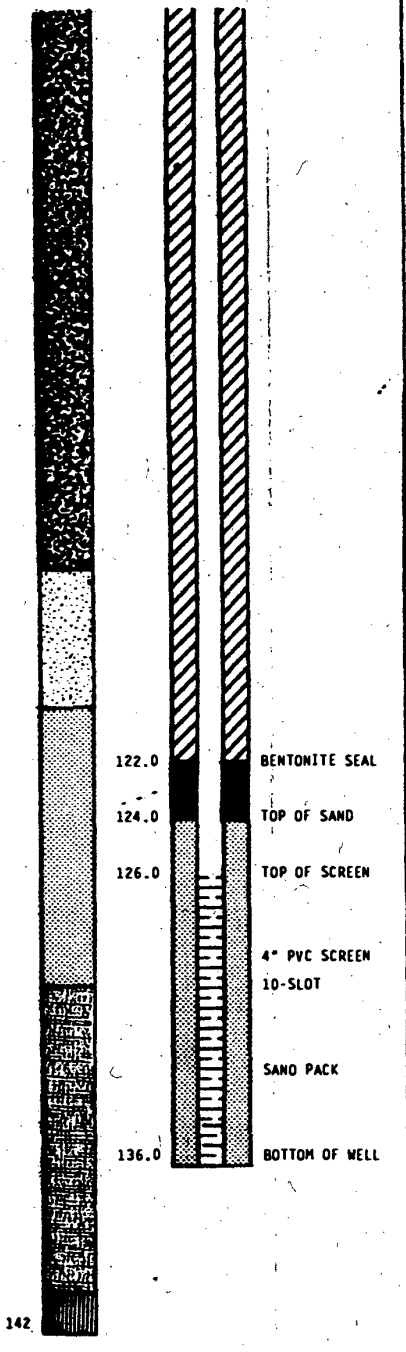
DEPTH (FT)	BLOWS	SOIL DESCRIPTION
95 - 97	19 21 32 29	LT. BROWN FINE TO COARSE SAND RECOVERY = 12"
100 - 102	35 42 67 65	BROWN/ORANGE FINE TO COARSE SAND, TRACE SILT RECOVERY = 5"
105 - 107	25 52 67 100	SAME AS ABOVE RECOVERY = 14"
110 - 112	34 100/5"	SAME AS ABOVE RECOVERY = 8"
116 - 117	100/6"	BROWN/RED FINE TO MEDIUM SAND, TRACE SILT RECOVERY = 3"
120 - 122	12 11 19 28	BROWN FINE SAND, LITTLE SILT RECOVERY = 10"
125 - 127	12 22 20 18	LT. BROWN FINE SAND, LITTLE SILT RECOVERY = 12"
130 - 132	6 6 9 9	DARK GRAY FINE SAND AND SILT RECOVERY = 14"
135 - 137	5 6 5 8	SAME AS ABOVE RECOVERY = 20"
140 - 142	3 5 12 16	0-18" SAME AS ABOVE 18-24" DARK GRAY SILT, SOME CLAY END OF BORING = 142 FT

LITHOLOGY

WELL CONSTRUCTION



R2-0001494

BORING NO.:	SC-210	CONTRACTOR:	EMPIRE SOILS	DATE STARTED:	11/06/90
PROJECT NO.:	7650-N51	DRILLERS:	KENNEY, EDMAROS	DATE COMPLETED:	11/27/90
PROJECT:	SHIELD ALLOY	TRC INSPECTOR:	GLEZEN, MCMORROW	WATER TABLE LEVEL:	6.0 FT
CLIENT:	SMC	DRILLING METHOD:	MUD ROTARY	LOCATION: N	256545.97
LOCATION:	NEWFIELD, NJ	GROUND ELEVATION:	90.44	E	1698454.64
BORING DEPTH:	137 FT	INNER CASING ELEVATION:	91.65	NJDEP PERMIT NUMBER:	3135220-1

DEPTH (FT)	BLOWS	SOIL DESCRIPTION
0 - 2	3 3	0-12" DARK BROWN SILT AND FINE SAND, TRACE ORGANICS
	3 3	12-18" ORANGE/BROWN MEDIUM TO COARSE SAND, TRACE GRAVEL, TRACE SILT
2 - 4	C 8	0-4" TAN MEDIUM TO COARSE SAND, LITTLE GRAVEL
	12 17	4-14" ORANGE MEDIUM TO COARSE SAND, LITTLE GRAVEL, TRACE SILT
4 - 6	14 16	0-6" TAN MEDIUM TO COARSE SAND, LITTLE FINE SAND, TRACE GRAVEL
	16 12	6-15" ORANGE MEDIUM TO COARSE SAND, TRACE GRAVEL
6 - 6	11 14	0-20" ORANGE/BROWN MED. SAND, SOME C. SAND, TRACE GRAVEL, TRACE SILT.
	16 30	20-24" ORANGE SILT, LITTLE CLAY, LITTLE FINE SAND, WET
8 - 10	28 25	NO RECOVERY
	22 21	
10 - 12	4 3	LT. BROWN/ORANGE FINE SAND AND SILT, LITTLE CLAY STRINGERS, DAMP
	4 7	RECOVERY - 15"
12 - 14	6 6	ORANGE FINE SAND AND SILT M/LT. GRAY CLAY STRINGERS, TRACE GRAVEL.
	4 9	RECOVERY - 16"
15 - 17	6 9	ORANGE MEDIUM TO COARSE SAND, LITTLE FINE SAND, TRACE GRAVEL
	14 14	RECOVERY - 12"
20 - 22	7 16	0-2" ORANGE FINE SAND, SOME SILT, LITTLE CLAY
	25 23	2-12" TAN FINE SAND, SOME MEDIUM SAND
25 - 27	18 41	LT. BROWN/ORANGE MEDIUM TO COARSE SAND AND GRAVEL, TRACE FINE SAND
	44 40	RECOVERY - 18"
30 - 32	14 20	LIGHT TAN/PINK FINE SAND, TRACE SILT, TRACE MEDIUM SAND
	22 29	RECOVERY - 14"
35 - 37	13 22	LT. TAN/PINK MEDIUM SAND, LITTLE FINE SAND
	25 39	RECOVERY - 12"
40 - 42	21 29	LIGHT BROWN MEDIUM SAND, TRACE COARSE SAND, TRACE FINE SAND
	39 45	RECOVERY - 12"

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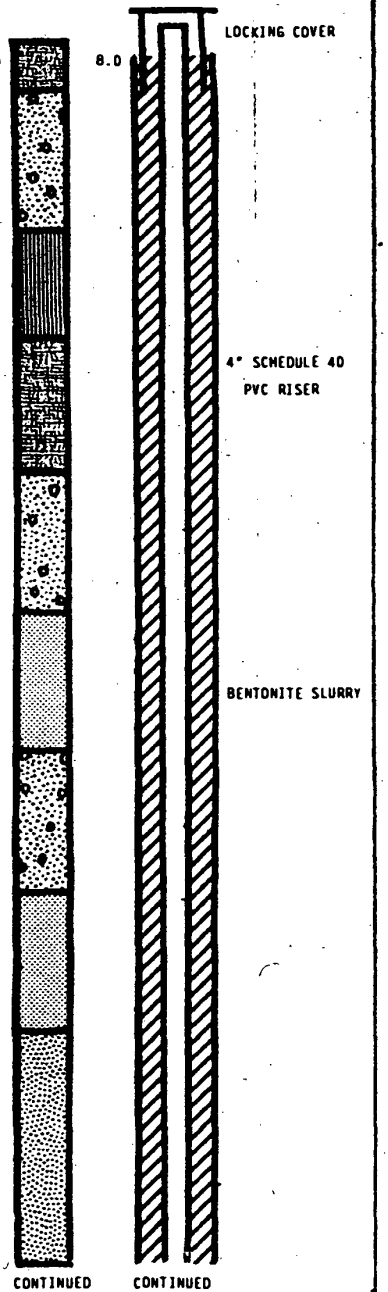

R2-0001495

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	LITHOLOGY	WELL CONSTRUCTION
45 - 47	22 35 50 60	TAN MEDIUM TO COARSE SAND, TRACE GRAVEL, TRACE FINE SAND RECOVERY = 16"		
50 - 52	21 41 54 70	TAN MEDIUM TO COARSE SAND, SOME GRAVEL IN TOP 4", SOME FINE SAND RECOVERY = 16"		
55 - 57	41 55 57 43	TAN MEDIUM TO COARSE SAND, SOME GRAVEL RECOVERY = 14"		4" SCHEDULE 40 PVC RISER
60 - 62	22 47 66 76	ORANGE/BROWN MEDIUM TO COARSE SAND, TRACE SILT, TRACE GRAVEL RECOVERY = 14"		
65 - 67	21 26 9 8	RED/BROWN FINE TO COARSE SAND, TRACE GRAVEL, TRACE SILT RECOVERY = 2"		
70 - 72	14 41 47 53	ORANGE/TAN FINE SAND, SOME SILT RECOVERY = 10"		BENTONITE SLURRY
75 - 77	25 22 32	SAME AS ABOVE RECOVERY = 10"		
80 - 82	22 30 42 46	SAME AS ABOVE RECOVERY = 14"		
85 - 67	7 20 25 37	LT. BROWN FINE SAND, LITTLE SILT RECOVERY = 18"		
90 - 92	15 21 32 44	SAME AS ABOVE RECOVERY = 14"		
		CONTINUED ON NEXT PAGE	CONTINUED	CONTINUED

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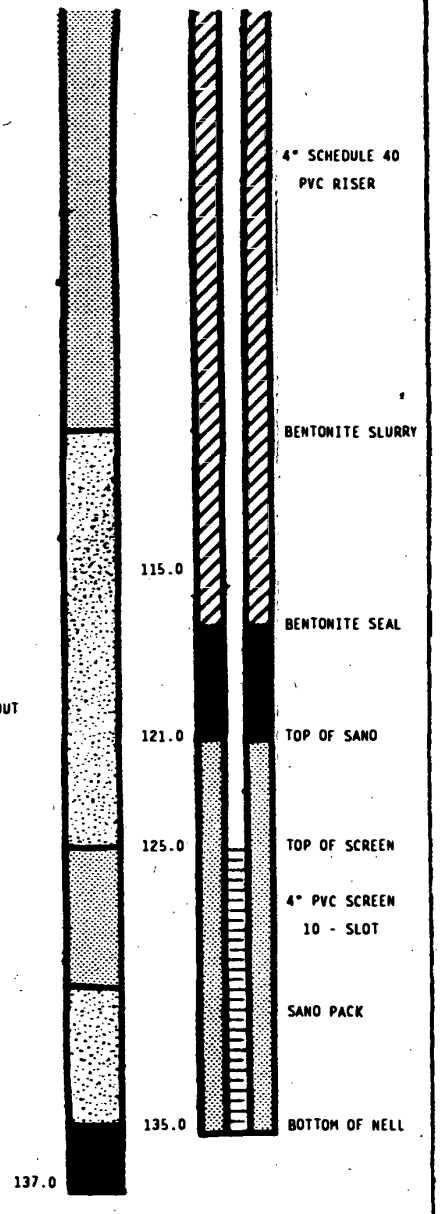
DEPTH (FT)	BLOWS	SOIL DESCRIPTION
95 - 97	30 30 22 18	LT. BROWN FINE SAND, LITTLE SILT RECOVERY = 16"
100 - 102	11 16 22 26	LT. BROWN/ORANGE FINE SAND, TRACE SILT WITH THIN WHITE SILT LAYERS RECOVERY = 12"
105 - 107	13 15 27 30	SAME AS ABOVE, NO SILT LAYERS RECOVERY = 12"
110 - 112	22 32 34 30	BROWN/ORANGE FINE TO MEDIUM SAND, TRACE SILT RECOVERY = 12"
115 - 117	21 52 100/5"	SAME AS ABOVE RECOVERY = 8"
120 - 122	6 8 10 15	BROWN/ORANGE FINE TO MEDIUM SAND WITH THIN WHITE SILT LAYERS THROUGHOUT RECOVERY = 12"
125 - 127	3 5 15 18	BROWN FINE SAND, SOME SILT, TRACE CLAY RECOVERY = 20"
130 - 132	20 21 20 25	BROWN FINE TO MEDIUM SAND, TRACE SILT, TRACE CLAY RECOVERY = 12"
135 - 137	5 10 26 47	DARK GRAY SILT AND CLAY, LITTLE FINE SAND RECOVERY = 24"
		END OF BORING = 137 FT



R2-0001497

WELL NO:	SC-28D	CONTRACTOR:	ONI-TECH DRILLING	DATE STARTED:	8/[illegible]
PROJECT NO:	[illegible]-0080-400M	DRILLER:	JEFF [illegible], SAOCO, WARREN	DATE COMPLETED:	7 8/[illegible]
PROJECT:	[illegible] ALLOY (SMC)	PROJECT ENGINEER:	[illegible]	WATER TABLE EL:	W [illegible] ([illegible])
LOCATION:	[illegible], [illegible]	DRILLING METHOD:	MDD HOLLART	LOCATION:	M 756,668.90
WELL DEPTH:	153 FEET	GROUND EL:	107.4[illegible]		E 1,899,472.69
HEIGHT NO:	9047[illegible]	CASING EL:	1[illegible]		

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION
0 - 2	7 13 17 [illegible]	0-3" Topsoil; Dk. Brown F-M SAND, little silt-clay 3-13" Orange F-M SAND, little m-c gravel, dry.	LOCKING COVER CEMENT/BENTONITE GROUT
5 - 7	2 8 [illegible] 18	Orange/Yellow F-C SAND, some f-c gravel to 1" 8" Recovery.	10.0
10 - 11	1 9 [illegible] 12	Orange F-M SAND, tr C sand, [illegible] 11" Recovery	BENTONITE GROUT
15 - 17	7 [illegible] 13 14	Same as Above 8" Recovery	8" BOREHOLE
20 - [illegible]	11 13 10 13	Orange F-M SAND, tr c sand, tr mod. gravel, some cobbles, wet 14" Recovery	
25 - 27	10 14 15 15	Orange F-M SAND, tr c sand, tr gravel. 13" Recovery	4" PVC RISER
30 - 31	15 17 11 [illegible]	Orange F-C SAND, tr-little f-c gravel, wet. 14" Recovery	
35 - 37	[illegible] 15 18 13	Orange M-C SAND, tr f sand, tr-little gravel, wet 13" Recovery	
40 - 42	8 20 39 22	Orange M-C SAND, tr gravel. 18" Recovery	
43 - 47	21 25 31 40	Tan F-M SAND, little c sand, tr gravel 12" Recovery	
50 - 52	20 75 100/3"	Tan/pink fine SAND, little-some [illegible] sand. 13" Recovery	
55 - 57	40 90 100/5"	Tan/pink [illegible] SAND, tr-little f sand [illegible] 10" Recovery	
60 - 62	15 1000"	White/Tan F-C SAND 9" Recovery	

(OON790UEO)

SHIELD ALLOY METALLURGICAL

BORING, continued

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION
65 - 67	47 100/5"	Tan/white/pink fine SAND, tr m-c sand, tr white clay stringers 10" Recovery	
70 - 72	48 52 100/5"	Same as Above 12" Recovery	8" BOREHOLE
75 - 80	62 100/4"	Tan f-C SAND, some f gravel, tr gravel 10" Recovery	
80 - 82	40 100/2"	Tan f-C SAND, some f gravel 12" Recovery	
85 - 87	36 100/4"	Tan F-C SAND, some Fe gravel 10" Recovery	NON BENTONITE GROUT
90 - 92	61 100/3"	Tan F-C SAND, some gravel 10" Recovery	
95 - 97	19 13 58 46	Tan F-VF SAND, some clay stringers @ 2" and 8". 13" Recovery	
160 - 162	17 26 30 e7	Orange/Tan/Red F-VF SAND, some white sand stringers 17" Recovery	4" PVC RISER (SCHEDULE 40)
165 - 167	35 100/5"	Tan/Orange F SAND 6" Recovery	
110 - 111	84 25 60 100/2"	Orange/Tan F-VF SAND, little white clay stringers 11" Recovery	
115 - 117	64 100/2"	Orange/Tan F-M SAND, some sand 6" Recovery	
120 - 122	55 100/5"	Tan F-M SAND, some sand, white clay stringers in tip of sample 6" Recovery	
125 - 137	14 24 37 42	Tan/White F-VF SAND, some clay stringers 10" Recovery	
		127	800 SAND SEAL
130 - 132	30 100/3"	Tan/Brown F-VF SAND 7" Recovery	130 TOP OF SAND PACK
		133	TOP OF SCREEN

R2-0001499

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
135 - 137	52 100/5"	Tan F SAND (possibly silt wet) 7" Recovery		6" BOREHOLE
140 - 142	34 42 22 28	Tan F SAND, tr clay stringers 9" Recovery		#1 SAND PACK
145 - 147	23 30 37 40	Tan F SAND, tr clay stringers 10" Recovery		4" PVC SCREEN .10 SLOT
150 - 152	56 59 66 70	Same as Above 8" Recovery	153.0	BOTTOM OF WELL
155 - 157	26 22 50 25	Gray CLAY, tr f sand, dense. 24" Recovery		
		END OF BORING - 157 FEET		

WELL NO:	SC-29D	CONTRACTOR:	[illegible]	DATE STARTED:	2/18/97
PROJECT NO:	[illegible]	DRILLERS:	DAVE, MIKE, GEORGE	DATE COMPLETED:	2/20/97
PROJECT:	SHIELD ALLOY (SMC)	TRC INSPECTOR:	BROWN	TEST DATE:	
LOCATION:	NEWFIELD, NJ	DRILLING METHOD:	MUD ROTARY	LOCATION:	N
WELL DEPTH:	140 FEET	GROUND EL:			E
PERMIT NO.:	3147409	CASING EL:			

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION
0 - 2	4 8 6 10	0-2" Topsoil Silt, Brown F Sand and Silt, some organics 2-6" Brown F Sand and Silt, some Gravel C-10" Yellow brown F-M SAND, some gravel, little Silt 10" Recovery, No Odor; OVA = ND	PLUSH MOUNT LOCKING COVER CEMENT PAD CEMENT GROUT 5.6
5 - 7	12 12 12 12	0-5" Yellow brown C Sand and Gravel 5-10" Yellow brown F-M SAND 10" Recovery, No Odor; OVA=2 ppm	
10 - 12	10 11 10 10	Yellow brown F-M SAND, little Silt, tr C Sand 10" Recovery, No Odor	CEMENT/BENTONITE GROUT
15 - 17	5 8 8 25	Yellow brown F-C SAND, some Gravel 6" Recovery; No Odor; OVA=ND Bottom of water table (if samples have been wet due to drilling slurry)	6" BOREHOLE
20 - 22	8 3 8 8	No Recovery, several pieces of gravel 0" Recovery	
25 - 27	3 10 10 3	Yellow orange F Sand and Silt, little Clay 10" Recovery, No Odor; OVA=ND	4" PVC RISER
30 - 32	12 18 20 20	Yellow orange F-M SAND, little C Sand; C Sand increasing w/depth Small K Red orange color 10" Recovery; OVA=ND	
35 - 37	17 25 37 12	Red/Brown F-M SAND, Silty at tip of spoon 9" Recovery; No Odor; OVA=1 ppm	
40 - 42	27 25 27 30	Orange yellow M-C SAND tr F Sand 5" Recovery; No Odor; OVA=2 ppm	
45 - 47	27 25 25 23	0-5" Yellow F SAND 4-9" Yellow brown F-M SAND, little C Sand 7-4" Dark Red F SAND 9" Recovery; No Odor; OVA=10 ppm	
50 - 52	37 35 33 25/9"	Tan F-M SAND 9" Recovery; No Odor; OVA=C 10 G	
55 - 57	12 32 34 45	Tan F SAND, little Silt; some orange color 9" Recovery; No Odor; OVA=6 ppm	
60 - 62	36 37 45 50/2"	0-4" Brown M-C SAND, tr F Sand 4-10" Yellow orange F-M SAND 34" Recovery; No Odor; OVA=12 ppm (CONTINUED)	

R2-0001501

SHIELD ALL 0 FAILURE/SCAL

SC-25D, continued

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
65 - 67	37 44 43 50/3"	Tan F-M SAND; tight/compact 6" Recovery; No Odor; OVA=3 ppm		
70 - 72	34 34 50/3"	0-4" Tan F-M SAND 4-6" Tan F-M SAND, pyrite Gravel, little C Sand 7-10" Tan F-M SAND, little C Sand; Lt. Bell F-M Sand in tip of spoon 10" Recovery; No Odor; OVA=4 ppm		6" BOREHOLE
75 - 77	18 36 48 50/3"	0-2" Tan F SAND 3-5" GRAVEL, little F Sand 5-12" Tan F SAND 12" Recovery; No Odor		
80 - 82	20 31 44 54	Lt. Tan V LLND 8" Recovery; No Odor; OVA=4 ppm		
85 - 87	44 50/3"	Lt. Tan F SAND; lots of wash 8" Recovery; No Odor; OVA=2.5 ppm		CEMENT/BENTONITE GROUT
90 - 92	21 50/4"	Tan F SAND, little M Sand 4" Recovery; No Odor; OVA=NO		
95 - 97	47 50/4"	Tan TF SAND; slightly sorted at top, and little at tip 4" Recovery; No Odor; OVA=1.8 ppm		
100 - 102	37 41 50/6"	No Recovery, all mild 8" Recovery		4" PVC RISER (SCHEDULE 40)
105 - 107	33 44 40 54	Orange brown F-C SAND, tr. Clay stringer, tight 10" Recovery; OVA=<1 ppm		
110 - 112	21 31 54 50/6"	Orange brown F-M SAND; little C Sand 8" Recovery; No Odor; OVA=<1 ppm		
115 - 117	31 45 49 50	Tan F-M SAND, little C Sand; wash on top <8" Recovery		
120 - 122	49 100/4"	Tan F SAND, some M Sand, tr. C Sand; very tight 6" Recovery; OVA=2 ppm	120.0	FINE SAND SEAL
			123.0	TOP OF SAND TACK
125 - 127	31 100/7"	Tan F-M SAND, little M Sand; tight 8" Recovery; No Odor; OVA=1.9 ppm		
			128.0	TOP OF SCREEN
130 - 132	34 100/8"	Tan/Orange F SAND, tr. Clay; tight 8" Recovery; No Odor; OVA=2.25 ppm (CONTINUED)		

R2-0001502

SHIELD ALLOY METALLURGICAL
SC-29D, continued

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION
135 - 137	22 47 70 43	0-4" Lt. Gray CLAY 4-5" F Sand and Clay 5-8" Orange brown F & SAND 8" Recovery, No Odor, OVA=2.3 ppm	8" BOREHOLE
140 - 142	40 45 68 83	0-4" Tan F SAND 4 & 5" Tan F Sand Gray Clay, tight 8.5" Recovery, No Odor, OVA=2.25 ppm	8 MORIE SAND PACK
145 - 147	16 22 24 24	0-4" Tan F SAND 5-8" Orange F SAND, m. Clay 8" Recovery, No Odor, OVA=2.3 ppm	4" PVC SCREEN 10 SLOT
148.5		Dk. Gray CLAY On 8 ft bit	148.0 BOTTOM OF WELL 150.0 BOTTOM OF BOREHOLE
		END OF BORING = 150 FEET	

R2-0001503

Supplemental Offsite Ground Water Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

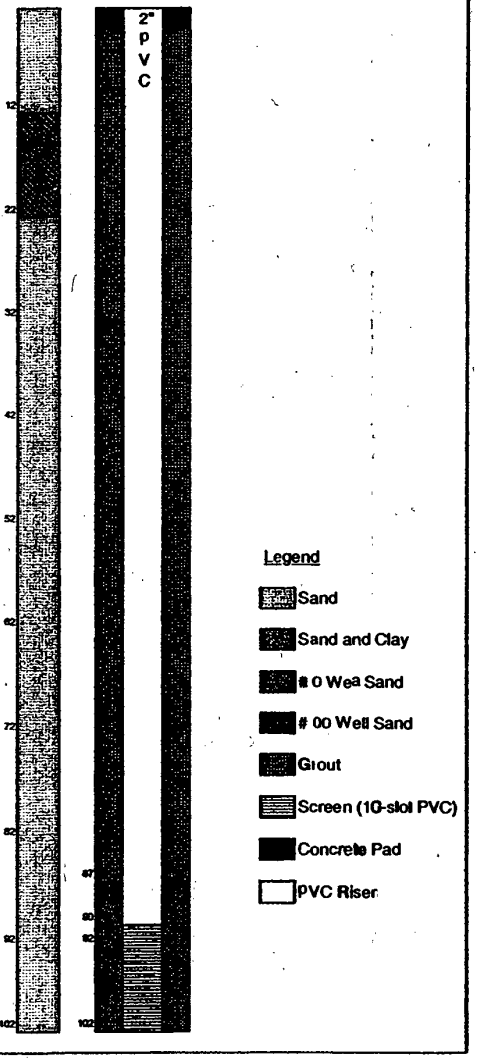
TRC

Project Name: SMC Offsite Ground Water Investigation
Project Number: 51903-OWAT-082230
Project Location: Vineland, New Jersey
Boring Location: West Forest Grove Road

Drilling Company: United Drilling Co., Inc.
Drillers: Joe and Dan
TRC Inspector: Kate McAndrew
Drill Equipment / Method: 1500 Midway Truck Rig
Mud Rotary / Pressure Trench

Boring: SC-320
Date Started: 12/18/2006
Date Completed: 12/19/2006
Depth to Water: 10.55
Horizontal Coordinates: E343355.15a, N252952.385 (VP-5)
Ground Elevation: NA
Inner Casing Elevation: NA

10-12	14/24	6 12 18 24	12 17 19 18	Saturated, medium brown-orange F-C SAND, trace silt, no odor, no stains.
20-22	12/24	6 12 18 24	6 7 7 9	Wet, a 4" clay layer located at 20-20.4-ftbgs turning to medium brown-orange F-M SAND and gray CLAY, no odor, no stains.
30-32	8/24	6 12 18 24	12 18 21 26	Wet, medium brown F-M SAND, little C-sand, top 2" was rock fragments (quartz), no odor, no stains.
40-42	10/24	6 12 18 24	7 8 12 15	Wet, medium brown F-SAND, some M-sand, 1" gray clay layer at 40-ftbgs, no odor, no stains.
50-52	4/8	6 12 18 24	22 50/2	Wet, medium brown-orange F-C SAND, trace F-gravel, no odor, no stains. Spoon refusal at 50.5-ftbgs.
60-62	10/13	6 12 18 24	21 33 50/1	Wet, medium brown-orange F-C SAND, trace F-gravel, no odor, no stains. Spoon refusal at 61.1-ftbgs.
70-72	7/11	6 12 18 24	41 50/5	Wet, medium brown-orange VF-M SAND, some thin (<1") gray stringers, no odor, no stains. Spoon refusal at 70.11-ftbgs.
80-82	8/9	6 12 18 24	29 50/3	Clay layer at 80-ftbgs turning to medium brown VF-M SAND, trace C-sand, no odor, no stains. Spoon refusal at 60.9-ftbgs.
90-92	4/14	6 12 18 24	16 32 50/2	Wet, 1" gray clay layer at 90-ftbgs turning to medium brown-orange-red F-M SAND, no odor, no stains. Spoon refusal at 91.2-ftbgs.
100-102	4/8	6 12 18 24	27 50/2	Wet, medium brown VF-M SAND, no odor, no stains. Spoon refusal at 100.5-ftbgs.



WELL CONSTRUCTION:
10-Slot PVC Screen (2") = 102-92 ftbgs
PVC Riser (2") = 92 ft bgs-grade
0 Well Sand = 102-90 ftbgs
000 Well Sand = 90-87 ftbgs
Grout (bentonite/cement mixture) = 87-4 ftbgs
Native Backfill = 4-0.5 ftbgs
Concrete Pad = 0.5-grade
Monitoring well secured with a locking expansion plug
Monitoring well completed with a flush-mounted curb box.

NOTES:
ftbgs - feet below ground surface.
NA - Data not available at time of reporting.
Horizontal datum (New Jersey State Plane Coordinates, NAD 83).
Samples collected for geological description every 10 feet using split spoon (140 lb hammer dropped 30").
Monitoring well developed using a Grundfos Redi-flow pump using surge block and pump technique.

R2-0001504

APPENDIX B

PERCHLORATE PURCHASE RECORDS

POTASSIUM PERCHLORATE

102

ORDER NO.	DATE	VENDOR	QUANTITY	PRICE	F.O.B.	TERMS	DELIVERY
RM9336	9.13.83	Hummel Chemical	3000 #	$0.830 #	S. Plainfield	net 30	
9374	10.6.83	"	4500 #	.830	"	"	
9401	11.8.83	"	3000 #	.830	"	"	
9432	12.9.83	" 14,960	9020 #	.855	"	"	
9570	2.28.84	Technichem Inc	2204	.675	Little Falls	COD	
9884	8.24.84	"	5070	1.200	"	net 30	
2807	6.25.87	Service Chemical	1000	.890	Hatfield	"	
2972	9.16.87	"	1000	.890	"	"	
3000	9.29.87	"	2000	.890	"	"	
3023	10.7.87	"	6000	"	"	"	wh 11/2 10/16 3-5 M/yr
3188	12.9.87	"	3000	"	"	"	1/4
63273	1.8.88	"	3000	"	"	"	
63795	1.04.89	"	40,000	1.030	"	"	
64272	1.03.90	"		1.065	"	"	
64676	1.07.91	"	2000	1.160	"	net 60	
65207	2.28.92	"	500	1.150	"	"	

3000 #/mo 020700

POTASSIUM PERCHLORATE

102

ORDER NO.	DATE	VENDOR	QUANTITY	PRICE	F.O.B.	TERMS	DELIVERY
RM7619	12.5.78	Kerr McGee	5100	.411 #	Henderson N	net 30	5/19/79 - 6/21
7693	2.14.79	" " .5733	5100	.411	"	"	8/13/79 - 8/27
7766	4.18.79	Hummel Chemical .5432	10,200	.505	S. Plainfield	"	56-59
8088	2.27.80	Kerr McGee	10,200	.4892	Henderson	"	5/1/80 - 7/14/80
8259	8.12.80	" " 1.1392	5,100	.4892	"	"	11/1 -
8260	8.12.80	Hummel	4,200	.680	S Plainfield	"	11/25 - 9/15
8356	11.19.80	" .7232	5,100	.680	"	"	11/21
8439	1.12.81	Kerr McGee	10,200	.5830	Henderson	"	2/18 + 4/1
8444	1.15.81	Hummel	10,200	.680	S. Plainfield	"	
8465	1.30.81	"	72,000	11@.680 61@.810	"	"	
9103	1.17.83	"	3000	.840	"	"	
9117	2.14.83	"	3000	.840	"	"	
9137	3.4.83	"	9000	.830	"	"	A/R
9259	6.21.83	"	3000	.830	"	"	
9269	7.1.83	"	3000	.800	"	"	
9322	8.30.83	"	3000	.830	"	"	

R2-0001506

POTASSIUM PERCHLORATE

ORDER NO.	DATE	VENDOR	QUANTITY	PRICE	F.O.B.	TERMS	DELIVERY
RM6196	3.26.74	Hooker	25,000	.2175	Niagara	net 30	1974
6279	7.17.74	Kerr-McGee	9900	.2175	Henderson Nevada	"	8/11/74
6323	9.17.74	" "	9900	.2175	"	"	10/14/74
6805	9.14.76	" "	5000	.31	"	"	
6964	4.14.77	" "	5100	.3775	"	"	Slip 4/0 5/9/77 10th
7035	6.14.77	" "	5100	.3775	"	.5019	" - 2/20/78
7044	6.24.77	Hummel Chemical	5100	.425	S. Plainfield	"	
7128	10.5.77	" "	5100	.45	"	"	
7243	1.13.78	" "	5100	.45	"	"	Slip 4/0 1/30/79
7258	1.23.78	" "	15,480	.45+50	"	"	" - 3/27 - 3/2
7259	1.23.78	Kerr McGee	5100	.3775	Henderson Nev	"	" - 6/19 8th
7334	3.15.78	" "	5100	.3775	"	"	" - 9/14 10th
7368	4.5.78	Hummel Chemical	15300	.50	S Plainfield	"	5/22, 6/19, 7/17
7474	7.7.78	" "	15300	.50	"	"	17, 9/4, 10/2
7514	9.5.78	Kerr McGee	5100	.4110	Henderson Nevada	"	3/17/79
7539	10.10.78	Hummel Chemical	15300	.50	S Plainfield	"	11/1, 12/1/79

R2-0001507

APPENDIX C

SOIL INVESTIGATION BORING LOGS

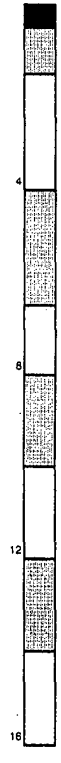
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Background

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-01
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	1.2	NA	0-0.3	TOPSOIL.
				0.3-1.2	Orange-brown F-M SAND, little c-gravel, trace silt, trace f-gravel.
				1.2-4	No Recovery.
4-8	4	2.6	NA	0-2.6	Orange-brown M-C SAND, trace silt.
				2.6-4	No Recovery.
8-12	4	1.8	NA	0-1.8	Orange-brown M-C SAND, trace silt, trace c-gravel.
				1.8-4	No Recovery.
12-16	4	2	NA	0-2	Orange-brown M-C SAND, some m-c gravel, trace silt. Wet at 14 fbg.
				2-4	No Recovery.

Lithology



Legend

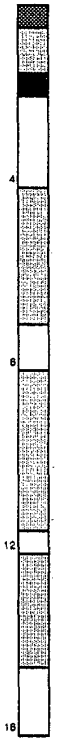
- Topsoil
- Sand
- No Recovery

Collect SS-01 (5-7)
Collect SS-01 (12-14)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring:	SS-02
Project Number: 171441.000050.000000	Drillers: Michael	Date Started:	10/26/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed:	10/26/09
Boring Location: Near former storage shed	Drill Equipment / Method: Geoprobe 66DT		

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2	NA	0-0.6	Gray ASH and M-C GRAVEL.
				0.6-1.2	Brown F-M SAND with some silty clay.
				1.2-2	Orange-brown SILTY CLAY with some f-m sand.
				2-4	No Recovery.
4-8	4	3	NA	0-0.8	Orange-brown F-M SAND, some clay.
				0.8-3	Orange-brown F-M SAND, trace silt, trace f-m gravel.
				3-4	No Recovery.
8-12	4	3.3	NA	0-3.3	Orange-brown M-C SAND, trace f-m gravel.
				3.3-4	No Recovery.
12-16	4	2.7	NA	0-2.7	Orange-brown M-C SAND, trace f-gravel, trace silt. Wet at 15.5-16 fbg.
				2.7-4	No Recovery,

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- No Recovery

Collect SS-02 (1-3)
Collect SS-02 (14-16)

Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Near former storage shed

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-03
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2	NA	0-0.4	Gray-brown F-M SAND and SILT, some m-c gravel.
				0.4-0.8	Light gray ASH with some m-c gravel, very moist.
				0.8-2	Orange-brown SILTY CLAY, some f-m sand, trace f-gravel.
				2-4	No Recovery.
4-8	4	3.6	NA	0-3.6	Orange-brown F-M SAND, little silt, little f-gravel.
				3.6-4	No Recovery.
8-12	4	3.3	NA	0-2.7	Orange-brown F-M SAND, little silt, little f-gravel.
				2.7-3.3	M-C SAND, trace silt, some m-c gravel.
				3.3-4	No Recovery.
12-16	4	2.5	NA	0-2.5	Orange-brown M-C SAND, trace silt, trace f-gravel, wet at 15.5-16 fbg.
				2.5-4	No Recovery.
16-20	4	2.5	NA	0-2.5	Orange-brown M-C SAND, little f-m gravel, wet.
				2.5-4	No Recovery.

Lithology

Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-03 (0-2)
Collect SS-03 (13-15)

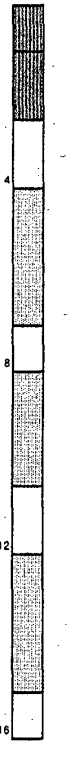
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Near former storage shed

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-04
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2.6	NA	0-1	Brown VF-M SAND and SILT, little m-c gravel.
				1-2.6	Orange-brown F-M SAND and SILT, trace clay, little f-m gravel.
				2.6-4	No Recovery.
4-8	4	3	NA	0-3	Orange-brown F-M SAND, some silt, little f-m gravel.
				3-4	No Recovery.
8-12	4	2.7	NA	0-2.7	Orange-brown M-C SAND, trace silt, little f-m gravel.
				2.7-4	No Recovery.
12-16	4	2.9	NA	0-2.9	Orange-brown M-C SAND, trace silt, little f-m gravel, wet at 15-16 fbg.
				2.9-4	No Recovery.

Lithplpgy



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-04 (2-4)
Collect SS-03 (14-16)

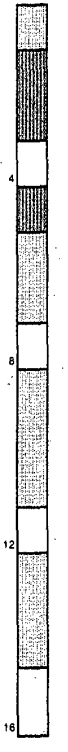
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Near former storage shed

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-05
Date Started: 10/26/09
Date Complated: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2.9	NA	0-1	Brown F-M SAND, some silt, some m-c gravel.
				1-2.9	Orange-brown F-M SAND and SILT, trace clay, trace f-m gravel.
				2.9-4	No Recovery.
4-8	4	3	NA	0-1	Orange-brown F-M SAND and SILT, trace f-m gravel.
				1-3	Orange-brown F-C SAND, trace f-m gravel.
				3-4	No Recovery.
8-12	4	3	NA	0-1.5	Orange-brown F-C SAND, trace-silt, trace f-m gravel.
				1.5-3	Orange-brown M-C SAND, trace f-c gravel.
				3-4	No Recovery.
12-16	4	2.3	NA	0-2.3	Orange-brown M-C SAND, trace f-c gravel, wet at 15.5-16 fbg.
				2.3-4	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-05 (5-7)
Collect SS-05 (13-15)

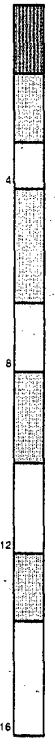
Project Name: SMC Off-Site Ground Water InVestigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Near former storage shed

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-06
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2.9	NA	0-0.6	Gray-brown VF-FSAND and SILT, trace f-m gravel.
				0.6-1	Brown F-M SAND and SILT, trace f-m gravel.
				1-1.5	Orange-brown F-M SAND and SILT, trace clay, trace f-m gravel.
				1.5-2.9	Orange-brown F-M SAND, little silt.
				2.9-4	No Recovery.
4-8	4	2.5	NA	0-2.5	Orange-brown F-M SAND, trace silt, little m-c gravel.
				2.5-4	No Recovery,
8-12	4	2.2	NA	0-2.2	Orange-brown F-C SAND, little m-c gravel.
				2.2-4	No Recovery.
12-16	4	1.6	NA	0-1.6	Orange-brown F-C SAND, little m-c gravel, wet at 15.5-16 fbg.
				1.6-4	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-06 (1-3)
Collect SS-06 (14-16)

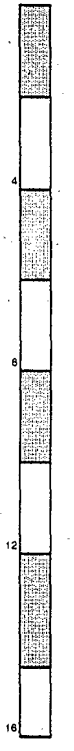
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Near former storage shed

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-07
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2.1	NA	0-1	Dark brown F-M SAND, little silt, some m-c gravel.
				1-2.1	Orange-brown F-M SILTY SAND, little clay.
				2.1-4	No Recovery.
4-8	4	2.2	NA	0-0.5	Orange-brown F-M SILTY SAND, little clay.
				0.5-2.2	Orange-brown F-M SAND, little f-m gravel.
				2.2-4	No Recovery.
8-12	4	2.3	NA	0-1	Orange-brown F-M SAND, little f-m gravel.
				1-2.3	Orange-brown M-C SAND, little f-m gravel.
				2.3-4	No Recovery.
12-16	4	2.5	NA	0-2.5	Orange-brown M-C SAND, little f-m gravel. Wet at 15.5-16 fbg.
				2.5-5	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-07 (6-8)
Collect SS-07 (13-15)

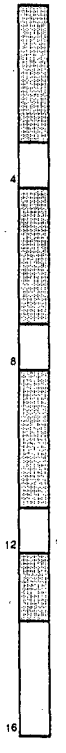
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Near former storage shed

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-08
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	3	NA	0-0.2	Dark brown F-M SAND, little m-c gravel.
				0.2-3	Orange-brown F-M SAND, some silt, trace clay, trace f-m gravel.
				3-4	No Recovery.
4-8	4	2.9	NA	0-2.9	Orange-brown F-M SAND, little silt, trace f-m gravel.
				2.9-4	No Recovery.
8-12	4	2.8	NA	0-2.8	Orange-brown F-M SAND, trace silt, trace f-gravel.
				2.8-4	No Recovery.
12-16	4	2.5	NA	0-1	Orange-brown F-M SAND, trace silt, trace f-gravel.
				1-2.5	Orange-brown M-C SAND, trace f-m gravel, wet at 15.5-16 fbg.
				2.5-4	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-08 (3-4)
Collect SS-08 (12-14)

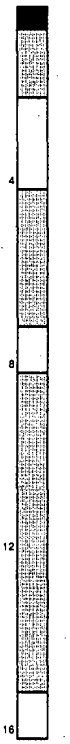
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-09
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	1.9	NA	0-0.5	TOPSOIL.
				0.5-1.9	Orange-brown F-C SAND, some silt, trace clay, some f-c gravel, very moist.
				1.9-4	No Recovery.
4-8	4	3.3	NA	0-3.3	Orange-brown F-M SAND, little silt, trace clay, little f-m gravel, very moist near bottom.
				3.3-4	No Recovery.
8-12	4	3.8	NA	0-1	Orange-brown F-M SAND, little silt, trace clay, little f-m gravel
				1-3.8	Orange-brown F-C SAND, little silt, trace f-m gravel.
				3.8-4	No Recovery.
12-16	4	3.1	NA	0-2	Orange-brown F-C SAND, trace silt, trace f-m gravel.
				2-3.1	Red-brown F-C SAND, trace f-m gravel, wet at 14-16 fbg.
				3.1-4	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-09 (6-8)
Collect SS-09 (12-14)

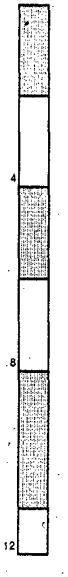
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-10
Date Started: 10/26/09
Date Completed: 10/26/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2	NA	0-1	Brown F-M SAND, some silt, little f-m gravel.
				1-2	Orange-brown F-M SAND, some silt, little f-m gravel.
				2-4	No Recovery.
4-8	4	2.2	NA	0-1	Orange-brown M-C SAND.
				1-2.2	F-M SAND, some silt, trace f-m gravel, wet at tip.
				2.2-4	No Recovery.
8-12	4	3.2	NA	0-3.2	Orange-brown F-C SAND, trace f-m gravel, wet.
				3.2-4	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-10 (2-4)
Collect SS-10 (4-6)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring: SS-11
Project Number: 171441.000050.000000	Drillers: Michael	Date Started: 10/27/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed: 10/27/09
Boring Location: Former lagoons	Drill Equipment / Method: Geoprobe 66DT	

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	2.6	NA	0-0.4	TOPSOIL	
				0.4-2.6	Orange-brown F-M SAND, some silt, little clay, trace f-m gravel.	
				2.6-4	No Recovery.	
4-8	4	2.8	NA	0-1	Orange-brown F-M SAND, some silt, little clay, trace f-m gravel.	
				1-2	Orange-brown M-C SAND, trace silt, little f-m gravel.	
				2-2.8	Tan F-M SAND.	
				2.8-4	No Recovery.	
8-12	4	3	NA	0-0.5	Tan F-M SAND.	
				0.5-3	Orange-brown F-M SAND, some silt, trace clay, trace f-m gravel. Wet at 8-12 fbg.	
				3-4	No Recovery.	

Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-11 (1-3)
Collect SS-11 (5-7)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring: SS-12
Project Number: 171441.000050.000000	Drillers: Michael	Date Started: 10/27/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed: 10/27/09
Boring Location: Former lagoons	Drill Equipment / Method: Geoprobe 66DT	

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	3	NA	0-1	Brown F-M SAND, little silt, trace f-m gravel.
				1-3	Orange-brown F-M SAND, little silt, little f-m gravel.
				3-4	No Recovery.
4-8	4	3	NA	0-0.5	Orange-brown F-M SAND, little silt, little f-m gravel.
				0.5-2.2	Orange-brown M-C SAND, little f-m gravel.
				2.2-3	Orange-brown F-M SAND, some silt, little clay. Wet at tip.
				3-4	No Recovery.
8-12	4	0	NA	0-4	No Recovery. Sleeve jammed inside macro-core. Wet.

Lithology

Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-12 (2-4)
Collect SS-12 (5-7)

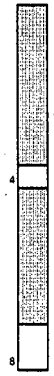
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-13
Date Started: 10/27/09
Date Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	3.4	NA	0-1.2	Brown F-M SAND, little silt, little f-m gravel.
				1.2-3.4	Orange-brown F-M SAND, little silt, little f-m gravel.
				3.4-4	No Recovery.
4-8	4	2.9	NA	0-1.9	Orange-brown F-M SAND, little silt, little f-m gravel.
				1.9-2.9	Orange-brown m-c sand, little f-m gravel. Wet at bottom 0.2'
				2.9-4	No Recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

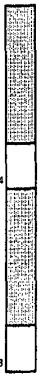
Collect SS-13 (1-3)
Collect SS-13 (5-7)

Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-14
Date Started: 10/27/09
Date Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	3	NA	0-3	Brown F-M SAND, little silt, little f-m gravel.	
				3-4	No Recovery.	
4-8	4	3	NA	0-1	Brown F-M SAND, little silt, little f-m gravel.	
				1-3	Red brown M-C SAND, trace f-m gravel. Wet at bottom 0.2'	
				3-4	No Recovery.	



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

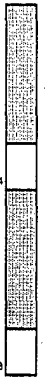
Collect SS-14 (1-3)
Collect SS-14 (6-8)

Project: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-15
Date Started: 10/27/09
Date Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	2.9	NA	0-1	Brown F-M SAND, little silt, little f-c gravel.	
				1-1.1	C-GRAVEL.	
				1.1-2.9	Orange-brown F-C SAND, little f-m gravel.	
				2.9-4	No Recovery.	
4-8	4	3.5	NA	0-0.5	Orange-brown F-C SAND, little f-m gravel.	
				0.5-1.9	Orange-brown F-M SILTY SAND, some clay.	
				1.9-3.5	Orange-brown F-M SAND, little silt. Wet at bottom 0.1'	
				3.5-4	No Recovery.	



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-15 (2-4)
Collect SS-15 (4-6)

Project: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-16
Date Started: 10/27/09
Date Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	4	NA	0-0.8	Dk. Brown F-M SAND, little silt	
				0.8-2.1	Brown F-M SAND, little silt, some f-c gravel.	
				2.1-4	Orange-brown F-M SAND, some silt, trace clay, little f-c gravel.	
4-8	4	4	NA	0-4	Orange-brown F-M SAND, some silt, trace clay. Wet at tip.	

Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-16 (1-3)
Collect SS-16 (6-8)

Project: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-17
Date Started: 10/27/09
Date Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	4	NA	0-2.5	Brown F-M SAND, little sill, little f-c gravel.	
				2.5-4	Orange-brown F-M SAND, some silt, little clay, little f-m gravel.	
4-8	4	3	NA	0-3	Orange-brown F-M SAND, some silt, little clay, little f-m gravel. Wet at bottom 0.5'	
				3-4	No Recovery.	

Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-17 (1-3)
Collect SS-17 (5-7)

Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-18
Date Started: 10/27/09
Date Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	4	NA	0-1.3	Dk. Brown F-M SAND, little silt, trace clay, trace f-m gravel.	
				1.3-4	Brown F-M SAND, some silt, little clay, trace f-c gravel.	
4-8	4	3	NA	0-0.5	Brown F-M SAND, some silt, little clay, trace f-c gravel.	
				2.5-3	Orange-brawn M-C SAND, little f-m gravel, red at bottom. Wet at bottom 0.2'	
				3-4	No Recovery.	

Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-18 (1-3)
Collect SS-18 (6-8)

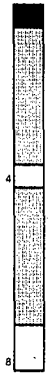
Project Name: SMC Off-Site Ground Water Investigation
Project Number: 171441.000050.000000
Project Location: Newfield, NJ
Boring Location: Former lagoons

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Michael
TRC Inspector: John Moss
Drill Equipment / Method: Geoprobe 66DT

Boring: SS-19
Date Started: 10/27/09
Dale Completed: 10/27/09

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	3.5	NA	0-0.5	Dk. Brown F-M SAND, some silt (TOPSOIL).
				0.5-1.5	Orange-brown F-M SAND, little f-m gravel, trace silt.
				1.5-1.7	Brown-black F-M SAND
				1.7-2.6	Brown F-M SAND, little siti, little f-m gravel.
				2.6-3.5	Orange-brown F-C SAND, little f-c gravel.
				3.5-4	No Recovery.
4-8	4	3.3	NA	0-0.8	Orange-brown F-M SAND, little silt, little clay
				0.8-3.3	Orange-brown m-c sand,some m-c Wet at bottom 0.5'
				3.3-4	No Recovery.

Lithology



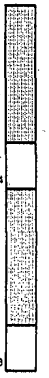
Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-19 (1-3)
Collect SS-19 (6-8)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring: SS-20
Project Number: 171441.000050.000000	Drillers: Michael	Date Started: 10/27/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed: 10/27/09
Boring Location: Former lagoons	Drill Equipment / Method: Geoprobe 66DT	

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	3.2	NA	0-2.4	Brown F-M SAND, trace silt. Little f-m gravel.	
				2.4-2.6	Dense orange-brown F-SILTY SAND gravel, trace silt.	
				2.6-3.2	Brown F-M SAND, some f-m gravel.	
				3.2-4	No recovery.	
4-8	4	3.2	NA	0-3.2	Brown F-M SAND, trace silt, little f-m gravel. Wet at tip.	
				3.2-4	No Recovery.	



Legend

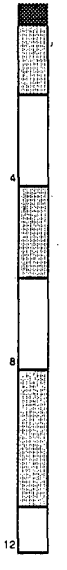
- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-20 (1-3)
Collect SS-20 (4-6)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring:	SS-21
Project Number: 171441.000050.000000	Drillers: Michael	Date Started:	10/28/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed:	10/28/09
Boring Location: Former Bldg. D102 footprint	Drill Equipment / Method: Geoprobe 66DT		

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	1.4	NA	0-0.5	Concrete
				0.5-1	Brown F-M SAND, little f-m gravel.
				1-1.9	Orange-brown M-C SAND, little f-m gravel.
				1.9-4	No Recovery.
4-8	4	2.3	NA	0-2.3	Orange-brown M-C SAND, little m-c gravel. Wet at tip.
				2.3-4	No Recovery.
8-12	4	3	NA	0-1	Orange-brown F-M SAND, some silt, trace f-m gravel. Wet.
				1-3	Orange-brown F-M SAND. Wet.
				3-4	No Recovery.

Lithology



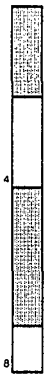
Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- Concrete
- No Recovery

Collect SS-21 (1-3)
Collect SS-21 (5-7)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring:	SS-22
Project Number: 171441.000050.000000	Drillers: Michael	Date Started:	10/28/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed:	10/28/09
Boring Location: Former Bldg. D102 footprint	Drill Equipment / Method: Geoprobe 66DT		

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	2.1	NA	0-0.6	Brown F-M SAND, some f-m gravel, little silt.	
				0.6-0.9	Orange-brown F-M SAND.	
				0.9-1.2	Black F-M SAND, petro odor.	
				1.2-2.1	Brown F-M SAND, little silt, little f-m gravel.	
				2.1-4	No recovery.	
4-8	4	3.1	NA	0-0.6	Brown F-M SAND, little silt, little f-m gravel.	
				0.6-3.1	Orange-brown M-C SAND, little f-m gravel. Wet at tip.	
				3.1-4	No recovery.	



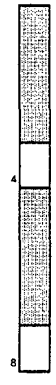
Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-22 (1-3)
Collect SS-22 (6-8)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring: SS-23
Project Number: 171441.000050.000000	Drillers: Michael	Date Started: 10/28/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed: 10/28/09
Boring Location: Former Bldg. D102 footprint	Drill Equipment / Method: Geoprobe 66DT	

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description	Lithology
0-4	4	2.9	NA	0-0.6	Brown F-M SAND, some m-c gravel and concrete fragments.	
				0.6-1.6	Orange-brown F-M SAND, little f-m gravel.	
				1.6-2.9	Dk. Brown F-M SAND, little silt.	
				2.9-4	No recovery.	
4-8	4	3.3	NA	0-0.6	Orange-brown M-C SAND, little f-m gravel. Wet at tip.	
				3.3-4	No recovery.	



Legend

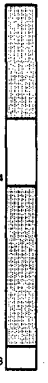
- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-23 (2-4)
Collect SS-23 (6-8)

Project Name: SMC Off-Site Ground Water Investigation	Drilling Company: Unitech Drilling Co., Inc.	Boring: SS-24
Project Number: 171441.000050.000000	Drillers: Michael	Date Started: 10/28/09
Project Location: Newfield, NJ	TRC Inspector: John Moss	Date Completed: 10/28/09
Boring Location: Former Bldg. D102 footprint	Drill Equipment / Method: Geoprobe 66DT	

Depth (feet)	Penetration (ft)	Recovery (ft)	PID (ppm)	(ft)	Soil Description
0-4	4	2.5	NA	0-0.9	Black-Brown F-M SAND, little c-sand, some f-c gravel and concrete fragments.
				0.9-1.6	Orange-brown F-M SAND, little f-m gravel.
				1.6-1.8	Black gravel.
				1.8-2.5	Brown F-M SAND, little f-m gravel.
				2.5-4	No recovery.
4-8	4	3.3	NA	0-1.4	Brown F-M SAND, little f-m gravel.
				1.4-3.3	Orange-Brown F-M SAND, some silt, little clay. Wet at tip.
				3.3-4	No recovery.

Lithology



Legend

- Topsoil
- Sand
- Silty Clay
- Gravel
- Sand and Silt
- Ash
- No Recovery

Collect SS-24 (1-3)
Collect SS-24 (4-6)

APPENDIX D

GROUNDWATER VERTICAL PROFILING/SAMPLING LOG SHEETS

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: Whale pump
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13 (25-30')
Date: 10/14/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 11:05

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
11:10				4.62	0.138	986.1	8.02	12.97		242.0	Orange-brown, silty
11:14				4.42	0.141	614.8	8.13	12.93		267.0	Orange-brown, silty
11:17				4.34	0.144	461.0	8.23	12.90		281.9	Orange-brown, silty
11:21				4.32	0.147	321.0	8.30	12.88		288.8	Orange-brown, silty
11:26				4.33	0.150	219.3	8.40	12.85		295.6	Orange-brown, silty
11:30				4.30	0.152	128.2	8.47	12.85		297.4	Orange-brown, silty
11:35				4.31	0.153	57.3	8.59	12.82		302.3	Clear
3@3-5 m.			30-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13 (25-30') Sample Time: 11:35 TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001534

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations In Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13 (50-55')
Date: 10/14/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (In): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
13:17				5.18	0.171	1086.4	2.97	14.09		208.5	Orange-brown, silty
13:20				4.78	0.174	1035.5	3.11	13.96		227.1	Orange-brown, silty
13:23				4.62	0.175	506.4	2.69	13.82		245.5	Orange-brown, silty
13:26				4.60	0.174	284.8	2.44	13.67		252.8	Orange-brown, silty, clearing
13:29				4.62	0.176	177.0	2.35	13.63		257.8	Orange-brown, silty, clearing
13:32				4.61	0.176	97.7	2.28	13.57		266.9	Orange-brown, siity, clearing
13:37				4.62	0.176	59.5	2.28	13.52		269.4	Slightly cloudy
13:45				4.65	0.175	46.9	2.17	13.44		277.6	Slightly cloudy
3@3-5 m.			~100-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13 (50-55') — Sample Time: 13:45 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001535

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13 (75-80')
Date: 10/14/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Inten/al (ftbtoc):

Purging Information — Start purge at: 14:40

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
14:43				4.48	0.131	408.0	6.41	14.19		245.7	Slight orange-brown, silty
14:48				4.46	0.125	26.8	7.36	14.20		269.8	clear
14:53				4.41	0.125	8.2	7.50	14.16		287.0	clear
3@3-5 m.			~70-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13 (75-80') — Sample Time: 14:55 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Obsen/ations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001536

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13 (100-105')
Date: 10/15/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 8:28

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
8:31				5.70	0.148	1109.7	3.18	13.81		96.2	Orange-brown, silty
8:36				5.34	0.122	321.4	6.61	14.09		153.7	Orange-brown, silty
8:41				5.14	0.117	528.5	7.62	14.18		183.2	Orange-brown, silty
8:46				5.02	0.115	328.5	7.87	14.21		200.6	Orange-brown, silty
8:51				4.88	0.113	274.6	8.05	14.00		218.4	Orange-brown, silty
8:56				4.77	0.113	166.7	8.13	13.98		232.0	Orange-brown, silty
9:01				4.74	0.113	99.4	8.16	13.98		240.4	Slightly cloudy
9:06				4.71	0.113	54.3	8.18	13.99		247.0	Slightly cloudy
9:11				4.68	0.113	35.4	8.20	13.99		252.4	Clear
3@3-5 m.			~100-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample identity: VP-13 (100-105') — Sample Time: 9:15 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001537

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13 (125-130')
Date: 10/15/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (In): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 10:32

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
10:37				6.22	0.039	1113.1	8.08	14.18		208.6	Orange-brown, silty
10:42				5.13	0.035	718.5	8.50	14.19		223.3	Orange-brown, silty
10:45 - 10:49	Not pumping										
10:52				5.14	0.034	1085.0	8.39	14.17		222.7	Orange-brown, silty
10:56 - 11:22	Not pumping										
11:25				5.22	0.034	500.8	8.24	14.10		213.2	Orange-brown, silty
11:30				5.13	0.033	116.9	8.40	14.14		226.8	Slightly cloudy
11:34				5.09	0.033	50.1	8.42	14.15		231.9	Clear
11:38				5.05	0.033	15.1	8.44	14.16		235.6	Clear
3@3-5 m.			~100-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13 (125-130') — Sample Time: 11:40 — TRC Personnel: J. Moss

Analysis	Containers: Number	Containers: Size	Containers: Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001538

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather: ~50-degrees, cloudy
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: Vp-13A (15-20')
Date: 10/22/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 11:58 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Obsen/ations (color, odor, etc.)
12:04				4.63	0.387	1414.6	1.59	18.43		192.8	Orange-brown, silty
12:07 - 12:09	Not Pumping										
12:13				4.72	0.436	1420.2	0.86	18.90		199.1	Orange-brown, silty
12:15				4.68	0.447	1065.2	0.62	18.86		205.0	Orange-brown, silty
12:20				4.67	0.454	290.1	0.58	18.91		208.1	Cloudy
12:24				4.69	0.458	197.5	0.47	19.00		208.1	Slightly Cloudy
12:28				4.71	0.460	107.3	0.47	19.10		206.3	Clear
12:35				4.73	0.462	44.2	0.43	19.17		205.2	Clear
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13A (15-20') — Sample Time: 12:35 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Obsen/ations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001539

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather: ~60-degrees, sunny
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13A (37-42')
Date: 10/22/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 14:03 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
14:06				4.52	0.186	181.6	0.40	14.75		154.9	Slightly orange-brown, silty
14:11				4.44	0.183	42.7	0.25	14.56		197.4	Clear
14:14				4.42	0.182	32.8	0.23	14.50		213.9	Clear
3@3-5 m.			~80-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13A (37-42') — Sample Time: 14:15 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+5						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001540

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13A (62-67')
Date: 10/22/2009
Depth to Water (ftbtoc): NA
Depth to Bottpm (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,lter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 15:06

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,lter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Obsen/ations (color, odor, etc.)
15:13				4.62	0.148	1215.2	0.29	16.44		174.7	Orange-brown, silty
15:50				4.80	NA	3.7	NA	NA		NA	Clear
3@3-5 m.			~70-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13A (62-67') — Sample Time: 15:50 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001541

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather: ~55-degrees, cloudy
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13A (87-92')
Date: 10/23/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (In): 4.25"
Standing Volume (gal,lIter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 8:28

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,lIter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
8:31				5.65	0.115	471.2	3.02	14.37		52.7	Orange-brown, silty
8:35				4.84	0.100	95.1	5.31	14.27		127.4	Clear
8:38				4.76	0.100	107.7	5.30	14.25		145.3	Clear
8:41				4.67	0.100	55.7	6.20	14.22		161.6	Clear
8:46				4.61	0.100	42.4	6.25	14.21		181.5	Clear
8:50				4.56	0.100	27.8	6.62	1.20		197.3	Clear
8:52				4.55	0.100	26.3	6.60	14.19		201.2	Clear
3@3-5 m.			~125-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13A (87-92') — Sample Time: 8:55 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001542

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations In Vineland
Site Conditions / Weather: ~60-degrees, cloudy
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-13A (111-116')
Date: 10/26/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 9:57

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
10:00				5.27	0.058	1374.0	5.41	14.64		133.5	Orange-brown, silty
10:06				4.87	0.039	138.7	7.47	14.60		181.1	Cloudy
10:11				4.85	0.038	38.9	7.62	14.54		191.6	Clear
10:15				4.87	0.037	18.5	7.67	14.50		198.2	Clear
10:17				4.88	0.037	15.1	7.70	14.49		200.7	Clear
3@3-5 m.			~75-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-13A (111-116') — Sample Time: 10:20 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001543

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: Whale pump
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-14 (35-40')
Date: 10/16/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 12:00

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
12:27				5.20	0.188	1109.0	4.55	13.64		234.8	Orange-brown, silty
12:32				4.90	0.181	1074.6	5.48	14.30		232.5	Orange-brown, silty
12:40				4.76	0.215	581.0	3.16	14.81		224.4	Orange-brown, silty
12:45				4.73	0.228	487.7	2.97	14.84		215.0	Orahge-brown, silty
12:49				4.73	0.237	530.0	2.90	14.85		208.9	Orange-brown, silty
12:53				4.73	0.242	408.8	2.90	14.90		197.5	Orange-brown, slify
13:00				4.74	0.248	254.6	2.91	14.94		189.6	Cloudy
13:06				4.76	0.252	180.0	2.87	14.94		177.5	Slightly cloudy
3@3-5 m.			~75-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-14 (35-40') — Sample Time: 13:10 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001544

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-14 (55-60')
Date: 10/16/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 13:50 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
13:53				4.75	0.090	487.4	7.46	14.23		249.3	Cloudy, orange-brown silt
13:57				4.70	0.087	182.2	7.56	14.70		246.3	Cloudy
14:03				4.67	0.086	52.3	7.73	14.83		249.5	Clear
14:06				4.65	0.085	43.7	7.82	14.80		253.3	Clear
14:09				4.62	0.084	46.0	7.94	14.60		256.3	Clear
14:13				4.60	0.085	36.4	8.01	14.59		260.9	Clear
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-14 (55-60') — Sample Time: 14:15 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001545

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-14 (130-135')
Date: 10/19/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Inten/al (ftbtoc):

Purging Information — Start purge at: 14:40 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
14:51				4.77	0.065	209.8	3.73	14.39		207.6	Cloudy, orange-brown silt
14:56				4.70	0.063	99.0	3.72	14.36		228.3	Slightly cloudy
14:58				4.68	0.062	77.3	3.71	14.35		235.5	Clear
15:01				4.66	0.062	64.6	3.70	14.36		242.0	Clear
15:05				4.60	0.061	58.3	3.68	14.32		249.5	Clear
15:07				4.60	0.061	55.0	3.67	14.32		251.6	Clear
3@3-5 m.			~100-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-14 (130-135') — Sample Time: 15:10 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Obsen/ations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001546

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well identification: VP-15 (30-35')
Date: 10/12/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (In): 4.25"
Standing Volume (gal,liter): NA
Screened Inten/al (ftbtoc):

Purging Information — Start purge at: 14:03 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
14:15				8.60	0.124	1147.2	19.15	18.16		146.0	Yellow-brown, silty
14:24				5.87	0.129	1007.1	9.53	18.96		194.8	Yellow-brown, silty
14:28				5.27	0.121	135.2	8.51	18.01		229.8	Pale yellow
14:31				5.06	0.120	75.6	8.56	17.97		243.3	Pale yellow
14:34				4.94	0.119	48.7	8.53	17.94		254.2	Pale yellow
3@3-5 m.			~75-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15 (30-35') — Sample Time: 14:40 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001547

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15 (45-50')
Date: 10/12/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 15:26

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Obsen/ations (color, odor, etc.)
15:29				4.96	0.074	284.0	2.80	17.31		240.3	
15:31				4.89	0.072	114.1	2.79	17.21		245.2	
15:34				4.83	0.071	33.3	2.79	17.10		256.7	
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15 (45-50') — Sample Time: 15:35 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Obsen/ations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001548

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15 (65-70)
Date: 10/13/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened inten/al (ftbtoc):

Purging Information — Start purge at: 9:00

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
9:05				5.07	0.073	82.5	4.54	16.48		202.2	Yellow, silty, then clearing
9:08				4.94	0.072	29.8	4.78	16.43		215.9	Slightly yellow, silty
9:11				4.82	0.072	18.1	4.85	16.40		232.0	Clear
9:14				4.72	0.072	9.6	4.87	16.38		246.3	Clear
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15 (65-70') Sample Time: 9:15 TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001549

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15 (88-93')
Date: 10/13/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 10:24 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
10:26				5.11	0.066	1129.0	4.52	16.13		210.8	Yellow-brown, silty
10:29				4.90	0.062	317.8	5.03	15.76		234.5	Yellow-brown, silty
10:31				4.77	0.061	141.8	5.31	15.59		250.5	Yellow-brown, silty, clearing
10:34				4.66	0.059	72.9	5.40	15.46		265.3	Slightly silty
10:38				4.61	0.059	42.4	5.64	15.35		281.1	Slightly silty
3@3-5 m.			~100-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15 (88-93') — Sample Time: 10:40 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001550

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15 (114-119')
Date: 10/13/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 11:50 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
11:54				4.50	0.037	1112.3	0.50	17.05		100.0	Gray, silty
11:58				4.30	0.033	668.2	0.41	17.04		97.8	Gray, silty
12:02				4.19	0.034	225.3	0.36	17.00		104.1	Gray, silty
12:05				4.14	0.036	92.1	0.36	16.93		104.9	Gray, slightly silty
12:08				4.13	0.036	55.4	0.35	16.88		106.4	Gray, slightly silty
12:13				4.15	0.036	65.2	0.32	16.83		107.7	Gray, slightly silty
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15 (114-119') — Sample Time: 12:15 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001551

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations In Vineland
Site Conditions / Weather:
Purge Method: Whale pump
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15A (15-20')
Date: 10/20/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 15:05

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Obsen/ations (color, odor, etc.)
15:09				5.73	0.554	165.3	5.92	17.48		122.1	Orange-brown, silty, slightly cloudy
15:14				5.64	0.560	118.1	6.01	17.44		119.7	Orange-brown, silty, slightly cloudy
15:18				5.62	0.564	85.2	5.94	17.42		112.7	Orange-brown, silty, slightly cloudy
15:23				5.60	0.525	265.4	5.62	17.37		114.5	Orange-brown, silty
15:28				5.59	0.554	112.0	5.63	17.34		128.5	Slightly cloudy
15:31				5.58	0.524	55.7	5.64	17.29		132.9	Clear
15:39				5.56	0.518	34.1	5.77	17.28		131.0	Clear
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling information — Sample Identity: VP-15A (15-20') — Sample Time: 15:40 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001552

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather: ~55-degrees, sunny
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15A (38-43')
Date: 10/21/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 8:36

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
8:39				4.98	0.084	656.3	3.92	13.99		148.9	Orange-brown, silty
8:42				4.85	0.084	92.5	3.88	14.48		181.8	Clear
8:45				4.80	0.084	79.1	3.92	14.50		196.8	Clear
8:50				4.75	0.084	44.6	4.01	14.53		214.3	Clear
3@3-5 m.			~100-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15A (38-43') — Sample Time: 8:50 — TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001553

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather: ~60-degrees, sunny
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15A (55-60')
Date: 10/21/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (In): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 9:45

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
9:48				4.58	0.051	1377.4	3.84	15.01		199.9	Orange-brown, silty
9:53				4.49	0.050	220.7	4.14	14.62		237.7	Cloudy
10:20				4.52	0.049	43.0	4.20	14.44		268.5	Clear
3@3-5 m.			~125-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling information — Sample Identity: VP-15A (55-60') Sample Time: 10:20 TRC Personnel: J. Moss

Analysis	Containers Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001554

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather:
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15A (77-82')
Date: 10/21/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (in): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 11:16

Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
11:18				4.91	0.050	209.3	4.72	15.24		188.0	Orange-brown, silty
11:21				4.52	0.047	79.0	5.62	14.82		230.9	Orange-brown, slightly silty
11:25				4.37	0.047	62.0	5.86	14.59		255.3	Slightly cloudy, then clear
11:27				4.39	0.046	90.0	5.72	14.83		261.1	Clear
3@3-5 m.			~50-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15A (77-82') — Sample Time: 11:30 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001555

Ground Water Sampling Log

Client: SMC
Project Number: 112434.00GWAT.002235
Site Name / Location: SMC / Newfield / Off-site locations in Vineland
Site Conditions / Weather: ~65-degrees, sunny
Purge Method: SAT & submersible pump / packer assembly
Purge Equipment/Material: SAT
Headspace PID/FID (ppm): NA
Pump Intake (ftbtoc):

Well Identification: VP-15A (99-104')
Date: 10/21/2009
Depth to Water (ftbtoc): NA
Depth to Bottom (ftbtoc): NA
Standing Column (ft): NA
Well Diameter (In): 4.25"
Standing Volume (gal,liter): NA
Screened Interval (ftbtoc):

Purging Information — Start purge at: 13:40 — Well Casing Volumes: 1" = 0.04 gal/ft = 0.15 L/ft, 2" = 0.16 gal/ft = 0.62 L/ft, 4" = 0.65 gal/ft = 2.47 L/ft, 6" = 1.47 gal/ft = 5.56 L/ft

Time	DTW (ftbtoc)	Purge Rate (gpm,lpm)	Volume Purged (gal,liter)	pH	Specific Cond. (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (ºC)	Other	ORP (mV)	Comments / Observations (color, odor, etc.)
13:44				4.21	0.056	1380.3	5.53	15.31		199.2	Orange-brown, silty
13:47				3.73	0.055	72.4	6.38	14.82		248.3	Cloudy
13:50				3.68	0.055	22.0	6.51	14.56		261.6	Clear
13:54				3.67	0.054	9.2	6.60	14.37		271.6	Clear
3@3-5 m.			~110-gal	+/- 0.1	3%	10%	10%	3%		+/- 10 mV	

Sampling Information — Sample Identity: VP-15A (99-104') — Sample Time: 13:55 — TRC Personnel: J. Moss

Analysis	Containers: Number	Size	Type	Preservative	Sampling Method/Material	Comments / Observations
VOCs						
Total Cr						
Cr+6						
Perchlorate						
Methane						
Nitrate						
Fe+2						

R2-0001556

APPENDIX E

MONITORING WELL CONSTRUCTION LOGS

Supplemental Offsite Groundwater Investigation,
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

TRC

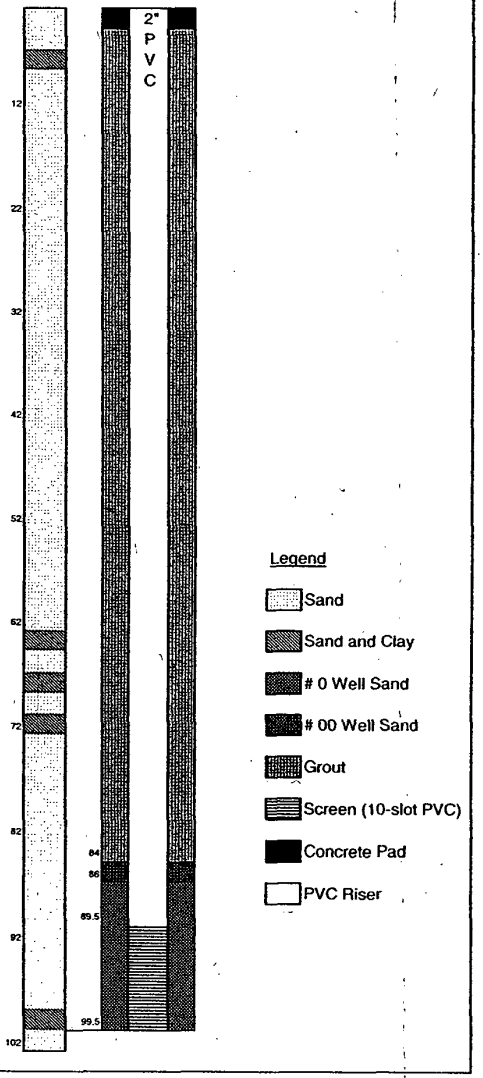
Project Name: SMC Offsite Ground Water Investigation
Project Number: 112434-00GWAT-002235
Project Location: Vineland, New Jersey
Boring Location: West Garden Road

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Dan Evans and Joe Evans
TRC Inspector: Paul Cyr
Drill Equipment / Method: 1500 Midway Truck Rig
Mud Rotary / Pressure Tremie

Boring: SC-3SD
Date Started: 10/29/2009
Date Completed: 10/29/2009
Depth to Water: NA
Horizontal Coordinates: E335051.78, N251029.52 (VP-15A)
Ground Elevation: NA
Inner Casing Elevation: NA

Depth (ftbgs)	Recovery / Penetration (inches)	Split Spoon (inches)	Blow Counts	Soil Description
10-12	20/24	6	10	Light brown F SAND, trace M Sand
		12	14	and M Gravel
		18	15	Gray CLAY, trace C Gravel
		24	17	
20-22	8/18	6	25	Light brown F-M SAND, trace C
		12	30	Gravel
		18	50/5"	Spoon refusal at 21.5-ftbgs.
30-32	12/18	6	30	Light brown/orange F-M SAND,
		12	35	trace C Sand, trace F-M gravel
		18	50-5"	Spoon refusal at 31.5-ftbgs.
40-42	11/24	6	10	Red/orange/brown M-C SAND,
		12	15	little M-C Gravel, trace F sand
		18	19	and F gravel
		24	17	
50-52	20/20	6	24	Dark red/brown F SAND
		12	36	C GRAVEL, trace M Gravel
		18	50/7"	Spoon refusal at 51.7-ftbgs.
60-62	11/24	6	14	Gray CLAY and inter-bedded
		12	10	red/brown F SAND
		18	22	
		24	24	
70-72	9.5/18	6	10	Light brown F SAND, inter-bedded
		12	31	thin Clay layers
		18	50/5"	Red-brown F SAND, inter-bedded
				thin Clay layers
				Spoon refusal at 71.5-ftbgs.
80-82	11/24	6	15	Light brown F SAND, inter-bedded
		12	25	thin Silt layers
		18	36	
		24	40	
90-92	12/24	6	9	Light brown F SAND, trace C
		12	8	Gravel
		18	18	
		24	22	
100-102	19/24	6	10	Light brown F SAND, inter-bedded
		12	11	thin Clay layers
		18	13	
		24	15	

Lithology / Monitoring Well Construction



WELL CONSTRUCTION:
10-Slot PVC Screen (2") = 99.5-89.5 ftbgs
PVC Riser (2") = 89.5 ftbgs-grade
0 Well Sand = 99.5-86 ftbgs
#00 Well Sand = 86-84 ftbgs
Grout (bentonite/cement mixture) = 84-2 ftbgs
Native Backfill = 2-0.5 ftbgs
Concrete Pad = 0.5-grade
Monitoring well secured with a locking sanitary plug.
Monitoring well completed with a flush-mounted curb box.

NOTES:
ftbgs - feet below ground surface.
NA - Data not available at time of reporting
Horizontal datum (New Jersey State Plane Coordinates, NAD 83).
Samples collected for geological description every 10 feet using split spoon (140 lb hammer dropped 30").
Monitoring well developed using whale pumps in series and using surge and pump technique.

Supplemental Offsite Groundwater Investigation
Shieldalloy Metallurgical Corporation
Newfield, New Jersey

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

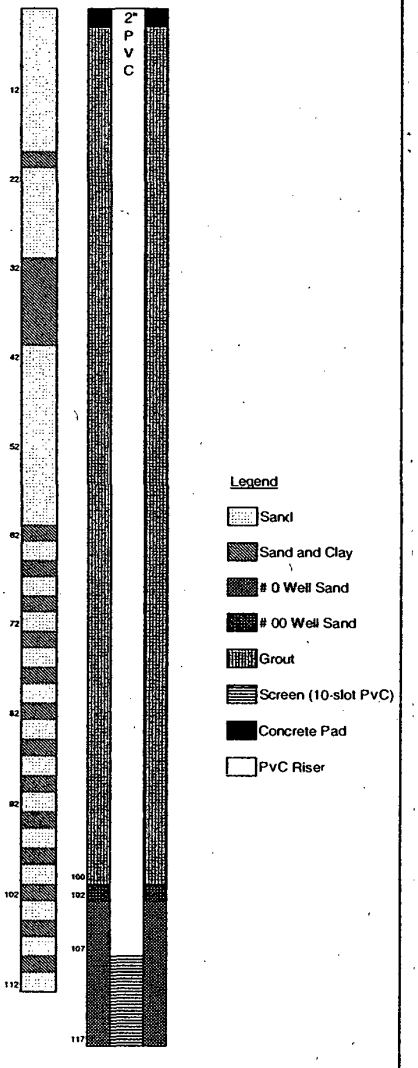
TRC

Project Name: SMC Offsite Ground Water Investigation
Project Number: 112434-00GWAT-002235
Project Location: Vineland, New Jersey
Boring Location: Salem Avenue

Drilling Company: Unitech Drilling Co., Inc.
Drillers: Dan Evans and Joe Evans
TRC Inspector: Paul Cyr
Drill Equipment / Method: 1500 Midway Truck Rig
Mud Rotary / Pressure Tremie

Boring: SC-36D
Date Started: 11/3/2009
Date Completed: 11/4/2009
Depth to Water: NA
Horizontal Coordinates: E341283.30, N258484.52 (VP-13A)
Ground Elevation: NA
Inner Casing Elevation: NA

Depth (ftbgs)	Recovery / Penetration (inches)	Split Spoon (inches)	Blow Counts	Soil Description	Lithology	Monitoring Well Construction
10-12	11/24	6	12	Red/orange/brown M-C SAND, trace		
		12	16	C Gravel		
		18	26	Red-brown M-C SAND		
		24	29	Light brown - red-brown F SAND		
20-22	8/24	6	16	Medium brown F SAND, thin Clay		
		12	18	layer at 20-ftbgs.		
		18	17			
		24	17			
30-32	24/24	6	22	Cobbles		
		12	24	Red-brown F SAND		
		18	17	Tan CLAY		
		24	18			
40-42	15.5/24	6	20	Tan CLAY		
		12	20	Red-brown F-M SAND		
		18	29			
		24	37			
50-52	8/11	6	36	Red-brown M-C SAND, little M		
		12	50/5"	Gravel, trace clay, trace C gravel		
				Spoon refusal at 51-ftbgs.		
60-62	23/24	6	13	Tan-medium brown CLAY, trace		
		12	8	F Sand		
		18	14	Medium brown F SAND		
		24	20	Tan CLAY, trace F Sand		
				Red-brown F SAND, trace clay		
				Medium to light brown F SAND		
70-72	19/24	6	8	Gray-brown CLAY and F SAND		
		12	10	Medium brown F SAND, trace Clay		
		18	7	Red-brown F SAND		
		24	8	CLAY, trace F Sand		
80-82	19/24	6	13	Tan CLAY		
		12	7	Medium brown F SAND, trace Clay		
		18	14			
		24	20			
90-92	14/24	6	16	Medium brown F SAND, trace Clay		
		12	9			
		18	15			
		24	23			
100-102	18/24	6	13	Tan CLAY, trace M Gravel		
		12	18	Red-brown F SAND, trace Clay		
		18	26			
		24	26			
105-107	12/24	6	18	Cobbles, trace F Sand		
		12	20	Tan CLAY, trace F Sand		
		18	23	Red-brown F SAND, trace M Gravel,		
		24	30	trace clay		
110-112	12/24	6	9	Medium brown F SAND, trace Clay		
		12	9			
		18	15			
		24	23			



WELL CONSTRUCTION:
10-Slot PVC Screen (2") = 117-107 ftbgs
PVC Riser (2") = 107 ftbgs-grade
0 Well Sand = 117-102 ftbgs
#00 Well Sand = 102-100 ftbgs
Grout (bentonite/cement mixture) = 100-1 ftbgs
Native Backfill = 1-0.5 ftbgs
Concrete Pad = 0.5-grade
Monitoring well secured with a locking sanitary plug
Monitoring well completed with a flush-mounted curb box

NOTES:
ftbgs - feet below grourvt surface.
NA - Data not available at time of reporting
Horizontal datum (New Jersey State Plane Coordinates, NAD 83).
Samples collected for geological dascription every 10 feet using split spoon (140 lb hammer dropped 30").
Monitoring well developed using whale pumps in series and using surge arxl pump technique.

R2-0001559

TRC
Results you can rely on
21 Griffin Road North
Windsor, CT 06095
Telephone: 860-298-9692
Fax: 860-298-6399

PROJECT INFORMATION

Project Name:	Perchlorate RI
Project Location:	Between 540 and 560 Salem Avenue, Vineland, NJ
Project Number:	177208.0000.000003
Client:	SMC
TRC Eng./Geol:	John Moss
Checked By:	Larry Butlien

BORING/WELL INFORMATION

Boring Depth:	142	Hole Diameter:	4.25
Date Started:	4/4/11	Date Completed:	4/5/11
Coordinate System:	New Jersey State Plane, NAD 83		
North:	258986	East:	342114
Vertical Datum:	NAVD88	Ground Elevation:	97
Well Elevation (Top of Casing)	96.91 ft.		

DRILLING INFORMATION

Drilling Contractor:	Uni-Tech Drilling
Driller(s):	Michael
Drilling Method:	Mud Rotary
Equipment/Model:	Failing 1500
Sampler:	2" split spoon

GROUND WATER OBSERVATIONS

MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE			4/5/2011
DEPTH (ft.bgs.)			14.5
REFERENCE			Ground Surface
STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	BLOW COUNTS	LITHOLOGY	◆ VOC SCREENING RESULTS (ppm) 20 40 60 80	MATERIAL DESCRIPTION	WELL DIAGRAM
1–10									Flush-to-grade road box well protector
11–12	SS-1	X	2.0	1.5	14 20 22 23			Yellow-Brown Very Fine-Medium SAND, trace Gravel; thin band of Silty Sand at 10.5'	▼
13–20									
21–22	SS-2	X	2.0	1.3	20 36 34 36			Yellow-Brown Very Fine-Fine SAND; coarse Gravel at top of recovery	
23–30									
31–32	SS-3	X	2.0	0.8	15 22 27 32			Yellow-Brown Very Fine-Coarse SAND; coarse Gravel at top of recovery	
33–40									
41–42	SS-4	X	2.0	1.1	34 38 50 56			Yellow-Brown Very Fine-Coarse SAND, trace fine Gravel; coarse Gravel at top of recovery; thin Light Gray Clay lens at 41.5'	
43–45									

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 6/20/11 14:01 - H:\HAZMAT\SMC\NEWFIELD\PERCHLORATE\PERCHLORATE RI\ADDITIONAL WELL INSTALL - SC40D\SMC PERCHLORATE - SC40D.GPJ

R2-0001560

TRC
Results you can rely on
21 Griffin Road North
Windsor, CT 06095
Telephone: 860-298-9692
Fax: 860-298-6399

PROJECT INFORMATION

Project Name:	Perchlorate RI
Project Location:	Between 540 and 560 Salem Avenue, Vineland, NJ
Project Number:	177208.0000.000003
Client:	SMC
TRC Eng./Geol:	John Moss
Checked By:	Larry Butlien

BORING/WELL INFORMATION

Boring Depth:	142	Hole Diameter:	4.25
Date Started:	4/4/11	Date Completed:	4/5/11
Coordinate System:	New Jersey State Plane, NAD 83		
North:	258986	East:	342114
Vertical Datum:	NAVD88	Ground Elevation:	97
Well Elevation (Top of Casing)	96.91 ft.		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	BLOW COUNTS	LITHOLOGY	◆ VOC SCREENING RESULTS (ppm) 20 40 60 80	MATERIAL DESCRIPTION	WELL DIAGRAM
46–50									
51	SS-5	X	1.4	0.8	45 50 50/5"			Yellow-Brown Very Fine-Medium SAND with some medium-coarse Gravel Brown Fine-Coarse SAND	
52–60									Portland cement / bentonite grout mix
61	SS-6	X	2.0	0.8	32 32 30 26			Light Tan Very Fine-Medium SAND Red-Brown Very Fine-Coarse SAND; coarse Gravel at top of recovery	
62–70									
71	SS-7	X	1.3	0.9	30 50 50/4"			Light Tan Fine-Medium SAND	
72–80									
81	SS-8	X	1.3	0.7	24 29 50/4"			Light Tan Very Fine-Fine SAND Yellow-Brown Very Fine-Fine SAND with trace Light Gray Clay lenses	
82–90									
91	SS-9	X	0.9	0.6	30 50/5"			Tan Very Fine-Fine SAND	
92–95									

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 6/20/11 14:01 - H:\HAZMAT\SMC\NEWFIELD\PERCHLORATE\PERCHLORATE RI\ADDITIONAL WELL INSTALL - SC40D\SMC PERCHLORATE - SC40D.GPJ

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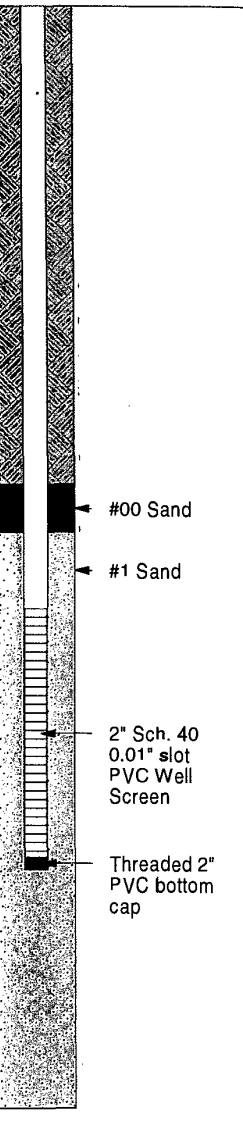
BORING/WELL INFORMATION

Boring Depth:	142	Hole Diameter:	4.25
Date Started:	4/4/11	Date Completed:	4/5/11
Coordinate System:	New Jersey State Plane, NAD 83		
North:	258986	East:	342114
Vertical Datum:	NAVD88	Ground Elevation:	97
Well Elevation (Top of Casing)	96.91 ft.		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	BLOW COUNTS	LITHOLOGY	◆VOC SCREENING RESULTS (ppm) 20 40 60 80	MATERIAL DESCRIPTION
101	SS-10		0.4	0.4	50/5"			Yellow-Brown Very Fine-Medium SAND with little Light Gray Clay lenses
106	SS-11		0.9	0.6	24 50/5"			Yellow-Brown Very Fine-Medium SAND Yellow-Brown Very Fine-Medium SAND with little Light Gray Clay lenses and Dark Brown/Red-Brown lenses
111	SS-12		0.4	0.4	50/5"			Tan Very Fine-Medium SAND, some Light Gray Clay at top of recovery
116	SS-13		1.3	0.8	22 28 50/4"			Yellow-Brown Very Fine-Medium SAND, little medium Gravel
121	SS-14		2.0	0.8	20 24 30 57			Yellow-Brown Very Fine-Medium SAND, little Light Gray Clay and coarse Sand at top of recovery
126	SS-15		0.8	0.4	30 50/4"			Orange-Brown Fine-Coarse SAND
131	SS-16		2.0	0.8	20 26 46 50			Tan Very Fine-Fine SAND, little fine Gravel, little Light Gray Clay
136	SS-17		1.7	1.0	24 34 55 17/2"			Tan Fine-Coarse SAND, trace Light Gray Clay lenses Orange-Brown Very Fine-Fine SAND, some Light Gray Clay lenses
141	SS-18		2.0	1.0	16 21 31 23			Orange-Brown Very Fine-Medium SAND with some fine Gravel
								Bottom of borehole at 142.0 feet.

WELL DIAGRAM



SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 6/20/11 14:01 - H:\HAZMAT\SMC\NEWFIELD\PERCHLORATE\PERCHLORATE RI\ADDITIONAL WELL INSTALL - SC40D\SMC PERCHLORATE - SC40D.GPJ

APPENDIX F

ROAD OPENING PERMITS

CITY VINELAND
ENGINEERING DEPARTMENT
APPLICATION AND PERMIT FOR RIGHT-OF-WAY OPENING

Applicant Name: TRC Environmental Corporation
Applicant Address: 21 Griffin Road North, Windsor, CT 06095
Applicant Phone Number: 860-298-6325
Street to be Opened: See attached table
BLOCK NO. See attached table LOT NO. See attached table
Purpose: Drilling for ground water sampling
Anticipated Start Date October 12, 2009 Estimated time for Completion 2 weeks
Name of Contractor Vai-Tech Drilling
Width of Opening (Ft.) 1 X Length of Opening (Ft.) 1 = Area (Sq. Ft.) 1x6 locations
Area (Sq. Ft.) 6 Divided by 9 = Area (Sq. Ft.) 0.67
Underground location Request No. See attached table

FEE SCHEDULE	FEE	TOTAL
Administration Fee	$25.00	$25.00
1). Minimum right-of-way opening for 16 Sq. Ft. or less	$50.00	$50.00
a). Greater than 16 Sq. Ft. but less than or equal to 50 Sq. Ft.	$100.00	
b). For every Sq. Ft. of opening greater than 50 Sq. Ft the fee shall be $1.00 per Sq. Ft.	$1.00	
2). Curb and or gutter installation		
a). 0-100' L.E	$50.00	
b). Over 100 L.F. fee is $25.00 per 100' L.F.	$25.00	
3). Buried Cable minimum fee for up to 1,500 L.F	$50.00	
Over 1,500 L.F. is S10.00 per 1,000 L.F	Total:	$75.00

Maximum fee on any of the above is $500.00 unless otherwise determined by the City Engineer.
Performance Bond required YES _____ NO X
Performance Bond, $90.00 per Sq. Yd. X _____ S.Y. = AMOUNT $ _____
Must be Bond, Certified Check or Cashier Check

A Maintenance Bond shall be posted prior to the release of the performance bond, and shall remain in effect for two years.
Maintenance Bond = 10% of Performance Bond $ _____
Must be Bond, Certified Check or Cashier Check

As the applicant for this permit I accept all the terms and conditions of the City of Vineland Chapter Number 241. It is agreed that all restoration pertaining to this right-of-way opening shall be done by the applicant according to the standards set forth in this ordinance.

Sr. Project Hydrogeologist — Title (type or print)
Larry Butler — Signature of Applicant
10-5-09 — Date

----------FOR CITY USE ONLY----------

FOR City Engineer
APPROVED ☒ DENIED ☐
10-9-09 — Date

Date of Final Inspection: _____
Inspector's Approval: _____
COMMENTS: _____

• WARNING •
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FOR UTILITY LOCATIONS

PERMIT NO. 12836

Sample Location Summary
Shieldalloy Metallurgical Corporation
Newfield, New Jersey
October 2009

Soil Boring Location ID	Approximate State Planar Coordinates		Street Address (Property Adjacent to Sample Location)	Block Number	Lot Number	Nearest Cross Street	Approximate Distance from Nearest Cross Street	Direction from Nearest Cross Street	Side of Street Location was Marked On	Size of Right of Way	NJ Onn Call 9	Description of Location
	Northing	Eastina										
Monitoring Wells												
VP-7	255290.06	345190.40	Strawbeny Avenue	901	12 & 13	North East Boulevard	360 feet	East	Northern	50 feet	092782108	Located just north of edge of Strawberry Avenue
VP-8	255969.96	343697.27	West Arbor Avenue	702	3	North West Boulevard	1,080 feel	West	Southern	50 feet	092782115	Located just south of edge of West Arbor Avenue
Vertical Profiling												
VP-13A	258527.70	341278.11	Salem Avenue	202	36	West Weymouth Road	550 feet	Northeast	Northern	50 feet	092782148	Located just north of edge of Salem Avenue
VP-14	253179.69	340452.81	West Forest Grove Road	701	62	Nicilette Court	775 feet	East	Northern	50 feet	092782153	Located just north of edge of West Forest Grove Road
VP-15	252352.54	336510.54	Freddy Lane	604	3 & 6	West Forest Grove Road	1,000 feet	South	Southern	50 feet	092782162	Located just south of edge of Freddy Lane
VP-15A	250995.03	335101.55	West Garden Road	1101	13	North Mill Road	550 feet	East	Southern	50 feet	092782166	Located just south of edge of West Garden Road

COUNTY PERMIT NUMBER 09-165 Approval Date 9-30-09

APPLICATION AND PERMIT TO OPEN HIGHWAY IN THE COUNTY OF CUMBERLAND

Application hereby being made by the undersigned, permission is hereby given to the undersigned to make an opening ~~in~~ within the Cumberland County right-of-way approximately 10-feet off the road pavement along the northern side of West Weymouth (Road) or Street at a location adjacent to Block 501, Lot 7 of not more than 1 square feet, for the purpose of installing a soil boring, which may be completed as a monitoring well.

according to plan filed with the application of this permit.

The applicant agrees to fully comply with all resolutions, ordinances, rules and regulatioas of the County of Cumberland for the opening of County highways and particularly with the resolution dated August 9th, 1951 duly passed and advertised according to law by the Board of Chosen Freeholders of the County of Cumberland, a copy of which resolution the undersigned acknowledges receipt thereof at the time of receiving this permit.

The applicant agrees that the issuance of this permit shall constitute a valid contract between the County of Cumberland and the applicant.

The applicant likewise agrees that he will indemnify and save harmless the County from any loss or damage which may result by reason of the opening on behalf of the applicant of any street, road or highway owned or under the control of the County.

APPLICANT: TRC Environmental Corporation

By John Moss / John Moss

COUNTY OF CUMBERLAND

By _____

County Engineer or his authorized agent.

All rights of the applicant under this permit shall become void ninety (90) days from the date hereof unless extended by endorsement made hereon by the County Engineer or his authorized agent.

Deposit Received: $

Excavation by mechanical machinery or method is not granted unless the Cumberland County Engineer causes his signature to appear immediately below.

X _____

Tunnelling under the pavement is not authorized unless the Cumberland County Engineer causes his signature to appear immediately below.

_____

Note: Attached is the $1.00 permit application fee.

CITY VINELAND
ENGINEERING DEPARTMENT
APPLICATION AND PERMIT FOR RIGHT-OF-WAY OPENING

Applicant Name: TRC Environmental Corporation
Applicant Address: 21 Griffin Road North, Windsor, CT 06095
Applicant Phone Number: 860-298-6325
Street to be Opened: Salem Avenue
BLOCK NO. 2002 LOT NO. 31 / 32
Purpose: Drilling for groundwater Sampling
Anticipated Start Date: April 4, 2011 Estimated time for Completion 3 days
Name of Contractor Vironex Drilling
Width of Opening (Ft.) 1 X Length of Opening (Ft.) 1 = Area (Sq. Ft.) 1
Area (Sq. Ft.) 1 Divided by 9 = Area (Sq. Ft.) 0.11
Underground location Request No. SC405

FEE SCHEDULE	FEE	TOTAL
Administration Fee	$25.00	$25.00
1). Minimum right-of-way opening for 16 Sq. Ft. or less	$50.00	$50.00
a). Greater than 16 Sq. Ft. but less than or equal to 50 Sq. Ft.	$100.00	
b). For every Sq. Ft. of opening greater than 50 Sq. Ft the fee shall be $1.00 per Sq. Ft.	$1.00	
2). Curb and or gutter installation		
a). 0-100' L.E	$50.00	
b). Over 100 L.F. fee is S25.00 per 100' L.E	$25.00	
3). Buried Cable minimum fee for up to 1,500 L.F	$50.00	
Over 1,500 L.E is $10.00 per 1,000 L.F	Total:	$75.00

Maximum fee on any of the above is $500.00 unless otherwise determined by the City Engineer.
Performance Bond required YES _____ NO X
Performance Bond, $90.00 per Sq. Yd. X _____ S.Y. = AMOUNT $ _____
Must be Bond, Certified Check or Cashier Check

A Maintenance Bond shall be posted prior to the release of the performance bond, and shall remain in effect for two years.
Maintenance Bond = 10% of Performance Bond $ _____
Must be Bond, Certified Check or Cashier Check

As the applicant for this permit I accept all the terms and conditions of the City of Vineland Chapter Number 241. It is agreed that all restoration pertaining to this right-of-way opening shall be done by the applicant according to the standards set forth in this ordinance.

Project Manager — Title (type or print)
Laurence J. Bethlen — Signature of Applicant
3/23/11 — Date

----------FOR CITY USE ONLY----------

City Engineer
APPROVED ☒ DENIED ☐
3-30-11 — Date

Date of Final Inspection: _____
Inspector's Approval: _____
COMMENTS: _____

• WARNING •
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1-800-272-1000
FOR UTILITY LOCATIONS

PERMIT NO. 12837

Sample Location Summary
Shieldalloy Metallurgical Corporation
Newfield, New Jersey
March 2011

Soil Boring Location ID	Approximate State Planar Coordinates		Street Proposed Boring is Marked On	Street Address (Property Adjacent to Sample Location)	Block Number	Lot Number	Nearest Cross Street	Approximate Distance from Nearest Cross Street	Direction from Nearest Cross Street	Side of Street Location was Marked On	Size of Right-of-Way	Description of Location
	Northing	Easting										
Monitoring Wells												
SC40D	259000.00	342108.00	Salem Avenue	Between 540 and 560 Salem Avenue, within City-owned right of way along edge of Salem Avenue	202	31 & 32	West Weymouth Road	1,500 feet	Northeast	Northern	50 feet	Located just north of edge of Salem Avenue

APPENDIX G

ANALYTICAL LABORATORY REPORTS

(ELECTRONIC COPIES ON CD)

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000 PO#16372

Accutest Job Number: JA30839

Sampling Date: 10/20/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **31**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Sample Summary

TRC

Job No: JA30839

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30839-1	10/20/09	07:40	CC	10/20/09	AQ	Field Blank Water	FB102009A
JA30839-2	10/20/09	10:00	CC	10/20/09	AQ	Ground Water	SC25S
JA30839-3	10/20/09	11:10	CC	10/20/09	AQ	Ground Water	W2(R)
JA30839-4	10/20/09	11:50	CC	10/20/09	AQ	Ground Water	SC14S
JA30839-5	10/20/09	12:45	CC	10/20/09	AQ	Ground Water	W3D
JA30839-6	10/20/09	13:55	CC	10/20/09	AQ	Ground Water	SC11S(R)
JA30839-7	10/20/09	12:55	CC	10/20/09	AQ	Ground Water	SC26D
JA30839-8	10/20/09	11:00	CC	10/20/09	AQ	Ground Water	OB-2A

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30839
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	11/11/2009 3:55:44 P

On 10/20/2009, 7 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30839 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 EPA 314

Matrix: AQ **Batch ID:** GP51310

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30998-6DUP, JA30998-6MS were used as the QC samples for Perchlorate.
- JA30839-8 for Perchlorate: Detection limit raised due to dilution required for possible matrix interference.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31889

- Sample(s) JA30998-6DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB102009A		
Lab Sample ID:	JA30839-1	**Date Sampled:**	10/20/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 17:23	MS	EPA 314
Specific Conductivity	2.7	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC25S		
Lab Sample ID:	JA30839-2	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 17:40	MS	EPA 314
Specific Conductivity	180	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W2(R)		
Lab Sample ID:	JA30839-3	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.94 B	3.0	0.92	ug/l	1	10/28/09 17:58	MS	EPA 314
Specific Conductivity	110	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC14S		
Lab Sample ID:	JA30839-4	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 18:15	MS	EPA 314
Specific Conductivity	98.4	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W3D		
Lab Sample ID:	JA30839-5	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.6	3.0	0.92	ug/l	1	10/28/09 18:32	MS	EPA 314
Specific Conductivity	102	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC11S(R)		
Lab Sample ID:	JA30839-6	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 18:50	MS	EPA 314
Specific Conductivity	146	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC26D		
Lab Sample ID:	JA30839-7	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	11.0	3.0	0.92	ug/l	1	10/28/09 19:07	MS	EPA 314
Specific Conductivity	774	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	OB-2A		
Lab Sample ID:	JA30839-8	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/20/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate [a]	4.8 B	6.0	1.8	ug/l	2	11/05/09 20:00	MS	EPA 314
Specific Conductivity	65.9	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

(a) Detection limit raised due to dilution required for possible matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

FB ON

CHAIN OF CUSTODY

pvx#13779416

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JA30839

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Bothlen E-mail: lbothlen@trcsolutions.com
Phone #: (860)295 6225 Fax #: (860)298 6399
Sampler(s) Name(s): C. Carlson J. Reynolds Phone #: 860 989-5916

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 Glw Blvd
City: New Field State: NY
Project #: 171441.0000.0000 ~~112454.B~~
Client Purchase Order #: 16372
Project Manager: Larry Bothlen

Billing Information (if different from Report to):
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
-1	FB102009A		10/20/09	0740	KS/CC	AQ	1					1				
-2	SC25S			1000	CC/DR	AQ	1					1				UTC3
-3	W2(R)			1110	CC/DR	AQ	1					1				
-4	SC14S			1150	CC/DR	AQ	1					1				
-5	W3D			1245	CC/DR	AQ	1					1				
-6	SC11S(R)			1355	CC/DR	AQ	1					1				
-7	SC26D			1255	KS/CC	AQ	1					1				
-8	OB-2A			1100	KS/CC	AQ	1					1				

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other Excel TRCJW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	10/20/09 1548	1	2	10/20/09	2
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seals: 332 [X] Intact [ ] Not intact	Preserved where applicable: [ ]	On Ice: [ ] Cooler Temp: 1.8
5		5			

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30839 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/20/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA30839: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA30839

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30839-1	Collected: 20-OCT-09 07:40 By: CC		Received: 20-OCT-09 By: MPC			
FB102009A						
JA30839-1	EPA 314	28-OCT-09 17:23	MS	28-OCT-09	MS	PERCHLT
JA30839-1	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-2	Collected: 20-OCT-09 10:00 By: CC		Received: 20-OCT-09 By: MPC			
SC25S						
JA30839-2	EPA 314	28-OCT-09 17:40	MS	28-OCT-09	MS	PERCHLT
JA30839-2	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-3	Collected: 20-OCT-09 11:10 By: CC		Received: 20-OCT-09 By: MPC			
W2(R)						
JA30839-3	EPA 314	28-OCT-09 17:58	MS	28-OCT-09	MS	PERCHLT
JA30839-3	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-4	Collected: 20-OCT-09 11:50 By: CC		Received: 20-OCT-09 By: MPC			
SC14S						
JA30839-4	EPA 314	28-OCT-09 18:15	MS	28-OCT-09	MS	PERCHLT
JA30839-4	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-5	Collected: 20-OCT-09 12:45 By: CC		Received: 20-OCT-09 By: MPC			
W3D						
JA30839-5	EPA 314	28-OCT-09 18:32	MS	28-OCT-09	MS	PERCHLT
JA30839-5	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-6	Collected: 20-OCT-09 13:55 By: CC		Received: 20-OCT-09 By: MPC			
SC11S(R)						
JA30839-6	EPA 314	28-OCT-09 18:50	MS	28-OCT-09	MS	PERCHLT
JA30839-6	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-7	Collected: 20-OCT-09 12:55 By: CC		Received: 20-OCT-09 By: MPC			
SC26D						
JA30839-7	EPA 314	28-OCT-09 19:07	MS	28-OCT-09	MS	PERCHLT

R2-0001586

Internal Sample Tracking Chronicle

TRC

Job No: JA30839

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30839-7	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-8	Collected: 20-OCT-09 11:00 By: CC		Received: 20-OCT-09 By: MPC			
OB-2A						
JA30839-8	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30839-8	EPA 314	05-NOV-09 20:00	MS	05-NOV-09	MS	PERCHLT

R2-0001587

Accutest Internal Chain of Custody

Job Number: JA30839
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/20/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30839-1.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-1.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-1.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-1.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-1.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-1.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-1.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-1.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-1.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-1.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-1.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-2.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-2.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-2.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-2.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-2.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-2.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-2.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-2.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-2.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-2.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-2.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-3.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-3.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-3.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-3.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-3.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-3.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-3.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-3.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-3.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-3.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-3.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-4.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-4.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-4.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-4.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-4.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-4.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-4.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-4.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30839
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/20/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30839-4.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-4.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-4.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-5.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-5.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-5.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-5.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-5.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-5.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-5.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-5.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-5.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-5.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-5.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-6.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-6.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-6.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-6.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-6.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-6.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-6.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-6.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-6.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-6.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-6.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-7.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-7.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-7.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-7.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30839-7.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-7.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-7.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-7.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-7.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-7.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-7.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30839-8.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA30839-8.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA30839-8.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA30839-8.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA30839
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/20/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30839-8.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30839-8.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30839-8.1	Secured Storage	Adam Scott	11/02/09 12:39	Retrieve from Storage
JA30839-8.1	Adam Scott	Melissa Smith	11/02/09 12:40	Custody Transfer
JA30839-8.1	Melissa Smith	Secured Storage	11/02/09 16:41	Return to Storage
JA30839-8.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30839-8.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30839-8.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30839-8.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30839-8.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30839-8.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30839-8.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30839-8.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30839-8.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30839-8.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30839-8.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30839-8.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30839-8.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30839-8.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30839-8.1	Dave Hunkele		12/08/09 10:56	Disposed

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: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51310/GN31654	3.0	0.0	ug/l	8	7.84	98.0	85-115%
Perchlorate	GP51310/GN31654			ug/l	25	23.8	95.2	85-115%
Perchlorate	GP51310/GN32028	3.0	0.0	ug/l	25	25.2	100.8	85-115%

Associated Samples:
Batch GP51310: JA30839-1, JA30839-2, JA30839-3, JA30839-4, JA30839-5, JA30839-6, JA30839-7, JA30839-8
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51310/GN31654	JA30998-6	ug/l	7.3	7.6	4.0	0-15%
Specific Conductivity	GN31889	JA30998-6	umhos/cm	651	682	4.7	0-10%

Associated Samples:
Batch GN31889: JA30839-1, JA30839-2, JA30839-3, JA30839-4, JA30839-5, JA30839-6, JA30839-7, JA30839-8
Batch GP51310: JA30839-1, JA30839-2, JA30839-3, JA30839-4, JA30839-5, JA30839-6, JA30839-7, JA30839-8
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51310/GN31654	JA30998-6	ug/l	7.3	25	32.0	98.8	80-120%

Associated Samples:
Batch GP51310: JA30839-1, JA30839-2, JA30839-3, JA30839-4, JA30839-5, JA30839-6, JA30839-7, JA30839-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31654
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:51	GN31654-STD1	1		STDA
13:08	GN31654-STD2	1		STDB
13:26	GN31654-STD3	1		STDC
13:43	GN31654-STD4	1		STDD
14:01	GN31654-STD5	1		STDE
14:18	GN31654-STD6	1		STDF
09:33	GN31654-IPC1	1		SCON=4290
09:50	GN31654-ICV1	1		
10:08	GP51274-MB1	1		
10:25	GN31654-CRI1	1		
10:42	GP51274-B1	1		
11:00	GN31654-CCV1	1		
11:52	GP51310-ICV1	1		
12:09	GP51274-S1	6		
12:27	GP51274-D1	5		
12:44	JA31192-2	5		(sample used for QC only; not part of login JA30839)
13:02	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:54	ZZZZZZ	4		
14:11	ZZZZZZ	4		
14:29	ZZZZZZ	4		
14:46	GN31654-CCVA1	1		
15:04	GN31654-IPC2	1		
15:21	GP51310-MB1	1		
15:38	GN31654-CRI2	1		
15:56	GP51310-B1	1		
16:13	GN31654-CCV2	1		
16:31	GP51310-S1	1		
16:48	GP51310-D1	1		
17:05	JA30998-6	1		(sample used for QC only; not part of login JA30839)
17:23	JA30839-1	1		scon
17:40	JA30839-2	1		scon

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31654
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:58	JA30839-3	1		scon
18:15	JA30839-4	1		scon
18:32	JA30839-5	1		scon
18:50	JA30839-6	1		scon
19:07	JA30839-7	1		scon
19:25	GN31654-CCVA2	1		
19:42	JA30839-8	1		Rerun for confirmation due to peak shape.
19:59	ZZZZZZ	1		
20:17	ZZZZZZ	1		
20:34	ZZZZZZ	1		
20:52	ZZZZZZ	1		
21:09	ZZZZZZ	1		
21:26	ZZZZZZ	1		
21:44	ZZZZZZ	1		
22:01	ZZZZZZ	1		
22:19	ZZZZZZ	1		
22:36	GN31654-CCV3	1		
22:53	ZZZZZZ	1		
23:11	GN31654-CCVA3	1		fails high

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Run ID: GN31654 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31654-IPC1	Perchlorate	23.9	3.0	0.92	25	95.6	80-120
GN31654-ICV1	Perchlorate	26.3	3.0	0.92	25	105.2	90-110
GN31654-CRI1	Perchlorate	3.2	3.0	0.92	3	106.7	75-125
GN31654-CCV1	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN31654-CCVA1	Perchlorate	52.5	3.0	0.92	50	105.0	
GN31654-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN31654-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN31654-CCV2	Perchlorate	25.3	3.0	0.92	25	101.2	85-115
GN31654-CCVA2	Perchlorate	51.0	3.0	0.92	50	102.0	
GN31654-CCV3	Perchlorate	28.7	3.0	0.92	25	114.8	85-115
GN31654-CCVA3	Perchlorate	59.7	3.0	0.92	50	119.4!(a)	

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110501.TXT Date Analyzed: 11/05/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32028
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32028-STD1	1		STDA
10:23	GN32028-STD2	1		STDB
10:41	GN32028-STD3	1		STDC
11:34	GN32028-STD4	1		STDD
11:51	GN32028-STD5	1		STDE
12:09	GN32028-STD6	1		STDF
11:51	GN32028-IPC1	1		scon=4290
12:10	GN32028-ICV1	1		
12:27	GP51456-MB1	1		
12:27	GP51310-MB2	1		Sample shown for QC tracking purposes only.
12:44	GN32028-CRI1	1		
13:02	GP51456-B1	1		
13:02	GP51310-B2	1		Sample shown for QC tracking purposes only.
13:19	GN32028-CCV1	1		
13:37	GP51456-ICV1	1		
13:54	GP51456-S1	1		
14:11	GP51456-D1	1		
14:29	JA31978-3	1		(sample used for QC only; not part of login JA30839)
14:46	ZZZZZZ	1		
15:04	ZZZZZZ	200		
15:21	ZZZZZZ	1		
15:38	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:13	GN32028-CCVA1	1		
16:31	ZZZZZZ	1		
16:48	ZZZZZZ	1		
17:05	GP51388-S1	150		
17:23	GP51388-D1	150		
17:40	JA31384-5	150		(sample used for QC only; not part of login JA30839)
17:58	ZZZZZZ	2		
18:15	ZZZZZZ	150		
18:32	ZZZZZZ	1		
18:50	ZZZZZZ	10		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110501.TXT Date Analyzed: 11/05/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32028
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:07	GN32028-CCV2	1		
19:25	ZZZZZZ	2		
19:42	ZZZZZZ	2		
20:00	JA30839-8	2		
20:17	GN32028-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30839
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110501.TXT Date Analyzed: 11/05/09 Methods: EPA 314, EPA 314 M
Run ID: GN32028 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32028-IPC1	Perchlorate	24.3	3.0	0.92	25	97.2	80-120
GN32028-ICV1	Perchlorate	26.9	3.0	0.92	25	107.6	90-110
GN32028-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32028-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32028-CCVA1	Perchlorate	52.6	3.0	0.92	50	105.2	
GN32028-CCV2	Perchlorate	27.0	3.0	0.92	25	108.0	85-115
GN32028-CCVA2	Perchlorate	56.5	3.0	0.92	50	113.0	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000 PO#16372

Accutest Job Number: JA30944

Sampling Date: 10/20/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **33**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA30944

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30944-1	10/20/09	15:35	CC	10/21/09	AQ	Ground Water	SC12S
JA30944-2	10/20/09	16:05	CC	10/21/09	AQ	Ground Water	SC12D
JA30944-3	10/20/09	16:45	CC	10/21/09	AQ	Ground Water	SC13S(R)
JA30944-4	10/20/09	17:35	CC	10/21/09	AQ	Ground Water	SC13D
JA30944-5	10/20/09	18:00	CC	10/21/09	AQ	Ground Water	SC15S
JA30944-6	10/20/09	18:25	CC	10/21/09	AQ	Ground Water	SC16S
JA30944-7	10/20/09	15:35	CC	10/21/09	AQ	Ground Water	SC28D
JA30944-8	10/20/09	16:50	CC	10/21/09	AQ	Ground Water	SC30D
JA30944-9	10/20/09	17:45	CC	10/21/09	AQ	Ground Water	SC10S
JA30944-10	10/20/09	18:10	CC	10/21/09	AQ	Ground Water	SC10D

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30944
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	11/14/2009 12:04:18 P

On 10/21/2009, 10 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30944 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 EPA 314

Matrix: AQ **Batch ID:** GP51310

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30998-6DUP, JA30998-6MS were used as the QC samples for Perchlorate.
- JA30944-10 for Perchlorate: Detection limit raised due to dilution required for possible matrix interference.
- JA30944-4 for Perchlorate: Detection limit raised due to dilution required for possible matrix interference.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31889

- Sample(s) JA30998-6DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC12S		
Lab Sample ID:	JA30944-1	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 19:59	MS	EPA 314
Specific Conductivity	1070	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC12D		
Lab Sample ID:	JA30944-2	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 20:17	MS	EPA 314
Specific Conductivity	33.5	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC13S(R)		
Lab Sample ID:	JA30944-3	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 20:34	MS	EPA 314
Specific Conductivity	673	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC13D		
Lab Sample ID:	JA30944-4	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate [a]	2.2 B	6.0	1.8	ug/l	2	11/05/09 19:25	MS	EPA 314
Specific Conductivity	59.8	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

(a) Detection limit raised due to dilution required for possible matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC15S		
Lab Sample ID:	JA30944-5	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 21:09	MS	EPA 314
Specific Conductivity	201	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC16S		
Lab Sample ID:	JA30944-6	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/28/09 21:26	MS	EPA 314
Specific Conductivity	244	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC28D		
Lab Sample ID:	JA30944-7	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	49.0	3.0	0.92	ug/l	1	10/28/09 21:44	MS	EPA 314
Specific Conductivity	1080	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC30D		
Lab Sample ID:	JA30944-8	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.6 B	3.0	0.92	ug/l	1	10/28/09 22:01	MS	EPA 314
Specific Conductivity	67.0	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC10S		
Lab Sample ID:	JA30944-9	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.7 B	3.0	0.92	ug/l	1	10/28/09 22:19	MS	EPA 314
Specific Conductivity	551	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC10D		
Lab Sample ID:	JA30944-10	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate [a]	19.5	6.0	1.8	ug/l	2	11/05/09 19:42	MS	EPA 314
Specific Conductivity	1230	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

(a) Detection limit raised due to dilution required for possible matrix interference.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30944

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City / State / Zip: Windsor, CT 06095
Project Contact / E-mail: Larry Buthen lbuthen@trcsolutions.com
Phone # / Fax #: (860) 298-6225 860 298-6399
Sampler(s) Name(s) / Phone #: C. Carlson J. Reynolds, K. Sheffield C. Lindahl

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd
City / State: Newfield NJ
Project #: 171 441.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Buthen

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet): Perchlorate

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	SC12S		10/20/09	1535	cc/OR	AQ	1					1				X	
-2	SC12D			1605	cc/OR	AQ	1					1				X	UTC3
-3	SC13S (R)			1645	cc/OR	AQ	1					1				X	
-4	SC13D			1735	cc/OR	AQ	1					1				X	
-5	SC15S			~~1730~~ 1800	cc/OR	AQ	1					1				X	
-6	SC16S			1825	cc/OR	AQ	1					1				X	
-7	SC28D			1535	~~cc/OR~~ KS	AQ	1					1				X	
-8	SC30D			1650	~~cc/OR~~ KS	AQ	1					1				X	
-9	SC10S			1745	~~cc/OR~~ KS	AQ	1					1				X	
-10	SC10D			1810	KS	AQ	1					1				X	
	~~SC22S~~		~~10/21/09~~	~~910~~	~~cc/OR~~	~~AQ~~	~~1~~					~~1~~				~~X~~	

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format
- [x] Other Hazsite Excel TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/21/09 1005	1 [signature]	2 [signature]	10-21-9 1300	2 [signature]
3		3	4		4
5		5			

Custody Seal # — [ ] Intact [ ] Not intact — Preserved where applicable [ ] — On Ice [x] — Cooler Temp. 2.2°C

JA30944: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30944 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/21/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA30944: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA30944

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30944-1	Collected: 20-OCT-09 15:35 By: CC		Received: 21-OCT-09 By: MPC			
SC12S						
JA30944-1	EPA 314	28-OCT-09 19:59	MS	28-OCT-09	MS	PERCHLT
JA30944-1	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-2	Collected: 20-OCT-09 16:05 By: CC		Received: 21-OCT-09 By: MPC			
SC12D						
JA30944-2	EPA 314	28-OCT-09 20:17	MS	28-OCT-09	MS	PERCHLT
JA30944-2	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-3	Collected: 20-OCT-09 16:45 By: CC		Received: 21-OCT-09 By: MPC			
SC13S(R)						
JA30944-3	EPA 314	28-OCT-09 20:34	MS	28-OCT-09	MS	PERCHLT
JA30944-3	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-4	Collected: 20-OCT-09 17:35 By: CC		Received: 21-OCT-09 By: MPC			
SC13D						
JA30944-4	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-4	EPA 314	05-NOV-09 19:25	MS	05-NOV-09	MS	PERCHLT
JA30944-5	Collected: 20-OCT-09 18:00 By: CC		Received: 21-OCT-09 By: MPC			
SC15S						
JA30944-5	EPA 314	28-OCT-09 21:09	MS	28-OCT-09	MS	PERCHLT
JA30944-5	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-6	Collected: 20-OCT-09 18:25 By: CC		Received: 21-OCT-09 By: MPC			
SC16S						
JA30944-6	EPA 314	28-OCT-09 21:26	MS	28-OCT-09	MS	PERCHLT
JA30944-6	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-7	Collected: 20-OCT-09 15:35 By: CC		Received: 21-OCT-09 By: MPC			
SC28D						
JA30944-7	EPA 314	28-OCT-09 21:44	MS	28-OCT-09	MS	PERCHLT

R2-0001619

Internal Sample Tracking Chronicle

TRC

Job No: JA30944

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30944-7	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-8	Collected: 20-OCT-09 16:50 By: CC		Received: 21-OCT-09 By: MPC			
SC30D						
JA30944-8	EPA 314	28-OCT-09 22:01	MS	28-OCT-09	MS	PERCHLT
JA30944-8	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-9	Collected: 20-OCT-09 17:45 By: CC		Received: 21-OCT-09 By: MPC			
SC10S						
JA30944-9	EPA 314	28-OCT-09 22:19	MS	28-OCT-09	MS	PERCHLT
JA30944-9	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-10	Collected: 20-OCT-09 18:10 By: CC		Received: 21-OCT-09 By: MPC			
SC10D						
JA30944-10	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30944-10	EPA 314	05-NOV-09 19:42	MS	05-NOV-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30944
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30944-1.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-1.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-1.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-1.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-1.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-1.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-1.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-1.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-2.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-2.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-2.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-2.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-2.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-2.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-2.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-2.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-3.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-3.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-3.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-3.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-3.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-3.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-3.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-3.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-4.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-4.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-4.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-4.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30944-4.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30944-4.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30944-4.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-4.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-4.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-4.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-4.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30944-4.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30944-4.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30944-4.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30944-4.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30944-4.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30944-4.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30944
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30944-4.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30944-4.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30944-4.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30944-4.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-5.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-5.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-5.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-5.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-5.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-5.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-5.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-5.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-6.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-6.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-6.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-6.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-6.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-6.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-6.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-6.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-7.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-7.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-7.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-7.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-7.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-7.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-7.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-7.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-8.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-8.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-8.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-8.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-8.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-8.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-8.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-8.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-9.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-9.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-9.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA30944
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30944-9.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-9.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-9.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-9.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-9.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30944-10.1	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30944-10.1	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30944-10.1	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30944-10.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30944-10.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30944-10.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30944-10.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30944-10.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30944-10.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30944-10.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30944-10.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30944-10.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30944-10.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30944-10.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30944-10.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30944-10.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30944-10.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30944-10.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30944-10.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30944-10.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30944-10.1	Dave Hunkele		12/08/09 10:57	Disposed

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: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51310/GN31654	3.0	0.0	ug/l	8	7.84	98.0	85-115%
Perchlorate	GP51310/GN31654			ug/l	25	23.8	95.2	85-115%
Perchlorate	GP51310/GN32028	3.0	0.0	ug/l	25	25.2	100.8	85-115%

Associated Samples:
Batch GP51310: JA30944-1, JA30944-10, JA30944-2, JA30944-3, JA30944-4, JA30944-5, JA30944-6, JA30944-7, JA30944-8, JA30944-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51310/GN31654	JA30998-6	ug/l	7.3	7.6	4.0	0-15%
Specific Conductivity	GN31889	JA30998-6	umhos/cm	651	682	4.7	0-10%

Associated Samples:
Batch GN31889: JA30944-1, JA30944-10, JA30944-2, JA30944-3, JA30944-4, JA30944-5, JA30944-6, JA30944-7, JA30944-8, JA30944-9
Batch GP51310: JA30944-1, JA30944-10, JA30944-2, JA30944-3, JA30944-4, JA30944-5, JA30944-6, JA30944-7, JA30944-8, JA30944-9
(*) Outside of QC limits

ACCUTEST. Laboratories
R2-0001626

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51310/GN31654	JA30998-6	ug/l	7.3	25	32.0	98.8	80-120%

Associated Samples:
Batch GP51310: JA30944-1, JA30944-10, JA30944-2, JA30944-3, JA30944-4, JA30944-5, JA30944-6, JA30944-7, JA30944-8, JA30944-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31654
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:51	GN31654-STD1	1		STDA
13:08	GN31654-STD2	1		STDB
13:26	GN31654-STD3	1		STDC
13:43	GN31654-STD4	1		STDD
14:01	GN31654-STD5	1		STDE
14:18	GN31654-STD6	1		STDF
09:33	GN31654-IPC1	1		SCON=4290
09:50	GN31654-ICV1	1		
10:08	GP51274-MB1	1		
10:25	GN31654-CRI1	1		
10:42	GP51274-B1	1		
11:00	GN31654-CCV1	1		
11:52	GP51310-ICV1	1		
12:09	GP51274-S1	6		
12:27	GP51274-D1	5		
12:44	JA31192-2	5		(sample used for QC only; not part of login JA30944)
13:02	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:54	ZZZZZZ	4		
14:11	ZZZZZZ	4		
14:29	ZZZZZZ	4		
14:46	GN31654-CCVA1	1		
15:04	GN31654-IPC2	1		
15:21	GP51310-MB1	1		
15:38	GN31654-CRI2	1		
15:56	GP51310-B1	1		
16:13	GN31654-CCV2	1		
16:31	GP51310-S1	1		
16:48	GP51310-D1	1		
17:05	JA30998-6	1		(sample used for QC only; not part of login JA30944)
17:23	ZZZZZZ	1		
17:40	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31654
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:58	ZZZZZZ	1		
18:15	ZZZZZZ	1		
18:32	ZZZZZZ	1		
18:50	ZZZZZZ	1		
19:07	ZZZZZZ	1		
19:25	GN31654-CCVA2	1		
19:42	ZZZZZZ	1		
19:59	JA30944-1	1		scon
20:17	JA30944-2	1		scon
20:34	JA30944-3	1		scon
20:52	JA30944-4	1		rerun for confirmation
21:09	JA30944-5	1		scon
21:26	JA30944-6	1		scon
21:44	JA30944-7	1		scon
22:01	JA30944-8	1		scon
22:19	JA30944-9	1		scon
22:36	GN31654-CCV3	1		
22:53	JA30944-10	1		end CCVA fails; rerun sample
23:11	GN31654-CCVA3	1		fails high

Refer to raw data for calibration curve and standards.

R2-0001629

Instrument QC Summary
Inorganics Analyses

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Run ID: GN31654 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31654-IPC1	Perchlorate	23.9	3.0	0.92	25	95.6	80-120
GN31654-ICV1	Perchlorate	26.3	3.0	0.92	25	105.2	90-110
GN31654-CRI1	Perchlorate	3.2	3.0	0.92	3	106.7	75-125
GN31654-CCV1	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN31654-CCVA1	Perchlorate	52.5	3.0	0.92	50	105.0	
GN31654-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN31654-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN31654-CCV2	Perchlorate	25.3	3.0	0.92	25	101.2	85-115
GN31654-CCVA2	Perchlorate	51.0	3.0	0.92	50	102.0	
GN31654-CCV3	Perchlorate	28.7	3.0	0.92	25	114.8	85-115
GN31654-CCVA3	Perchlorate	59.7	3.0	0.92	50	119.4!(a)	

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110501.TXT Date Analyzed: 11/05/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32028
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32028-STD1	1		STDA
10:23	GN32028-STD2	1		STDB
10:41	GN32028-STD3	1		STDC
11:34	GN32028-STD4	1		STDD
11:51	GN32028-STD5	1		STDE
12:09	GN32028-STD6	1		STDF
11:51	GN32028-IPC1	1		scon=4290
12:10	GN32028-ICV1	1		
12:27	GP51456-MB1	1		
12:27	GP51310-MB2	1		Sample shown for QC tracking purposes only.
12:44	GN32028-CRI1	1		
13:02	GP51456-B1	1		
13:02	GP51310-B2	1		Sample shown for QC tracking purposes only.
13:19	GN32028-CCV1	1		
13:37	GP51456-ICV1	1		
13:54	GP51456-S1	1		
14:11	GP51456-D1	1		
14:29	JA31978-3	1		(sample used for QC only; not part of login JA30944)
14:46	ZZZZZZ	1		
15:04	ZZZZZZ	200		
15:21	ZZZZZZ	1		
15:38	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:13	GN32028-CCVA1	1		
16:31	ZZZZZZ	1		
16:48	ZZZZZZ	1		
17:05	GP51388-S1	150		
17:23	GP51388-D1	150		
17:40	JA31384-5	150		(sample used for QC only; not part of login JA30944)
17:58	ZZZZZZ	2		
18:15	ZZZZZZ	150		
18:32	ZZZZZZ	1		
18:50	ZZZZZZ	10		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110501.TXT Date Analyzed: 11/05/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32028
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:07	GN32028-CCV2	1		
19:25	JA30944-4	2		
19:42	JA30944-10	2		
20:00	ZZZZZZ	2		
20:17	GN32028-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30944
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110501.TXT Date Analyzed: 11/05/09 Methods: EPA 314, EPA 314 M
Run ID: GN32028 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32028-IPC1	Perchlorate	24.3	3.0	0.92	25	97.2	80-120
GN32028-ICV1	Perchlorate	26.9	3.0	0.92	25	107.6	90-110
GN32028-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32028-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32028-CCVA1	Perchlorate	52.6	3.0	0.92	50	105.2	
GN32028-CCV2	Perchlorate	27.0	3.0	0.92	25	108.0	85-115
GN32028-CCVA2	Perchlorate	56.5	3.0	0.92	50	113.0	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000 PO#16372

Accutest Job Number: JA30998

Sampling Date: 10/21/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **75**

ACCREDITED IN ACCORDANCE WITH nelac

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

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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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Sample Summary

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30998-1	10/21/09	07:30	CC	10/21/09	AQ	Field Blank Water	FB102109
JA30998-2	10/21/09	09:10	CC	10/21/09	AQ	Ground Water	SC22S
JA30998-3	10/21/09	10:30	CC	10/21/09	AQ	Ground Water	MWH-4
JA30998-4	10/21/09	12:05	CC	10/21/09	AQ	Ground Water	IWC-2
JA30998-5	10/21/09	12:40	CC	10/21/09	AQ	Ground Water	IWC-4
JA30998-6	10/21/09	12:50	CC	10/21/09	AQ	Ground Water	IWC-1
JA30998-6D	10/21/09	12:50	CC	10/21/09	AQ	Water Dup/MSD	IWC-1
JA30998-6S	10/21/09	12:50	CC	10/21/09	AQ	Water Matrix Spike	IWC-1
JA30998-7	10/21/09	13:10	CC	10/21/09	AQ	Ground Water	IWC-3
JA30998-8	10/21/09	13:15	CC	10/21/09	AQ	Ground Water	IWC-5
JA30998-9	10/21/09	13:30	CC	10/21/09	AQ	Ground Water	IWC-6
JA30998-10	10/21/09	14:35	CC	10/21/09	AQ	Ground Water	SC-9S
JA30998-11	10/21/09	14:50	CC	10/21/09	AQ	Ground Water	SC33S

Sample Summary
(continued)

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA30998-12	10/21/09	14:40	CC	10/21/09	AQ	Ground Water	B
JA30998-12D	10/21/09	14:40	CC	10/21/09	AQ	Water Dup/MSD	B
JA30998-12S	10/21/09	14:40	CC	10/21/09	AQ	Water Matrix Spike	B
JA30998-13	10/21/09	08:40	CC	10/21/09	AQ	Ground Water	SC6S
JA30998-14	10/21/09	09:05	CC	10/21/09	AQ	Ground Water	RW6S
JA30998-15	10/21/09	09:10	CC	10/21/09	AQ	Ground Water	SC6D
JA30998-16	10/21/09	09:20	CC	10/21/09	AQ	Ground Water	RW6D
JA30998-17	10/21/09	09:45	CC	10/21/09	AQ	Ground Water	SC4S
JA30998-18	10/21/09	10:12	CC	10/21/09	AQ	Ground Water	SC18S
JA30998-19	10/21/09	10:55	CC	10/21/09	AQ	Ground Water	SC18D
JA30998-20	10/21/09	11:10	CC	10/21/09	AQ	Ground Water	SC1D
JA30998-21	10/21/09	11:35	CC	10/21/09	AQ	Ground Water	SC1S
JA30998-22	10/21/09	12:05	CC	10/21/09	AQ	Ground Water	SC3S

Sample Summary
(continued)

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA30998-22D	10/21/09	12:05	CC	10/21/09	AQ	Water Dup/MSD	SC3S
JA30998-22S	10/21/09	12:05	CC	10/21/09	AQ	Water Matrix Spike	SC3S
JA30998-23	10/21/09	12:20	CC	10/21/09	AQ	Ground Water	SC3D(R)
JA30998-24	10/21/09	13:00	CC	10/21/09	AQ	Ground Water	SC34D
JA30998-25	10/21/09	14:00	CC	10/21/09	AQ	Ground Water	RIW2
JA30998-26	10/21/09	14:10	CC	10/21/09	AQ	Ground Water	IW2

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA30998

Site: SMC Perchlorate On-Site Investigation, Newfield, NJ **Report Date** 11/14/2009 11:57:38 A

On 10/21/2009, 25 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.4 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30998 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 EPA 314

Matrix: AQ **Batch ID:** GP51310

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30998-6DUP, JA30998-6MS were used as the QC samples for Perchlorate.

Matrix: AQ **Batch ID:** GP51409

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30998-12MS, JA30998-12DUP were used as the QC samples for Perchlorate.
- RPD(s) for Duplicate for Perchlorate are outside control limits for sample GP51409-D1. RPD acceptable due to low duplicate and sample concentrations.
- JA30998-18 for Perchlorate: Background indicates possible interference, but reported results confirmed with 1:5 dilution.

Matrix: AQ **Batch ID:** GP51498

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30998-22DUP, JA30998-22MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31889

- Sample(s) JA30998-6DUP were used as the QC samples for Specific Conductivity.

Matrix: AQ **Batch ID:** GN31890

- Sample(s) JA30998-12DUP were used as the QC samples for Specific Conductivity.

Matrix: AQ **Batch ID:** GN31892

- Sample(s) JA30998-22DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB102109		
Lab Sample ID:	JA30998-1	**Date Sampled:**	10/21/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 11:50	BD	EPA 314
Specific Conductivity	2.6	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC22S		
Lab Sample ID:	JA30998-2	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 12:08	BD	EPA 314
Specific Conductivity	376	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MWH-4		
Lab Sample ID:	JA30998-3	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 12:25	BD	EPA 314
Specific Conductivity	307	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-2		
Lab Sample ID:	JA30998-4	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.7	3.0	0.92	ug/l	1	11/11/09 10:38	MS	EPA 314
Specific Conductivity	688	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-4		
Lab Sample ID:	JA30998-5	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.6	3.0	0.92	ug/l	1	11/10/09 13:00	BD	EPA 314
Specific Conductivity	251	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-1		
Lab Sample ID:	JA30998-6	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.3	3.0	0.92	ug/l	1	10/28/09 17:05	MS	EPA 314
Specific Conductivity	651	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-3		
Lab Sample ID:	JA30998-7	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.5 B	3.0	0.92	ug/l	1	11/10/09 13:17	BD	EPA 314
Specific Conductivity	224	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-5		
Lab Sample ID:	JA30998-8	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	11.7	3.0	0.92	ug/l	1	11/11/09 10:56	MS	EPA 314
Specific Conductivity	417	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-6		
Lab Sample ID:	JA30998-9	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.7	3.0	0.92	ug/l	1	11/11/09 11:13	MS	EPA 314
Specific Conductivity	444	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC-9S		
Lab Sample ID:	JA30998-10	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.2	3.0	0.92	ug/l	1	11/11/09 11:31	MS	EPA 314
Specific Conductivity	445	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC33S		
Lab Sample ID:	JA30998-11	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.0	3.0	0.92	ug/l	1	11/11/09 11:48	MS	EPA 314
Specific Conductivity	449	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	B		
Lab Sample ID:	JA30998-12	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.2 B	3.0	0.92	ug/l	1	11/10/09 10:58	BD	EPA 314
Specific Conductivity	741	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC6S		
Lab Sample ID:	JA30998-13	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.4	3.0	0.92	ug/l	1	11/11/09 12:05	MS	EPA 314
Specific Conductivity	588	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	RW6S		
Lab Sample ID:	JA30998-14	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	12.9	3.0	0.92	ug/l	1	11/11/09 12:23	MS	EPA 314
Specific Conductivity	730	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC6D		
Lab Sample ID:	JA30998-15	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.8	3.0	0.92	ug/l	1	11/11/09 12:40	MS	EPA 314
Specific Conductivity	1070	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	RW6D		
Lab Sample ID:	JA30998-16	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	14.3	3.0	0.92	ug/l	1	11/11/09 15:48	MS	EPA 314
Specific Conductivity	937	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC4S		
Lab Sample ID:	JA30998-17	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/11/09 13:32	MS	EPA 314
Specific Conductivity	200	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC18S		
Lab Sample ID:	JA30998-18	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate [a]	0.92 U	3.0	0.92	ug/l	1	11/11/09 13:50	MS	EPA 314
Specific Conductivity	444	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

(a) Background indicates possible interference, but reported results confirmed with 1:5 dilution.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC18D		
Lab Sample ID:	JA30998-19	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.8	3.0	0.92	ug/l	1	11/09/09 20:00	MS	EPA 314
Specific Conductivity	183	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC1D		
Lab Sample ID:	JA30998-20	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	46.3	3.0	0.92	ug/l	1	11/09/09 20:18	MS	EPA 314
Specific Conductivity	356	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC1S		
Lab Sample ID:	JA30998-21	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 B	3.0	0.92	ug/l	1	11/09/09 20:35	MS	EPA 314
Specific Conductivity	235	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC3S		
Lab Sample ID:	JA30998-22	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 B	3.0	0.92	ug/l	1	11/09/09 19:43	MS	EPA 314
Specific Conductivity	263	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC3D(R)		
Lab Sample ID:	JA30998-23	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	141	24	7.4	ug/l	8	11/11/09 15:31	MS	EPA 314
Specific Conductivity	638	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC34D		
Lab Sample ID:	JA30998-24	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	136	24	7.4	ug/l	8	11/11/09 14:39	MS	EPA 314
Specific Conductivity	631	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	RIW2		
Lab Sample ID:	JA30998-25	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.1	3.0	0.92	ug/l	1	11/11/09 14:56	MS	EPA 314
Specific Conductivity	380	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IW2		
Lab Sample ID:	JA30998-26	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.7	3.0	0.92	ug/l	1	11/09/09 21:45	MS	EPA 314
Specific Conductivity	300	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
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www.accutest.com

FED-EX Tracking # 1378374 0
Bottle Order Control #
Accutest Quote #
Accutest Job # JA30998

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: (860) 295-6225 Fax #: (860) 298-6399
Sampler(s) Name(s): C. Carlson + J. Reynolds Phone #: (860) 989-5416

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Butlien

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate		LAB USE ONLY
-1	FB102109		10/21/09	0730	SR/CC	AQ	1					1				X		UTCI
-2	SC22S			0910	CC/JR	AQ	1					1				X		
-3	MWH-4			1030	CC/JR	AQ	1					1				X		
-4	IWC-2			1205	CC/JR	AQ	1					1				X		
-5	IWC-4			1240	CC/JR	AQ	1					1				X		
-6	IWC-1			1250	CC/JR	AQ	3					3				X	MS/MSD volume included	
-7	IWC-3			1310	CC/JR	AQ	1					1				X		
-8	IWC-5			1315	CC/JR	AQ	1					1				X	Not filtered due to colloidal fouling of filters.	*
-9	IWC-6			1330	CC/JR	AQ	1					1				X		*
-10	SC-9S			1435	CC/JR	AQ	1					1				X		
-11	SC 33S			1450	CC/JR	AQ	1					1				X		
-12	B			1440	CC/JR	AQ	3					3				X	MS/MSD volume included	

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULL T1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other HAZSITE EXCEL TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

IWC-5 and IW-6 not filtered. • All DAB's 2L 10-21-09

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/21/09 1526	1 [signature]	2 [signature]	10-21-09 1658	2 [signature]
3		3	4		4
5		5	Custody Seal # 848	☑ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☐ Cooler Temp. 3.4, [illegible]

1A

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JA30998: Chain of Custody
Page 1 of 4

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CHAIN OF CUSTODY

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PAGE 2 OF 2

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30998

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #: 860-298-6399
Sampler(s) Name(s): K. Sheffield + C. Lindahl Phone #:

Project Information

Project Name: SMC Perchlorate
Street: 35 SW Blvd
City: New field State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Butlien

Billing Information (If different from Report to)

Company Name: Same
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-13	SC6S		10/21/09	0840	KS/CC	GW	1					1				X	
-14	RW6S			0905			1					1				X	
-15	SC6D			0910			1					1				X	
-16	RW6D			0920			1					1				X	
-17	SC4S			0945			1					1				X	
-18	SC18S			1012			1					1				X	
-19	SC18D			1055			1					1				X	
-20	SC1D			1110			1					1				X	
-21	SC1S			1135			1					1				X	
-22	SC3S*			1205			1					1				X	ms/msd
-23	SC3D(R)			1220			1					1				X	
-24	SC34D			1300			1					1				X	

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format ~~EDD~~ hazard excel
- [x] Other TRCCT LO2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/21/09 1524	1 [signature]	2 [signature]	10-21-09 1658	2 [signature]
3		3	4		4
5		5	Custody Seal # 848 342(a)	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp. 3.4 °C

JA30998: Chain of Custody
Page 2 of 4

ACCUTEST Laboratories

CHAIN OF CUSTODY

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www.accutest.com

PAGE 2 OF 2

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30998

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Road North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buthen E-mail: lbuthen@trcsolutions
Phone #: 860-298-6275 Fax #: 860-298-6399
Sampler(s) Name(s): K. Sheffield / C. Lindquist Phone #:

Project Information

Project Name: SMC
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.0000-0006
Client Purchase Order #: 16372
Project Manager: Larry Buthen

Billing Information (If different from Report to)

Company Name: Same
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-25	RIW2		10/21/09	1400	KS/CC	GW	1					1				X	
-26	IW 2 (*)		10-21-09	1410			1										

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format hazsite001
- [x] Other TRC CTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

(*) Added to COC
RL 10-21-09

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/21/09 1524	1 [signature]	2 [signature]	10-21-09 1658	2 [signature]
3		3	4		4
5		5	Custody Seal # 848 (4) 342	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☐ Cooler Temp. 3.1°C

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JA30998: Chain of Custody
Page 3 of 4

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30998 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/21/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

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4

JA30998: Chain of Custody
Page 4 of 4

Internal Sample Tracking Chronicle

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30998-1	Collected: 21-OCT-09 07:30 By: CC		Received: 21-OCT-09		By: MP	
FB102109						
JA30998-1	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-1	EPA 314	10-NOV-09 11:50	BD	10-NOV-09	MS	PERCHLT
JA30998-2	Collected: 21-OCT-09 09:10 By: CC		Received: 21-OCT-09		By: MP	
SC22S						
JA30998-2	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-2	EPA 314	10-NOV-09 12:08	BD	10-NOV-09	MS	PERCHLT
JA30998-3	Collected: 21-OCT-09 10:30 By: CC		Received: 21-OCT-09		By: MP	
MWH-4						
JA30998-3	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-3	EPA 314	10-NOV-09 12:25	BD	10-NOV-09	MS	PERCHLT
JA30998-4	Collected: 21-OCT-09 12:05 By: CC		Received: 21-OCT-09		By: MP	
IWC-2						
JA30998-4	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-4	EPA 314	11-NOV-09 10:38	MS	11-NOV-09	MS	PERCHLT
JA30998-5	Collected: 21-OCT-09 12:40 By: CC		Received: 21-OCT-09		By: MP	
IWC-4						
JA30998-5	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-5	EPA 314	10-NOV-09 13:00	BD	10-NOV-09	MS	PERCHLT
JA30998-6	Collected: 21-OCT-09 12:50 By: CC		Received: 21-OCT-09		By: MP	
IWC-1						
JA30998-6	EPA 314	28-OCT-09 17:05	MS	28-OCT-09	MS	PERCHLT
JA30998-6	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-7	Collected: 21-OCT-09 13:10 By: CC		Received: 21-OCT-09		By: MP	
IWC-3						
JA30998-7	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON

R2-0001673

Internal Sample Tracking Chronicle

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30998-7	EPA 314	10-NOV-09 13:17	BD	10-NOV-09	MS	PERCHLT
JA30998-8	Collected: 21-OCT-09 13:15 By: CC		Received: 21-OCT-09 By: MP			
IWC-5						
JA30998-8	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-8	EPA 314	11-NOV-09 10:56	MS	11-NOV-09	MS	PERCHLT
JA30998-9	Collected: 21-OCT-09 13:30 By: CC		Received: 21-OCT-09 By: MP			
IWC-6						
JA30998-9	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-9	EPA 314	11-NOV-09 11:13	MS	11-NOV-09	MS	PERCHLT
JA30998-10	Collected: 21-OCT-09 14:35 By: CC		Received: 21-OCT-09 By: MP			
SC-9S						
JA30998-10	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-10	EPA 314	11-NOV-09 11:31	MS	11-NOV-09	MS	PERCHLT
JA30998-11	Collected: 21-OCT-09 14:50 By: CC		Received: 21-OCT-09 By: MP			
SC33S						
JA30998-11	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-11	EPA 314	11-NOV-09 11:48	MS	11-NOV-09	MS	PERCHLT
JA30998-12	Collected: 21-OCT-09 14:40 By: CC		Received: 21-OCT-09 By: MP			
B						
JA30998-12	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-12	EPA 314	10-NOV-09 10:58	BD	10-NOV-09	MS	PERCHLT
JA30998-13	Collected: 21-OCT-09 08:40 By: CC		Received: 21-OCT-09 By: MP			
SC6S						
JA30998-13	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-13	EPA 314	11-NOV-09 12:05	MS	11-NOV-09	MS	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30998-14	Collected: 21-OCT-09 09:05 By: CC		Received: 21-OCT-09 By: MP			
RW6S						
JA30998-14	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-14	EPA 314	11-NOV-09 12:23	MS	11-NOV-09	MS	PERCHLT
JA30998-15	Collected: 21-OCT-09 09:10 By: CC		Received: 21-OCT-09 By: MP			
SC6D						
JA30998-15	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-15	EPA 314	11-NOV-09 12:40	MS	11-NOV-09	MS	PERCHLT
JA30998-16	Collected: 21-OCT-09 09:20 By: CC		Received: 21-OCT-09 By: MP			
RW6D						
JA30998-16	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-16	EPA 314	11-NOV-09 15:48	MS	11-NOV-09	MS	PERCHLT
JA30998-17	Collected: 21-OCT-09 09:45 By: CC		Received: 21-OCT-09 By: MP			
SC4S						
JA30998-17	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-17	EPA 314	11-NOV-09 13:32	MS	11-NOV-09	MS	PERCHLT
JA30998-18	Collected: 21-OCT-09 10:12 By: CC		Received: 21-OCT-09 By: MP			
SC18S						
JA30998-18	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-18	EPA 314	11-NOV-09 13:50	MS	11-NOV-09	MS	PERCHLT
JA30998-19	Collected: 21-OCT-09 10:55 By: CC		Received: 21-OCT-09 By: MP			
SC18D						
JA30998-19	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-19	EPA 314	09-NOV-09 20:00	MS	09-NOV-09	MS	PERCHLT
JA30998-20	Collected: 21-OCT-09 11:10 By: CC		Received: 21-OCT-09 By: MP			
SC1D						

Internal Sample Tracking Chronicle

TRC

Job No: JA30998

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30998-20	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-20	EPA 314	09-NOV-09 20:18	MS	09-NOV-09	MS	PERCHLT
JA30998-21	Collected: 21-OCT-09 11:35 By: CC		Received: 21-OCT-09 By: MP			
SC1S						
JA30998-21	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-21	EPA 314	09-NOV-09 20:35	MS	09-NOV-09	MS	PERCHLT
JA30998-22	Collected: 21-OCT-09 12:05 By: CC		Received: 21-OCT-09 By: MP			
SC3S						
JA30998-22	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-22	EPA 314	09-NOV-09 19:43	MS	09-NOV-09	MS	PERCHLT
JA30998-23	Collected: 21-OCT-09 12:20 By: CC		Received: 21-OCT-09 By: MP			
SC3D(R)						
JA30998-23	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-23	EPA 314	11-NOV-09 15:31	MS	11-NOV-09	MS	PERCHLT
JA30998-24	Collected: 21-OCT-09 13:00 By: CC		Received: 21-OCT-09 By: MP			
SC34D						
JA30998-24	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-24	EPA 314	11-NOV-09 14:39	MS	11-NOV-09	MS	PERCHLT
JA30998-25	Collected: 21-OCT-09 14:00 By: CC		Received: 21-OCT-09 By: MP			
RIW2						
JA30998-25	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-25	EPA 314	11-NOV-09 14:56	MS	11-NOV-09	MS	PERCHLT
JA30998-26	Collected: 21-OCT-09 14:10 By: CC		Received: 21-OCT-09 By: MP			
IW2						
JA30998-26	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA30998-26	EPA 314	09-NOV-09 21:45	MS	09-NOV-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-1.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-1.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-1.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-1.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-1.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-1.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-1.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-1.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-1.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-1.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-1.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-1.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-1.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-1.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-1.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-1.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-1.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-1.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-1.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-1.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-1.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-1.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-1.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-1.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-2.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-2.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-2.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-2.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-2.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-2.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-2.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-2.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-2.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-2.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-2.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-2.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-2.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-2.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-2.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-2.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-2.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-2.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-2.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-2.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-2.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-2.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-2.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-2.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-3.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-3.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-3.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-3.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-3.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-3.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-3.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-3.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-3.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-3.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-3.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-3.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-3.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-3.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-3.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-3.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-3.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-3.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-3.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-3.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-3.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-3.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-3.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-3.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-4.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-4.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-4.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-4.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-4.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-4.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-4.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-4.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-4.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-4.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-4.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-4.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-4.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-4.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-4.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-4.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-4.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-4.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-4.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-4.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-4.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-4.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-4.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-4.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-5.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-5.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-5.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-5.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-5.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-5.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-5.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-5.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-5.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-5.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-5.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-5.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-5.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-5.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-5.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-5.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-5.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-5.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-5.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-5.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-5.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-5.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-5.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-5.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-6.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-6.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-6.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-6.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-6.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-6.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-6.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-6.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-6.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-6.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-6.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-6.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-6.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-6.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-6.2	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-6.2	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-6.2	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-6.2	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-6.2	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-6.2	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-6.2	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-6.2	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-6.2	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-6.2	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-6.2	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-6.2	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-6.2	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-6.2	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-6.3	Secured Storage	Todd Shoemaker	10/27/09 08:51	Retrieve from Storage
JA30998-6.3	Todd Shoemaker	Melissa Smith	10/27/09 08:52	Custody Transfer
JA30998-6.3	Melissa Smith	Secured Storage	10/27/09 16:46	Return to Storage
JA30998-6.3	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-6.3	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-6.3	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-6.3	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-6.3	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-6.3	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-6.3	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-6.3	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-6.3	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-6.3	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-6.3	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-6.3	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-6.3	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-6.3	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-7.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-7.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-7.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-7.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-7.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-7.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-7.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-7.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-7.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-7.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-7.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-7.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-7.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-7.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-7.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-7.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-7.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-7.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-7.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-7.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-7.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-7.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-7.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-7.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-8.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-8.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-8.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-8.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-8.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-8.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-8.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-8.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-8.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-8.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-8.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-8.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-8.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-8.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-8.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-8.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-8.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-8.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-8.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-8.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-8.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-8.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-8.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-8.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-9.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-9.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-9.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-9.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-9.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-9.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-9.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-9.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-9.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-9.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-9.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-9.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-9.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-9.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-9.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-9.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-9.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-9.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-9.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-9.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-9.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-9.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-9.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-9.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-10.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-10.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-10.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-10.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-10.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-10.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-10.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-10.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-10.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-10.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-10.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-10.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-10.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-10.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-10.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-10.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-10.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-10.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-10.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-10.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-10.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-10.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-10.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-10.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-11.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-11.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-11.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-11.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-11.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-11.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-11.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-11.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-11.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-11.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-11.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-11.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-11.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-11.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-11.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-11.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-11.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-11.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-11.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-11.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-11.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-11.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-11.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-11.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-12.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-12.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-12.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-12.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-12.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-12.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-12.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-12.1	Secured Storage	Rie Iwasaki	11/03/09 14:37	Retrieve from Storage
JA30998-12.1	Rie Iwasaki		11/03/09 14:37	Depleted

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-12.2	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-12.2	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-12.2	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-12.2	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-12.2	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-12.2	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-12.2	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-12.2	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-12.2	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-12.2	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-12.2	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-12.2	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-12.2	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-12.2	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-12.2	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-12.2	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-12.2	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-12.2	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-12.2	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-12.2	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-12.2	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-12.2	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-12.2	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-12.2	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-12.3	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-12.3	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-12.3	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-12.3	Secured Storage	Adam Scott	11/02/09 12:39	Retrieve from Storage
JA30998-12.3	Adam Scott	Melissa Smith	11/02/09 12:40	Custody Transfer
JA30998-12.3	Melissa Smith	Secured Storage	11/02/09 16:41	Return to Storage
JA30998-12.3	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-12.3	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-12.3	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-12.3	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-12.3	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-12.3	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-12.3	Barbara Dula		11/10/09 09:30	Depleted
JA30998-13.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-13.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-13.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-13.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-13.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-13.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-13.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-13.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-13.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-13.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-13.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-13.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-13.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-13.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-13.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-13.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-13.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-13.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-13.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-13.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-13.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-13.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-13.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-13.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-14.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-14.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-14.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-14.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-14.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-14.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-14.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-14.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-14.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-14.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-14.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-14.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-14.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-14.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-14.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-14.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-14.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-14.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-14.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-14.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-14.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-14.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-14.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-14.1	Dave Hunkele		12/08/09 10:57	Disposed

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-15.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-15.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-15.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-15.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-15.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-15.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-15.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-15.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-15.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-15.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-15.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-15.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-15.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-15.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-15.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-15.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-15.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-15.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-15.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-15.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-15.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-15.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-15.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-15.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-16.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-16.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-16.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-16.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-16.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-16.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-16.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-16.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-16.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-16.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-16.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-16.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-16.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-16.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-16.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-16.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-16.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-16.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-16.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-16.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-16.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-16.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-16.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-16.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-17.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-17.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-17.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-17.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-17.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-17.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-17.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-17.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-17.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-17.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-17.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-17.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage
JA30998-17.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-17.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-17.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-17.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-17.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-17.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-17.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-17.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-17.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-17.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-17.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-17.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-18.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-18.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-18.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-18.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-18.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-18.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-18.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-18.1	Secured Storage	Melissa Smith	11/03/09 14:49	Retrieve from Storage
JA30998-18.1	Melissa Smith	Secured Storage	11/03/09 15:45	Return to Storage
JA30998-18.1	Secured Storage	Adam Scott	11/04/09 09:41	Retrieve from Storage
JA30998-18.1	Adam Scott	Melissa Smith	11/04/09 09:42	Custody Transfer
JA30998-18.1	Melissa Smith	Secured Storage	11/04/09 16:06	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-18.1	Secured Storage	Todd Shoemaker	11/05/09 08:02	Retrieve from Storage
JA30998-18.1	Todd Shoemaker	Melissa Smith	11/05/09 08:03	Custody Transfer
JA30998-18.1	Melissa Smith	Secured Storage	11/05/09 16:26	Return to Storage
JA30998-18.1	Secured Storage	Melissa Smith	11/06/09 12:07	Retrieve from Storage
JA30998-18.1	Melissa Smith	Secured Storage	11/06/09 16:48	Return to Storage
JA30998-18.1	Secured Storage	Todd Shoemaker	11/10/09 08:29	Retrieve from Storage
JA30998-18.1	Todd Shoemaker	Barbara Dula	11/10/09 08:30	Custody Transfer
JA30998-18.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-18.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-18.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-18.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-18.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-19.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-19.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-19.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-19.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-19.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-19.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-19.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-19.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-19.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-19.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-19.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-19.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-19.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-19.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-19.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-19.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-19.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-20.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-20.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-20.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-20.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-20.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-20.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-20.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-20.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-20.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-20.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-20.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-20.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-20.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-20.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-20.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-20.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-20.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-21.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-21.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-21.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-21.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-21.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-21.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-21.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-21.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-21.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-21.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-21.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-21.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-21.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-21.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-21.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-21.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-21.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-22.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-22.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-22.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-22.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-22.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-22.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-22.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-22.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-22.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-22.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-22.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-22.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-22.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-22.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-22.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-22.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-22.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-22.2	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-22.2	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-22.2	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-22.2	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-22.2	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-22.2	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-22.2	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-22.2	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-22.2	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-22.2	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-22.2	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-22.2	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-22.2	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-22.2	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-22.2	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-22.2	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-22.2	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-22.3	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-22.3	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-22.3	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-22.3	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-22.3	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-22.3	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-22.3	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-22.3	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-22.3	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-22.3	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-22.3	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-22.3	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-22.3	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-22.3	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-22.3	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-22.3	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-22.3	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-23.1	Secured Storage	Adam Scott	11/03/09 10:20	Retrieve from Storage
JA30998-23.1	Adam Scott	Rie Iwasaki	11/03/09 10:23	Custody Transfer
JA30998-23.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-23.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-23.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-23.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-23.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-23.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-23.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-23.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-23.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-23.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-23.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-24.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-24.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-24.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-24.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-24.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-24.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-24.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-24.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-24.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-24.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-24.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-24.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-24.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-24.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-24.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-24.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-24.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-25.1	Secured Storage	Todd Shoemaker	10/29/09 09:26	Retrieve from Storage
JA30998-25.1	Todd Shoemaker	Melissa Smith	10/29/09 09:28	Custody Transfer
JA30998-25.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-25.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-25.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer
JA30998-25.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-25.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-25.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-25.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-25.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-25.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-25.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-25.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-25.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-25.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-25.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-25.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30998-26.1	Secured Storage	Adam Scott	10/29/09 10:53	Retrieve from Storage
JA30998-26.1	Adam Scott	Melissa Smith	10/29/09 10:54	Custody Transfer
JA30998-26.1	Melissa Smith	Secured Storage	10/29/09 15:43	Return to Storage
JA30998-26.1	Secured Storage	Todd Shoemaker	11/03/09 08:46	Retrieve from Storage
JA30998-26.1	Todd Shoemaker	Sarvadaman Tripathi	11/03/09 08:51	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA30998
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30998-26.1	Sarvadaman Tripathi	Rie Iwasaki	11/03/09 09:29	Custody Transfer
JA30998-26.1	Rie Iwasaki	Secured Storage	11/03/09 14:35	Return to Storage
JA30998-26.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA30998-26.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA30998-26.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA30998-26.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA30998-26.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA30998-26.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA30998-26.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA30998-26.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA30998-26.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA30998-26.1	Dave Hunkele		12/08/09 10:57	Disposed

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: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51310/GN31654	3.0	0.0	ug/l	8	7.84	98.0	85-115%
Perchlorate	GP51310/GN31654			ug/l	25	23.8	95.2	85-115%
Perchlorate	GP51409/GN32151	3.0	0.0	ug/l	25	24.9	99.6	85-115%
Perchlorate	GP51409/GN32151			ug/l	8	7.73	96.6	85-115%
Perchlorate	GP51409/GN32209	3.0	0.0	ug/l	25	24.8	99.2	85-115%
Perchlorate	GP51409/GN32209			ug/l	8	8.16	102.0	85-115%
Perchlorate	GP51498/GN32125	3.0	0.0	ug/l	25	24.8	99.2	85-115%
Perchlorate	GP51498/GN32209	3.0	0.0	ug/l	25	24.8	99.2	85-115%

Associated Samples:
Batch GP51310: JA30998-6
Batch GP51409: JA30998-1, JA30998-10, JA30998-11, JA30998-12, JA30998-13, JA30998-14, JA30998-15, JA30998-16, JA30998-17, JA30998-18, JA30998-2, JA30998-3, JA30998-4, JA30998-5, JA30998-7, JA30998-8, JA30998-9
Batch GP51498: JA30998-19, JA30998-20, JA30998-21, JA30998-22, JA30998-23, JA30998-24, JA30998-25, JA30998-26
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51310/GN31654	JA30998-6	ug/l	7.3	7.6	4.0	0-15%
Perchlorate	GP51409/GN32151	JA30998-12	ug/l	1.2 B	1.1	200.0(a)	0-15%
Perchlorate	GP51498/GN32125	JA30998-22	ug/l	1.8 B	1.6	11.8	0-15%
Specific Conductivity	GN31889	JA30998-6	umhos/cm	651	682	4.7	0-10%
Specific Conductivity	GN31890	JA30998-12	umhos/cm	741	745	0.5	0-10%
Specific Conductivity	GN31892	JA30998-22	umhos/cm	263	259	1.5	0-10%

Associated Samples:
Batch GN31889: JA30998-6
Batch GN31890: JA30998-1, JA30998-10, JA30998-11, JA30998-12, JA30998-13, JA30998-14, JA30998-15, JA30998-16, JA30998-17, JA30998-18, JA30998-19, JA30998-2, JA30998-20, JA30998-3, JA30998-4, JA30998-5, JA30998-7, JA30998-8, JA30998-9
Batch GN31892: JA30998-21, JA30998-22, JA30998-23, JA30998-24, JA30998-25, JA30998-26
Batch GP51310: JA30998-6
Batch GP51409: JA30998-1, JA30998-10, JA30998-11, JA30998-12, JA30998-13, JA30998-14, JA30998-15, JA30998-16, JA30998-17, JA30998-18, JA30998-2, JA30998-3, JA30998-4, JA30998-5, JA30998-7, JA30998-8, JA30998-9
Batch GP51498: JA30998-19, JA30998-20, JA30998-21, JA30998-22, JA30998-23, JA30998-24, JA30998-25, JA30998-26
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51310/GN31654	JA30998-6	ug/l	7.3	25	32.0	98.8	80-120%
Perchlorate	GP51409/GN32151	JA30998-12	ug/l	1.2 B	25	23.1	92.4	80-120%
Perchlorate	GP51498/GN32125	JA30998-22	ug/l	1.8 B	25	26.7	99.6	80-120%

Associated Samples:
Batch GP51310: JA30998-6
Batch GP51409: JA30998-1, JA30998-10, JA30998-11, JA30998-12, JA30998-13, JA30998-14, JA30998-15, JA30998-16, JA30998-17, JA30998-18, JA30998-2, JA30998-3, JA30998-4, JA30998-5, JA30998-7, JA30998-8, JA30998-9
Batch GP51498: JA30998-19, JA30998-20, JA30998-21, JA30998-22, JA30998-23, JA30998-24, JA30998-25, JA30998-26
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31654
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:51	GN31654-STD1	1		STDA
13:08	GN31654-STD2	1		STDB
13:26	GN31654-STD3	1		STDC
13:43	GN31654-STD4	1		STDD
14:01	GN31654-STD5	1		STDE
14:18	GN31654-STD6	1		STDF
09:33	GN31654-IPC1	1		SCON=4290
09:50	GN31654-ICV1	1		
10:08	GP51274-MB1	1		
10:25	GN31654-CRI1	1		
10:42	GP51274-B1	1		
11:00	GN31654-CCV1	1		
11:52	GP51310-ICV1	1		
12:09	GP51274-S1	6		
12:27	GP51274-D1	5		
12:44	JA31192-2	5		(sample used for QC only; not part of login JA30998)
13:02	ZZZZZZ	1		
13:19	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:54	ZZZZZZ	4		
14:11	ZZZZZZ	4		
14:29	ZZZZZZ	4		
14:46	GN31654-CCVA1	1		
15:04	GN31654-IPC2	1		
15:21	GP51310-MB1	1		
15:38	GN31654-CRI2	1		
15:56	GP51310-B1	1		
16:13	GN31654-CCV2	1		
16:31	GP51310-S1	1		
16:48	GP51310-D1	1		
17:05	JA30998-6	1		scon
17:23	ZZZZZZ	1		
17:40	ZZZZZZ	1		

R2-0001697

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31654
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:58	ZZZZZZ	1		
18:15	ZZZZZZ	1		
18:32	ZZZZZZ	1		
18:50	ZZZZZZ	1		
19:07	ZZZZZZ	1		
19:25	GN31654-CCVA2	1		
19:42	ZZZZZZ	1		
19:59	ZZZZZZ	1		
20:17	ZZZZZZ	1		
20:34	ZZZZZZ	1		
20:52	ZZZZZZ	1		
21:09	ZZZZZZ	1		
21:26	ZZZZZZ	1		
21:44	ZZZZZZ	1		
22:01	ZZZZZZ	1		
22:19	ZZZZZZ	1		
22:36	GN31654-CCV3	1		
22:53	ZZZZZZ	1		
23:11	GN31654-CCVA3	1		fails high

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409102801.TXT Date Analyzed: 10/28/09 Methods: EPA 314, EPA 314 M
Run ID: GN31654 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31654-IPC1	Perchlorate	23.9	3.0	0.92	25	95.6	80-120
GN31654-ICV1	Perchlorate	26.3	3.0	0.92	25	105.2	90-110
GN31654-CRI1	Perchlorate	3.2	3.0	0.92	3	106.7	75-125
GN31654-CCV1	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN31654-CCVA1	Perchlorate	52.5	3.0	0.92	50	105.0	
GN31654-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN31654-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN31654-CCV2	Perchlorate	25.3	3.0	0.92	25	101.2	85-115
GN31654-CCVA2	Perchlorate	51.0	3.0	0.92	50	102.0	
GN31654-CCV3	Perchlorate	28.7	3.0	0.92	25	114.8	85-115
GN31654-CCVA3	Perchlorate	59.7	3.0	0.92	50	119.4!(a)	

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110901.TXT Date Analyzed: 11/09/09 Methods: EPA 314
Analyst: MS Run ID: GN32125
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32125-STD1	1		STDA
10:23	GN32125-STD2	1		STDB
10:41	GN32125-STD3	1		STDC
11:34	GN32125-STD4	1		STDD
11:51	GN32125-STD5	1		STDE
12:09	GN32125-STD6	1		STDF
10:26	GN32125-IPC1	1		SCON=4292
10:43	GN32125-ICV1	1		
11:01	GP51497-MB1	1		
11:18	GN32125-CRI1	1		
11:36	GP51497-B1	1		
11:53	GN32125-CCV1	1		
12:10	GP51497-ICV1	1		
12:28	ZZZZZZ	1		
12:45	GP51497-S1	1		Rerun for confirmation
13:03	GP51497-D1	1		
13:20	JA31977-6	1		(sample used for QC only; not part of login JA30998)
13:38	ZZZZZZ	1		
13:55	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:30	ZZZZZZ	1		
14:47	ZZZZZZ	1		
15:05	GN32125-CCVA1	1		
15:22	ZZZZZZ	1		
15:39	ZZZZZZ	1		
15:57	ZZZZZZ	1		
16:14	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:49	ZZZZZZ	1		
17:06	GP51497-S1	1		
17:24	GN32125-CCV2	1		
17:41	GN32125-IPC2	1		SCON=4292
17:59	GP51498-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110901.TXT Date Analyzed: 11/09/09 Methods: EPA 314
Analyst: MS Run ID: GN32125
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:16	GN32125-CRI2	1		
18:33	GP51498-B1	1		
18:51	GN32125-CCVA2	1		
19:08	GP51498-S1	1		
19:26	GP51498-D1	1		
19:43	JA30998-22	1		
20:00	JA30998-19	1		
20:18	JA30998-20	1		
20:35	JA30998-21	1		
20:53	JA30998-23	1		Overrange rerun 1:8
21:10	JA30998-24	1		Overrange rerun 1:8
21:27	JA30998-25	1		Rerun for confirmation due to tailing
21:45	JA30998-26	1		
22:02	GN32125-CCV3	1		
22:20	GP51498-S2	1		
22:37	GP51498-D2	1		
22:54	JA31107-3	1		(sample used for QC only; not part of login JA30998)
23:12	ZZZZZZ	1		
23:29	ZZZZZZ	1		
23:47	ZZZZZZ	1		
00:04	ZZZZZZ	1		
00:21	ZZZZZZ	1		
00:39	ZZZZZZ	1		
00:56	ZZZZZZ	1		
01:14	GN32125-CCVA3	1		
01:31	ZZZZZZ	1		
01:48	ZZZZZZ	1		
02:06	GN32125-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110901.TXT Date Analyzed: 11/09/09 Methods: EPA 314
Run ID: GN32125 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32125-IPC1	Perchlorate	23.0	3.0	0.92	25	92.0	80-120
GN32125-ICV1	Perchlorate	25.5	3.0	0.92	25	102.0	90-110
GN32125-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32125-CCV1	Perchlorate	24.4	3.0	0.92	25	97.5	85-115
GN32125-CCVA1	Perchlorate	55.6	3.0	0.92	50	111.0	
GN32125-CCV2	Perchlorate	24.4	3.0	0.92	25	97.7	85-115
GN32125-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN32125-CRI2	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN32125-CCVA2	Perchlorate	51.9	3.0	0.92	50	104.0	
GN32125-CCV3	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32125-CCVA3	Perchlorate	53.7	3.0	0.92	50	107.0	
GN32125-CCV4	Perchlorate	25.4	3.0	0.92	25	102.0	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111001.TXT Date Analyzed: 11/10/09 Methods: EPA 314
Analyst: BD Run ID: GN32151
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32151-STD1	1		STDA
10:23	GN32151-STD2	1		STDB
10:41	GN32151-STD3	1		STDC
11:34	GN32151-STD4	1		STDD
11:51	GN32151-STD5	1		STDE
12:09	GN32151-STD6	1		STDF
08:56	GN32151-IPC1	1		scon=4290
09:14	GN32151-ICV1	1		
09:31	GP51409-MB2	1		
09:49	GN32151-CRI1	1		
10:06	GP51409-B2	1		
10:23	GN32151-CCV1	1		
10:41	GP51409-ICV2	1		
10:58	JA30998-12	1		
11:16	GP51409-S1	1		
11:33	GP51409-D1	1		
11:50	JA30998-1	1		
12:08	JA30998-2	1		
12:25	JA30998-3	1		
12:43	JA30998-4	1		interfering peak; rerun for confirmation
13:00	JA30998-5	1		
13:17	JA30998-7	1		
13:35	GN32151-CCVA1	1		
13:52	JA30998-8	1		next CCV fails; no further samples reported
14:10	JA30998-9	1		
14:27	JA30998-10	1		
14:44	JA30998-11	1		
15:02	JA30998-13	1		
15:19	JA30998-14	1		
15:37	JA30998-15	1		
15:54	JA30998-16	1		
16:12	JA30998-17	1		
16:29	JA30998-18	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111001.TXT Date Analyzed: 11/10/09 Methods: EPA 314
Analyst: BD Run ID: GN32151
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:46	GN32151-CCV2	1		fails high
17:04	GN32151-IPC2	1		
17:21	GP51509-MB1	1		
17:21	GP51498-MB2	1		Sample shown for QC tracking purposes only.
17:39	GN32151-CRI2	1		
17:56	GP51509-B1	1		
17:56	GP51498-B2	1		Sample shown for QC tracking purposes only.
18:13	GN32151-CCVA2	1		
18:31	JA31115-1	1		(sample used for QC only; not part of login JA30998)
18:48	GP51509-S1	1		
19:06	GP51509-D1	1		
19:23	ZZZZZZ	1		
19:40	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:15	ZZZZZZ	1		
20:33	ZZZZZZ	1		
20:50	ZZZZZZ	1		
21:07	ZZZZZZ	1		
21:25	GN32151-CCV3	1		
21:42	ZZZZZZ	1		
22:00	ZZZZZZ	1		
22:17	ZZZZZZ	1		
22:34	ZZZZZZ	1		
22:52	ZZZZZZ	1		
23:09	ZZZZZZ	1		
23:27	JA30998-23	8		
23:44	JA30998-24	8		
00:01	JA30998-25	1		
00:19	JA30998-4	1		
00:36	GN32151-CCVA3	1		
00:54	JA30998-5	1		
01:11	JA30998-14	1		
01:28	GN32151-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111001.TXT Date Analyzed: 11/10/09 Methods: EPA 314
Run ID: GN32151 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32151-IPC1	Perchlorate	23.8	3.0	0.92	25	95.2	80-120
GN32151-ICV1	Perchlorate	26.5	3.0	0.92	25	106.0	90-110
GN32151-CRI1	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN32151-CCV1	Perchlorate	25.6	3.0	0.92	25	102.4	85-115
GN32151-CCVA1	Perchlorate	54.7	3.0	0.92	50	109.4	
GN32151-CCV2	Perchlorate	30.7	3.0	0.92	25	122.8!(a)	85-115
GN32151-IPC2	Perchlorate	24.8	3.0	0.92	25	99.2	80-120
GN32151-CRI2	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN32151-CCVA2	Perchlorate	52.6	3.0	0.92	50	105.2	
GN32151-CCV3	Perchlorate	26.8	3.0	0.92	25	107.2	85-115
GN32151-CCVA3	Perchlorate	52.8	3.0	0.92	50	105.6	
GN32151-CCV4	Perchlorate	26.6	3.0	0.92	25	106.4	85-115

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111101.TXT Date Analyzed: 11/11/09 Methods: EPA 314
Analyst: MS Run ID: GN32209
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32209-STD1	1		STDA
10:23	GN32209-STD2	1		STDB
10:41	GN32209-STD3	1		STDC
11:34	GN32209-STD4	1		STDD
11:51	GN32209-STD5	1		STDE
12:09	GN32209-STD6	1		STDF
08:36	GN32209-IPC1	1		scon=4290
08:54	GN32209-ICV1	1		
09:11	GP51409-MB3	1		
09:11	GP51498-MB2	1		Sample shown for QC tracking purposes only.
09:29	GN32209-CRI1	1		
09:46	GP51409-B3	1		
09:46	GP51498-B2	1		Sample shown for QC tracking purposes only.
10:04	GN32209-CCV1	1		
10:21	GP51409-ICV3	1		
10:38	JA30998-4	1		
10:56	JA30998-8	1		
11:13	JA30998-9	1		
11:31	JA30998-10	1		
11:48	JA30998-11	1		
12:05	JA30998-13	1		
12:23	JA30998-14	1		
12:40	JA30998-15	1		
12:58	JA30998-16	1		tailing; see rerun
13:15	GN32209-CCVA1	1		
13:32	JA30998-17	1		
13:50	JA30998-18	1		
14:21	JA30998-23	8		tailing; see rerun
14:39	JA30998-24	8		
14:56	JA30998-25	1		
15:14	JA30998-16	1		see rerun for confirmation
15:31	JA30998-23	8		
15:48	JA30998-16	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111101.TXT Date Analyzed: 11/11/09 Methods: EPA 314
Analyst: MS Run ID: GN32209
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:06	GN32209-CCV2	1		
16:23	GN32209-IPC2	1		
16:41	GP51509-MB1	1		
16:58	GN32209-CRI2	1		
17:15	GP51509-B1	1		
17:33	GN32209-CCVA2	1		
17:50	GP51509-S1	1		Roll back for reanalysis.
18:08	GP51509-D1	1		Roll back for reanalysis.
18:25	JA31115-1	1		(sample used for QC only; not part of login JA30998)
18:42	ZZZZZZ	1		
19:00	ZZZZZZ	1		
19:17	ZZZZZZ	1		
19:35	ZZZZZZ	1		
19:52	ZZZZZZ	1		
20:09	ZZZZZZ	1		
20:27	ZZZZZZ	1		
20:44	GN32209-CCV3	1		
21:02	ZZZZZZ	1		
21:19	ZZZZZZ	1		
21:36	ZZZZZZ	1		
21:54	ZZZZZZ	1		
22:11	ZZZZZZ	1		
22:29	ZZZZZZ	4		
22:46	GN32209-CCVA3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30998
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111101.TXT Date Analyzed: 11/11/09 Methods: EPA 314
Run ID: GN32209 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32209-IPC1	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN32209-ICV1	Perchlorate	26.1	3.0	0.92	25	104.4	90-110
GN32209-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN32209-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN32209-CCVA1	Perchlorate	53.5	3.0	0.92	50	107.0	
GN32209-CCV2	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN32209-IPC2	Perchlorate	24.3	3.0	0.92	25	97.2	80-120
GN32209-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32209-CCVA2	Perchlorate	51.9	3.0	0.92	50	103.8	
GN32209-CCV3	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32209-CCVA3	Perchlorate	51.6	3.0	0.92	50	103.2	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000

Accutest Job Number: JA31107

Sampling Dates: 10/21/09 - 10/22/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **31**

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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: Marie Meidhof 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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Accutest LabLink@544321 09:45 23-Feb-2010

Sample Summary

TRC

Job No: JA31107

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31107-1	10/21/09	14:55	KS	10/22/09	AQ	Ground Water	SC2D(R)
JA31107-2	10/21/09	15:35	KS	10/22/09	AQ	Ground Water	IW1
JA31107-3	10/21/09	16:10	KS	10/22/09	AQ	Ground Water	SC19S
JA31107-3D	10/21/09	16:10	KS	10/22/09	AQ	Water Dup/MSD	SC19S
JA31107-3S	10/21/09	16:10	KS	10/22/09	AQ	Water Matrix Spike	SC19S
JA31107-4	10/21/09	17:00	KS	10/22/09	AQ	Ground Water	SC19D
JA31107-5	10/21/09	17:25	KS	10/22/09	AQ	Ground Water	SC21S
JA31107-6	10/21/09	18:15	KS	10/22/09	AQ	Ground Water	SC21D
JA31107-7	10/21/09	17:00	KS	10/22/09	AQ	Ground Water	A
JA31107-8	10/22/09	08:10	KS	10/22/09	AQ	Ground Water	L
JA31107-9	10/22/09	07:40	KS	10/22/09	AQ	Field Blank Water	FB102209
JA31107-10	10/22/09	08:30	KS	10/22/09	AQ	Ground Water	SC23S

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA31107
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	11/16/2009 12:16:36 P

On 10/22/2009, 9 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31107 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 EPA 314

Matrix: AQ **Batch ID:** GP51498

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31107-3DUP, JA31107-3MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31921

- Sample(s) JA31107-3DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC2D(R)		
Lab Sample ID:	JA31107-1	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.0	3.0	0.92	ug/l	1	11/09/09 23:12	MS	EPA 314
Specific Conductivity	276	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IW1		
Lab Sample ID:	JA31107-2	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.1 B	3.0	0.92	ug/l	1	11/09/09 23:29	MS	EPA 314
Specific Conductivity	236	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC19S		
Lab Sample ID:	JA31107-3	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/09/09 22:54	MS	EPA 314
Specific Conductivity	173	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC19D		
Lab Sample ID:	JA31107-4	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	14.3	3.0	0.92	ug/l	1	11/09/09 23:47	MS	EPA 314
Specific Conductivity	165	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC21S		
Lab Sample ID:	JA31107-5	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 00:04	MS	EPA 314
Specific Conductivity	63.9	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC21D		
Lab Sample ID:	JA31107-6	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	29.1	3.0	0.92	ug/l	1	11/10/09 00:21	MS	EPA 314
Specific Conductivity	185	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	A		
Lab Sample ID:	JA31107-7	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 00:39	MS	EPA 314
Specific Conductivity	127	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	L		
Lab Sample ID:	JA31107-8	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 00:56	MS	EPA 314
Specific Conductivity	98.4	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102209		
Lab Sample ID:	JA31107-9	**Date Sampled:**	10/22/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 01:31	MS	EPA 314
Specific Conductivity	0.0 B	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC23S		
Lab Sample ID:	JA31107-10	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 01:48	MS	EPA 314
Specific Conductivity	322	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
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PAGE 1 OF 2

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA31107

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Road North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #: 860-298-6399
Sampler(s) Name(s): K. Sheffield / C. Lindahl Phone #:

Project Information

Project Name: SMC Perchlorate GW
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171444.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Butlien

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	SC2D(R)		10/21/09	1455	KS/CL	GW	1					1				X	
-2	IW1			1535			1					1				X	
-3	*SC19S			1610			3					1				X	ms/msd
-4	SC19D			1700			1					1				X	
-5	SC21S			1725			1					1				X	
-6	SC21D			1815			1					1				X	VTC1

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [x] ~~NJ Reduced~~
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format TRC ~~EM~~ Hazsk Excel TRCCTWZ
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

NO CUST. SEAL M.M

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/22/09 0900	1 [signature] 10-22-09 9:00	2 [signature] 10-22-09	12:10	2 [signature]
3		3	4		4
5		5			

Custody Seal # — [ ] Intact [ ] Not intact — Preserved where applicable [ ] — On Ice [x] — Cooler Temp. 3.2°C

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JA31107: Chain of Custody
Page 1 of 3

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ON FB

CHAIN OF CUSTODY

PAGE 2 OF 2

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www.accutest.com

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # JA31107

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttlien E-mail: LButtlien@TRCsolutions.com
Phone #: (860)298-6225 Fax #: (860)298-6399
Sampler(s) Name(s): C. Carlson & J. Reynolds Phone #:

Project Information

Project Name: SMC Perchlorate GW sampling
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 160372
Project Manager: Larry Buttlien

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-7	A		10/21/09	1700	CC/JR	AQ	1					1				X	
-8	L		10/22/09	0810	CC/JR	AQ	1					1				X	
-9	FB102209		10/22/09	0740	CC/JR	AQ	1					1				X	
-10	S<235		10/22/09	0830	CC/JR	AQ	1					1				X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format
- [X] Other EXCEL HAZSITE TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special instructions

NO CUST. SEAL M.M

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		10/22/09 0900		10-22-09 9:00		
2				10-22-09	13:10	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Intact / Not intact	Preserved where applicable / On Ice / Cooler Temp. 3.2c

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31107 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/22/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

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F: 732.329.3499

Dayton, New Jersey
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JA31107: Chain of Custody
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Internal Sample Tracking Chronicle

TRC

Job No: JA31107

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31107-1 SC2D(R)	Collected: 21-OCT-09 14:55 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-1	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-1	EPA 314	09-NOV-09 23:12	MS	09-NOV-09	MS	PERCHLT
JA31107-2 IW1	Collected: 21-OCT-09 15:35 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-2	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-2	EPA 314	09-NOV-09 23:29	MS	09-NOV-09	MS	PERCHLT
JA31107-3 SC19S	Collected: 21-OCT-09 16:10 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-3	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-3	EPA 314	09-NOV-09 22:54	MS	09-NOV-09	MS	PERCHLT
JA31107-4 SC19D	Collected: 21-OCT-09 17:00 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-4	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-4	EPA 314	09-NOV-09 23:47	MS	09-NOV-09	MS	PERCHLT
JA31107-5 SC21S	Collected: 21-OCT-09 17:25 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-5	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-5	EPA 314	10-NOV-09 00:04	MS	09-NOV-09	MS	PERCHLT
JA31107-6 SC21D	Collected: 21-OCT-09 18:15 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-6	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-6	EPA 314	10-NOV-09 00:21	MS	09-NOV-09	MS	PERCHLT
JA31107-7 A	Collected: 21-OCT-09 17:00 By: KS		Received: 22-OCT-09 By: MPC			
JA31107-7	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON

Internal Sample Tracking Chronicle

TRC

Job No: JA31107

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31107-7	EPA 314	10-NOV-09 00:39	MS	09-NOV-09	MS	PERCHLT
JA31107-8	Collected: 22-OCT-09 08:10 By: KS		Received: 22-OCT-09 By: MPC			
L						
JA31107-8	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-8	EPA 314	10-NOV-09 00:56	MS	09-NOV-09	MS	PERCHLT
JA31107-9	Collected: 22-OCT-09 07:40 By: KS		Received: 22-OCT-09 By: MPC			
FB102209						
JA31107-9	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-9	EPA 314	10-NOV-09 01:31	MS	09-NOV-09	MS	PERCHLT
JA31107-10	Collected: 22-OCT-09 08:30 By: KS		Received: 22-OCT-09 By: MPC			
SC23S						
JA31107-10	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31107-10	EPA 314	10-NOV-09 01:48	MS	09-NOV-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31107
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31107-1.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-1.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-1.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-1.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-1.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-1.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-1.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-2.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-2.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-2.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-2.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-2.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-2.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-2.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-3.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-3.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-3.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-3.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-3.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-3.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-3.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-3.2	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-3.2	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-3.2	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-3.2	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-3.2	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-3.2	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-3.2	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-3.3	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-3.3	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-3.3	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-3.3	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-3.3	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-3.3	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-3.3	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-4.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-4.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-4.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-4.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA31107
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31107-4.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-4.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-4.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-5.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-5.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-5.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-5.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-5.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-5.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-5.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-6.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-6.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-6.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-6.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-6.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-6.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-6.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-7.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-7.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-7.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-7.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-7.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-7.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-7.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-8.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-8.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-8.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-8.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-8.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-8.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-8.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31107-9.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-9.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-9.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-9.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-9.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-9.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-9.1	Dave Hunkele		12/08/09 10:58	Disposed

Accutest Internal Chain of Custody

Job Number: JA31107
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31107-10.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31107-10.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31107-10.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31107-10.1	Secured Storage	Adam Scott	11/09/09 09:11	Retrieve from Storage
JA31107-10.1	Adam Scott	Melissa Smith	11/09/09 09:12	Custody Transfer
JA31107-10.1	Melissa Smith	Secured Storage	11/09/09 16:00	Return to Storage
JA31107-10.1	Dave Hunkele		12/08/09 10:58	Disposed

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: JA31107
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51498/GN32125	3.0	0.0	ug/l	25	24.8	99.2	85-115%

Associated Samples:
Batch GP51498: JA31107-1, JA31107-10, JA31107-2, JA31107-3, JA31107-4, JA31107-5, JA31107-6, JA31107-7, JA31107-8, JA31107-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31107
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51498/GN32125	JA31107-3	ug/l	0.92 U	0.0	0.0	0-15%
Specific Conductivity	GN31921	JA31107-3	umhos/cm	173	174	0.6	0-10%

Associated Samples:
Batch GN31921: JA31107-1, JA31107-10, JA31107-2, JA31107-3, JA31107-4, JA31107-5, JA31107-6, JA31107-7, JA31107-8, JA31107-9
Batch GP51498: JA31107-1, JA31107-10, JA31107-2, JA31107-3, JA31107-4, JA31107-5, JA31107-6, JA31107-7, JA31107-8, JA31107-9
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31107
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51498/GN32125	JA31107-3	ug/l	0.92 U	25	24.7	98.8	80-120%

Associated Samples:
Batch GP51498: JA31107-1, JA31107-10, JA31107-2, JA31107-3, JA31107-4, JA31107-5, JA31107-6, JA31107-7, JA31107-8, JA31107-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31107
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110901.TXT Date Analyzed: 11/09/09 Methods: EPA 314
Analyst: MS Run ID: GN32125
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32125-STD1	1		STDA
10:23	GN32125-STD2	1		STDB
10:41	GN32125-STD3	1		STDC
11:34	GN32125-STD4	1		STDD
11:51	GN32125-STD5	1		STDE
12:09	GN32125-STD6	1		STDF
10:26	GN32125-IPC1	1		SCON=4292
10:43	GN32125-ICV1	1		
11:01	GP51497-MB1	1		
11:18	GN32125-CRI1	1		
11:36	GP51497-B1	1		
11:53	GN32125-CCV1	1		
12:10	GP51497-ICV1	1		
12:28	ZZZZZZ	1		
12:45	GP51497-S1	1		Rerun for confirmation
13:03	GP51497-D1	1		
13:20	JA31977-6	1		(sample used for QC only; not part of login JA31107)
13:38	ZZZZZZ	1		
13:55	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:30	ZZZZZZ	1		
14:47	ZZZZZZ	1		
15:05	GN32125-CCVA1	1		
15:22	ZZZZZZ	1		
15:39	ZZZZZZ	1		
15:57	ZZZZZZ	1		
16:14	ZZZZZZ	1		
16:32	ZZZZZZ	1		
16:49	ZZZZZZ	1		
17:06	GP51497-S1	1		
17:24	GN32125-CCV2	1		
17:41	GN32125-IPC2	1		SCON=4292
17:59	GP51498-MB1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31107
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110901.TXT Date Analyzed: 11/09/09 Methods: EPA 314
Analyst: MS Run ID: GN32125
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:16	GN32125-CRI2	1		
18:33	GP51498-B1	1		
18:51	GN32125-CCVA2	1		
19:08	GP51498-S1	1		
19:26	GP51498-D1	1		
19:43	JA30998-22	1		(sample used for QC only; not part of login JA31107)
20:00	ZZZZZZ	1		
20:18	ZZZZZZ	1		
20:35	ZZZZZZ	1		
20:53	ZZZZZZ	1		
21:10	ZZZZZZ	1		
21:27	ZZZZZZ	1		
21:45	ZZZZZZ	1		
22:02	GN32125-CCV3	1		
22:20	GP51498-S2	1		
22:37	GP51498-D2	1		
22:54	JA31107-3	1		
23:12	JA31107-1	1		
23:29	JA31107-2	1		
23:47	JA31107-4	1		
00:04	JA31107-5	1		
00:21	JA31107-6	1		
00:39	JA31107-7	1		
00:56	JA31107-8	1		
01:14	GN32125-CCVA3	1		
01:31	JA31107-9	1		
01:48	JA31107-10	1		
02:06	GN32125-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31107
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409110901.TXT Date Analyzed: 11/09/09 Methods: EPA 314
Run ID: GN32125 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32125-IPC1	Perchlorate	23.0	3.0	0.92	25	92.0	80-120
GN32125-ICV1	Perchlorate	25.5	3.0	0.92	25	102.0	90-110
GN32125-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32125-CCV1	Perchlorate	24.4	3.0	0.92	25	97.5	85-115
GN32125-CCVA1	Perchlorate	55.6	3.0	0.92	50	111.0	
GN32125-CCV2	Perchlorate	24.4	3.0	0.92	25	97.7	85-115
GN32125-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN32125-CRI2	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN32125-CCVA2	Perchlorate	51.9	3.0	0.92	50	104.0	
GN32125-CCV3	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32125-CCVA3	Perchlorate	53.7	3.0	0.92	50	107.0	
GN32125-CCV4	Perchlorate	25.4	3.0	0.92	25	102.0	85-115

(!) Outside of QC limits

New Jersey ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

02/23/10

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000 PO#16372

Accutest Job Number: JA31115

Sampling Date: 10/22/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **47**

ACCREDITED IN ACCORDANCE WITH nelac

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

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Accutest LabLink@544321 09:45 23-Feb-2010

Sample Summary

TRC

Job No: JA31115

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA31115-1	10/22/09	08:35	KS	10/22/09	AQ	Ground Water	SC5S
JA31115-2	10/22/09	08:50	KS	10/22/09	AQ	Ground Water	SC5D
JA31115-3	10/22/09	09:40	KS	10/22/09	AQ	Ground Water	SC31D
JA31115-4	10/22/09	10:30	KS	10/22/09	AQ	Ground Water	SC24D
JA31115-5	10/22/09	10:05	KS	10/22/09	AQ	Ground Water	SC24S
JA31115-6	10/22/09	10:45	KS	10/22/09	AQ	Ground Water	SC32D
JA31115-7	10/22/09	11:00	KS	10/22/09	AQ	Ground Water	SC35D
JA31115-8	10/22/09	11:30	KS	10/22/09	AQ	Ground Water	SC17S
JA31115-9	10/22/09	12:10	KS	10/22/09	AQ	Ground Water	SC17D
JA31115-10	10/22/09	09:35	KS	10/22/09	AQ	Ground Water	SC27S
JA31115-11	10/22/09	09:55	KS	10/22/09	AQ	Ground Water	SC20S
JA31115-12	10/22/09	10:50	KS	10/22/09	AQ	Ground Water	SC20D
JA31115-13	10/22/09	11:20	KS	10/22/09	AQ	Ground Water	W4

Sample Summary
(continued)

TRC

Job No: JA31115

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA31115-14	10/22/09	11:35	KS	10/22/09	AQ	Ground Water	K

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA31115
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	11/17/2009 4:13:41 PM

On 10/22/2009, 14 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.3 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31115 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 EPA 314

Matrix AQ **Batch ID:** GP51509

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31115-1MS, JA31115-1DUP were used as the QC samples for Perchlorate.
- RPD(s) for Duplicate for Perchlorate are outside control limits for sample GP51509-D1. RPD acceptable due to low duplicate and sample concentrations.
- JA31115-1 for Perchlorate: Noisy baseline on analysis, but results match initial analysis and duplicate analysis.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix AQ **Batch ID:** GN31892

- Sample(s) JA30998-22DUP were used as the QC samples for Specific Conductivity.

Matrix AQ **Batch ID:** GN31921

- Sample(s) JA31107-3DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC5S		
Lab Sample ID:	JA31115-1	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate [a]	1.4 B	3.0	0.92	ug/l	1	11/11/09 18:25	MS	EPA 314
Specific Conductivity	190	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

(a) Noisy baseline on analysis, but results match initial analysis and duplicate analysis.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC5D		
Lab Sample ID:	JA31115-2	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.2 B	3.0	0.92	ug/l	1	11/13/09 12:20	MS	EPA 314
Specific Conductivity	180	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC31D		
Lab Sample ID:	JA31115-3	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.6	3.0	0.92	ug/l	1	11/12/09 12:32	MS	EPA 314
Specific Conductivity	195	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC24D		
Lab Sample ID:	JA31115-4	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0	3.0	0.92	ug/l	1	11/12/09 12:14	MS	EPA 314
Specific Conductivity	272	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC24S		
Lab Sample ID:	JA31115-5	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.99 B	3.0	0.92	ug/l	1	11/13/09 12:02	MS	EPA 314
Specific Conductivity	405	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC32D		
Lab Sample ID:	JA31115-6	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.2	3.0	0.92	ug/l	1	11/12/09 11:57	MS	EPA 314
Specific Conductivity	118	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC35D		
Lab Sample ID:	JA31115-7	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.3	3.0	0.92	ug/l	1	11/12/09 11:40	MS	EPA 314
Specific Conductivity	113	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC17S		
Lab Sample ID:	JA31115-8	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/11/09 20:27	MS	EPA 314
Specific Conductivity	311	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC17D		
Lab Sample ID:	JA31115-9	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.3	3.0	0.92	ug/l	1	11/11/09 21:02	MS	EPA 314
Specific Conductivity	105	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC27S		
Lab Sample ID:	JA31115-10	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/11/09 21:19	MS	EPA 314
Specific Conductivity	370	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC20S		
Lab Sample ID:	JA31115-11	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/11/09 21:36	MS	EPA 314
Specific Conductivity	489	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC20D		
Lab Sample ID:	JA31115-12	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.0	3.0	0.92	ug/l	1	11/12/09 11:22	MS	EPA 314
Specific Conductivity	143	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W4		
Lab Sample ID:	JA31115-13	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.2 B	3.0	0.92	ug/l	1	11/11/09 22:11	MS	EPA 314
Specific Conductivity	140	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	K		
Lab Sample ID:	JA31115-14	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	90.5	12	3.7	ug/l	4	11/11/09 22:29	MS	EPA 314
Specific Conductivity	504	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA31115

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Road North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttien E-mail: lbuttien@trcsolutions.com
Phone #: 860-298-6225 Fax #: 860-298-6399
Sampler(s) Name(s): K. Sheffield / C. Lindahl Phone #:

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 103722
Project Manager: Larry Buttien

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	SC5S		10/22/09	0835	KS/CL	GW	1					1				X	
-2	SC5D			0850			1					1				X	VTC1
-3	SC31D			0940			1					1				X	
-4	SC24D			1030			1					1				X	
-5	SC24S			1005			1					1				X	
-6	SC32D			1045			1					1				X	
-7	SC35D			1100			1					1				X	
-8	SC17S			1130			1					1				X	
-9	SC17D			1210			1					1				X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labilink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format HAZSITE EXCEL
- [ ] Other TRCTLV2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	10/22/09 1520	1	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [X] Not intact	Preserved where applicable: [ ] On Ice: [X] Cooler Temp: 1.3°C

ACCUTEST. Laboratories

CHAIN OF CUSTODY

PAGE 2 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # JA31115

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: LButlien@Trcsolutions.com
Phone #: 688-6225 Fax #: (860)298-6399
Sampler(s) Name(s): C. Carlson + J. Raynold Phone #:

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Butlien

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-10	SC27S		10/22/09	0935	CC/JR	AQ	1					1				X	
-11	SC20S			0955	CC/JR	AQ	1					1				X	
-12	SC20D			1050	CC/JR	AQ	1					1				X	
-13	W4			1120	CC/JR	AQ	1					1				X	
-14	K			1135	CC/JR	AQ	1					1				X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved by (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULL T1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format HAZSITE EXCEL
- [ ] Other TRC TWS

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		10/22/09 1520	1 PM	2		2
3			3	4		4
5			5			

Custody Seal # | [ ] Intact [X] Not intact | Preserved where applicable [ ] | On Ice [X] | Cooler Temp. 1, 3 °C

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31115 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/22/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA31115: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

TRC

Job No: JA31115

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31115-1 SC5S	Collected: 22-OCT-09 08:35 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-1	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-1	EPA 314	11-NOV-09 18:25	MS	11-NOV-09	BD	PERCHLT
JA31115-2 SC5D	Collected: 22-OCT-09 08:50 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-2	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-2	EPA 314	13-NOV-09 12:20	MS	13-NOV-09	BD	PERCHLT
JA31115-3 SC31D	Collected: 22-OCT-09 09:40 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-3	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-3	EPA 314	12-NOV-09 12:32	MS	12-NOV-09	BD	PERCHLT
JA31115-4 SC24D	Collected: 22-OCT-09 10:30 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-4	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-4	EPA 314	12-NOV-09 12:14	MS	12-NOV-09	BD	PERCHLT
JA31115-5 SC24S	Collected: 22-OCT-09 10:05 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-5	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-5	EPA 314	13-NOV-09 12:02	MS	13-NOV-09	BD	PERCHLT
JA31115-6 SC32D	Collected: 22-OCT-09 10:45 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-6	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-6	EPA 314	12-NOV-09 11:57	MS	12-NOV-09	BD	PERCHLT
JA31115-7 SC35D	Collected: 22-OCT-09 11:00 By: KS		Received: 22-OCT-09 By: MPC			
JA31115-7	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON

Internal Sample Tracking Chronicle

TRC

Job No: JA31115

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31115-7	EPA 314	12-NOV-09 11:40	MS	12-NOV-09	BD	PERCHLT
JA31115-8	Collected: 22-OCT-09 11:30 By: KS		Received: 22-OCT-09 By: MPC			
SC17S						
JA31115-8	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-8	EPA 314	11-NOV-09 20:27	MS	11-NOV-09	BD	PERCHLT
JA31115-9	Collected: 22-OCT-09 12:10 By: KS		Received: 22-OCT-09 By: MPC			
SC17D						
JA31115-9	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-9	EPA 314	11-NOV-09 21:02	MS	11-NOV-09	BD	PERCHLT
JA31115-10	Collected: 22-OCT-09 09:35 By: KS		Received: 22-OCT-09 By: MPC			
SC27S						
JA31115-10	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-10	EPA 314	11-NOV-09 21:19	MS	11-NOV-09	BD	PERCHLT
JA31115-11	Collected: 22-OCT-09 09:55 By: KS		Received: 22-OCT-09 By: MPC			
SC20S						
JA31115-11	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-11	EPA 314	11-NOV-09 21:36	MS	11-NOV-09	BD	PERCHLT
JA31115-12	Collected: 22-OCT-09 10:50 By: KS		Received: 22-OCT-09 By: MPC			
SC20D						
JA31115-12	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-12	EPA 314	12-NOV-09 11:22	MS	12-NOV-09	BD	PERCHLT
JA31115-13	Collected: 22-OCT-09 11:20 By: KS		Received: 22-OCT-09 By: MPC			
W4						
JA31115-13	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-13	EPA 314	11-NOV-09 22:11	MS	11-NOV-09	BD	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA31115

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31115-14	Collected: 22-OCT-09 11:35 By: KS		Received: 22-OCT-09 By: MPC			
K						
JA31115-14	SM19 2510B/SW 9050A	03-NOV-09	RI			SCON
JA31115-14	EPA 314	11-NOV-09 22:29	MS	11-NOV-09	BD	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31115
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31115-1.1	Secured Storage	Dave Hunkele	11/03/09 15:03	Retrieve from Storage
JA31115-1.1	Dave Hunkele	Rie Iwasaki	11/03/09 15:04	Custody Transfer
JA31115-1.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-1.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-1.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-1.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-1.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-1.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-1.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-1.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31115-1.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31115-1.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31115-1.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-2.1	Secured Storage	Dave Hunkele	11/03/09 15:03	Retrieve from Storage
JA31115-2.1	Dave Hunkele	Rie Iwasaki	11/03/09 15:04	Custody Transfer
JA31115-2.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-2.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-2.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-2.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-2.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-2.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-2.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-2.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31115-2.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31115-2.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31115-2.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-3.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-3.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-3.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-3.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-3.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-3.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-3.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-3.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-3.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-3.1	Secured Storage	Todd Shoemaker	11/12/09 09:36	Retrieve from Storage
JA31115-3.1	Todd Shoemaker	Melissa Smith	11/12/09 09:38	Custody Transfer
JA31115-3.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31115-3.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-4.1	Secured Storage	Dave Hunkele	11/03/09 15:03	Retrieve from Storage
JA31115-4.1	Dave Hunkele	Rie Iwasaki	11/03/09 15:04	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA31115
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31115-4.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-4.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-4.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-4.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-4.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-4.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-4.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-4.1	Secured Storage	Todd Shoemaker	11/12/09 09:36	Retrieve from Storage
JA31115-4.1	Todd Shoemaker	Melissa Smith	11/12/09 09:38	Custody Transfer
JA31115-4.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31115-4.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-5.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-5.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-5.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-5.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-5.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-5.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-5.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-5.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-5.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-5.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31115-5.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31115-5.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31115-5.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-6.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-6.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-6.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-6.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-6.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-6.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-6.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-6.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
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JA31115-6.1	Secured Storage	Todd Shoemaker	11/12/09 09:36	Retrieve from Storage
JA31115-6.1	Todd Shoemaker	Melissa Smith	11/12/09 09:38	Custody Transfer
JA31115-6.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31115-6.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-7.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-7.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-7.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-7.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA31115
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31115-7.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-7.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-7.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-7.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-7.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-7.1	Secured Storage	Todd Shoemaker	11/12/09 09:36	Retrieve from Storage
JA31115-7.1	Todd Shoemaker	Melissa Smith	11/12/09 09:38	Custody Transfer
JA31115-7.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31115-7.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-8.1	Secured Storage	Dave Hunkele	11/03/09 15:03	Retrieve from Storage
JA31115-8.1	Dave Hunkele	Rie Iwasaki	11/03/09 15:04	Custody Transfer
JA31115-8.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-8.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-8.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-8.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-8.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-8.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-8.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-8.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-9.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-9.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-9.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-9.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-9.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-9.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-9.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-9.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-9.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-9.1	Secured Storage	Todd Shoemaker	11/12/09 09:36	Retrieve from Storage
JA31115-9.1	Todd Shoemaker	Melissa Smith	11/12/09 09:38	Custody Transfer
JA31115-9.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31115-9.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-10.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-10.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-10.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-10.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-10.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-10.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-10.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-10.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-10.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31115
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31115-10.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-11.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-11.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-11.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-11.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-11.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-11.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-11.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-11.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-11.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-11.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-12.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-12.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-12.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-12.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-12.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-12.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-12.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-12.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-12.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-12.1	Secured Storage	Todd Shoemaker	11/12/09 09:36	Retrieve from Storage
JA31115-12.1	Todd Shoemaker	Melissa Smith	11/12/09 09:38	Custody Transfer
JA31115-12.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31115-12.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-13.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-13.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-13.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-13.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-13.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-13.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage
JA31115-13.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-13.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-13.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-13.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31115-14.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31115-14.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31115-14.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31115-14.1	Secured Storage	Todd Shoemaker	11/10/09 08:02	Retrieve from Storage
JA31115-14.1	Todd Shoemaker	Barbara Dula	11/10/09 08:03	Custody Transfer
JA31115-14.1	Barbara Dula	Secured Storage	11/10/09 15:53	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31115
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31115-14.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31115-14.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31115-14.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31115-14.1	Dave Hunkele		12/08/09 10:58	Disposed

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: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51509/GN32209	3.0	0.0	ug/l	25	25.4	101.6	85-115%
Perchlorate	GP51509/GN32251	3.0	0.0	ug/l	25	24.5	98.0	85-115%
Perchlorate	GP51509/GN32251			ug/l	8	7.86	98.3	85-115%
Perchlorate	GP51509/GN32290	3.0	0.0	ug/l	25	24.7	98.8	85-115%
Perchlorate	GP51509/GN32290			ug/l	8	7.79	97.4	85-115%

Associated Samples:
Batch GP51509: JA31115-1, JA31115-10, JA31115-11, JA31115-12, JA31115-13, JA31115-14, JA31115-2, JA31115-3, JA31115-4, JA31115-5, JA31115-6, JA31115-7, JA31115-8, JA31115-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51509/GN32209	JA31115-1	ug/l	1.4 B	1.3	32.3(a)	0-15%
Specific Conductivity	GN31892	JA30998-22	umhos/cm	263	259	1.5	0-10%
Specific Conductivity	GN31921	JA31107-3	umhos/cm	173	174	0.6	0-10%

Associated Samples:
Batch GN31892: JA31115-10, JA31115-11, JA31115-12, JA31115-13, JA31115-14
Batch GN31921: JA31115-1, JA31115-2, JA31115-3, JA31115-4, JA31115-5, JA31115-6, JA31115-7, JA31115-8, JA31115-9
Batch GP51509: JA31115-1, JA31115-10, JA31115-11, JA31115-12, JA31115-13, JA31115-14, JA31115-2, JA31115-3, JA31115-4, JA31115-5, JA31115-6, JA31115-7, JA31115-8, JA31115-9
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51509/GN32209	JA31115-1	ug/l	1.4 B	25	26.6	99.2	80-120%

Associated Samples:
Batch GP51509: JA31115-1, JA31115-10, JA31115-11, JA31115-12, JA31115-13, JA31115-14, JA31115-2, JA31115-3, JA31115-4, JA31115-5, JA31115-6, JA31115-7, JA31115-8, JA31115-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111101.TXT Date Analyzed: 11/11/09 Methods: EPA 314
Analyst: MS Run ID: GN32209
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32209-STD1	1		STDA
10:23	GN32209-STD2	1		STDB
10:41	GN32209-STD3	1		STDC
11:34	GN32209-STD4	1		STDD
11:51	GN32209-STD5	1		STDE
12:09	GN32209-STD6	1		STDF
08:36	GN32209-IPC1	1		scon=4290
08:54	GN32209-ICV1	1		
09:11	GP51409-MB3	1		
09:11	GP51498-MB2	1		Sample shown for QC tracking purposes only.
09:29	GN32209-CRI1	1		
09:46	GP51409-B3	1		
09:46	GP51498-B2	1		Sample shown for QC tracking purposes only.
10:04	GN32209-CCV1	1		
10:21	GP51409-ICV3	1		
10:38	ZZZZZZ	1		
10:56	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:48	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:15	GN32209-CCVA1	1		
13:32	ZZZZZZ	1		
13:50	ZZZZZZ	1		
14:21	ZZZZZZ	8		
14:39	ZZZZZZ	8		
14:56	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:31	ZZZZZZ	8		
15:48	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111101.TXT Date Analyzed: 11/11/09 Methods: EPA 314
Analyst: MS Run ID: GN32209
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:06	GN32209-CCV2	1		
16:23	GN32209-IPC2	1		
16:41	GP51509-MB1	1		
16:58	GN32209-CRI2	1		
17:15	GP51509-B1	1		
17:33	GN32209-CCVA2	1		
17:50	GP51509-S1	1		Roll back for reanalysis.
18:08	GP51509-D1	1		Roll back for reanalysis.
18:25	JA31115-1	1		
18:42	JA31115-2	1		Rerun to confirm.
19:00	JA31115-3	1		unusual peak shape; rerun for confirmation
19:17	JA31115-4	1		tailing peak; rerun for confirmation
19:35	JA31115-5	1		Rerun to confirm.
19:52	JA31115-6	1		unusual peak shape; rerun for confirmation
20:09	JA31115-7	1		tailing peak; rerun for confirmation
20:27	JA31115-8	1		
20:44	GN32209-CCV3	1		
21:02	JA31115-9	1		
21:19	JA31115-10	1		
21:36	JA31115-11	1		
21:54	JA31115-12	1		interfering peak; rerun for confirmation
22:11	JA31115-13	1		
22:29	JA31115-14	4		
22:46	GN32209-CCVA3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111101.TXT Date Analyzed: 11/11/09 Methods: EPA 314
Run ID: GN32209 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32209-IPC1	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN32209-ICV1	Perchlorate	26.1	3.0	0.92	25	104.4	90-110
GN32209-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN32209-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN32209-CCVA1	Perchlorate	53.5	3.0	0.92	50	107.0	
GN32209-CCV2	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN32209-IPC2	Perchlorate	24.3	3.0	0.92	25	97.2	80-120
GN32209-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32209-CCVA2	Perchlorate	51.9	3.0	0.92	50	103.8	
GN32209-CCV3	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32209-CCVA3	Perchlorate	51.6	3.0	0.92	50	103.2	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32251
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32251-STD1	1		STDA
10:23	GN32251-STD2	1		STDB
10:41	GN32251-STD3	1		STDC
11:34	GN32251-STD4	1		STDD
11:51	GN32251-STD5	1		STDE
12:09	GN32251-STD6	1		STDF
09:02	GN32251-IPC1	1		SCON=4290
09:20	GN32251-ICV1	1		
09:37	GP51509-MB2	1		
09:37	GP51549-MB1	1		Sample shown for QC tracking purposes only.
10:13	GN32251-CRI1	1		
10:30	GP51509-B2	1		
10:30	GP51549-B1	1		Sample shown for QC tracking purposes only.
10:47	GN32251-CCV1	1		
11:05	GP51509-ICV1	1		
11:22	JA31115-12	1		
11:40	JA31115-7	1		
11:57	JA31115-6	1		
12:14	JA31115-4	1		
12:32	JA31115-3	1		
12:49	GN32251-CCVA1	1		
13:07	GP51549-S1	1		
13:24	GP51549-D1	1		
13:41	JA31793-8	1		(sample used for QC only; not part of login JA31115)
13:59	ZZZZZZ	1		
14:16	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:51	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	ZZZZZZ	1		
16:01	GN32251-CCV2	1		
16:18	ZZZZZZ	60		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32251
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:35	ZZZZZZ	1		
16:53	ZZZZZZ	1		
17:10	ZZZZZZ	150		
17:28	ZZZZZZ	150		
17:45	ZZZZZZ	1		
18:02	ZZZZZZ	1		
18:20	GN32251-CCVA2	1		
18:37	GN32251-CCV3	1		
18:55	GN32251-IPC2	1		
19:12	GP51486-MB1	1		
19:29	GN32251-CRI2	1		
19:47	GP51486-B1	1		
20:04	GN32251-CCVA3	1		
20:22	GP51486-S1	1		
20:39	GP51486-D1	1		
20:56	JA31353-1	1		(sample used for QC only; not part of login JA31115)
21:14	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:49	ZZZZZZ	1		
22:06	ZZZZZZ	1		
22:24	ZZZZZZ	1		
22:41	ZZZZZZ	1		
22:58	ZZZZZZ	1		
23:16	GN32251-CCV4	1		
23:33	ZZZZZZ	1		
23:51	ZZZZZZ	1		
00:08	ZZZZZZ	1		
00:25	ZZZZZZ	1		
00:43	ZZZZZZ	1		
01:00	ZZZZZZ	1		
01:18	ZZZZZZ	1		
01:35	ZZZZZZ	1		
01:52	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32251
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:10	ZZZZZZ	1		
02:27	GN32251-CCVA4	1		
02:45	ZZZZZZ	1		
03:02	ZZZZZZ	1		
03:19	GN32251-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Run ID: GN32251 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32251-IPC1	Perchlorate	23.6	3.0	0.92	25	94.4	80-120
GN32251-ICV1	Perchlorate	26.4	3.0	0.92	25	105.6	90-110
GN32251-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32251-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32251-CCVA1	Perchlorate	51.8	3.0	0.92	50	103.6	
GN32251-CCV2	Perchlorate	24.6	3.0	0.92	25	98.4	85-115
GN32251-CCVA2	Perchlorate	49.5	3.0	0.92	50	99.0	
GN32251-CCV3	Perchlorate	26.3	3.0	0.92	25	105.2	85-115
GN32251-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN32251-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32251-CCVA3	Perchlorate	51.1	3.0	0.92	50	102.2	
GN32251-CCV4	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN32251-CCVA4	Perchlorate	53.6	3.0	0.92	50	107.2	
GN32251-CCV5	Perchlorate	26.1	3.0	0.92	25	104.4	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32290-STD1	1		STDA
10:23	GN32290-STD2	1		STDB
10:41	GN32290-STD3	1		STDC
11:34	GN32290-STD4	1		STDD
11:51	GN32290-STD5	1		STDE
12:09	GN32290-STD6	1		STDF
10:01	GN32290-IPC1	1		scon=4290
10:18	GN32290-ICV1	1		
10:35	GP51509-MB3	1		
10:35	GP51549-MB2	1		Sample shown for QC tracking purposes only.
10:35	GP51565-MB1	1		Sample shown for QC tracking purposes only.
10:53	GN32290-CRI1	1		
11:10	GP51509-B3	1		
11:10	GP51549-B2	1		Sample shown for QC tracking purposes only.
11:10	GP51565-B1	1		Sample shown for QC tracking purposes only.
11:28	GN32290-CCV1	1		
11:45	GP51509-ICV2	1		
12:02	JA31115-5	1		
12:20	JA31115-2	1		
12:37	ZZZZZZ	150		
12:55	ZZZZZZ	1		
13:12	GN32290-CCVA1	1		
13:30	ZZZZZZ	1		
13:47	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:22	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:57	ZZZZZZ	1		
15:14	ZZZZZZ	1		
15:31	ZZZZZZ	1		
15:49	GN32290-CCV2	1		
16:06	ZZZZZZ	1		
16:24	GP51565-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:41	GP51565-D1	1		
16:58	JA31506-2	1		(sample used for QC only; not part of login JA31115)
17:16	ZZZZZZ	1		
17:33	ZZZZZZ	1		
17:51	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:25	ZZZZZZ	1		
18:43	ZZZZZZ	1		
19:00	GN32290-CCVA2	1		fails high
19:18	GN32290-CCV3	1		
19:35	GN32290-IPC2	1		
19:52	GP51526-MB1	1		
20:10	GN32290-CRI2	1		
20:27	GP51526-B1	1		
20:45	GN32290-CCVA3	1		
21:02	ZZZZZZ	1		
21:19	GP51526-S1	1		rerun for confirmation
21:37	GP51526-D1	1		
21:54	JA31399-1	1		(sample used for QC only; not part of login JA31115)
22:12	ZZZZZZ	1		
22:29	ZZZZZZ	1		
22:46	ZZZZZZ	1		
23:04	ZZZZZZ	1		
23:21	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:56	GN32290-CCV4	1		
00:13	ZZZZZZ	1		
00:31	ZZZZZZ	1		
00:48	ZZZZZZ	1		
01:06	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:58	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:15	ZZZZZZ	1		
02:33	ZZZZZZ	1		
02:50	ZZZZZZ	1		
03:08	GN32290-CCVA4	1		
03:25	ZZZZZZ	1		
03:42	ZZZZZZ	1		
04:00	GN32290-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31115
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Run ID: GN32290 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32290-IPC1	Perchlorate	25.4	3.0	0.92	25	101.6	80-120
GN32290-ICV1	Perchlorate	27.0	3.0	0.92	25	108.0	90-110
GN32290-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32290-CCV1	Perchlorate	24.6	3.0	0.92	25	98.4	85-115
GN32290-CCVA1	Perchlorate	54.0	3.0	0.92	50	108.0	
GN32290-CCV2	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32290-CCVA2	Perchlorate	58.8	3.0	0.92	50	117.6!(a)	
GN32290-CCV3	Perchlorate	28.0	3.0	0.92	25	112.0	85-115
GN32290-IPC2	Perchlorate	26.5	3.0	0.92	25	106.0	80-120
GN32290-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32290-CCVA3	Perchlorate	49.9	3.0	0.92	50	99.8	
GN32290-CCV4	Perchlorate	26.9	3.0	0.92	25	107.6	85-115
GN32290-CCVA4	Perchlorate	54.6	3.0	0.92	50	109.2	
GN32290-CCV5	Perchlorate	27.6	3.0	0.92	25	110.4	85-115

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000

Accutest Job Number: JA33467

Sampling Date: 11/19/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **23**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Sample Summary

TRC

Job No: JA33467

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA33467-1	11/19/09	15:20	KS	11/19/09	AQ	Ground Water	SC33D
JA33467-2	11/19/09	17:30	KS	11/19/09	AQ	Ground Water	SC34D
JA33467-2D	11/19/09	17:30	KS	11/19/09	AQ	Water Dup/MSD	SC34D
JA33467-2S	11/19/09	17:30	KS	11/19/09	AQ	Water Matrix Spike	SC34D
JA33467-3	11/19/09	18:00	KS	11/19/09	AQ	Ground Water	SC37D
JA33467-4	11/19/09	14:20	KS	11/19/09	AQ	Field Blank Water	FB111909

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA33467
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	12/7/2009 8:33:21 PM

On 11/19/2009, 3 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.4 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA33467 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 EPA 314

Matrix: AQ **Batch ID:** GP51802

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA33467-2DUP, JA33467-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN32877

- Sample(s) JA33467-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC33D		
Lab Sample ID:	JA33467-1	**Date Sampled:**	11/19/09
Matrix:	AQ - Ground Water	**Date Received:**	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	12/02/09 15:07	MS	EPA 314
Specific Conductivity	204	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC34D		
Lab Sample ID:	JA33467-2	**Date Sampled:**	11/19/09
Matrix:	AQ - Ground Water	**Date Received:**	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	152	18	5.5	ug/l	6	12/02/09 16:17	MS	EPA 314
Specific Conductivity	1020	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC37D		
Lab Sample ID:	JA33467-3	**Date Sampled:**	11/19/09
Matrix:	AQ - Ground Water	**Date Received:**	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	150	18	5.5	ug/l	6	12/02/09 16:52	MS	EPA 314
Specific Conductivity	996	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB111909		
Lab Sample ID:	JA33467-4	**Date Sampled:**	11/19/09
Matrix:	AQ - Field Blank Water	**Date Received:**	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	12/02/09 13:58	MS	EPA 314
Specific Conductivity	3.0	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE ___ OF ___

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA33467

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Road North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butler E-mail: lbutler@trcsolutions.com
Phone #: 860-298-6225 Fax #: 860-298-6399
Sampler(s) Name(s): K. Sleffield / C. Carlson Phone #:

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 Jew Blvd
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #:
Project Manager: Larry Butler

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE		LAB USE ONLY
-1	SC33D		11/19/09	#1520	K/C	Aq	1					1				X	pH = 9.75
-2	SC34D			1350	K/C		3					1				X	pH = 7.05
-3	SC37D		↓	1800	↓	↓	1					1				X	pH = 7.05
-4	FB111909		11.19.09	1420			1										

Includes MS/MSD volume

UTC1

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labtink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format
- [X] Other HazSiteExcel TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		11/19/09 2145	1	2		2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal # N/A	[ ] Intact [ ] Not Intact	Preserved where applicable [ ] On Ice [X] Cooler Temp 3-4 °C

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA33467 **Client:** TRC-CT **Immediate Client Services Action Required:** Yes

Date / Time Received: 11/19/2009 2145 **Delivery Method:** Client **Client Service Action Required at Login:** No

Project: SMC **No. Coolers:** 1 **Airbill #'s:**

Cooler Security

	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature

	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio

	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☐

Sample Integrity - Documentation

	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition

	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions

	Y	N	N/A
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:	☐	☐	☐

Comments

-4 ADDED TO COC - "FB111909"

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA33467: Chain of Custody
Page 2 of 4

Sample Receipt Summary - Problem Resolution

Accutest Job Number: JA33467

CSR: Marie Meidhof **Response Date** 11/23/2009

Response: Please proceed with the perchlorate analysis for sample -4; confirmed by Larry Butlien.

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA33467: Chain of Custody
Page 3 of 4

Job Change Order: JA33467_12/7/2009

Requested Date:	12/7/2009	**Received Date:**	11/19/2009
Account Name:	TRC	**Due Date:**	12/10/2009
Project Description:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Deliverable:**	FULT1
CSR:	MM	**TAT (Days):**	21

Sample #:
JA33467-2

Change: Please revise the sample ID to SC34D (from SC39D).

SC39D

Above Changes Per: John Moss **Date:** 12/7/2009

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

JA33467: Chain of Custody
Page 4 of 4

Internal Sample Tracking Chronicle

TRC

Job No: JA33467

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA33467-1	Collected: 19-NOV-09 15:20 By: KS		Received: 19-NOV-09 By: MPC			
SC33D						
JA33467-1	EPA 314	02-DEC-09 15:07	MS	02-DEC-09	MS	PERCHLT
JA33467-1	SM19 2510B/SW 9050A	03-DEC-09	BD			SCON
JA33467-2	Collected: 19-NOV-09 17:30 By: KS		Received: 19-NOV-09 By: MPC			
SC34D						
JA33467-2	EPA 314	02-DEC-09 16:17	MS	02-DEC-09	MS	PERCHLT
JA33467-2	SM19 2510B/SW 9050A	03-DEC-09	BD			SCON
JA33467-3	Collected: 19-NOV-09 18:00 By: KS		Received: 19-NOV-09 By: MPC			
SC37D						
JA33467-3	EPA 314	02-DEC-09 16:52	MS	02-DEC-09	MS	PERCHLT
JA33467-3	SM19 2510B/SW 9050A	03-DEC-09	BD			SCON
JA33467-4	Collected: 19-NOV-09 14:20 By: KS		Received: 19-NOV-09 By: MPC			
FB111909						
JA33467-4	EPA 314	02-DEC-09 13:58	MS	02-DEC-09	MS	PERCHLT
JA33467-4	SM19 2510B/SW 9050A	03-DEC-09	BD			SCON

Accutest Internal Chain of Custody

Job Number: JA33467
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 11/19/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA33467-1.1	Secured Storage	Todd Shoemaker	12/01/09 09:02	Retrieve from Storage
JA33467-1.1	Todd Shoemaker	Sarvadaman Tripathi	12/01/09 09:03	Custody Transfer
JA33467-1.1	Sarvadaman Tripathi	Secured Storage	12/01/09 16:48	Return to Storage
JA33467-1.1	Secured Storage	Todd Shoemaker	12/02/09 08:53	Retrieve from Storage
JA33467-1.1	Todd Shoemaker	Melissa Smith	12/02/09 08:54	Custody Transfer
JA33467-1.1	Melissa Smith	Secured Storage	12/02/09 16:08	Return to Storage
JA33467-1.1	Secured Storage	John Thomas	12/03/09 13:54	Retrieve from Storage
JA33467-1.1	John Thomas	Barbara Dula	12/03/09 13:56	Custody Transfer
JA33467-1.1	Barbara Dula	Secured Storage	12/03/09 15:57	Return to Storage
JA33467-1.1	Dave Hunkele		12/28/09 05:14	Disposed
JA33467-2.1	Secured Storage	Todd Shoemaker	12/01/09 09:02	Retrieve from Storage
JA33467-2.1	Todd Shoemaker	Sarvadaman Tripathi	12/01/09 09:03	Custody Transfer
JA33467-2.1	Sarvadaman Tripathi	Secured Storage	12/01/09 16:48	Return to Storage
JA33467-2.1	Secured Storage	Todd Shoemaker	12/02/09 08:53	Retrieve from Storage
JA33467-2.1	Todd Shoemaker	Melissa Smith	12/02/09 08:54	Custody Transfer
JA33467-2.1	Melissa Smith	Secured Storage	12/02/09 16:08	Return to Storage
JA33467-2.1	Secured Storage	John Thomas	12/03/09 13:54	Retrieve from Storage
JA33467-2.1	John Thomas	Barbara Dula	12/03/09 13:56	Custody Transfer
JA33467-2.1	Barbara Dula	Secured Storage	12/03/09 15:57	Return to Storage
JA33467-2.1	Dave Hunkele		12/28/09 05:14	Disposed
JA33467-2.2	Secured Storage	Todd Shoemaker	12/01/09 09:02	Retrieve from Storage
JA33467-2.2	Todd Shoemaker	Sarvadaman Tripathi	12/01/09 09:03	Custody Transfer
JA33467-2.2	Sarvadaman Tripathi	Secured Storage	12/01/09 16:48	Return to Storage
JA33467-2.2	Secured Storage	Todd Shoemaker	12/02/09 08:53	Retrieve from Storage
JA33467-2.2	Todd Shoemaker	Melissa Smith	12/02/09 08:54	Custody Transfer
JA33467-2.2	Melissa Smith	Secured Storage	12/02/09 16:08	Return to Storage
JA33467-2.2	Dave Hunkele		12/28/09 05:14	Disposed
JA33467-2.3	Secured Storage	Todd Shoemaker	12/01/09 09:02	Retrieve from Storage
JA33467-2.3	Todd Shoemaker	Sarvadaman Tripathi	12/01/09 09:03	Custody Transfer
JA33467-2.3	Sarvadaman Tripathi	Secured Storage	12/01/09 16:48	Return to Storage
JA33467-2.3	Secured Storage	Todd Shoemaker	12/02/09 08:53	Retrieve from Storage
JA33467-2.3	Todd Shoemaker	Melissa Smith	12/02/09 08:54	Custody Transfer
JA33467-2.3	Melissa Smith	Secured Storage	12/02/09 16:08	Return to Storage
JA33467-2.3	Dave Hunkele		12/28/09 05:14	Disposed
JA33467-3.1	Secured Storage	Todd Shoemaker	12/01/09 09:02	Retrieve from Storage
JA33467-3.1	Todd Shoemaker	Sarvadaman Tripathi	12/01/09 09:03	Custody Transfer
JA33467-3.1	Sarvadaman Tripathi	Secured Storage	12/01/09 16:48	Return to Storage
JA33467-3.1	Secured Storage	Todd Shoemaker	12/02/09 08:53	Retrieve from Storage
JA33467-3.1	Todd Shoemaker	Melissa Smith	12/02/09 08:54	Custody Transfer
JA33467-3.1	Melissa Smith	Secured Storage	12/02/09 16:08	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA33467
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 11/19/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA33467-3.1	Secured Storage	John Thomas	12/03/09 13:54	Retrieve from Storage
JA33467-3.1	John Thomas	Barbara Dula	12/03/09 13:56	Custody Transfer
JA33467-3.1	Barbara Dula	Secured Storage	12/03/09 15:57	Return to Storage
JA33467-3.1	Dave Hunkele		12/28/09 05:14	Disposed
JA33467-4.1	Secured Storage	Todd Shoemaker	12/01/09 09:02	Retrieve from Storage
JA33467-4.1	Todd Shoemaker	Sarvadaman Tripathi	12/01/09 09:03	Custody Transfer
JA33467-4.1	Sarvadaman Tripathi	Secured Storage	12/01/09 16:48	Return to Storage
JA33467-4.1	Secured Storage	Todd Shoemaker	12/02/09 08:53	Retrieve from Storage
JA33467-4.1	Todd Shoemaker	Melissa Smith	12/02/09 08:54	Custody Transfer
JA33467-4.1	Melissa Smith	Secured Storage	12/02/09 16:08	Return to Storage
JA33467-4.1	Secured Storage	John Thomas	12/03/09 13:54	Retrieve from Storage
JA33467-4.1	John Thomas	Barbara Dula	12/03/09 13:56	Custody Transfer
JA33467-4.1	Barbara Dula	Secured Storage	12/03/09 15:57	Return to Storage
JA33467-4.1	Dave Hunkele		12/28/09 05:14	Disposed

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: JA33467
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51802/GN32834	3.0	0.0	ug/l	25	25.5	102.0	85-115%

Associated Samples:
Batch GP51802: JA33467-1, JA33467-2, JA33467-3, JA33467-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA33467
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51802/GN32834	JA33467-2	ug/l	152	148	2.7	0-15%
Specific Conductivity	GN32877	JA33467-2	umhos/cm	1020	1010	1.0	0-10%

Associated Samples:
Batch GN32877: JA33467-1, JA33467-2, JA33467-3, JA33467-4
Batch GP51802: JA33467-1, JA33467-2, JA33467-3, JA33467-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA33467
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51802/GN32834	JA33467-2	ug/l	152	250	377	91.2	80-120%

Associated Samples:
Batch GP51802: JA33467-1, JA33467-2, JA33467-3, JA33467-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA33467
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409120201.TXT Date Analyzed: 12/02/09 Methods: EPA 314
Analyst: MS Run ID: GN32834
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:54	GN32834-STD1	1		STDA
10:12	GN32834-STD2	1		STDB
10:29	GN32834-STD3	1		STDC
10:46	GN32834-STD4	1		STDD
11:04	GN32834-STD5	1		STDE
11:21	GN32834-STD6	1		STDF
10:29	GN32834-IPC1	1		scon=4160
10:46	GN32834-ICV1	1		
11:04	GP51777-MB2	1		
11:04	GP51802-MB1	1		Sample shown for QC tracking purposes only.
11:21	GN32834-CRI1	1		
11:38	GP51777-B2	1		
11:38	GP51802-B1	1		Sample shown for QC tracking purposes only.
11:56	GN32834-CCV1	1		
12:13	GP51777-ICV2	1		
12:31	ZZZZZZ	1		
12:48	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:23	GN32834-CCVA1	1		
13:40	ZZZZZZ	1		
13:58	JA33467-4	1		scon
14:15	GP51802-S1	1		overrange; see rerun @ 1:10
14:32	GP51802-D1	1		overrange; see rerun @ 1:6
14:50	JA33467-2	1		overrange; see rerun @ 1:6
15:07	JA33467-1	1		scon
15:25	JA33467-3	1		overrange; see rerun @ 1:6
15:42	GP51802-S1	10		
16:00	GP51802-D1	6		
16:17	JA33467-2	6		scon
16:34	GN32834-CCV2	1		
16:52	JA33467-3	6		scon
17:09	GN32834-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA33467
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409120201.TXT Date Analyzed: 12/02/09 Methods: EPA 314
Run ID: GN32834 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32834-IPC1	Perchlorate	23.1	3.0	0.92	25	92.4	80-120
GN32834-ICV1	Perchlorate	26.2	3.0	0.92	25	104.8	90-110
GN32834-CRI1	Perchlorate	2.5	3.0	0.92	3	83.3	75-125
GN32834-CCV1	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32834-CCVA1	Perchlorate	48.9	3.0	0.92	50	97.8	
GN32834-CCV2	Perchlorate	23.9	3.0	0.92	25	95.6	85-115
GN32834-CCVA2	Perchlorate	49.7	3.0	0.92	50	99.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000

Accutest Job Number: JA34587

Sampling Date: 12/07/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **19**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA34587

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA34587-1	12/07/09	12:30	CC	12/07/09	AQ	Ground Water	SC35D
JA34587-2	12/07/09	14:25	CC	12/07/09	AQ	Ground Water	SC36D

R2-0001812

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA34587
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	12/21/2009 5:00:04 P

On 12/07/2009, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA34587 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 EPA 314

Matrix: AQ **Batch ID:** GP51950

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA34850-1DUP, JA34850-1MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN33106

- Sample(s) JA34850-1DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC35D		
Lab Sample ID:	JA34587-1	**Date Sampled:**	12/07/09
Matrix:	AQ - Ground Water	**Date Received:**	12/07/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.0 B	3.0	0.92	ug/l	1	12/14/09 12:43	MS	EPA 314
Specific Conductivity	90.6	0.50		umhos/cm	1	12/11/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC36D		
Lab Sample ID:	JA34587-2	**Date Sampled:**	12/07/09
Matrix:	AQ - Ground Water	**Date Received:**	12/07/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	5.3	3.0	0.92	ug/l	1	12/14/09 13:58	MS	EPA 314
Specific Conductivity	78.1	0.50		umhos/cm	1	12/11/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

GW

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA34587

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Road North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttin lbuttin@trcsolutions.com E-mail:
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): C. Carlson + C. Lindahl Phone #:

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW BLVD
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #:
Project Manager: Larry Buttin

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	SC35D		12/7/09	1230	CLL	AW						X				X	pH=8.23
-2	SC36D		↓	1341425	↓	↓						X				X	pH=6.28
																	UTC 2

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format Hazsite excel
- [x] Other TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

recd @ cooler sealed 12-7-9

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/7/09 1510	1 [signature]	2 [signature]	12-7-9 1715	2 [signature]
3		3	4		4
5		5	Custody Seal # 726	Intact / Not Intact	Presented where applicable / On Ice / Cooler Temp. 1.8

1A

JA34587: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA34587 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 12/7/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA34587: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA34587

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA34587-1	Collected: 07-DEC-09 12:30 By: CC		Received: 07-DEC-09 By: RL			
SC35D						
JA34587-1	SM19 2510B/SW 9050A	11-DEC-09	BD			SCON
JA34587-1	EPA 314	14-DEC-09 12:43	MS	14-DEC-09	MS	PERCHLT
JA34587-2	Collected: 07-DEC-09 14:25 By: CC		Received: 07-DEC-09 By: RL			
SC36D						
JA34587-2	SM19 2510B/SW 9050A	11-DEC-09	BD			SCON
JA34587-2	EPA 314	14-DEC-09 13:58	MS	14-DEC-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA34587
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 12/07/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA34587-1.1	Secured Storage	Todd Shoemaker	12/11/09 08:26	Retrieve from Storage
JA34587-1.1	Todd Shoemaker	Melissa Smith	12/11/09 08:27	Custody Transfer
JA34587-1.1	Melissa Smith	Secured Storage	12/11/09 16:25	Return to Storage
JA34587-1.1	Secured Storage	Zethan Reyes	12/14/09 09:24	Retrieve from Storage
JA34587-1.1	Zethan Reyes	Melissa Smith	12/14/09 09:27	Custody Transfer
JA34587-1.1	Melissa Smith	Secured Storage	12/14/09 16:25	Return to Storage
JA34587-1.1	Dave Hunkele		01/11/10 05:15	Disposed
JA34587-2.1	Secured Storage	Todd Shoemaker	12/11/09 08:26	Retrieve from Storage
JA34587-2.1	Todd Shoemaker	Melissa Smith	12/11/09 08:27	Custody Transfer
JA34587-2.1	Melissa Smith	Secured Storage	12/11/09 16:25	Return to Storage
JA34587-2.1	Secured Storage	Zethan Reyes	12/14/09 09:24	Retrieve from Storage
JA34587-2.1	Zethan Reyes	Melissa Smith	12/14/09 09:27	Custody Transfer
JA34587-2.1	Melissa Smith	Secured Storage	12/14/09 16:25	Return to Storage
JA34587-2.1	Dave Hunkele		01/11/10 05:15	Disposed

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: JA34587
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51950/GN33183	3.0	0.0	ug/l	25	25.2	100.8	85-115%
Perchlorate	GP51950/GN33183			ug/l	8	8.99	112.4	85-115%

Associated Samples:
Batch GP51950: JA34587-1, JA34587-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA34587
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51950/GN33183	JA34850-1	ug/l	72.6	74.0	1.9	0-15%
Specific Conductivity	GN33106	JA34850-1	umhos/cm	617	624	1.1	0-10%

Associated Samples:
Batch GN33106: JA34587-1, JA34587-2
Batch GP51950: JA34587-1, JA34587-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA34587
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51950/GN33183	JA34850-1	ug/l	72.6	125	193	96.3	80-120%

Associated Samples:
Batch GP51950: JA34587-1, JA34587-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA34587
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409121401.TXT Date Analyzed: 12/14/09 Methods: EPA 314
Analyst: MS Run ID: GN33183
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:57	GN33183-STD1	1		STDA
09:14	GN33183-STD2	1		STDB
09:32	GN33183-STD3	1		STDC
09:49	GN33183-STD4	1		STDD
10:06	GN33183-STD5	1		STDE
10:24	GN33183-STD6	1		STDF
10:41	GN33183-IPC1	1		scon=4100
10:59	GN33183-ICV1	1		
11:16	GP51950-MB1	1		
11:33	GN33183-CRI1	1		
11:51	GP51950-B1	1		
12:08	GN33183-CCV1	1		
12:26	ZZZZZZ	1		bad injection
12:43	JA34587-1	1		
13:00	JA34587-2	1		see rerun for confirmation
13:18	ZZZZZZ	1		
13:40	GP51950-ICV1	1		
13:58	JA34587-2	1		
14:15	GP51950-S1	5		
14:33	GP51950-D1	3		
14:50	JA34850-1	3		(sample used for QC only; not part of login JA34587)
15:08	ZZZZZZ	100		
15:25	GN33183-CCVA1	1		
15:42	ZZZZZZ	1		
16:00	ZZZZZZ	1		
16:17	ZZZZZZ	1		
16:35	ZZZZZZ	1		
16:52	ZZZZZZ	1		
17:09	JA34587-1	1		for confirmation only; report original
17:27	GN33183-CCV2	1		
17:44	ZZZZZZ	10		
18:02	ZZZZZZ	10		
18:19	ZZZZZZ	10		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA34587
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409121401.TXT Date Analyzed: 12/14/09 Methods: EPA 314
Analyst: MS Run ID: GN33183
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:36	ZZZZZZ	10		
18:54	GN33183-CCVA2	1		
19:11	ZZZZZZ	5		
19:29	ZZZZZZ	5		
19:46	ZZZZZZ	5		
20:03	ZZZZZZ	5		
20:21	GN33183-CCV3	1		fails low; previous bracket not reported

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA34587
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409121401.TXT Date Analyzed: 12/14/09 Methods: EPA 314
Run ID: GN33183 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN33183-IPC1	Perchlorate	22.6	3.0	0.92	25	90.4	80-120
GN33183-ICV1	Perchlorate	25.5	3.0	0.92	25	102.0	90-110
GN33183-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN33183-CCV1	Perchlorate	25.6	3.0	0.92	25	102.4	85-115
GN33183-CCVA1	Perchlorate	51.8	3.0	0.92	50	103.6	
GN33183-CCV2	Perchlorate	26.7	3.0	0.92	25	106.8	85-115
GN33183-CCVA2	Perchlorate	55.9	3.0	0.92	50	111.8	
GN33183-CCV3	Perchlorate	16.3	3.0	0.92	25	65.2!(a)	85-115

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0020.0000 PO#16372

Accutest Job Number: JA38134

Sampling Date: 01/21/10

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **20**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA38134

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0020.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA38134-1	01/21/10	08:20	CC	01/21/10	AQ	Ground Water	K
JA38134-2	01/21/10	08:40	CC	01/21/10	AQ	Ground Water	LAYNE
JA38134-3	01/21/10	08:50	CC	01/21/10	AQ	Ground Water	W9

R2-0001831

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA38134
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	2/4/2010 11:19:16 AM

On 01/21/2010, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 4.1 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA38134 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 EPA 314

Matrix: AQ **Batch ID:** GP52341

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA38054-1DUP, JA38054-1MS were used as the QC samples for Perchlorate.
- Matrix Spike Recovery(s) for Perchlorate are outside control limits. Spike recovery indicates possible matrix interference.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN34229

- Sample(s) JA38214-1DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	K		
Lab Sample ID:	JA38134-1	**Date Sampled:**	01/21/10
Matrix:	AQ - Ground Water	**Date Received:**	01/21/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	78.1	12	3.7	ug/l	4	01/22/10 19:25	MS	EPA 314
Specific Conductivity	656	0.50		umhos/cm	1	01/22/10	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	LAYNE		
Lab Sample ID:	JA38134-2	**Date Sampled:**	01/21/10
Matrix:	AQ - Ground Water	**Date Received:**	01/21/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	67.4	9.0	2.8	ug/l	3	01/22/10 19:42	MS	EPA 314
Specific Conductivity	830	0.50		umhos/cm	1	01/22/10	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W9		
Lab Sample ID:	JA38134-3	**Date Sampled:**	01/21/10
Matrix:	AQ - Ground Water	**Date Received:**	01/21/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.1	3.0	0.92	ug/l	1	01/22/10 20:00	MS	EPA 314
Specific Conductivity	647	0.50		umhos/cm	1	01/22/10	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

CHAIN OF CUSTODY

ACCUTEST Laboratories

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # JA38134

Client / Reporting Information

Company Name: TRC
Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butler E-mail: lbutler@trcsolutions.com
Phone #: 860 298 6225 Fax #: 860 298 6399
Sampler's Name: R. Carlson

Project Information

Project Name: SM L Perchlorate Investigation
Street: 35 Old Blvd
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 16372

Requested Analysis

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	DI/H2O	8260 BTEX	8260 MTBE	624 TBA	624 MAP	8021 TBA	602 MAP	PAH/G PAH/G	625 BN	625 ABN	625 PAH	8270 BN	8270 ABN	8270 PAH	Perchlorate	LAB USE ONLY
-1	K		1/21/10	0840	cc	GW	1					1																	X	OTC 2
-2	LAYNE			0840	cc	GW	1					1																	X	
-3	W9			0850	cc	GW	1					1																	X	

Turnaround Time (Business Days)

- ☐ Std. 15 Business Days
- ☐ 10 Day RUSH
- ☒ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ NJ Reduced
- ☒ NJ Full
- ☐ Other
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☒ EDD Format: Excel TRCTWA

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1	1/21/10 0947	1	2	1-24-10	2
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4 1135	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Custody Seal # 102 Intact	Preserved where applicable ☐	On Ice ☐ Cooler Temp: 4.1°C

4.1 4

JA38134: Chain of Custody
Page 1 of 2

R2-0001838

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA38134 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 1/21/2010 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA38134: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA38134

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0020.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA38134-1	Collected: 21-JAN-10 08:20 By: CC		Received: 21-JAN-10 By: RL			
K						
JA38134-1	SM19 2510B/SW 9050A	22-JAN-10	RI			SCON
JA38134-1	EPA 314	22-JAN-10 19:25	MS	22-JAN-10	MS	PERCHLT
JA38134-2	Collected: 21-JAN-10 08:40 By: CC		Received: 21-JAN-10 By: RL			
LAYNE						
JA38134-2	SM19 2510B/SW 9050A	22-JAN-10	RI			SCON
JA38134-2	EPA 314	22-JAN-10 19:42	MS	22-JAN-10	MS	PERCHLT
JA38134-3	Collected: 21-JAN-10 08:50 By: CC		Received: 21-JAN-10 By: RL			
W9						
JA38134-3	SM19 2510B/SW 9050A	22-JAN-10	RI			SCON
JA38134-3	EPA 314	22-JAN-10 20:00	MS	22-JAN-10	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA38134
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 01/21/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA38134-1.1	Secured Storage	Todd Shoemaker	01/22/10 08:50	Retrieve from Storage
JA38134-1.1	Todd Shoemaker	Melissa Smith	01/22/10 08:51	Custody Transfer
JA38134-1.1	Melissa Smith	Rie Iwasaki	01/22/10 11:28	Custody Transfer
JA38134-1.1	Rie Iwasaki	Secured Storage	01/22/10 16:53	Return to Storage
JA38134-2.1	Secured Storage	Todd Shoemaker	01/22/10 08:50	Retrieve from Storage
JA38134-2.1	Todd Shoemaker	Melissa Smith	01/22/10 08:51	Custody Transfer
JA38134-2.1	Melissa Smith	Rie Iwasaki	01/22/10 11:28	Custody Transfer
JA38134-2.1	Rie Iwasaki	Secured Storage	01/22/10 16:53	Return to Storage
JA38134-3.1	Secured Storage	Todd Shoemaker	01/22/10 08:50	Retrieve from Storage
JA38134-3.1	Todd Shoemaker	Melissa Smith	01/22/10 08:51	Custody Transfer
JA38134-3.1	Melissa Smith	Rie Iwasaki	01/22/10 11:29	Custody Transfer
JA38134-3.1	Rie Iwasaki	Secured Storage	01/22/10 16:53	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/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA38134
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP52341/GN34240	3.0	0.0	ug/l	25	23.3	93.2	85-115%
Perchlorate	GP52341/GN34240			ug/l	8	7.86	98.3	85-115%

Associated Samples:
Batch GP52341: JA38134-1, JA38134-2, JA38134-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA38134
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP52341/GN34240	JA38054-1	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN34229	JA38214-1	umhos/cm	698	706	1.1	0-10%

Associated Samples:
Batch GN34229: JA38134-1, JA38134-2, JA38134-3
Batch GP52341: JA38134-1, JA38134-2, JA38134-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA38134
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP52341/GN34240	JA38054-1	ug/l	0.0	25	17.3	69.2N(a)	80-120%

Associated Samples:
Batch GP52341: JA38134-1, JA38134-2, JA38134-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA38134
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410012201.TXT Date Analyzed: 01/22/10 Methods: EPA 314
Analyst: MS Run ID: GN34240
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:27	GN34240-STD1	1		STDA
09:02	GN34240-STD2	1		STDB
09:37	GN34240-STD4	1		STDD
10:11	GN34240-STD5	1		STDE
10:29	GN34240-STD3	1		STDC
10:47	GN34240-STD6	1		STDF
10:25	GN34240-IPC1	1		scon=3390
10:43	GN34240-ICV1	1		
11:00	GP52341-MB1	1		
11:18	GN34240-CRI1	1		
11:35	GP52341-B1	1		
11:52	GN34240-CCV1	1		
12:10	GP52341-ICV1	1		
12:27	GP52341-S1	1		Spike recovery indicates possible matrix interference.
12:45	GP52341-D1	1		
13:02	JA38054-1	1		(sample used for QC only; not part of login JA38134)
13:19	JA38134-1	1		overrange - see 1:4
13:37	JA38134-2	1		overrange - see 1:3
13:54	JA38134-3	1		see rerun for confirmation
14:12	ZZZZZZ	1		
14:29	ZZZZZZ	1		
14:46	ZZZZZZ	1		
15:04	GN34240-CCVA1	1		
15:21	ZZZZZZ	1		
15:39	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:13	ZZZZZZ	1		
16:31	ZZZZZZ	1		
16:48	ZZZZZZ	1		
17:06	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:40	ZZZZZZ	200		
17:58	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA38134
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410012201.TXT Date Analyzed: 01/22/10 Methods: EPA 314
Analyst: MS Run ID: GN34240
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:15	GN34240-CCV2	1		
18:33	ZZZZZZ	1		
18:50	ZZZZZZ	1		
19:08	ZZZZZZ	1		
19:25	JA38134-1	4		
19:42	JA38134-2	3		
20:00	JA38134-3	1		
20:17	GN34240-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA38134
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410012201.TXT Date Analyzed: 01/22/10 Methods: EPA 314
Run ID: GN34240 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN34240-IPC1	Perchlorate	20.5	3.0	0.92	25	82.0	80-120
GN34240-ICV1	Perchlorate	23.9	3.0	0.92	25	95.6	90-110
GN34240-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN34240-CCV1	Perchlorate	24.1	3.0	0.92	25	96.4	85-115
GN34240-CCVA1	Perchlorate	47.7	3.0	0.92	50	95.4	
GN34240-CCV2	Perchlorate	23.2	3.0	0.92	25	92.8	85-115
GN34240-CCVA2	Perchlorate	49.9	3.0	0.92	50	99.8	

(!) Outside of QC limits

New Jersey ACCUTEST LABORATORIES

11/18/10

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

177208.000001

Accutest Job Number: JA55820

Sampling Date: 09/08/10

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **32**

ACCREDITED IN ACCORDANCE WITH nelac

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, Laboratory Director

Client Service contact: Marie Meidhof 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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Accutest LabLink@587432 14:53 18-Nov-2010

Sample Summary

TRC

Job No: JA55820

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA55820-1	09/08/10	07:40	JM	09/08/10	AQ	Field Blank Water	FB090810
JA55820-2	09/08/10	09:10	JM	09/08/10	AQ	Ground Water	SC10S
JA55820-3	09/08/10	09:35	JM	09/08/10	AQ	Ground Water	SC10D
JA55820-4	09/08/10	09:55	JM	09/08/10	AQ	Ground Water	SC6S
JA55820-5	09/08/10	10:10	JM	09/08/10	AQ	Ground Water	SC18S
JA55820-6	09/08/10	10:35	JM	09/08/10	AQ	Ground Water	SC1D
JA55820-7	09/08/10	10:55	JM	09/08/10	AQ	Ground Water	SC1S
JA55820-8	09/08/10	11:20	JM	09/08/10	AQ	Ground Water	SC3S
JA55820-9	09/08/10	11:35	JM	09/08/10	AQ	Ground Water	SC3D(R)
JA55820-10	09/08/10	12:30	JM	09/08/10	AQ	Ground Water	SC21S
JA55820-11	09/08/10	13:00	JM	09/08/10	AQ	Ground Water	SC21D
JA55820-12	09/08/10	13:20	JM	09/08/10	AQ	Ground Water	SC24S

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA55820
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	9/30/2010 5:51:05 PM

On 09/08/2010, 11 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA55820 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 EPA 314

Matrix: AQ **Batch ID:** GP55431

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA55826-4DUP, JA55826-4MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN42538

- Sample(s) JA55820-4DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB090810		
Lab Sample ID:	JA55820-1	**Date Sampled:**	09/08/10
Matrix:	AQ - Field Blank Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/10/10 13:26	MS	EPA 314
Specific Conductivity	2.6	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC10S		
Lab Sample ID:	JA55820-2	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/10/10 14:01	MS	EPA 314
Specific Conductivity	472	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC10D		
Lab Sample ID:	JA55820-3	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.5	3.0	0.58	ug/l	1	09/10/10 14:18	MS	EPA 314
Specific Conductivity	772	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC6S		
Lab Sample ID:	JA55820-4	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	19.6	3.0	0.58	ug/l	1	09/10/10 14:35	MS	EPA 314
Specific Conductivity	514	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC18S		
Lab Sample ID:	JA55820-5	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/10/10 14:53	MS	EPA 314
Specific Conductivity	285	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC1D		
Lab Sample ID:	JA55820-6	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	44.5	3.0	0.58	ug/l	1	09/10/10 15:10	MS	EPA 314
Specific Conductivity	393	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC1S		
Lab Sample ID:	JA55820-7	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.69 B	3.0	0.58	ug/l	1	09/10/10 15:27	MS	EPA 314
Specific Conductivity	168	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC3S		
Lab Sample ID:	JA55820-8	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	13.0	3.0	0.58	ug/l	1	09/10/10 15:45	MS	EPA 314
Specific Conductivity	402	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC3D(R)		
Lab Sample ID:	JA55820-9	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	143	18	3.5	ug/l	6	09/10/10 16:02	MS	EPA 314
Specific Conductivity	581	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC21S		
Lab Sample ID:	JA55820-10	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/10/10 16:19	MS	EPA 314
Specific Conductivity	171	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC21D		
Lab Sample ID:	JA55820-11	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	32.8	3.0	0.58	ug/l	1	09/10/10 16:37	MS	EPA 314
Specific Conductivity	228	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC24S		
Lab Sample ID:	JA55820-12	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.1 B	3.0	0.58	ug/l	1	09/10/10 17:11	MS	EPA 314
Specific Conductivity	640	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

New Jersey ACCUTEST LABORATORIES

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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

WW

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF ___

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job # JA55820

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): J. Moss / K. Sheffield Phone #:

Project Information

Project Name: SMC - Perchlorate
Street: 35 Northwest Blvd.
City: Newfield State: NJ
Project #: 177208.000001
Client Purchase Order #:
Project Manager: Larry Butlien

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	FB090810		9/8/10	7:40	JM/KS	W	1					1				X	
-2	SC10S			0910			1					1				X	UTC 2
-3	SC10D			0935			1					1				X	
-4	SC6S			0955			1					1				X	
-5	SC18S			1010			1					1				X	
-6	SC1D			1035			1					1				X	
-7	SC1S			1055			1					1				X	
-8	SC3S			1120			1					1				X	
-9	SC3D(R)			1135			1					1				X	
-10	SC21S			1230			1					1				X	
-11	SC21D			1300			1					1				X	
-12	SC24S			1320			1					1				X	

Turnaround Time (Business days)
- [ ] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format Hazsite Excel
- [x] Other TRCCTW1 NJ Full

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	9/8/10 / 1505	1 [signature] 9-8-10 1505	2 [signature] 9-8-10	1710	2 [signature]
3		3	4		4
5		5	Custody Seal # Na	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice Cooler Temp. 2.2C

4 VI 1 Cooler

JA55820: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA55820 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 9/8/2010 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

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4

JA55820: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA55820

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55820-1 FB090810	Collected: 08-SEP-10 07:40 By: JM		Received: 08-SEP-10 By: TH			
JA55820-1	EPA 314	10-SEP-10 13:26	MS	10-SEP-10	MS	PERCHLT
JA55820-1	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-2 SC10S	Collected: 08-SEP-10 09:10 By: JM		Received: 08-SEP-10 By: TH			
JA55820-2	EPA 314	10-SEP-10 14:01	MS	10-SEP-10	MS	PERCHLT
JA55820-2	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-3 SC10D	Collected: 08-SEP-10 09:35 By: JM		Received: 08-SEP-10 By: TH			
JA55820-3	EPA 314	10-SEP-10 14:18	MS	10-SEP-10	MS	PERCHLT
JA55820-3	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-4 SC6S	Collected: 08-SEP-10 09:55 By: JM		Received: 08-SEP-10 By: TH			
JA55820-4	EPA 314	10-SEP-10 14:35	MS	10-SEP-10	MS	PERCHLT
JA55820-4	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-5 SC18S	Collected: 08-SEP-10 10:10 By: JM		Received: 08-SEP-10 By: TH			
JA55820-5	EPA 314	10-SEP-10 14:53	MS	10-SEP-10	MS	PERCHLT
JA55820-5	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-6 SC1D	Collected: 08-SEP-10 10:35 By: JM		Received: 08-SEP-10 By: TH			
JA55820-6	EPA 314	10-SEP-10 15:10	MS	10-SEP-10	MS	PERCHLT
JA55820-6	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-7 SC1S	Collected: 08-SEP-10 10:55 By: JM		Received: 08-SEP-10 By: TH			
JA55820-7	EPA 314	10-SEP-10 15:27	MS	10-SEP-10	MS	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA55820

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55820-7	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-8	Collected: 08-SEP-10 11:20 By: JM		Received: 08-SEP-10 By: TH			
SC3S						
JA55820-8	EPA 314	10-SEP-10 15:45	MS	10-SEP-10	MS	PERCHLT
JA55820-8	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-9	Collected: 08-SEP-10 11:35 By: JM		Received: 08-SEP-10 By: TH			
SC3D(R)						
JA55820-9	EPA 314	10-SEP-10 16:02	MS	10-SEP-10	MS	PERCHLT
JA55820-9	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-10	Collected: 08-SEP-10 12:30 By: JM		Received: 08-SEP-10 By: TH			
SC21S						
JA55820-10	EPA 314	10-SEP-10 16:19	MS	10-SEP-10	MS	PERCHLT
JA55820-10	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-11	Collected: 08-SEP-10 13:00 By: JM		Received: 08-SEP-10 By: TH			
SC21D						
JA55820-11	EPA 314	10-SEP-10 16:37	MS	10-SEP-10	MS	PERCHLT
JA55820-11	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55820-12	Collected: 08-SEP-10 13:20 By: JM		Received: 08-SEP-10 By: TH			
SC24S						
JA55820-12	EPA 314	10-SEP-10 17:11	MS	10-SEP-10	MS	PERCHLT
JA55820-12	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON

Accutest Internal Chain of Custody

Job Number: JA55820
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55820-1.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-1.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-1.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-1.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-1.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-1.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-1.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-2.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-2.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-2.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-2.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-2.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-2.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-2.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-3.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-3.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-3.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-3.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-3.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-3.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-3.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-4.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-4.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-4.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-4.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-4.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-4.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-4.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-5.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-5.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-5.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-5.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-5.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-5.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-5.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-6.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-6.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-6.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-6.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA55820
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55820-6.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-6.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-6.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-7.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-7.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-7.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-7.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-7.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-7.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-7.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-8.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-8.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-8.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-8.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-8.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-8.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-8.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-9.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-9.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-9.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-9.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-9.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-9.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-9.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-10.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-10.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-10.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-10.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-10.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-10.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-10.1	Dave Hunkele		10/20/10 06:49	Disposed
JA55820-11.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-11.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-11.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-11.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-11.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-11.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-11.1	Dave Hunkele		10/20/10 06:49	Disposed

Accutest Internal Chain of Custody

Job Number: JA55820
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55820-12.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55820-12.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55820-12.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55820-12.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55820-12.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55820-12.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55820-12.1	Dave Hunkele		10/20/10 06:49	Disposed

New Jersey ACCUTEST LABORATORIES

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: JA55820
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP55431/GN42159	3.0	0.0	ug/l	25	24.2	96.8	85-115%
Perchlorate	GP55431/GN42159			ug/l	8	7.43	92.9	85-115%

Associated Samples:
Batch GP55431: JA55820-1, JA55820-10, JA55820-11, JA55820-12, JA55820-2, JA55820-3, JA55820-4, JA55820-5, JA55820-6, JA55820-7, JA55820-8, JA55820-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA55820
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP55431/GN42159	JA55826-4	ug/l	158	155	1.9	0-15%
Specific Conductivity	GN42538	JA55820-4	umhos/cm	514	509	1.0	0-10%

Associated Samples:
Batch GN42538: JA55820-1, JA55820-10, JA55820-11, JA55820-12, JA55820-2, JA55820-3, JA55820-4, JA55820-5, JA55820-6, JA55820-7, JA55820-8, JA55820-9
Batch GP55431: JA55820-1, JA55820-10, JA55820-11, JA55820-12, JA55820-2, JA55820-3, JA55820-4, JA55820-5, JA55820-6, JA55820-7, JA55820-8, JA55820-9
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA55820
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP55431/GN42159	JA55826-4	ug/l	158	250	406	99.2	80-120%

Associated Samples:
Batch GP55431: JA55820-1, JA55820-10, JA55820-11, JA55820-12, JA55820-2, JA55820-3, JA55820-4, JA55820-5, JA55820-6, JA55820-7, JA55820-8, JA55820-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

5.3
5

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55820
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091001.TXT Date Analyzed: 09/10/10 Methods: EPA 314
Analyst: MS Run ID: GN42159
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:05	GN42159-STD1	1		STDA
11:23	GN42159-STD2	1		STDB
11:40	GN42159-STD3	1		STDC
11:57	GN42159-STD4	1		STDD
12:14	GN42159-STD5	1		STDE
12:32	GN42159-STD6	1		STDF
09:07	GN42159-IPC1	1		
09:24	GN42159-ICV1	1		
09:41	GP55431-MB1	1		
09:59	GN42159-CRI1	1		
10:16	GP55431-B1	1		
10:33	GN42159-CCV1	1		
10:50	GP55431-ICV1	1		
11:08	GP55431-D1	6		
11:25	JA55826-4	6		(sample used for QC only; not part of login JA55820)
11:42	GP55431-S1	10		
12:00	ZZZZZZ	1		
12:17	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:52	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:26	JA55820-1	1		scon
13:44	GN42159-CCVA1	1		
14:01	JA55820-2	1		scon
14:18	JA55820-3	1		scon
14:35	JA55820-4	1		scon
14:53	JA55820-5	1		scon
15:10	JA55820-6	1		scon
15:27	JA55820-7	1		scon
15:45	JA55820-8	1		scon
16:02	JA55820-9	6		scon
16:19	JA55820-10	1		scon
16:37	JA55820-11	1		scon

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55820
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091001.TXT Date Analyzed: 09/10/10 Methods: EPA 314
Analyst: MS Run ID: GN42159
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:54	GN42159-CCV2	1		
17:11	JA55820-12	1		scon
17:28	GN42159-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA55820
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091001.TXT Date Analyzed: 09/10/10 Methods: EPA 314
Run ID: GN42159 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN42159-IPC1	Perchlorate	24.8(a)	3.0	0.58	25	99.2(a)	80-120
GN42159-ICV1	Perchlorate	23.6	3.0	0.58	25	94.4	90-110
GN42159-CRI1	Perchlorate	2.4	3.0	0.58	3	80.0	75-125
GN42159-CCV1	Perchlorate	23.5	3.0	0.58	25	94.0	85-115
GN42159-CCVA1	Perchlorate	50.8	3.0	0.58	50	101.6	
GN42159-CCV2	Perchlorate	24.4	3.0	0.58	25	97.6	85-115
GN42159-CCVA2	Perchlorate	53.2	3.0	0.58	50	106.4	

(!) Outside of QC limits
(a) Scon = 4360

New Jersey ACCUTEST LABORATORIES

11/19/10

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

172208.B00001.000000

Accutest Job Number: JA55826

Sampling Date: 09/08/10

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **24**

ACCREDITED IN ACCORDANCE WITH nelac

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, Laboratory Director

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA55826

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 172208.B00001.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA55826-1	09/08/10	10:30	CC	09/08/10	AQ	Ground Water	SC26D
JA55826-2	09/08/10	12:35	CC	09/08/10	AQ	Ground Water	SC28D
JA55826-3	09/08/10	13:10	CC	09/08/10	AQ	Ground Water	SC33D
JA55826-4	09/08/10	13:55	CC	09/08/10	AQ	Ground Water	SC34D
JA55826-4D	09/08/10	13:55	CC	09/08/10	AQ	Water Dup/MSD	SC34D
JA55826-4S	09/08/10	13:55	CC	09/08/10	AQ	Water Matrix Spike	SC34D
JA55826-5	09/08/10	14:20	CC	09/08/10	AQ	Ground Water	SC32D
JA55826-6	09/08/10	15:00	CC	09/08/10	AQ	Ground Water	SC2D(R)

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA55826
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	10/1/2010 8:52:16 AM

On 09/08/2010, 6 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA55826 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 EPA 314

Matrix: AQ **Batch ID:** GP55431

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA55826-4DUP, JA55826-4MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN42538

- Sample(s) JA55826-4DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC26D		
Lab Sample ID:	JA55826-1	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.8	3.0	0.58	ug/l	1	09/10/10 12:00	MS	EPA 314
Specific Conductivity	682	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0001886

Report of Analysis

Client Sample ID:	SC28D		
Lab Sample ID:	JA55826-2	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	16.8	3.0	0.58	ug/l	1	09/10/10 12:17	MS	EPA 314
Specific Conductivity	977	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC33D		
Lab Sample ID:	JA55826-3	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/10/10 12:34	MS	EPA 314
Specific Conductivity	60.4	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC34D		
Lab Sample ID:	JA55826-4	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	158	18	3.5	ug/l	6	09/10/10 11:25	MS	EPA 314
Specific Conductivity	1030	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC32D		
Lab Sample ID:	JA55826-5	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.7	3.0	0.58	ug/l	1	09/10/10 12:52	MS	EPA 314
Specific Conductivity	121	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC2D(R)		
Lab Sample ID:	JA55826-6	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.6	3.0	0.58	ug/l	1	09/10/10 13:09	MS	EPA 314
Specific Conductivity	274	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

GW

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA55826

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860 298 6225 Fax #: 860 298 6399
Sampler(s) Name(s): C. Carlson/C Lindahl Phone #: 860.989.5416

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 172208.000001.000000
Client Purchase Order #:
Project Manager: Larry Butlien

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate										LAB USE ONLY
-1	SC26D		9/8/10	1030	CC/CL	GW	1					1				X										UTC2
-2	~~SC33D~~ SC28D		↓	1235	CC/CL	GW	1					1				X										
-3	SC33D			1310	CC/CL	GW	1									X										
-4	SC34D		↓	1355	CC/CL	GW	3					3				X	MS/MSD volume included									
-5	SC32D		9/8/10	1420	KS/JM	GW	1					1				X										
-6	SC2D(R)			1500	KS/JM	GW	1					1				X										

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other Hazsite Excel TRC CTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	9/8/10 1505	1 [signature] 9.8.10 1505	2 [signature] 9.8.10	1710	2 [signature]
3		3	4		4
5		5	Custody Seal # N/A	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☒ Cooler Temp. 2.2C

V1 1 Cooler.

4.1

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JA55826: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA55826 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 9/8/2010 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA55826: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA55826

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 172208.B00001.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55826-1 SC26D	Collected: 08-SEP-10 10:30 By: CC		Received: 08-SEP-10 By: TH			
JA55826-1	EPA 314	10-SEP-10 12:00	MS	10-SEP-10	MS	PERCHLT
JA55826-1	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55826-2 SC28D	Collected: 08-SEP-10 12:35 By: CC		Received: 08-SEP-10 By: TH			
JA55826-2	EPA 314	10-SEP-10 12:17	MS	10-SEP-10	MS	PERCHLT
JA55826-2	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55826-3 SC33D	Collected: 08-SEP-10 13:10 By: CC		Received: 08-SEP-10 By: TH			
JA55826-3	EPA 314	10-SEP-10 12:34	MS	10-SEP-10	MS	PERCHLT
JA55826-3	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55826-4 SC34D	Collected: 08-SEP-10 13:55 By: CC		Received: 08-SEP-10 By: TH			
JA55826-4	EPA 314	10-SEP-10 11:25	MS	10-SEP-10	MS	PERCHLT
JA55826-4	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55826-5 SC32D	Collected: 08-SEP-10 14:20 By: CC		Received: 08-SEP-10 By: TH			
JA55826-5	EPA 314	10-SEP-10 12:52	MS	10-SEP-10	MS	PERCHLT
JA55826-5	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON
JA55826-6 SC2D(R)	Collected: 08-SEP-10 15:00 By: CC		Received: 08-SEP-10 By: TH			
JA55826-6	EPA 314	10-SEP-10 13:09	MS	10-SEP-10	MS	PERCHLT
JA55826-6	SM19 2510B/SW 9050A	22-SEP-10	ST			SCON

Accutest Internal Chain of Custody

Job Number: JA55826
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55826-1.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-1.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-1.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-1.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-1.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-1.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-1.1	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-2.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-2.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-2.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-2.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-2.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-2.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-2.1	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-3.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-3.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-3.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-3.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-3.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-3.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-3.1	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-4.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-4.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-4.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-4.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-4.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-4.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-4.1	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-4.2	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-4.2	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-4.2	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-4.2	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-4.2	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-4.2	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-4.2	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-4.3	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-4.3	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-4.3	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-4.3	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA55826
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/08/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55826-4.3	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-4.3	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-4.3	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-5.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-5.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-5.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-5.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-5.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-5.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-5.1	Dave Hunkele		10/25/10 10:54	Disposed
JA55826-6.1	Secured Storage	Todd Shoemaker	09/10/10 08:27	Retrieve from Storage
JA55826-6.1	Todd Shoemaker	Melissa Smith	09/10/10 08:28	Custody Transfer
JA55826-6.1	Melissa Smith	Secured Storage	09/10/10 15:40	Return to Storage
JA55826-6.1	Secured Storage	Todd Shoemaker	09/22/10 08:22	Retrieve from Storage
JA55826-6.1	Todd Shoemaker	Sarvadaman Tripathi	09/22/10 08:25	Custody Transfer
JA55826-6.1	Sarvadaman Tripathi	Secured Storage	09/22/10 17:03	Return to Storage
JA55826-6.1	Dave Hunkele		10/25/10 10:54	Disposed

New Jersey ACCUTEST LABORATORIES

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: JA55826
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP55431/GN42159	3.0	0.0	ug/l	25	24.2	96.8	85-115%
Perchlorate	GP55431/GN42159			ug/l	8	7.43	92.9	85-115%

Associated Samples:
Batch GP55431: JA55826-1, JA55826-2, JA55826-3, JA55826-4, JA55826-5, JA55826-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA55826
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP55431/GN42159	JA55826-4	ug/l	158	155	1.9	0-15%
Specific Conductivity	GN42538	JA55826-4	umhos/cm	1030	1030	0.0	0-10%

Associated Samples:
Batch GN42538: JA55826-1, JA55826-2, JA55826-3, JA55826-4, JA55826-5, JA55826-6
Batch GP55431: JA55826-1, JA55826-2, JA55826-3, JA55826-4, JA55826-5, JA55826-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA55826
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP55431/GN42159	JA55826-4	ug/l	158	250	406	99.2	80-120%

Associated Samples:
Batch GP55431: JA55826-1, JA55826-2, JA55826-3, JA55826-4, JA55826-5, JA55826-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55826
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091001.TXT Date Analyzed: 09/10/10 Methods: EPA 314
Analyst: MS Run ID: GN42159
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:05	GN42159-STD1	1		STDA
11:23	GN42159-STD2	1		STDB
11:40	GN42159-STD3	1		STDC
11:57	GN42159-STD4	1		STDD
12:14	GN42159-STD5	1		STDE
12:32	GN42159-STD6	1		STDF
09:07	GN42159-IPC1	1		
09:24	GN42159-ICV1	1		
09:41	GP55431-MB1	1		
09:59	GN42159-CRI1	1		
10:16	GP55431-B1	1		
10:33	GN42159-CCV1	1		
10:50	GP55431-ICV1	1		
11:08	GP55431-D1	6		
11:25	JA55826-4	6		scon
11:42	GP55431-S1	10		
12:00	JA55826-1	1		scon
12:17	JA55826-2	1		scon
12:34	JA55826-3	1		scon
12:52	JA55826-5	1		scon
13:09	JA55826-6	1		scon
13:26	ZZZZZZ	1		
13:44	GN42159-CCVA1	1		
14:01	ZZZZZZ	1		
14:18	ZZZZZZ	1		
14:35	ZZZZZZ	1		
14:53	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:27	ZZZZZZ	1		
15:45	ZZZZZZ	1		
16:02	ZZZZZZ	6		
16:19	ZZZZZZ	1		
16:37	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55826
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091001.TXT Date Analyzed: 09/10/10 Methods: EPA 314
Analyst: MS Run ID: GN42159
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:54	GN42159-CCV2	1		
17:11	ZZZZZZ	1		
17:28	GN42159-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA55826
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091001.TXT Date Analyzed: 09/10/10 Methods: EPA 314
Run ID: GN42159 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN42159-IPC1	Perchlorate	24.8(a)	3.0	0.58	25	99.2(a)	80-120
GN42159-ICV1	Perchlorate	23.6	3.0	0.58	25	94.4	90-110
GN42159-CRI1	Perchlorate	2.4	3.0	0.58	3	80.0	75-125
GN42159-CCV1	Perchlorate	23.5	3.0	0.58	25	94.0	85-115
GN42159-CCVA1	Perchlorate	50.8	3.0	0.58	50	101.6	
GN42159-CCV2	Perchlorate	24.4	3.0	0.58	25	97.6	85-115
GN42159-CCVA2	Perchlorate	53.2	3.0	0.58	50	106.4	

(!) Outside of QC limits
(a) Scon = 4360

New Jersey ACCUTEST LABORATORIES

11/19/10

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

177208.000001.000000

Accutest Job Number: JA55913

Sampling Dates: 09/08/10 - 09/09/10

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **50**

ACCREDITED IN ACCORDANCE WITH nelac

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, Laboratory Director

Client Service contact: Marie Meidhof 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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Accutest LabLink@587725 17:00 19-Nov-2010

Sample Summary

TRC

Job No: JA55913

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA55913-1	09/08/10	14:50	CC	09/09/10	AQ	Ground Water	SC35D
JA55913-2	09/08/10	15:20	CC	09/09/10	AQ	Ground Water	SC36D
JA55913-2D	09/08/10	15:20	CC	09/09/10	AQ	Water Dup/MSD	SC36D
JA55913-2S	09/08/10	15:20	CC	09/09/10	AQ	Water Matrix Spike	SC36D
JA55913-3	09/08/10	15:45	CC	09/09/10	AQ	Ground Water	SC37D
JA55913-4	09/08/10	16:40	CC	09/09/10	AQ	Ground Water	SC30D
JA55913-5	09/08/10	17:45	CC	09/09/10	AQ	Ground Water	W2R
JA55913-6	09/09/10	08:10	CC	09/09/10	AQ	Field Blank Water	FB090910
JA55913-7	09/09/10	09:15	CC	09/09/10	AQ	Ground Water	SC22S
JA55913-8	09/09/10	09:55	CC	09/09/10	AQ	Ground Water	IWC-4
JA55913-9	09/09/10	10:25	CC	09/09/10	AQ	Ground Water	SC14S
JA55913-10	09/09/10	10:35	CC	09/09/10	AQ	Ground Water	W3D
JA55913-11	09/09/10	10:40	CC	09/09/10	AQ	Ground Water	SC11S(R)

Sample Summary
(continued)

TRC

Job No: JA55913

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA55913-12	09/09/10	10:45	CC	09/09/10	AQ	Ground Water	SC12D
JA55913-13	09/08/10	15:45	CC	09/09/10	AQ	Ground Water	SC17S
JA55913-14	09/08/10	16:30	CC	09/09/10	AQ	Ground Water	SC17D
JA55913-15	09/08/10	17:35	CC	09/09/10	AQ	Ground Water	SC25S
JA55913-16	09/09/10	11:00	CC	09/09/10	AQ	Ground Water	SC20D
JA55913-17	09/09/10	11:10	CC	09/09/10	AQ	Ground Water	SC16S
JA55913-18	09/09/10	11:20	CC	09/09/10	AQ	Ground Water	W4
JA55913-19	09/09/10	11:35	CC	09/09/10	AQ	Ground Water	K
JA55913-20	09/09/10	11:50	CC	09/09/10	AQ	Ground Water	LAYNE
JA55913-21	09/09/10	12:00	CC	09/09/10	AQ	Ground Water	J

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA55913
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	10/4/2010 6:23:39 PM

On 09/09/2010, 20 Sample(s), 0 Trip Blank(s) and 1 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 JA55913 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 EPA 314

Matrix: AQ **Batch ID:** GP55524

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA55913-2DUP, JA55913-2MS were used as the QC samples for Perchlorate.

Matrix: AQ **Batch ID:** GP55533

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA56316-5DUP, JA56316-5MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN42597

- Sample(s) JA55913-11DUP, JA55913-2DUP were used as the QC samples for Specific Conductivity.

Matrix: AQ **Batch ID:** GN42681

- Sample(s) JA55913-21DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SC35D		
Lab Sample ID:	JA55913-1	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.7 B	3.0	0.58	ug/l	1	09/17/10 12:55	NR	EPA 314
Specific Conductivity	66.4	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC36D		
Lab Sample ID:	JA55913-2	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.4	3.0	0.58	ug/l	1	09/17/10 12:38	NR	EPA 314
Specific Conductivity	50.5	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC37D		
Lab Sample ID:	JA55913-3	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	5.6	3.0	0.58	ug/l	1	09/17/10 13:12	NR	EPA 314
Specific Conductivity	49.4	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC30D		
Lab Sample ID:	JA55913-4	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.8 B	3.0	0.58	ug/l	1	09/17/10 13:29	NR	EPA 314
Specific Conductivity	79.0	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W2R		
Lab Sample ID:	JA55913-5	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 13:47	NR	EPA 314
Specific Conductivity	192	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB090910		
Lab Sample ID:	JA55913-6	**Date Sampled:**	09/09/10
Matrix:	AQ - Field Blank Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 14:04	NR	EPA 314
Specific Conductivity	2.6	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC22S		
Lab Sample ID:	JA55913-7	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.0 B	3.0	0.58	ug/l	1	09/17/10 14:21	NR	EPA 314
Specific Conductivity	860	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	IWC-4		
Lab Sample ID:	JA55913-8	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.4	3.0	0.58	ug/l	1	09/17/10 14:56	NR	EPA 314
Specific Conductivity	250	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC14S		
Lab Sample ID:	JA55913-9	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 15:13	NR	EPA 314
Specific Conductivity	98.3	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W3D		
Lab Sample ID:	JA55913-10	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.4	3.0	0.58	ug/l	1	09/17/10 15:31	NR	EPA 314
Specific Conductivity	110	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC11S(R)		
Lab Sample ID:	JA55913-11	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 15:48	NR	EPA 314
Specific Conductivity	140	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC12D		
Lab Sample ID:	JA55913-12	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 16:05	NR	EPA 314
Specific Conductivity	36.5	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC17S		
Lab Sample ID:	JA55913-13	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 16:25	NR	EPA 314
Specific Conductivity	280	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC17D		
Lab Sample ID:	JA55913-14	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	5.6	3.0	0.58	ug/l	1	09/17/10 16:43	NR	EPA 314
Specific Conductivity	118	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC25S		
Lab Sample ID:	JA55913-15	**Date Sampled:**	09/08/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.64 B	3.0	0.58	ug/l	1	09/17/10 17:00	NR	EPA 314
Specific Conductivity	268	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC20D		
Lab Sample ID:	JA55913-16	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.0	3.0	0.58	ug/l	1	09/17/10 17:17	NR	EPA 314
Specific Conductivity	166	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC16S		
Lab Sample ID:	JA55913-17	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.58 U	3.0	0.58	ug/l	1	09/17/10 17:35	NR	EPA 314
Specific Conductivity	239	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	W4		
Lab Sample ID:	JA55913-18	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.93 B	3.0	0.58	ug/l	1	09/17/10 18:09	NR	EPA 314
Specific Conductivity	149	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	K		
Lab Sample ID:	JA55913-19	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.9 B	3.0	0.58	ug/l	1	09/17/10 18:27	NR	EPA 314
Specific Conductivity	356	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	LAYNE		
Lab Sample ID:	JA55913-20	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	36.6	3.0	0.58	ug/l	1	09/17/10 18:44	NR	EPA 314
Specific Conductivity	695	0.50		umhos/cm	1	09/23/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	J		
Lab Sample ID:	JA55913-21	**Date Sampled:**	09/09/10
Matrix:	AQ - Ground Water	**Date Received:**	09/09/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0	3.0	0.58	ug/l	1	09/18/10 13:33	NR	EPA 314
Specific Conductivity	354	0.50		umhos/cm	1	09/27/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
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PAGE 1 OF 2

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA55913

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City / State / Zip: Windsor CT 06095
Project Contact: Larry Buthen lbuthen@trcsolutions.com
Phone #: 860 298 6225 Fax #: 860 298 6399
Sampler(s) Name(s): C. Carlson C Lindahl Phone #: 860 989 5416

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd
City / State: Newfield NJ
Project #: 177208.000001.00000
Client Purchase Order #:
Project Manager: Larry Buthen

Billing Information (If different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	MS/MSD									LAB USE ONLY
1	SC35D		9/8/10	1480	CC/CL	GW	1					1				X										
2	SC36D			1520	CC/CL	GW	13					1				X	X	KW 9/9/10								UTC2
3	SC37D			1545	CC/CL	GW	1					1				X										
4	SC30D			1640	CC/CL	GW	1					1				X										
5	W2R			1745	CC/CL	GW	1					1				X										
6	FB090910		9/9/10	0810	JM	GW	1					1				X										
7	SC22S			0915	KS/CL		1					1				X										
8	IWC-4			0955			1					1				X										
9	SC14S			1025			1					1				X										
10	W3D			1035			1					1				X										
11	SC11S(R)			1040			1					1				X										
12	SC12D			1045			1					1				X										

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other Hazsite Excel TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	9/8/10, 1805	1 SMC Infirmary	2		2
3 [signature]	9/9/10 1510	3 [signature]	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact — Preserved where applicable ☐ — On Ice ☒ — Cooler Temp. 2.4°C

4.1 4

JA55913: Chain of Custody
Page 1 of 4

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 2 OF 2

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www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA55913

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Road North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buthlen E-mail: lbuthlen@trcsolutions.com
Phone #: 860-298-6225 Fax #: 860-298-6399
Sampler(s) Name(s): J. Moss / C. Carlson, K. Sheffield / C. Lundahl Phone #: 860-989-5416

Project Information

Project Name: SMC Perchlorate GW Sampling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 177208.00000100000
Client Purchase Order #:
Project Manager: Larry Buthlen

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-	13 SC17S		9/8/10	1545	KS/JM	GW	1					1				X	
-	14 SC17D		9/8/10	1630	KS/JM	GW	1					1				X	
-	15 SC25S		9/8/10	1735	KS/JM	GW	1					1				X	
-	16 SC20D		9/9/10	1100	KS/CL	GW	1					1				X	
-	17 SC16S		↓	1110	↓	↓	1					1				X	
-	18 W4		↓	1120	↓	↓	1					1				X	
-	19 K		↓	1185	↓	↓	1					1				X	
-	20 Layne		↓	1150	↓	↓	1					1				X	
-	21 J		↓	1200	↓	↓	1					1				X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other Hazsik Excel TRCCRUZ

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	9/8/10 18:05	1 SMC Infirmary	2		2
3 [signature]	9/9/10 1510	3 [signature]	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☒
Cooler Temp. 2.4°C

JA55913: Chain of Custody
Page 2 of 4

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA55913 **Client:** TRC-CT **Immediate Client Services Action Required:** No

Date / Time Received: 9/9/2010 1510 **Delivery Method:** Client **Client Service Action Required at Login:** Yes

Project: SMC **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	N	N/A
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:	☐	☐	☑

Comments

-2 REC'D MS/MSD VOL

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA55913: Chain of Custody
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Sample Receipt Summary - Problem Resolution

Accutest Job Number: JA55913

CSR: Marie Meidhof **Response Date** 9/10/2010

Response: Please login sample -2 as MS/MSD; triple volume received.

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
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JA55913: Chain of Custody
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Internal Sample Tracking Chronicle

TRC

Job No: JA55913

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55913-1	Collected: 08-SEP-10 14:50 By: CC		Received: 09-SEP-10 By: MPC			
SC35D						
JA55913-1	EPA 314	17-SEP-10 12:55	NR	17-SEP-10	NR	PERCHLT
JA55913-1	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-2	Collected: 08-SEP-10 15:20 By: CC		Received: 09-SEP-10 By: MPC			
SC36D						
JA55913-2	EPA 314	17-SEP-10 12:38	NR	17-SEP-10	NR	PERCHLT
JA55913-2	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-3	Collected: 08-SEP-10 15:45 By: CC		Received: 09-SEP-10 By: MPC			
SC37D						
JA55913-3	EPA 314	17-SEP-10 13:12	NR	17-SEP-10	NR	PERCHLT
JA55913-3	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-4	Collected: 08-SEP-10 16:40 By: CC		Received: 09-SEP-10 By: MPC			
SC30D						
JA55913-4	EPA 314	17-SEP-10 13:29	NR	17-SEP-10	NR	PERCHLT
JA55913-4	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-5	Collected: 08-SEP-10 17:45 By: CC		Received: 09-SEP-10 By: MPC			
W2R						
JA55913-5	EPA 314	17-SEP-10 13:47	NR	17-SEP-10	NR	PERCHLT
JA55913-5	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-6	Collected: 09-SEP-10 08:10 By: CC		Received: 09-SEP-10 By: MPC			
FB090910						
JA55913-6	EPA 314	17-SEP-10 14:04	NR	17-SEP-10	NR	PERCHLT
JA55913-6	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-7	Collected: 09-SEP-10 09:15 By: CC		Received: 09-SEP-10 By: MPC			
SC22S						
JA55913-7	EPA 314	17-SEP-10 14:21	NR	17-SEP-10	NR	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA55913

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55913-7	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-8	Collected: 09-SEP-10 09:55 By: CC		Received: 09-SEP-10 By: MPC			
IWC-4						
JA55913-8	EPA 314	17-SEP-10 14:56	NR	17-SEP-10	NR	PERCHLT
JA55913-8	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-9	Collected: 09-SEP-10 10:25 By: CC		Received: 09-SEP-10 By: MPC			
SC14S						
JA55913-9	EPA 314	17-SEP-10 15:13	NR	17-SEP-10	NR	PERCHLT
JA55913-9	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-10	Collected: 09-SEP-10 10:35 By: CC		Received: 09-SEP-10 By: MPC			
W3D						
JA55913-10	EPA 314	17-SEP-10 15:31	NR	17-SEP-10	NR	PERCHLT
JA55913-10	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-11	Collected: 09-SEP-10 10:40 By: CC		Received: 09-SEP-10 By: MPC			
SC11S(R)						
JA55913-11	EPA 314	17-SEP-10 15:48	NR	17-SEP-10	NR	PERCHLT
JA55913-11	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-12	Collected: 09-SEP-10 10:45 By: CC		Received: 09-SEP-10 By: MPC			
SC12D						
JA55913-12	EPA 314	17-SEP-10 16:05	NR	17-SEP-10	NR	PERCHLT
JA55913-12	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-13	Collected: 08-SEP-10 15:45 By: CC		Received: 09-SEP-10 By: MPC			
SC17S						
JA55913-13	EPA 314	17-SEP-10 16:25	NR	17-SEP-10	NR	PERCHLT
JA55913-13	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON

Internal Sample Tracking Chronicle

TRC

Job No: JA55913

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55913-14	Collected: 08-SEP-10 16:30 By: CC		Received: 09-SEP-10 By: MPC			
SC17D						
JA55913-14	EPA 314	17-SEP-10 16:43	NR	17-SEP-10	NR	PERCHLT
JA55913-14	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-15	Collected: 08-SEP-10 17:35 By: CC		Received: 09-SEP-10 By: MPC			
SC25S						
JA55913-15	EPA 314	17-SEP-10 17:00	NR	17-SEP-10	NR	PERCHLT
JA55913-15	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-16	Collected: 09-SEP-10 11:00 By: CC		Received: 09-SEP-10 By: MPC			
SC20D						
JA55913-16	EPA 314	17-SEP-10 17:17	NR	17-SEP-10	NR	PERCHLT
JA55913-16	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-17	Collected: 09-SEP-10 11:10 By: CC		Received: 09-SEP-10 By: MPC			
SC16S						
JA55913-17	EPA 314	17-SEP-10 17:35	NR	17-SEP-10	NR	PERCHLT
JA55913-17	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-18	Collected: 09-SEP-10 11:20 By: CC		Received: 09-SEP-10 By: MPC			
W4						
JA55913-18	EPA 314	17-SEP-10 18:09	NR	17-SEP-10	NR	PERCHLT
JA55913-18	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-19	Collected: 09-SEP-10 11:35 By: CC		Received: 09-SEP-10 By: MPC			
K						
JA55913-19	EPA 314	17-SEP-10 18:27	NR	17-SEP-10	NR	PERCHLT
JA55913-19	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-20	Collected: 09-SEP-10 11:50 By: CC		Received: 09-SEP-10 By: MPC			
LAYNE						

Internal Sample Tracking Chronicle

TRC

Job No: JA55913

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208.000001.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA55913-20	EPA 314	17-SEP-10 18:44	NR	17-SEP-10	NR	PERCHLT
JA55913-20	SM19 2510B/SW 9050A	23-SEP-10	ST			SCON
JA55913-21	Collected: 09-SEP-10 12:00 By: CC		Received: 09-SEP-10 By: MPC			
J						
JA55913-21	EPA 314	18-SEP-10 13:33	NR	18-SEP-10	NR	PERCHLT
JA55913-21	SM19 2510B/SW 9050A	27-SEP-10	ST			SCON

Accutest Internal Chain of Custody

Job Number: JA55913
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/09/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55913-1.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-1.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-1.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-1.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-1.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-1.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-1.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-2.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-2.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-2.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-2.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-2.2	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-2.2	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-2.2	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-2.2	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-2.2	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-2.2	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-2.2	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-2.3	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-2.3	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-2.3	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-2.3	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-2.3	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-2.3	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-2.3	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-3.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-3.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-3.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-3.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-3.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-3.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-3.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-4.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-4.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-4.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-4.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-4.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-4.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-4.1	Dave Hunkele		10/25/10 10:55	Disposed

Accutest Internal Chain of Custody

Job Number: JA55913
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/09/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55913-5.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-5.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-5.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-5.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-5.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-5.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-5.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-6.1	Secured Storage	John Thomas	09/17/10 11:30	Retrieve from Storage
JA55913-6.1	John Thomas	Natalie Romanoff	09/17/10 11:31	Custody Transfer
JA55913-6.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-6.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-6.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-6.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-6.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-7.1	Secured Storage	John Thomas	09/17/10 11:30	Retrieve from Storage
JA55913-7.1	John Thomas	Natalie Romanoff	09/17/10 11:31	Custody Transfer
JA55913-7.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-7.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-7.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-7.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-7.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-8.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-8.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-8.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-8.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-8.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-8.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-8.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-9.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-9.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-9.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-9.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-9.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-9.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-9.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-10.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-10.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-10.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA55913
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/09/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55913-10.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-10.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-10.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-10.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-11.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-11.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-11.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-11.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-11.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-11.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-11.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-12.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-12.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-12.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-12.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-12.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-12.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-12.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-13.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-13.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-13.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-13.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-13.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-13.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-13.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-14.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-14.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-14.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-14.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-14.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-14.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-14.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-15.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-15.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-15.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-15.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-15.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-15.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-15.1	Dave Hunkele		10/25/10 10:55	Disposed

Accutest Internal Chain of Custody

Job Number: JA55913
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/09/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55913-16.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-16.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-16.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-16.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-16.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-16.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-16.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-17.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-17.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-17.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-17.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-17.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-17.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-17.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-18.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-18.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-18.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-18.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-18.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-18.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-18.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-19.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-19.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-19.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-19.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-19.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-19.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-19.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-20.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-20.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-20.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage
JA55913-20.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-20.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-20.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-20.1	Dave Hunkele		10/25/10 10:55	Disposed
JA55913-21.1	Secured Storage	Todd Shoemaker	09/17/10 08:10	Retrieve from Storage
JA55913-21.1	Todd Shoemaker	Natalie Romanoff	09/17/10 08:15	Custody Transfer
JA55913-21.1	Natalie Romanoff	Secured Storage	09/17/10 15:47	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA55913
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 09/09/10

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA55913-21.1	Secured Storage	John Thomas	09/18/10 08:36	Retrieve from Storage
JA55913-21.1	John Thomas	Natalie Romanoff	09/18/10 08:38	Custody Transfer
JA55913-21.1	Natalie Romanoff	Secured Storage	09/18/10 14:25	Return to Storage
JA55913-21.1	Secured Storage	Zethan Reyes	09/23/10 08:33	Retrieve from Storage
JA55913-21.1	Zethan Reyes	Sarvadaman Tripathi	09/23/10 08:35	Custody Transfer
JA55913-21.1	Sarvadaman Tripathi	Secured Storage	09/23/10 16:53	Return to Storage
JA55913-21.1	Secured Storage	Todd Shoemaker	09/27/10 08:09	Retrieve from Storage
JA55913-21.1	Todd Shoemaker	Sarvadaman Tripathi	09/27/10 08:18	Custody Transfer
JA55913-21.1	Sarvadaman Tripathi	Secured Storage	09/27/10 17:10	Return to Storage
JA55913-21.1	Dave Hunkele		10/25/10 10:55	Disposed

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: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP55524/GN42397	3.0	0.0	ug/l	25	24.1	96.4	85-115%
Perchlorate	GP55524/GN42397			ug/l	8	7.40	92.5	85-115%
Perchlorate	GP55533/GN42428	3.0	0.0	ug/l	25	25.3	101.2	85-115%
Perchlorate	GP55533/GN42428			ug/l	8	7.97	99.6	85-115%

Associated Samples:
Batch GP55524: JA55913-1, JA55913-10, JA55913-11, JA55913-12, JA55913-13, JA55913-14, JA55913-15, JA55913-16, JA55913-17, JA55913-18, JA55913-19, JA55913-2, JA55913-20, JA55913-3, JA55913-4, JA55913-5, JA55913-6, JA55913-7, JA55913-8, JA55913-9
Batch GP55533: JA55913-21
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP55524/GN42397	JA55913-2	ug/l	6.4	5.8	9.8	0-15%
Perchlorate	GP55533/GN42428	JA56316-5	ug/l	35.3	35.9	1.7	0-15%
Specific Conductivity	GN42597	JA55913-2	umhos/cm	50.5	51.3	1.6	0-10%
Specific Conductivity	GN42597	JA55913-11	umhos/cm	140	138	1.4	0-10%
Specific Conductivity	GN42681	JA55913-21	umhos/cm	354	358	1.1	0-10%

Associated Samples:
Batch GN42597: JA55913-1, JA55913-10, JA55913-11, JA55913-12, JA55913-13, JA55913-14, JA55913-15, JA55913-16, JA55913-17, JA55913-18, JA55913-19, JA55913-2, JA55913-20, JA55913-3, JA55913-4, JA55913-5, JA55913-6, JA55913-7, JA55913-8, JA55913-9
Batch GN42681: JA55913-21
Batch GP55524: JA55913-1, JA55913-10, JA55913-11, JA55913-12, JA55913-13, JA55913-14, JA55913-15, JA55913-16, JA55913-17, JA55913-18, JA55913-19, JA55913-2, JA55913-20, JA55913-3, JA55913-4, JA55913-5, JA55913-6, JA55913-7, JA55913-8, JA55913-9
Batch GP55533: JA55913-21
(*) Outside of QC limits

R2-0001948

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP55524/GN42397	JA55913-2	ug/l	6.4	25	31.0	98.4	80-120%
Perchlorate	GP55533/GN42428	JA56316-5	ug/l	35.3	50	87.6	104.6	80-120%

Associated Samples:
Batch GP55524: JA55913-1, JA55913-10, JA55913-11, JA55913-12, JA55913-13, JA55913-14, JA55913-15, JA55913-16, JA55913-17, JA55913-18, JA55913-19, JA55913-2, JA55913-20, JA55913-3, JA55913-4, JA55913-5, JA55913-6, JA55913-7, JA55913-8, JA55913-9
Batch GP55533: JA55913-21
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091701.TXT Date Analyzed: 09/17/10 Methods: EPA 314
Analyst: NR Run ID: GN42397
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:05	GN42397-STD1	1		STDA
11:23	GN42397-STD2	1		STDB
11:40	GN42397-STD3	1		STDC
11:57	GN42397-STD4	1		STDD
12:14	GN42397-STD5	1		STDE
12:32	GN42397-STD6	1		STDF
10:02	GN42397-IPC1	1		
10:19	GN42397-ICV1	1		
10:36	GP55524-MB1	1		
10:54	GN42397-CRI1	1		
11:11	GP55524-B1	1		
11:28	GN42397-CCV1	1		
11:46	GP55524-ICV1	1		
12:03	GP55524-S1	1		
12:20	GP55524-D1	1		
12:38	JA55913-2	1		scon
12:55	JA55913-1	1		scon
13:12	JA55913-3	1		scon
13:29	JA55913-4	1		scon
13:47	JA55913-5	1		scon
14:04	JA55913-6	1		scon
14:21	JA55913-7	1		scon
14:39	GN42397-CCVA1	1		
14:56	JA55913-8	1		scon
15:13	JA55913-9	1		scon
15:31	JA55913-10	1		scon
15:48	JA55913-11	1		scon
16:05	JA55913-12	1		scon
16:25	JA55913-13	1		scon
16:43	JA55913-14	1		scon
17:00	JA55913-15	1		scon
17:17	JA55913-16	1		scon
17:35	JA55913-17	1		scon

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091701.TXT Date Analyzed: 09/17/10 Methods: EPA 314
Analyst: NR Run ID: GN42397
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:52	GN42397-CCV2	1		
18:09	JA55913-18	1		scon
18:27	JA55913-19	1		scon
18:44	JA55913-20	1		scon
19:01	GN42397-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091701.TXT Date Analyzed: 09/17/10 Methods: EPA 314
Run ID: GN42397 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN42397-IPC1	Perchlorate	24.7	3.0	0.58	25	98.8	80-120
GN42397-ICV1	Perchlorate	23.3	3.0	0.58	25	93.2	90-110
GN42397-CRI1	Perchlorate	2.6	3.0	0.58	3	86.7	75-125
GN42397-CCV1	Perchlorate	23.7	3.0	0.58	25	94.8	85-115
GN42397-CCVA1	Perchlorate	53.2	3.0	0.58	50	106.4	
GN42397-CCV2	Perchlorate	24.7	3.0	0.58	25	98.8	85-115
GN42397-CCVA2	Perchlorate	52.1	3.0	0.58	50	104.2	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091801.TXT Date Analyzed: 09/18/10 Methods: EPA 314
Analyst: NR Run ID: GN42428
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:05	GN42428-STD1	1		STDA
11:23	GN42428-STD2	1		STDB
11:40	GN42428-STD3	1		STDC
11:57	GN42428-STD4	1		STDD
12:14	GN42428-STD5	1		STDE
12:32	GN42428-STD6	1		STDF
07:41	GN42428-IPC1	1		
08:39	GN42428-ICV1	1		
08:56	GP55533-MB1	1		
09:13	GN42428-CRI1	1		
09:30	GP55533-B1	1		
09:48	GN42428-CCV1	1		
10:05	GP55533-ICV1	1		
10:22	GP55533-S1	1		rerun @ 1:2
10:39	GP55533-D1	1		
10:57	JA56316-5	1		(sample used for QC only; not part of login JA55913)
11:14	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:49	ZZZZZZ	1		
12:06	ZZZZZZ	1		
12:23	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:58	GN42428-CCVA1	1		
13:15	ZZZZZZ	1		
13:33	JA55913-21	1		SCON
13:50	GP55533-S1	2		
14:08	GN42428-CCV2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA55913
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 410091801.TXT Date Analyzed: 09/18/10 Methods: EPA 314
Run ID: GN42428 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN42428-IPC1	Perchlorate	24.9	3.0	0.58	25	99.6	80-120
GN42428-ICV1	Perchlorate	26.8	3.0	0.58	25	107.2	90-110
GN42428-CRI1	Perchlorate	2.4	3.0	0.58	3	80.0	75-125
GN42428-CCV1	Perchlorate	24.5	3.0	0.58	25	98.0	85-115
GN42428-CCVA1	Perchlorate	54.6	3.0	0.58	50	109.2	
GN42428-CCV2	Perchlorate	24.8	3.0	0.58	25	99.2	85-115

(!) Outside of QC limits

New Jersey ACCUTEST LABORATORIES

05/19/11

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

177208

Accutest Job Number: JA74509

Sampling Date: 04/29/11

Report to:

TRC Environmental Corporation

MWinbourne@trcsolutions.com

ATTN: Mark Winbourne

Total number of pages in report: **102**

ACCREDITED IN ACCORDANCE WITH nelac

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, Laboratory Director

Client Service contact: Marie Meidhof 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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Test results relate only to samples analyzed.

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Accutest LabLink@616112 15:20 19-May-2011

Sample Summary

TRC

Job No: JA74509

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA74509-1	04/29/11	07:30	CC	04/29/11	AQ	Field Blank Water	FB042911
JA74509-2	04/29/11	08:00	CC	04/29/11	AQ	Ground Water	SC40D
JA74509-2D	04/29/11	08:00	CC	04/29/11	AQ	Water Dup/MSD	SC40D
JA74509-2S	04/29/11	08:00	CC	04/29/11	AQ	Water Matrix Spike	SC40D
JA74509-3	04/29/11	08:15	CC	04/29/11	AQ	Ground Water	SC49D

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA74509
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	5/18/2011 7:06:12 PM

On 04/29/2011, 2 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA74509 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 EPA 314

Matrix: AQ **Batch ID:** GP58614

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA74509-2MS, JA74509-2DUP were used as the QC samples for Perchlorate.
- RPD(s) for Duplicate for Perchlorate are outside control limits for sample GP58614-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN50803

- Sample(s) JA74509-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB042911		
Lab Sample ID:	JA74509-1	**Date Sampled:**	04/29/11
Matrix:	AQ - Field Blank Water	**Date Received:**	04/29/11
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.73 U	3.0	0.73	ug/l	1	05/05/11 13:02	MS	EPA 314
Specific Conductivity	12.6	0.50		umhos/cm	1	05/13/11	SA	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC40D		
Lab Sample ID:	JA74509-2	**Date Sampled:**	04/29/11
Matrix:	AQ - Ground Water	**Date Received:**	04/29/11
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.0	3.0	0.73	ug/l	1	05/05/11 12:45	MS	EPA 314
Specific Conductivity	364	0.50		umhos/cm	1	05/13/11	SA	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SC49D		
Lab Sample ID:	JA74509-3	**Date Sampled:**	04/29/11
Matrix:	AQ - Ground Water	**Date Received:**	04/29/11
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.9	3.0	0.73	ug/l	1	05/10/11 14:00	AE	EPA 314
Specific Conductivity	358	0.50		umhos/cm	1	05/13/11	SA	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

FB
GW

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
Tel: 732-329-0200 FAX: 732-329-3499/3480
www. acutest.com

PAGE 1 OF 1

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA74509

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)	Matrix Codes
Company Name: TRC	Project Name: SMC Perchlorate RI	Perchlorate Method 314	DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL- Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank
Street Address: 21 Griffin Road North	Street: 35 SW Blvd	Billing Information (if different from Report to)	
City: Windsor State: CT Zip: 06095	City: Newfield State: NJ	Company Name	
Project Contact: Larry Buttien E-mail: lbuttien@trcsolutions.com	Project #: 177208	Street Address: SAME	
Phone #: 860-298-9692 Fax #: 860-298-6399	Client Purchase Order #	City State Zip	
Sampler(s) Name(s): C. Carlson Phone #	Project Manager: Larry Buttien	Attention:	

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate Method 314										LAB USE ONLY
1	FB042911		4/29/11	0730	CC	WW	1					X				X										
2	SC40D		↓	0800	CC	WW	3					X				X	MS/MSD volume included									UTC 2
3	SC49D		↓	0815	CC	GW	1					X				X										

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [x] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format Hazsite EXCEL
- [x] Other TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	4/29/11 1235	1 [signature]	2		2
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☑ Cooler Temp. 1.2
5		5			

1A 2F

4.1 4

JA74509: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA74509 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 4/29/2011 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA74509: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA74509

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 177208

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA74509-1	Collected: 29-APR-11 07:30	By: CC	Received: 29-APR-11	By: RL		
FB042911						
JA74509-1	EPA 314	05-MAY-11 13:02	MS	05-MAY-11	SJG	PERCHLT
JA74509-1	SM19 2510B/SW 9050A	13-MAY-11	SA			SCON
JA74509-2	Collected: 29-APR-11 08:00	By: CC	Received: 29-APR-11	By: RL		
SC40D						
JA74509-2	EPA 314	05-MAY-11 12:45	MS	05-MAY-11	SJG	PERCHLT
JA74509-2	SM19 2510B/SW 9050A	13-MAY-11	SA			SCON
JA74509-3	Collected: 29-APR-11 08:15	By: CC	Received: 29-APR-11	By: RL		
SC49D						
JA74509-3	EPA 314	10-MAY-11 14:00	AE	10-MAY-11	AE	PERCHLT
JA74509-3	SM19 2510B/SW 9050A	13-MAY-11	SA			SCON

Accutest Internal Chain of Custody

Job Number: JA74509
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 04/29/11

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA74509-1.1	Secured Storage	Zethan Reyes	05/04/11 08:41	Retrieve from Storage
JA74509-1.1	Zethan Reyes	Shirley Grzybowski	05/04/11 09:00	Custody Transfer
JA74509-1.1	Shirley Grzybowski	Secured Storage	05/04/11 13:36	Return to Storage
JA74509-1.1	Secured Storage	John Thomas	05/05/11 08:03	Retrieve from Storage
JA74509-1.1	John Thomas	Shirley Grzybowski	05/05/11 08:05	Custody Transfer
JA74509-1.1	Shirley Grzybowski	Secured Storage	05/05/11 15:16	Return to Storage
JA74509-1.1	Secured Storage	Adam Scott	05/12/11 15:35	Retrieve from Storage
JA74509-1.1	Adam Scott	Sanjay Advani	05/12/11 15:37	Custody Transfer
JA74509-1.1	Shirley Grzybowski	Secured Storage	05/13/11 06:57	Return to Storage
Analyst unavailable for custody transfer.				
JA74509-1.1	Secured Storage	John Thomas	05/13/11 09:35	Retrieve from Storage
JA74509-1.1	John Thomas	Sanjay Advani	05/13/11 09:37	Custody Transfer
JA74509-1.1	Sanjay Advani	Secured Storage	05/13/11 12:33	Return to Storage
JA74509-2.1	Secured Storage	Zethan Reyes	05/04/11 08:41	Retrieve from Storage
JA74509-2.1	Zethan Reyes	Shirley Grzybowski	05/04/11 09:00	Custody Transfer
JA74509-2.1	Shirley Grzybowski	Secured Storage	05/04/11 13:36	Return to Storage
JA74509-2.1	Secured Storage	John Thomas	05/05/11 08:03	Retrieve from Storage
JA74509-2.1	John Thomas	Shirley Grzybowski	05/05/11 08:05	Custody Transfer
JA74509-2.1	Shirley Grzybowski	Secured Storage	05/05/11 15:16	Return to Storage
JA74509-2.1	Secured Storage	Adam Scott	05/12/11 15:35	Retrieve from Storage
JA74509-2.1	Adam Scott	Sanjay Advani	05/12/11 15:37	Custody Transfer
JA74509-2.1	Shirley Grzybowski	Secured Storage	05/13/11 06:57	Return to Storage
Analyst unavailable for custody transfer.				
JA74509-2.1	Secured Storage	John Thomas	05/13/11 09:35	Retrieve from Storage
JA74509-2.1	John Thomas	Sanjay Advani	05/13/11 09:37	Custody Transfer
JA74509-2.1	Sanjay Advani	Secured Storage	05/13/11 12:33	Return to Storage
JA74509-2.2	Secured Storage	Adam Scott	05/12/11 15:35	Retrieve from Storage
JA74509-2.2	Adam Scott	Sanjay Advani	05/12/11 15:37	Custody Transfer
JA74509-2.2	Shirley Grzybowski	Secured Storage	05/13/11 06:57	Return to Storage
Analyst unavailable for custody transfer.				
JA74509-2.2	Secured Storage	John Thomas	05/13/11 09:35	Retrieve from Storage
JA74509-2.2	John Thomas	Sanjay Advani	05/13/11 09:37	Custody Transfer
JA74509-2.2	Sanjay Advani	Secured Storage	05/13/11 12:33	Return to Storage
JA74509-2.3	Secured Storage	Adam Scott	05/12/11 15:35	Retrieve from Storage
JA74509-2.3	Adam Scott	Sanjay Advani	05/12/11 15:37	Custody Transfer
JA74509-2.3	Shirley Grzybowski	Secured Storage	05/13/11 06:57	Return to Storage
Analyst unavailable for custody transfer.				
JA74509-2.3	Secured Storage	John Thomas	05/13/11 09:35	Retrieve from Storage
JA74509-2.3	John Thomas	Sanjay Advani	05/13/11 09:37	Custody Transfer
JA74509-2.3	Sanjay Advani	Secured Storage	05/13/11 12:33	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA74509
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 04/29/11

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA74509-3.1	Secured Storage	Zethan Reyes	05/04/11 08:41	Retrieve from Storage
JA74509-3.1	Zethan Reyes	Shirley Grzybowski	05/04/11 09:00	Custody Transfer
JA74509-3.1	Shirley Grzybowski	Secured Storage	05/04/11 13:36	Return to Storage
JA74509-3.1	Secured Storage	John Thomas	05/05/11 08:03	Retrieve from Storage
JA74509-3.1	John Thomas	Shirley Grzybowski	05/05/11 08:05	Custody Transfer
JA74509-3.1	Shirley Grzybowski	Secured Storage	05/05/11 15:16	Return to Storage
JA74509-3.1	Secured Storage	John Thomas	05/10/11 08:59	Retrieve from Storage
JA74509-3.1	John Thomas	Shirley Grzybowski	05/10/11 09:00	Custody Transfer
JA74509-3.1	Shirley Grzybowski	Secured Storage	05/10/11 15:21	Return to Storage
JA74509-3.1	Secured Storage	Adam Scott	05/12/11 15:35	Retrieve from Storage
JA74509-3.1	Adam Scott	Sanjay Advani	05/12/11 15:37	Custody Transfer
JA74509-3.1	Shirley Grzybowski	Secured Storage	05/13/11 06:57	Return to Storage
Analyst unavailable for custody transfer.				
JA74509-3.1	Secured Storage	John Thomas	05/13/11 09:35	Retrieve from Storage
JA74509-3.1	John Thomas	Sanjay Advani	05/13/11 09:37	Custody Transfer
JA74509-3.1	Sanjay Advani	Secured Storage	05/13/11 12:33	Return to Storage

New Jersey ACCUTEST LABORATORIES

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: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP58614/GN50477	3.0	0.0	ug/l	8	7.74	96.8	85-115%
Perchlorate	GP58614/GN50477			ug/l	25	25.7	102.8	85-115%
Perchlorate	GP58614/GN50648	3.0	0.0	ug/l	25	24.8	99.2	85-115%
Perchlorate	GP58614/GN50648			ug/l	8	8.00	100.0	85-115%

Associated Samples:
Batch GP58614: JA74509-1, JA74509-2, JA74509-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP58614/GN50477	JA74509-2	ug/l	4.0	5.3	28.0(a)	0-15%
Specific Conductivity	GN50803	JA74509-2	umhos/cm	364	377	3.5	0-10%

Associated Samples:
Batch GN50803: JA74509-1, JA74509-2, JA74509-3
Batch GP58614: JA74509-1, JA74509-2, JA74509-3
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP58614/GN50477	JA74509-2	ug/l	4.0	25	31.1	108.4	80-120%

Associated Samples:
Batch GP58614: JA74509-1, JA74509-2, JA74509-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 411050501.TXT Date Analyzed: 05/05/11 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN50477
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:11	GN50477-STD1	1		STDA
15:28	GN50477-STD2	1		STDB
15:45	GN50477-STD3	1		STDC
16:02	GN50477-STD4	1		STDD
16:20	GN50477-STD5	1		STDE
16:37	GN50477-STD6	1		STDF
08:26	GN50477-IPC1	1		
08:43	GN50477-ICV1	1		
09:00	GP58588-MB1	1		
09:18	GN50477-CRI1	1		
09:35	GP58588-B1	1		
09:52	GN50477-CCV1	1		
10:09	GP58614-ICV1	1		
10:27	GP58588-S1	1		
10:44	GP58588-D1	1		
11:01	JA74312-1	1		(sample used for QC only; not part of login JA74509)
11:19	GN50477-CCVA1	1		
11:36	GP58614-MB1	1		
11:53	GP58614-B1	1		
12:11	GP58614-S1	1		
12:28	GP58614-D1	1		
12:45	JA74509-2	1		scon
13:02	JA74509-1	1		scon
13:20	JA74509-3	1		irregular peak shape; rerun for confirmation
13:37	ZZZZZZ	1		
13:54	GN50477-CCV2	1		
14:12	ZZZZZZ	2		
14:29	GN50477-CCVA2	1		fails high

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 411050501.TXT Date Analyzed: 05/05/11 Methods: EPA 314, EPA 314 M
Run ID: GN50477 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN50477-IPC1	Perchlorate	23.4	3.0	0.73	25	93.6	80-120
GN50477-ICV1	Perchlorate	24.7	3.0	0.73	25	98.8	90-110
GN50477-CRI1	Perchlorate	2.8	3.0	0.73	3	93.3	75-125
GN50477-CCV1	Perchlorate	24.6	3.0	0.73	25	98.4	85-115
GN50477-CCVA1	Perchlorate	54.1	3.0	0.73	50	108.2	
GN50477-CCV2	Perchlorate	27.6	3.0	0.73	25	110.4	85-115
GN50477-CCVA2	Perchlorate	64.0	3.0	0.73	50	128.0!	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 411051002.TXT Date Analyzed: 05/10/11 Methods: EPA 314
Analyst: AE Run ID: GN50648
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:15	GN50648-STD1	1		STDA
10:33	GN50648-STD2	1		STDB
10:50	GN50648-STD3	1		STDC
11:07	GN50648-STD4	1		STDD
11:24	GN50648-STD5	1		STDE
11:42	GN50648-STD6	1		STDF
11:59	GN50648-IPC1	1		SCON=4030
12:16	GN50648-ICV1	1		
12:34	GP58614-MB2	1		
12:34	GP58691-MB1	1		Sample shown for QC tracking purposes only.
12:51	GN50648-CRI1	1		
13:08	GP58614-B2	1		
13:08	GP58691-B1	1		Sample shown for QC tracking purposes only.
13:25	GN50648-CCV1	1		
13:43	GP58614-ICV2	1		
14:00	JA74509-3	1		scon
14:17	GP58691-S1	1		Overrange see rerun 1:5
14:35	GP58691-D1	1		
14:52	JA74883-1	1		(sample used for QC only; not part of login JA74509)
15:09	ZZZZZZ	1		
15:27	ZZZZZZ	1		
15:44	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:18	ZZZZZZ	10		
16:36	GN50648-CCVA1	1		
16:53	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:45	ZZZZZZ	25		
18:02	ZZZZZZ	1		
18:20	ZZZZZZ	1		
18:37	ZZZZZZ	1		
18:54	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 411051002.TXT Date Analyzed: 05/10/11 Methods: EPA 314
Analyst: AE Run ID: GN50648
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
19:11	GP58691-S1	5		
19:29	ZZZZZZ	1		
19:46	GN50648-CCV2	1		
20:03	ZZZZZZ	4		
20:21	GN50648-CCVA2	1		Fails high no samples reported

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA74509
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 411051002.TXT Date Analyzed: 05/10/11 Methods: EPA 314
Run ID: GN50648 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN50648-IPC1	Perchlorate	23.5	3.0	0.73	25	94.0	80-120
GN50648-ICV1	Perchlorate	25.4	3.0	0.73	25	101.0	90-110
GN50648-CRI1	Perchlorate	2.8	3.0	0.73	3	93.3	75-125
GN50648-CCV1	Perchlorate	24.9	3.0	0.73	25	99.6	85-115
GN50648-CCVA1	Perchlorate	55.2	3.0	0.73	50	110.4	
GN50648-CCV2	Perchlorate	26.3	3.0	0.73	25	105.2	85-115
GN50648-CCVA2	Perchlorate	61.4	3.0	0.73	50	122.8!(a)	

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

New Jersey ACCUTEST LABORATORIES

General Chemistry

6

Raw Data

Sequence: 411050501
Operator: Chemistry

GN50477

Printed: 5/5/2011 3:30:18 PM

Title:
Datasource: NJMTLIC2_local
Location: Accutest_System_4\System 4 Sequences\2011\April
Timebase: Accutest_Sysyem_4
#Samples: 30

Created: 5/5/2011 7:47:37 AM by Chemistry
Last Update: 5/5/2011 3:30:09 PM by Chemistry

No.	Name	Type	Pos.	Inj. Vol.	Dil. Factor	Status	Inj. Date/Time	Comment
1	BLANKCONF	Unknown	1	1000.0	1.0000	Finished	5/5/2011 8:09:06 AM	
2	STDA	Standard	10	1000.0	1.0000	Finished	5/4/2011 3:11:13 PM	
3	STDB	Standard	11	1000.0	1.0000	Finished	5/4/2011 3:28:20 PM	
4	STDC	Standard	12	1000.0	1.0000	Finished	5/4/2011 3:45:38 PM	
5	STDD	Standard	13	1000.0	1.0000	Finished	5/4/2011 4:02:55 PM	
6	STDE	Standard	14	1000.0	1.0000	Finished	5/4/2011 4:20:14 PM	
7	STDF	Standard	15	1000.0	1.0000	Finished	5/4/2011 4:37:31 PM	
8	IPC	Unknown	2	1000.0	1.0000	Finished	5/5/2011 8:26:10 AM	
9	ICV	Unknown	3	1000.0	1.0000	Finished	5/5/2011 8:43:28 AM	
10	MB SOIL	Unknown	4	1000.0	1.0000	Finished	5/5/2011 9:00:46 AM	
11	CRI	Unknown	5	1000.0	1.0000	Finished	5/5/2011 9:18:04 AM	
12	BS SOIL	Unknown	6	1000.0	1.0000	Finished	5/5/2011 9:35:21 AM	
13	CCV	Unknown	7	1000.0	1.0000	Finished	5/5/2011 9:52:39 AM	
14	ICV2	Unknown	8	1000.0	1.0000	Finished	5/5/2011 10:09:57 AM	
15	JA74312-1MS	Unknown	9	1000.0	1.0000	Finished	5/5/2011 10:27:14 AM	
16	JA74312-1DUP	Unknown	10	1000.0	1.0000	Finished	5/5/2011 10:44:32 AM	
17	JA74312-1	Unknown	11	1000.0	1.0000	Finished	5/5/2011 11:01:50 AM	
18	CCVA	Unknown	12	1000.0	1.0000	Finished	5/5/2011 11:19:08 AM	
19	MB	Unknown	13	1000.0	1.0000	Finished	5/5/2011 11:36:26 AM	
20	BS	Unknown	14	1000.0	1.0000	Finished	5/5/2011 11:53:43 AM	
21	JA74509-2MS	Unknown	15	1000.0	1.0000	Finished	5/5/2011 12:11:00 PM	
22	JA74509-2DUP	Unknown	16	1000.0	1.0000	Finished	5/5/2011 12:28:18 PM	
23	JA74509-2	Unknown	17	1000.0	1.0000	Finished	5/5/2011 12:45:35 PM	
24	JA74509-1	Unknown	18	1000.0	1.0000	Finished	5/5/2011 1:02:53 PM	
25	JA74509-3	Unknown	19	1000.0	1.0000	Finished	5/5/2011 1:20:10 PM	
26	JA74312-3	Unknown	20	1000.0	1.0000	Finished	5/5/2011 1:37:26 PM	
27	CCV	Unknown	21	1000.0	1.0000	Finished	5/5/2011 1:54:45 PM	
28	JA74060-1	Unknown	22	1000.0	2.0000	Finished	5/5/2011 2:12:03 PM	
29	CCVA	Unknown	23	1000.0	1.0000	Finished	5/5/2011 2:29:20 PM	
30	STANDBY	Unknown	24	1000.0	1.0000	Finished	5/5/2011 2:46:37 PM	

GP58588 SOIL (1)

GP58614 AQ (1) ICV1

6.1 6

Chromeleon © Dionex Corporation, Version 6.80 SR9a Build 2680 (163077)

ACCUTEST

Analyst [signature] Product Perchlt

Date 5/5/11 Batch ID GN 50477

Sample Dilution Prep Log

Sample ID	Dilution	Initial Volume	Final Volume	Comments
BS		0.5ml GNE4-28104-IC	50ml DI H_2O	
MS (JA74509-2)		0.5ml GNE4-28104-IC	50ml Sample	
JA74060-1	1:2	10ml	20ml	brown liquid

QC Reviewer: _____ Date: _____

Form: GN-165
Rev. Date: 2/25/03

ACCUTEST.

Analyst S.A

Method Perchlorate Prep

Prep Date 5/2/11

GP # GP85588

alance # 38

Sample Prep Log

Sample ID	Sample Size	Final Volume
MB	33.0g	added 100mL DI H2O
BS	33.4g	added 99mL DI H2O + 1mL Spike
MS-3A74312-1	33.0g	added 99mL DI H2O + 1mL Spike
3A74312-1Dup	32.9g	added 100mL DI H2O
3A74312-1	33.0g	added 100mL DI H2O

Perchlorate Spike: GNE4-28104-IC exp: 5/22/11
Chemware Ultra Pure PTFE Boiling Stones Item # 0919120

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

QC Review_____

ACCUTEST

Test: Specific conductivity
Product: SCON
Method: SM20 2510, SW846 9050A ● Units: umhos/cm

Analyst: SS
GN Batch ID: GN50477
Date: 5/5/2011

SCON = $\frac{Km \times C}{\{1 + 0.0191 \times (T - 25)\}}$

Cell Constant (C) Date calculated: 3/31/2011 Cell Constant = 0.9806

QC Summary:

Check Standard 1	1402	True Value	1412	Recovery	99.3	Accetable?	Y
Check Standard 2	1404	True Value	1412	Recovery	99.4	Accetable?	Y
Check Standard 3		True Value	1412	Recovery	0.0	Accetable?	Y
Duplicate ID:		Samp Result:	78.41	Dup Result:	82.41	% RPD:	-5.0

Bottle #	Sample ID	Temp. in deg. C	Measured SCON in umhos/cm (Km)	Calculated SCON in umhos/cm (Km)	Detection Limit umhos/cm	Units	Factor
	ccv1conf	25.00	1430.00	1402.3	0.50	umhos/cm	1.0
	ipc-3	25.00	2620.00	2569.2	0.50	umhos/cm	1.0
	ipc-4	25.00	3380.00	3314.4	0.50	umhos/cm	1.0
	ipc-5	25.00	4110.00	4030.3	0.50	umhos/cm	1.0
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
	ccv1conf	25.00	1432.00	1404.2	0.50	umhos/cm	1.0
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
	ccv1conf	25.00					
		25.00					
		25.00					

Reagent - 1M KCL Solution -> GNF3-2770-1-SCon
exp 9/14/11

(0.01 M KCL -> 1 ml of 1 MKCL -> 100 ml DI H_2O)

Analyst: [signature] Date: 5/5/11 QC Reviewer: _____ Date: _____

6.1 6

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: Perchlorate

GN or GP Number: GN50477

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume or weight used with units	Balance or Autopipet ID (*)	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Analyst	Date
100 ppm	GNE4-28090-IC	1000 ppm	50 mL	Class A	DI Water	500 mL	100 ppm	5/22/2011	AE	
1 ppm	GNE4-28091-IC	100 ppm	5 mL	Class A	DI Water	500 mL	1 ppm	5/22/2011	AE	
100 ppm (ICV)	GNE4-28092-IC	1000 ppm	20 mL	Class A	DI Water	200 mL	100 ppm	5/22/2011	AE	
1 ppm (ICV)	GNE4-28093-IC	100 ppm	2 mL	Class A	DI Water	200 mL	1 ppm	5/22/2011	AE	
Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml	Balance or Autopipet ID (*)	Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	Analyst	Date
Standard B	GNE4-28094-IC	1 ppm	3 mL	Class A	DI Water	1000 mL	3 ppb	5/22/2011	AE	
Standard C	GNE4-28095-IC	1 ppm	3 mL	Class A	DI Water	500 mL	6 ppb	5/22/2011	AE	
Standard D	GNE4-28096-IC	1 ppm	5 mL	Class A	DI Water	500 mL	10 ppb	5/22/2011	AE	
Standard E	GNE4-28097-IC	1 ppm	25 mL	Class A	DI Water	1000 mL	25 ppb	5/22/2011	AE	
Standard F	GNE4-28098-IC	1 ppm	25 mL	Class A	DI Water	500 mL	50 ppb	5/22/2011	AE	
ICV 1	GNE4-28099-IC	1 ppm	25 mL	Class A	DI Water	1000 mL	25 ppb	5/22/2011	AE	
ICV 2	GNE4-28100-IC	1 ppm	8 mL	Class A	DI Water	1000 mL	8 ppb	5/22/2011	AE	

* 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

ACCUTEST.

Reagent Information Log - PERCHLT - Water /Soil

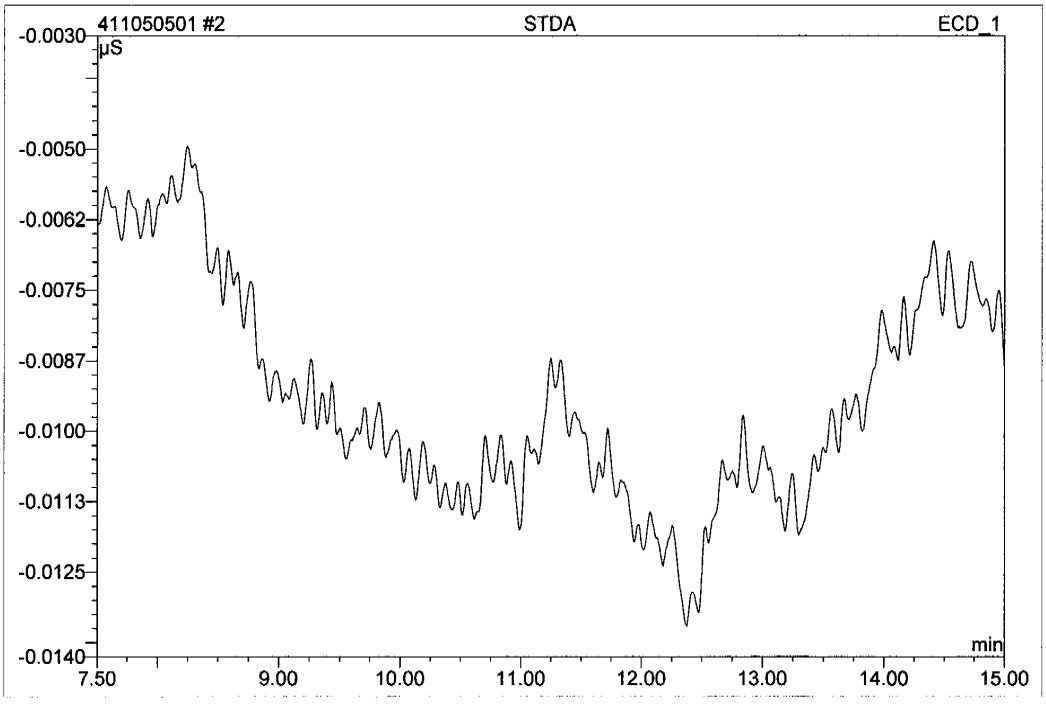
GN Batch ID#: GN50477

Reagent	Reagent # or Manufacturer/Lot	Exp. Date
Calibration Curve Standards:		
Standard Stock Solution, 1000 mg/L	GNE4-28087-IC	5/22/2011
Standard Intermediate, 100 mg/L	GNE4-28090-IC	5/22/2011
Standard Intermediate, 1 mg/L	GNE4-28091-IC	5/22/2011
Calibration Standard, 50 ug/L (CCVA)	GNE4-28098-IC	5/22/2011
Calibration Standard, 25 ug/L (CCV)	GNE4-28097-IC	5/22/2011
Calibration Standard, 10 ug/L	GNE4-28096-IC	5/22/2011
Calibration Standard, 6 ug/L	GNE4-28095-IC	5/22/2011
Calibration Standard, 3 ug/L (CRI)	GNE4-28094-IC	5/22/2011
External Stock Solution, 1000 mg/L	GNE4-28088-IC	5/22/2011
External Stock Solution, 100 mg/L	GNE4-28092-IC	5/22/2011
External Intermediate, 1 mg/L	GNE4-28093-IC	5/22/2011
External Standard, 25 ug/L (ICV1)	GNE4-28099-IC	5/22/2011
External Standard, 8 ug/L (ICV2)	GNE4-28100-IC	5/22/2011
IPC	GNE4-28104-IC	5/22/2011
KOH Eluent	110201654011	2/1/13
25000 mg/L MCT Stock	GNE4-28089-IC	5/22/2011
Filter lot numbers	21764038	NA
Perchlorate Spike, 2.5 mg/L	GNE4-28104-IC	5/22/2011

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

2 STDA

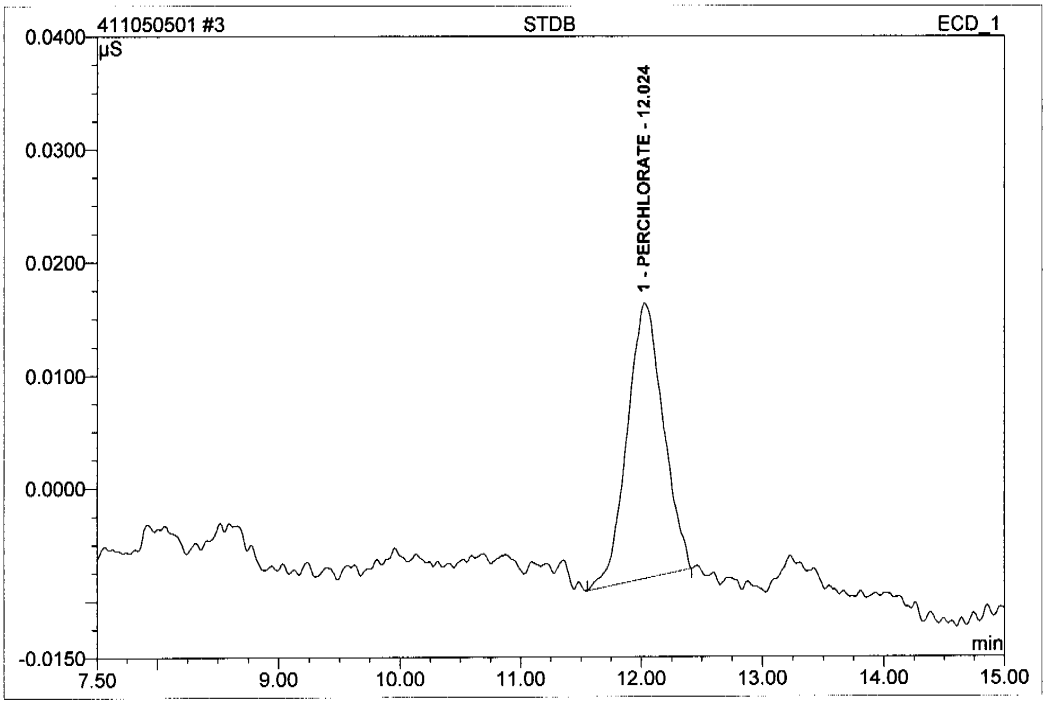
Sample Name:	**STDA**	*Injection Volume:*	**1000.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 15:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

3 STDB

Sample Name:	**STDB**	*Injection Volume:*	**1000.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 15:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



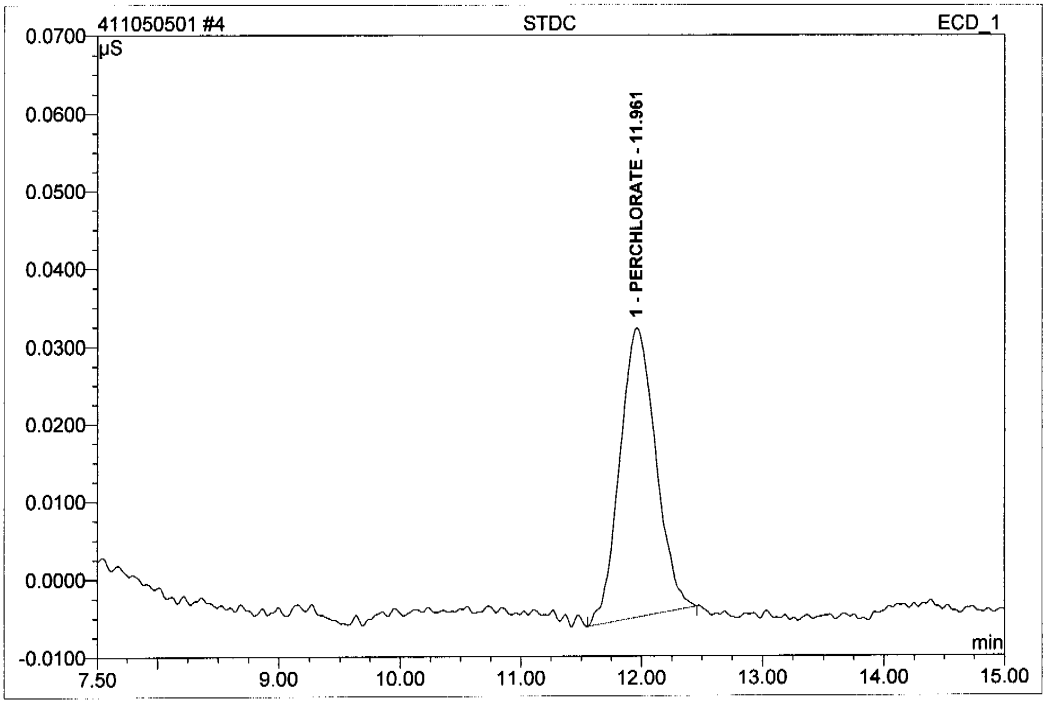
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	12.02	PERCHLORATE	0.024	0.008	100.00	3.602	BMB
Total:			0.024	0.008	100.00	3.602	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

4 STDC

Sample Name:	**STDC**	*Injection Volume:*	**1000.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 15:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



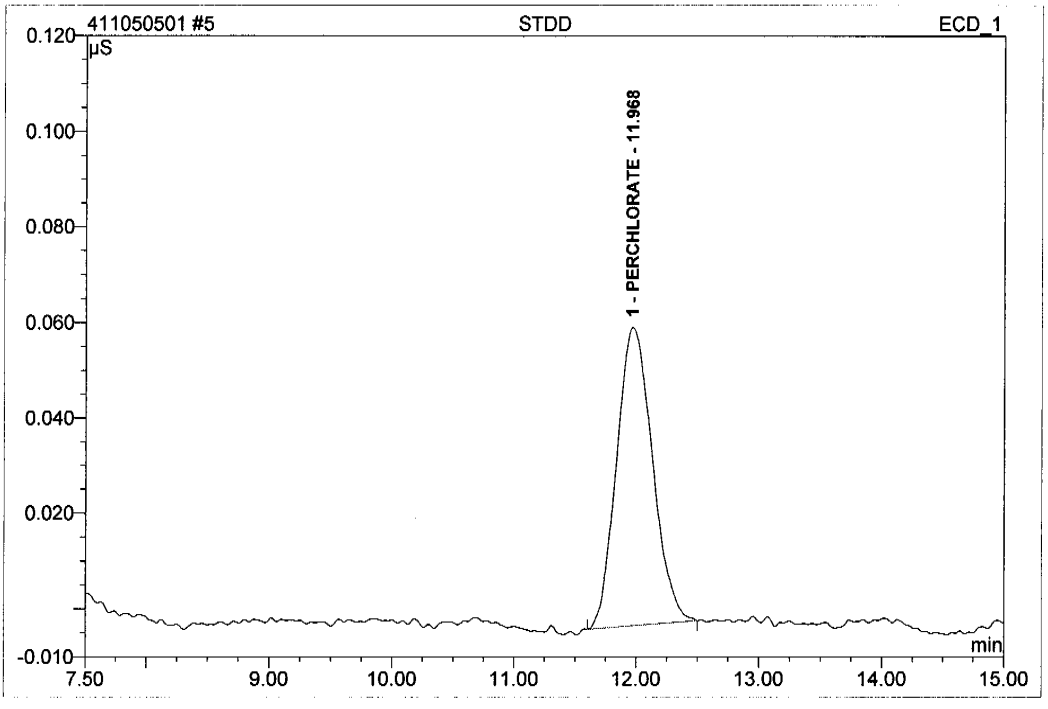
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.96	PERCHLORATE	0.037	0.013	100.00	5.476	BMB
Total:			0.037	0.013	100.00	5.476	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

5 STDD

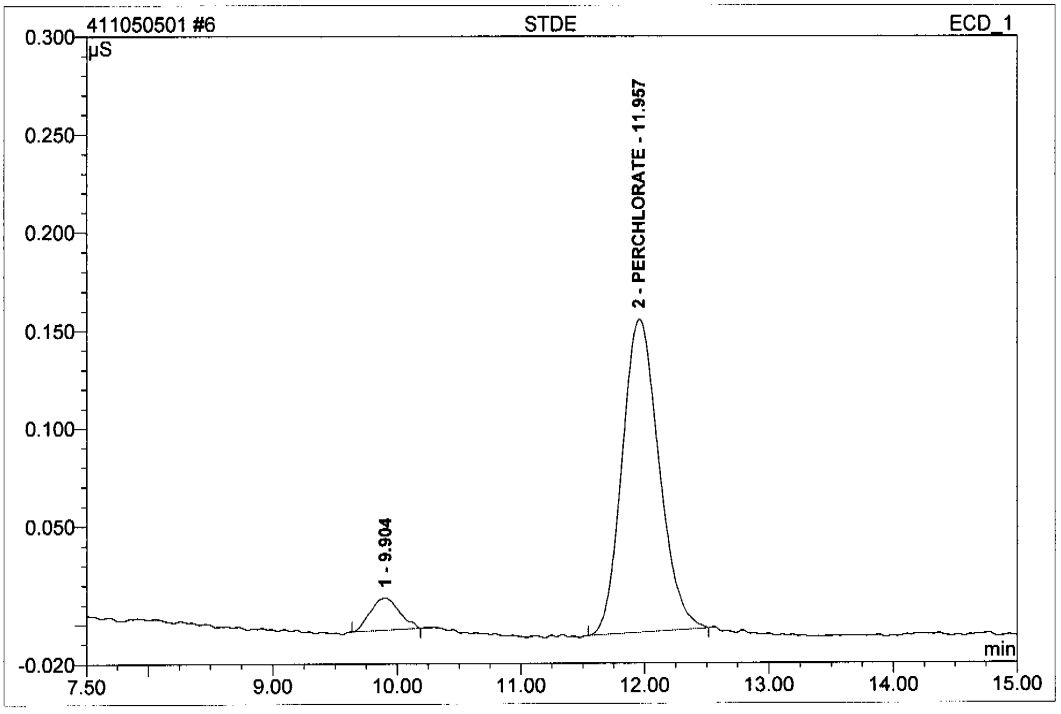
Sample Name:	**STDD**	*Injection Volume:*	**1000.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 16:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.97	PERCHLORATE	0.063	0.021	100.00	9.056	BMB
Total:			0.063	0.021	100.00	9.056	

6 STDE

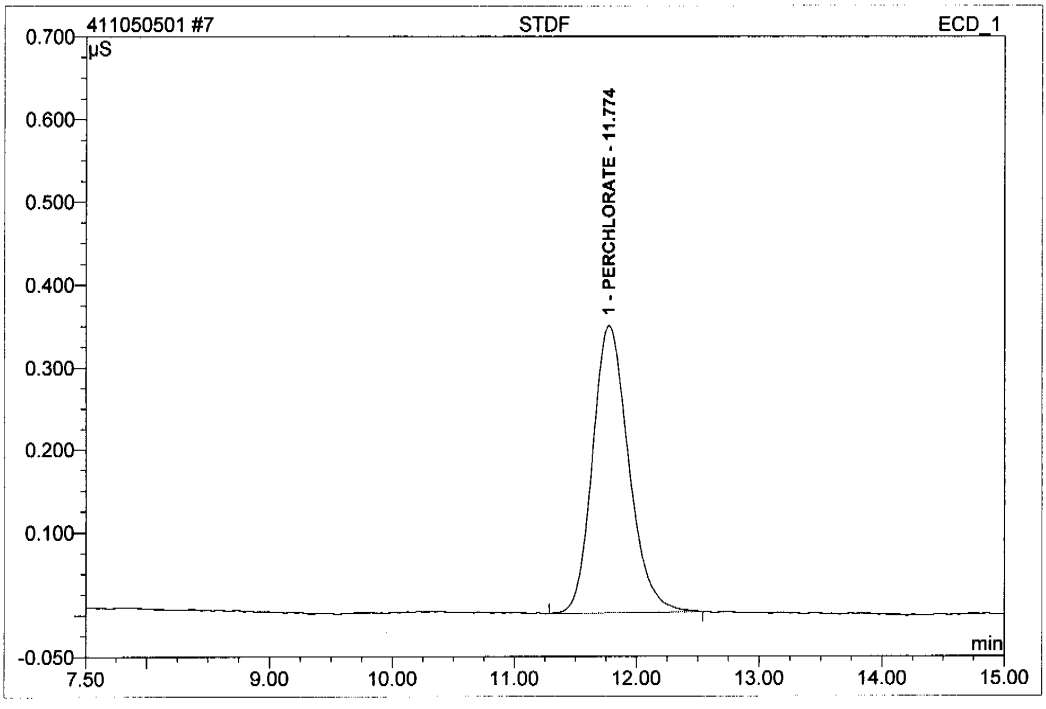
Sample Name:	**STDE**	*Injection Volume:*	**1000.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 16:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	9.90	n.a.	0.016	0.004	7.52	n.a.	BMB
2	11.96	PERCHLORATE	0.160	0.055	92.48	23.423	BMB
Total:			0.176	0.059	100.00	23.423	

7 STDF

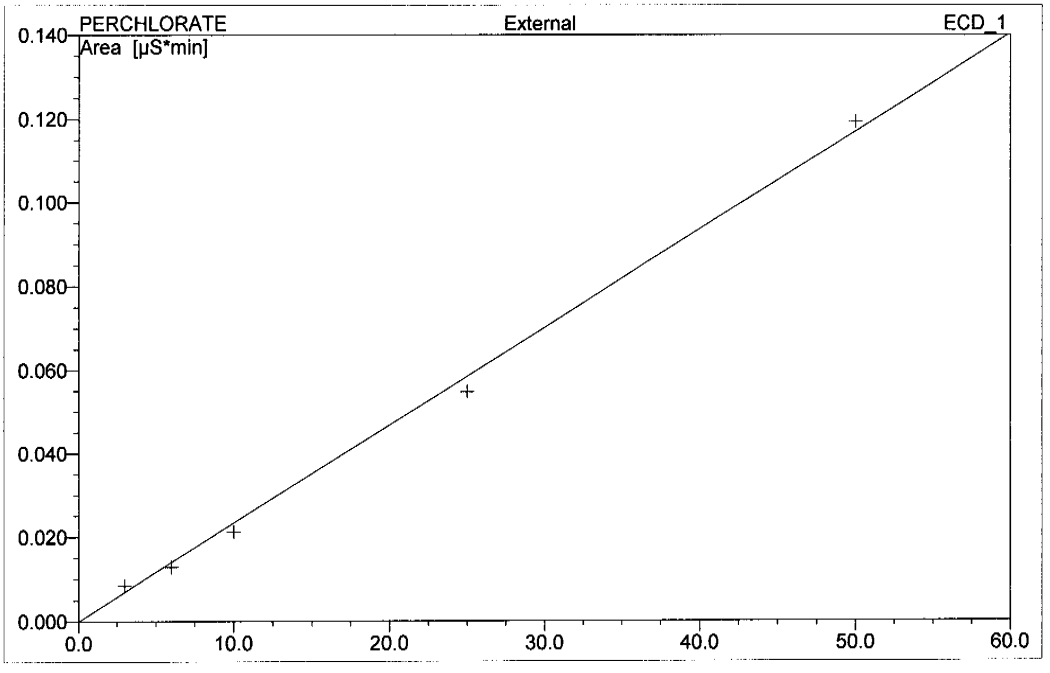
Sample Name:	**STDF**	*Injection Volume:*	**1000.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 16:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.77	PERCHLORATE	0.348	0.119	100.00	51.004	BMB
Total:			0.348	0.119	100.00	51.004	

7 STDF

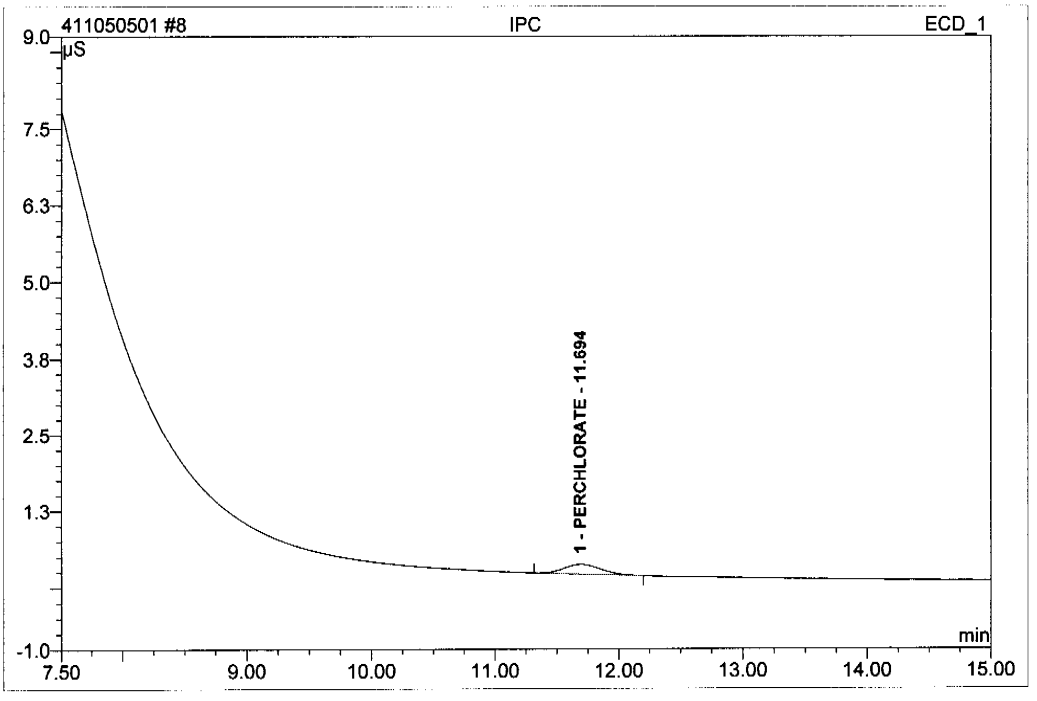
Sample Name:	**STDF**	*Injection Volume:*	**1000.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/4/2011 16:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	11.77	PERCHLORATE	ALin	5	99.8679	0.0000	0.0023	0.0000
Average:					99.8679	0.0000	0.0023	0.0000

8 IPC

Sample Name:	**IPC**	*Injection Volume:*	**1000.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 8:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.69	PERCHLORATE	0.160	0.055	100.00	23.353	BMB
Total:			0.160	0.055	100.00	23.353	

IPL = $\frac{0.055}{0.160}$ = 0.344

PD = 0.3

BS = $\frac{0.069}{0.200}$ = 0.345

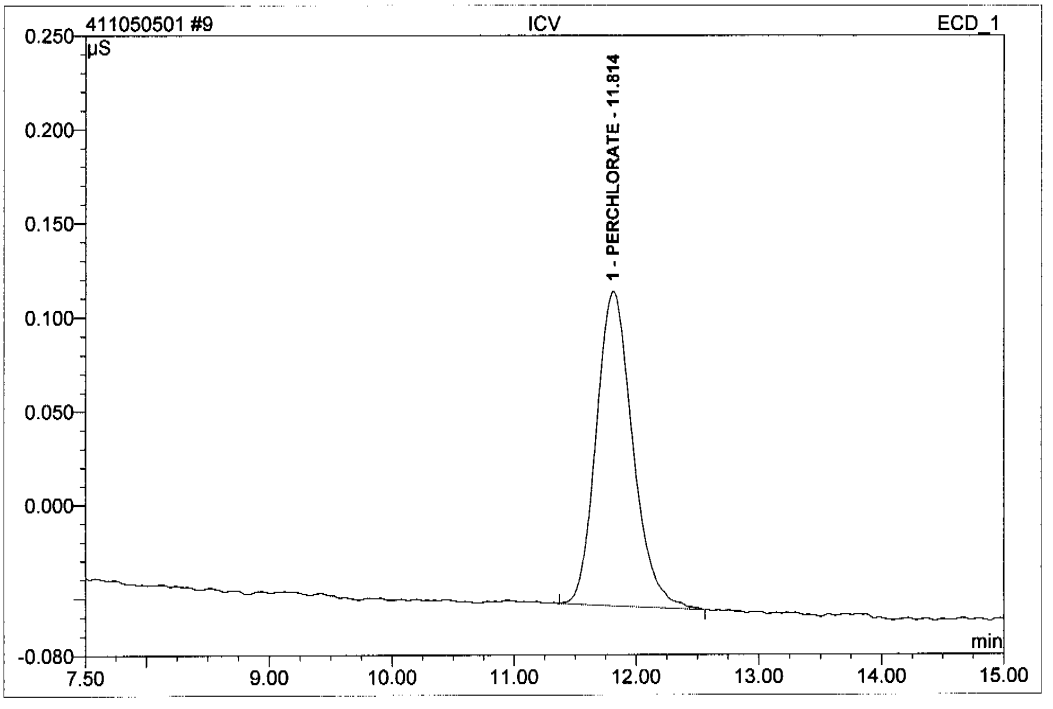
Rec=93.6% N=25

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

9 ICV

Sample Name:	**ICV**	*Injection Volume:*	**1000.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 8:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

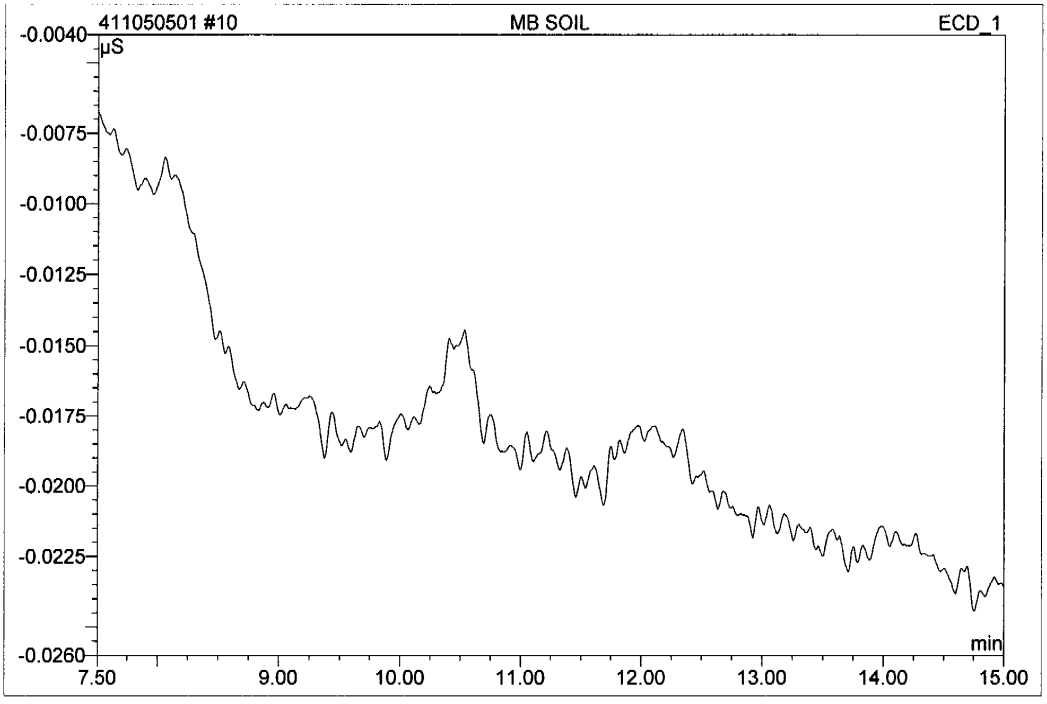


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.81	PERCHLORATE	0.168	0.058	100.00	24.743	BMB
Total:			0.168	0.058	100.00	24.743	

Rec=98.8% TV=25

10 MB SOIL

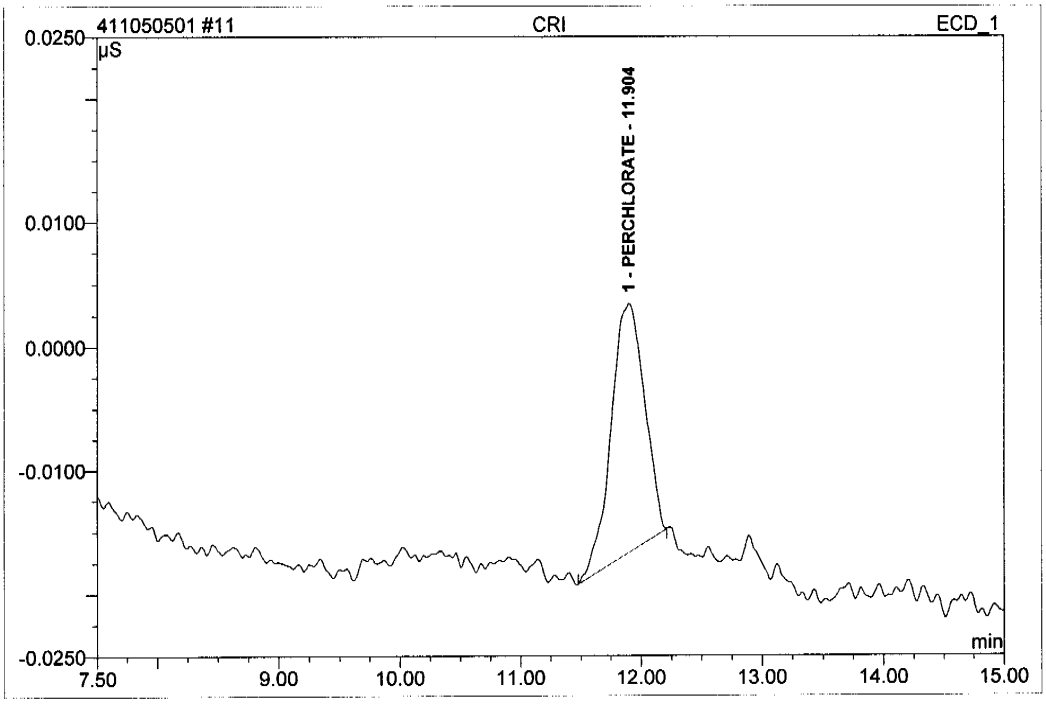
Sample Name:	**MB SOIL**	*Injection Volume:*	**1000.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 9:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

11 CRI

Sample Name:	**CRI**	*Injection Volume:*	**1000.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 9:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

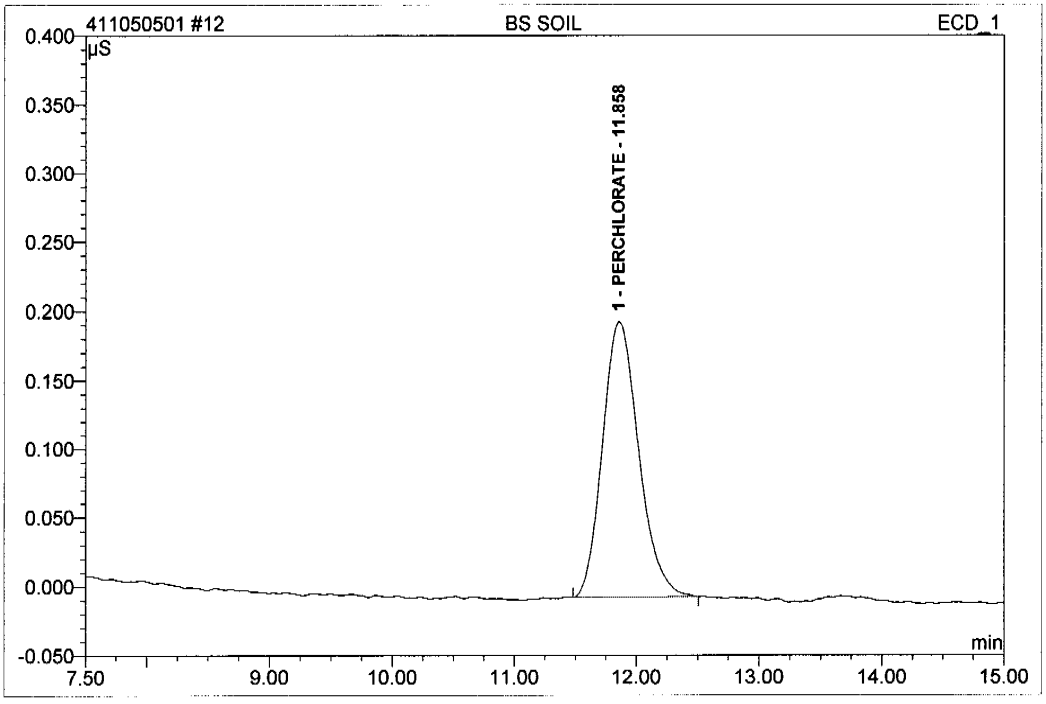


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.90	PERCHLORATE	0.020	0.006	100.00	2.758	BMB
Total:			0.020	0.006	100.00	2.758	

Rec=92% N=3.0

12 BS SOIL

Sample Name:	**BS SOIL**	*Injection Volume:*	**1000.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 9:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.86	PERCHLORATE	0.200	0.069	100.00	29.316	BMB
Total:			0.200	0.069	100.00	29.316	

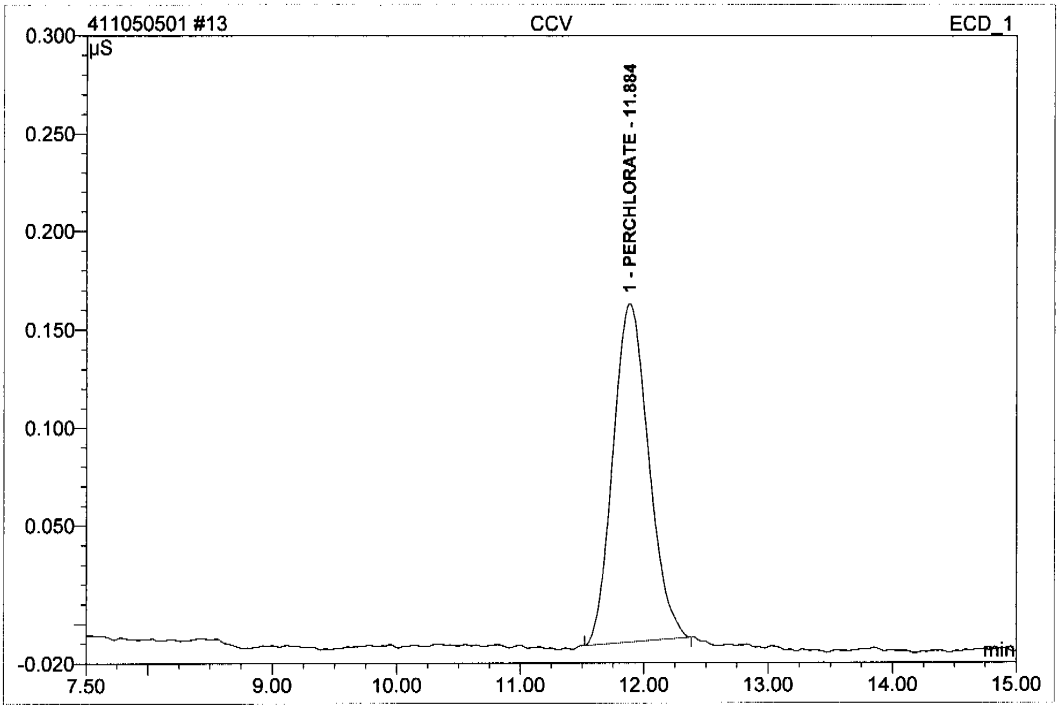
Rec=117.3% N=25

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

13 CCV

Sample Name:	**CCV**	*Injection Volume:*	**1000.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 9:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

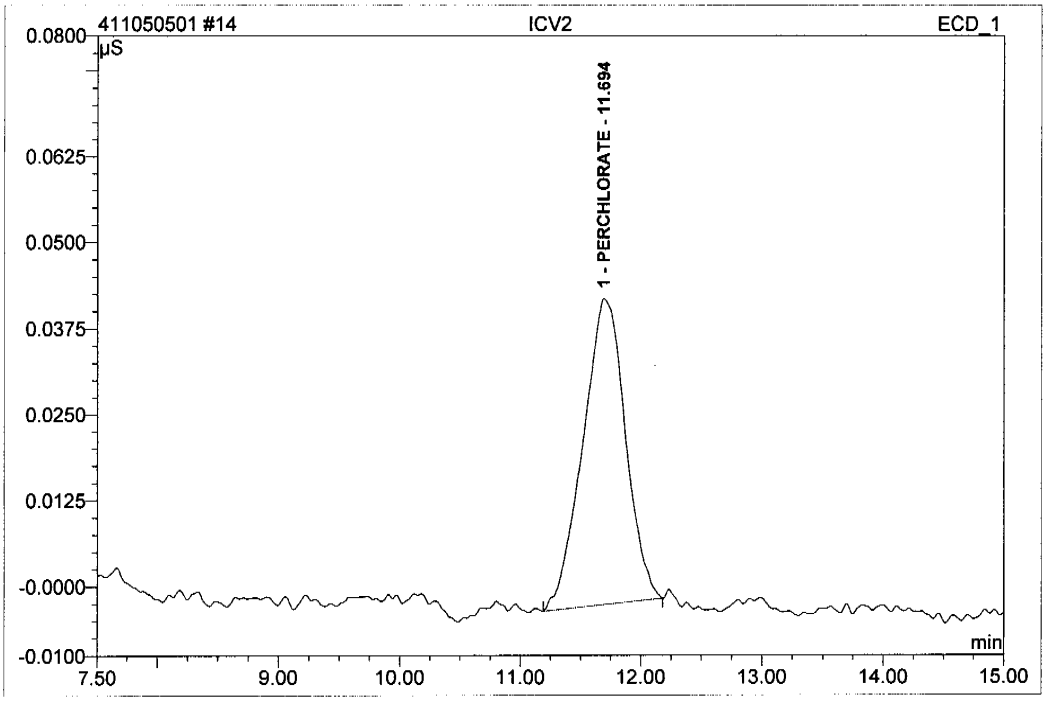


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.88	PERCHLORATE	0.173	0.058	100.00	24.598	BMB
Total:			0.173	0.058	100.00	24.598	

Rec=98.4% N=25

14 ICV2

Sample Name:	**ICV2**	*Injection Volume:*	**1000.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 10:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

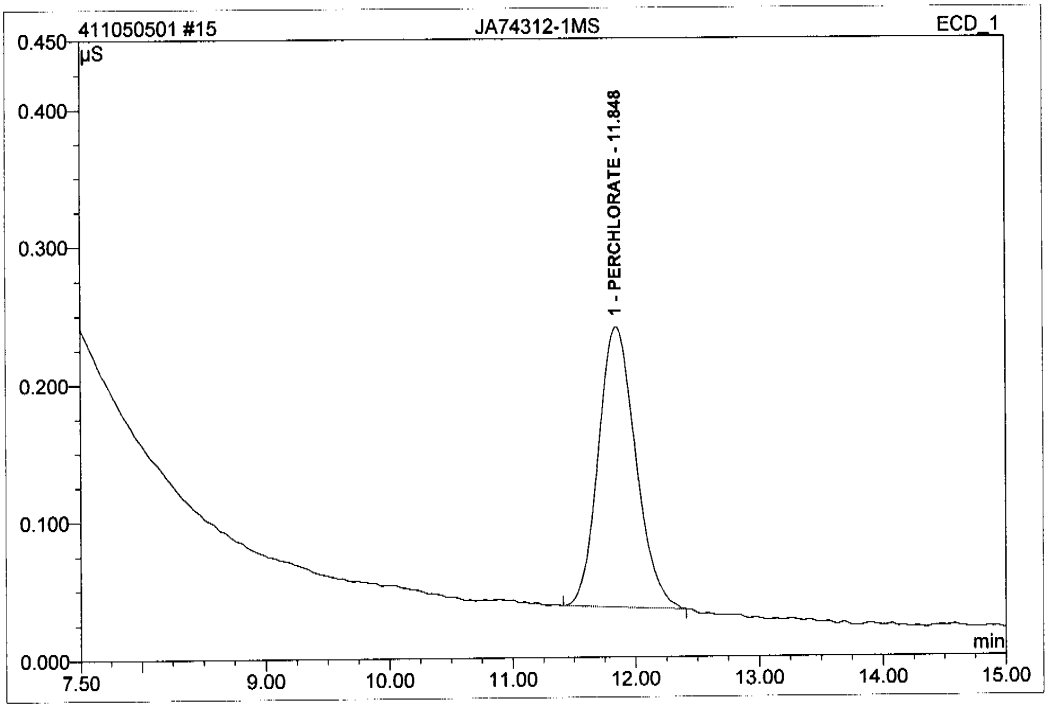


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.69	PERCHLORATE	0.044	0.018	100.00	7.743	BMB
Total:			0.044	0.018	100.00	7.743	

Rec 96.8% IV: 8.0

15 JA74312-1MS

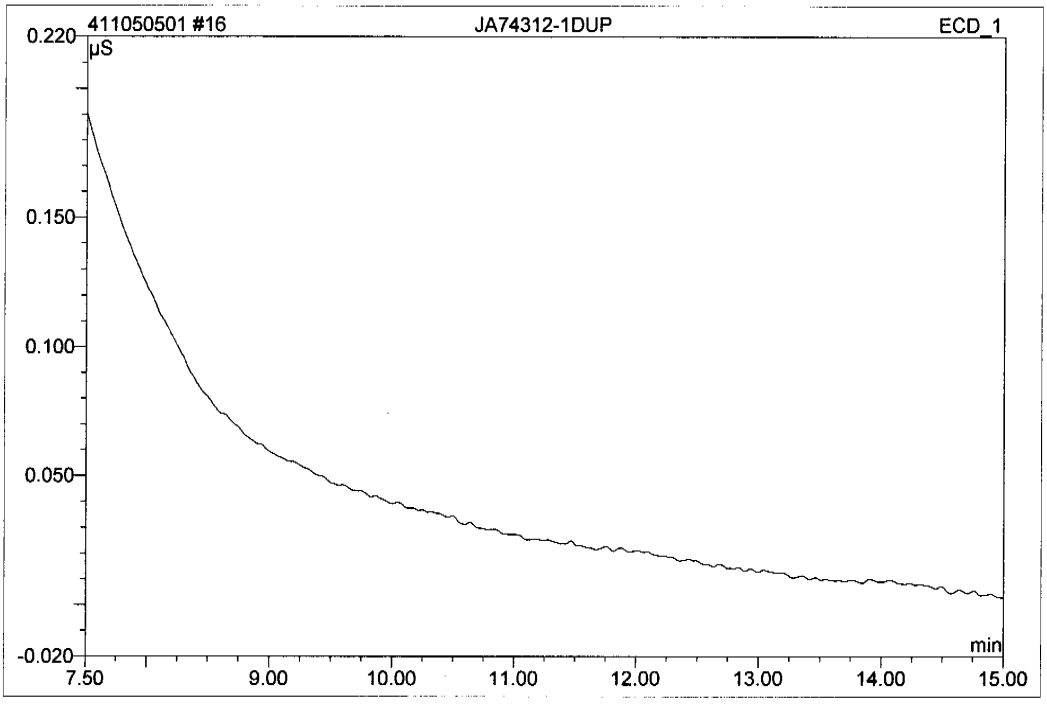
Sample Name:	**JA74312-1MS**	*Injection Volume:*	**1000.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 10:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.85	PERCHLORATE	0.204	0.071	100.00	30.543	BMB
Total:			0.204	0.071	100.00	30.543	

16 JA74312-1DUP

Sample Name:	**JA74312-1DUP**	*Injection Volume:*	**1000.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 10:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



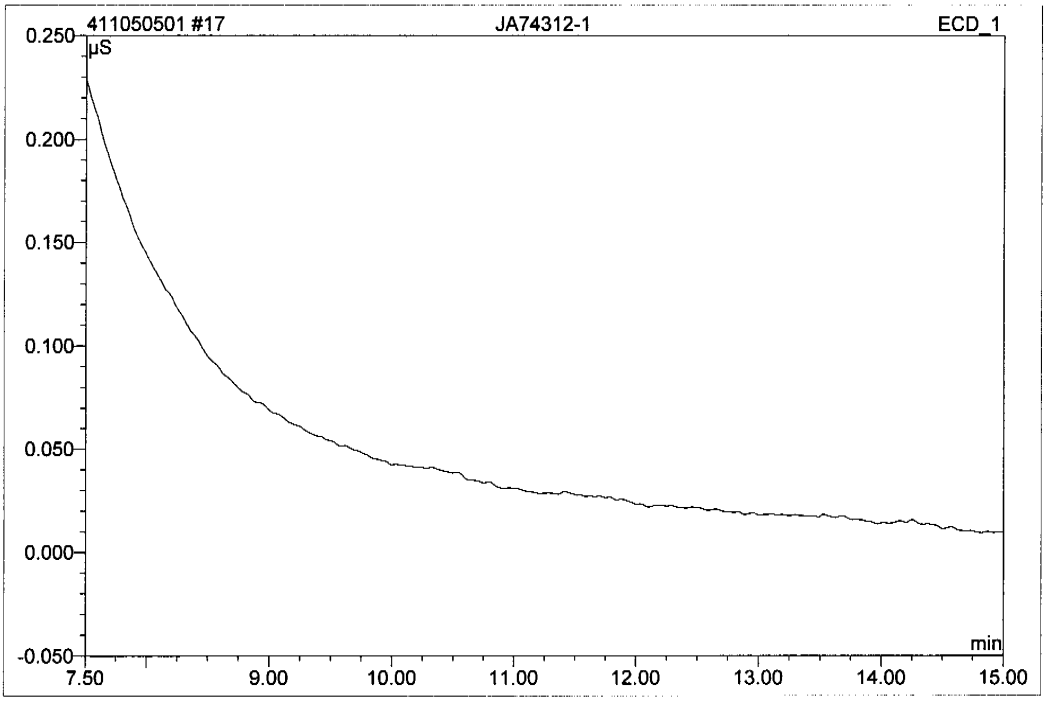
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

17 JA74312-1

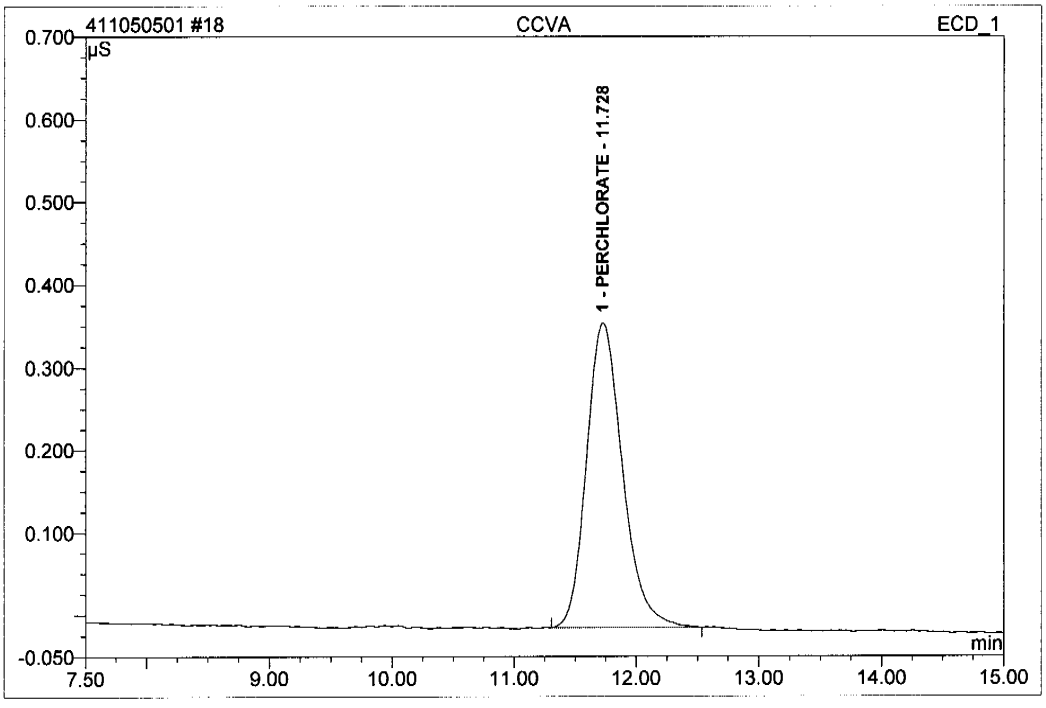
Sample Name:	**JA74312-1**	*Injection Volume:*	**1000.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 11:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

18 CCVA

Sample Name:	**CCVA**	*Injection Volume:*	**1000.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 11:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

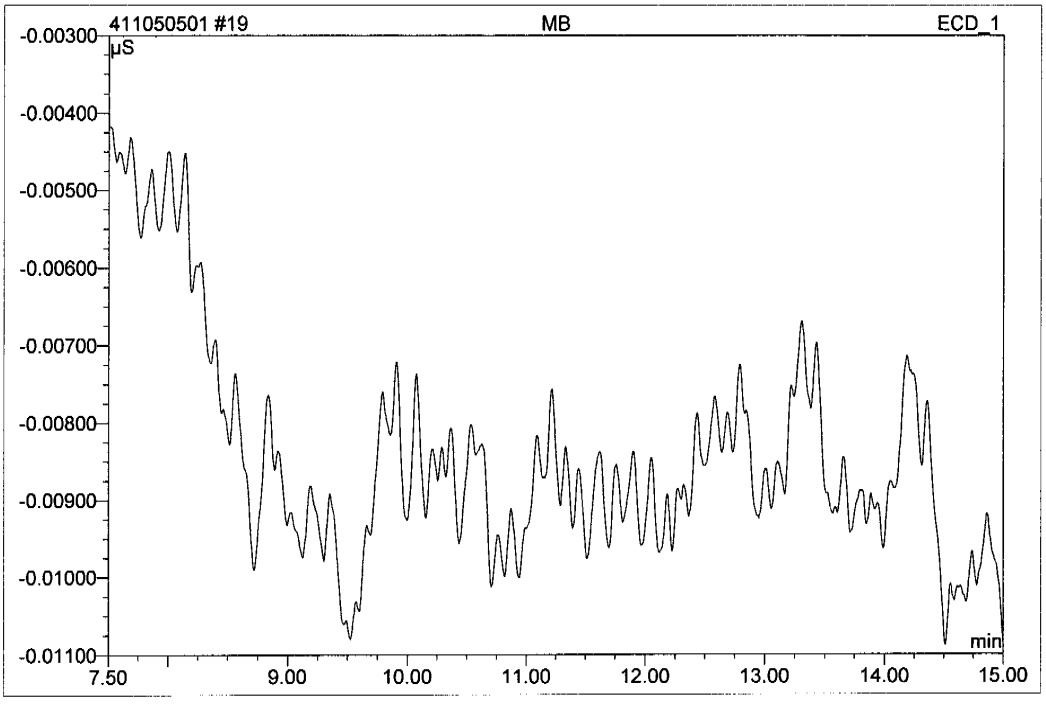


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.73	PERCHLORATE	0.369	0.127	100.00	54.090	BMB
Total:			0.369	0.127	100.00	54.090	

Rec=108.2% N=50

19 MB

Sample Name:	**MB**	*Injection Volume:*	**1000.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 11:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



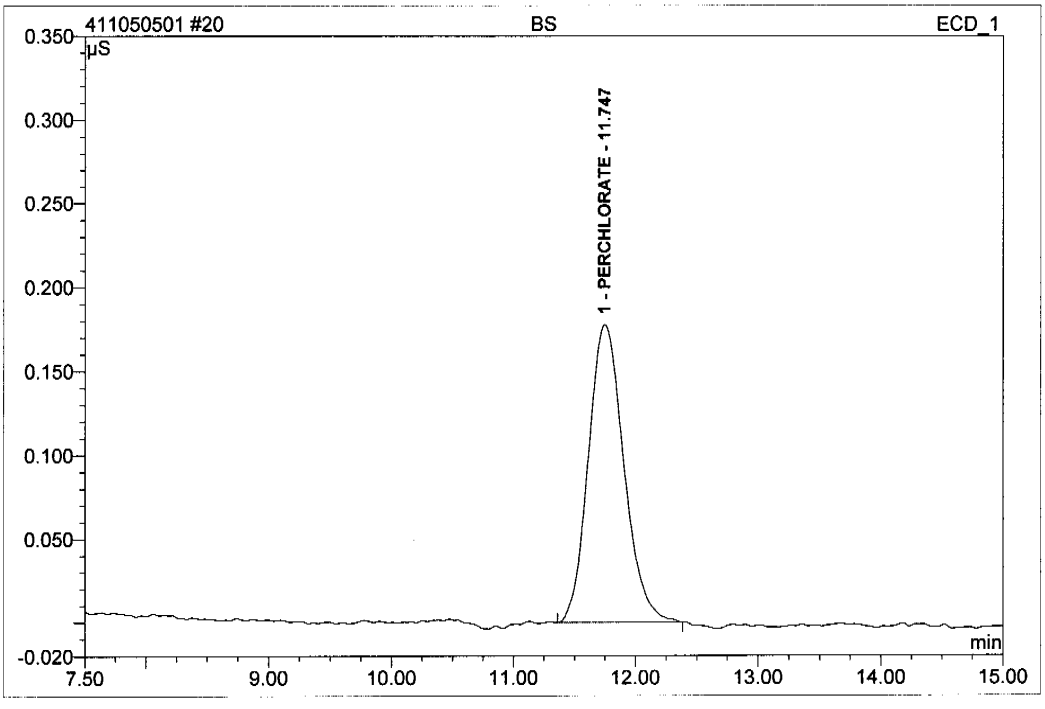
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

20 BS

Sample Name:	**BS**	*Injection Volume:*	**1000.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 11:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

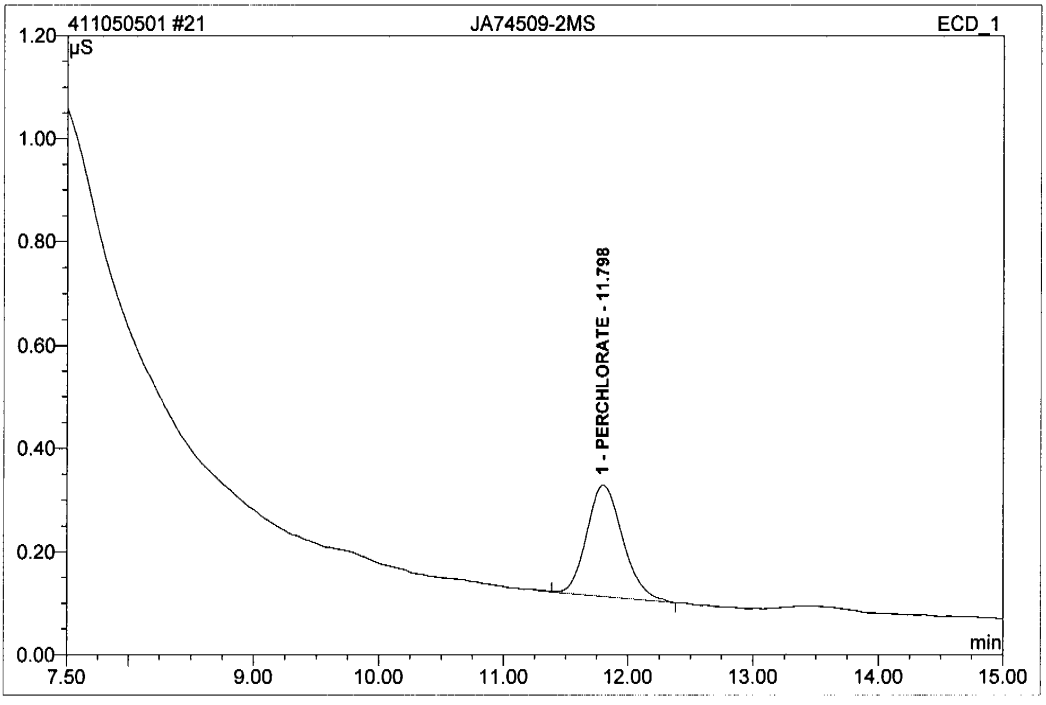


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.75	PERCHLORATE	0.178	0.060	100.00	25.689	BMB
Total:			0.178	0.060	100.00	25.689	

Rec=102.8% IV=25

21 JA74509-2MS

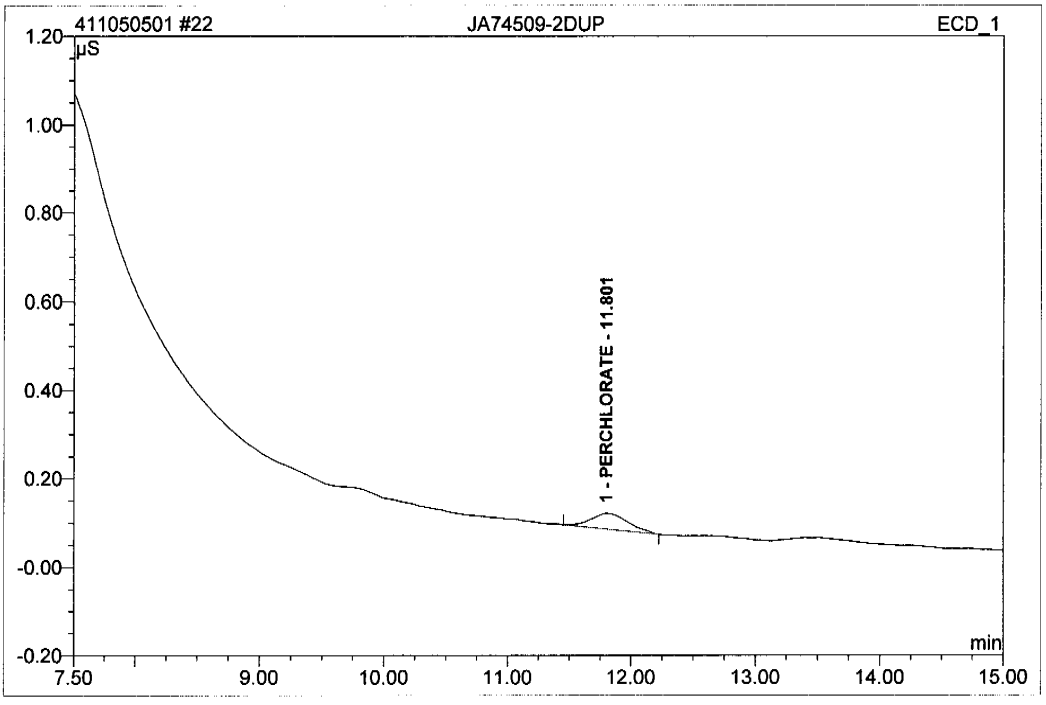
Sample Name:	**JA74509-2MS**	*Injection Volume:*	**1000.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 12:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.80	PERCHLORATE	0.215	0.073	100.00	31.062	BMB
Total:			0.215	0.073	100.00	31.062	

22 JA74509-2DUP

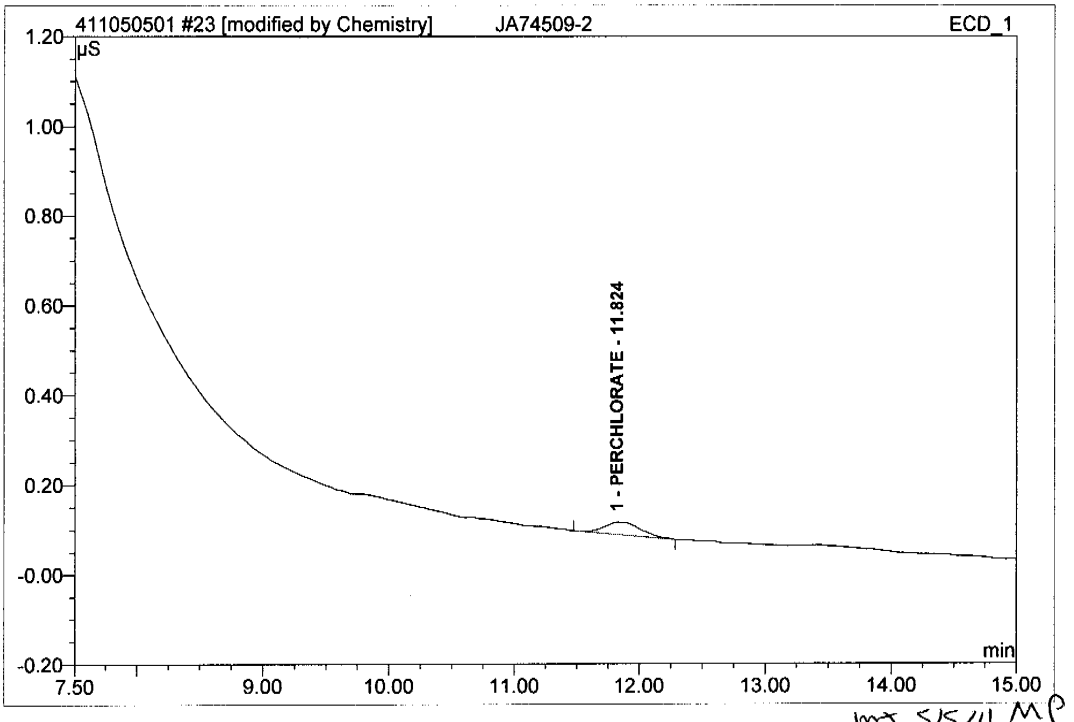
Sample Name:	**JA74509-2DUP**	*Injection Volume:*	**1000.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 12:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.80	PERCHLORATE	0.035	0.012	100.00	5.275	BMB
Total:			0.035	0.012	100.00	5.275	

23 JA74509-2

Sample Name:	**JA74509-2**	*Injection Volume:*	**1000.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 12:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

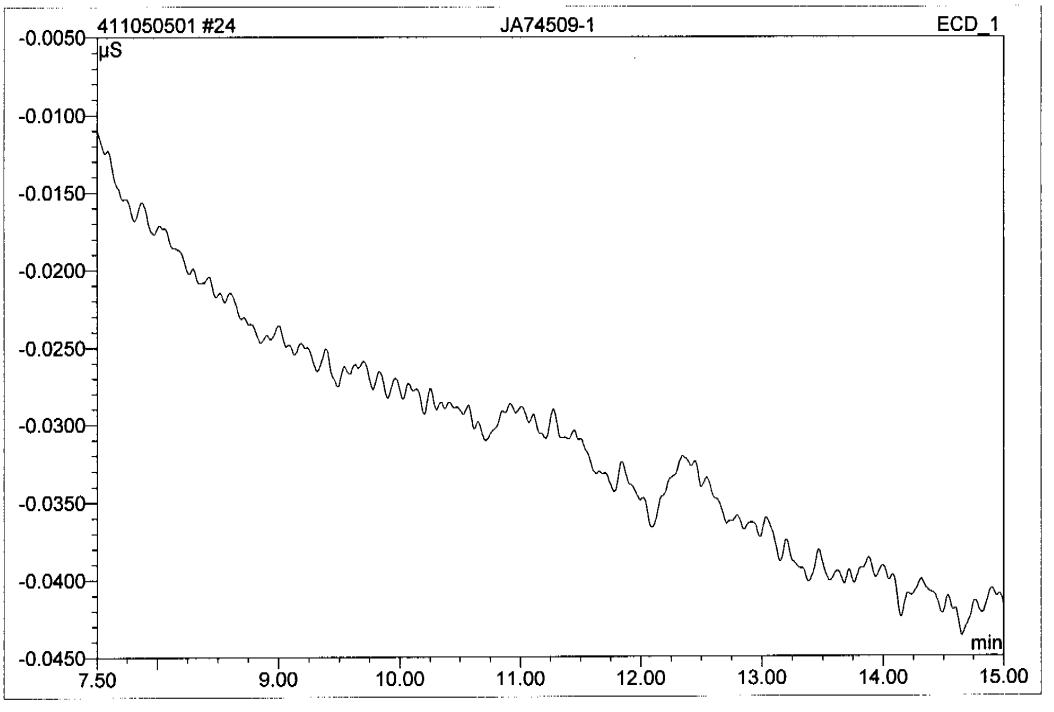


mt 5/5/11 MP

No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.82	PERCHLORATE	0.027	0.009	100.00	4.047	BMB*
Total:			0.027	0.009	100.00	4.047	

24 JA74509-1

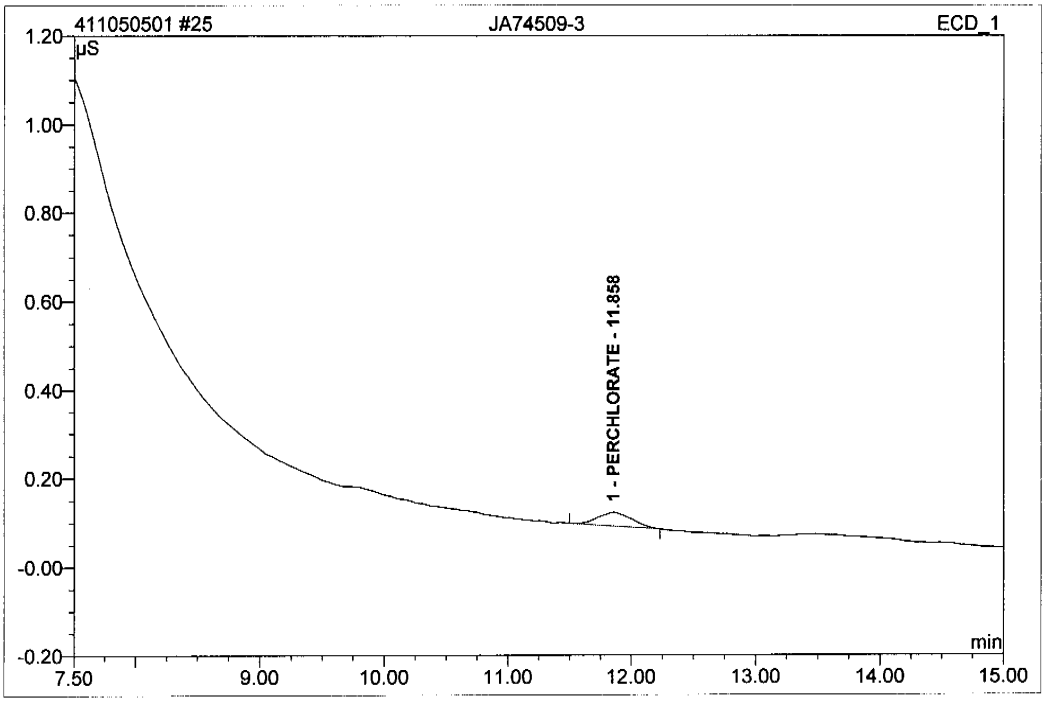
Sample Name:	**JA74509-1**	*Injection Volume:*	**1000.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 13:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

25 JA74509-3

Sample Name:	**JA74509-3**	*Injection Volume:*	**1000.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 13:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.86	PERCHLORATE	0.031	0.010	100.00	4.177	BMB
Total:			0.031	0.010	100.00	4.177	

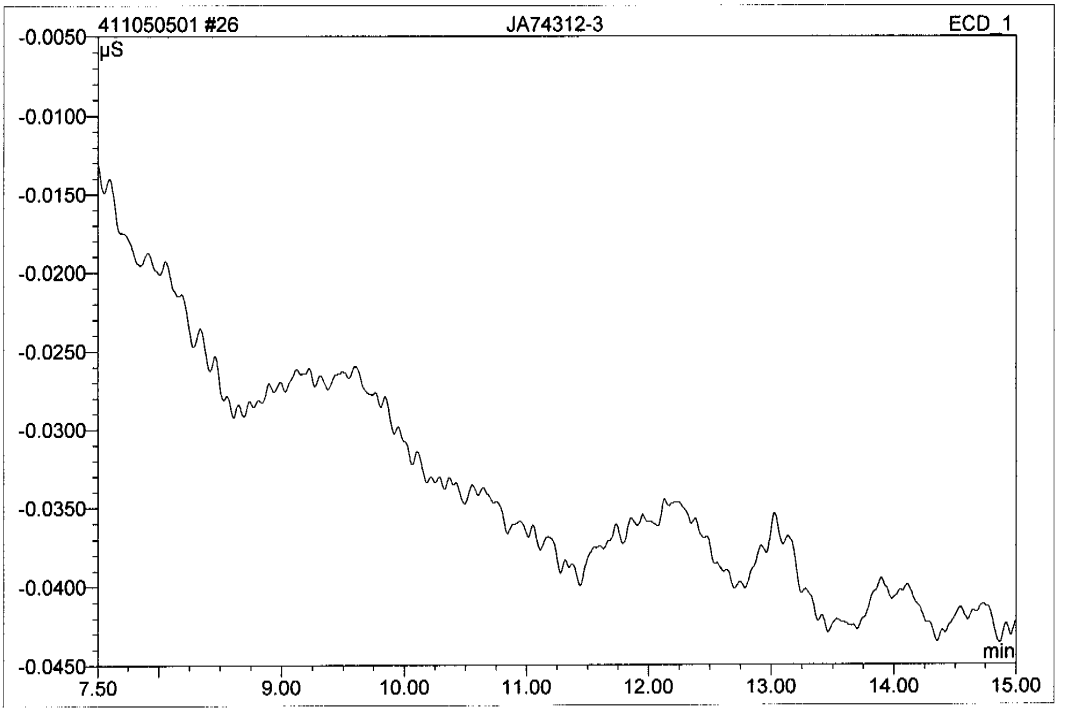
irregular peak shape - rerun for confirmation

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

26 JA74312-3

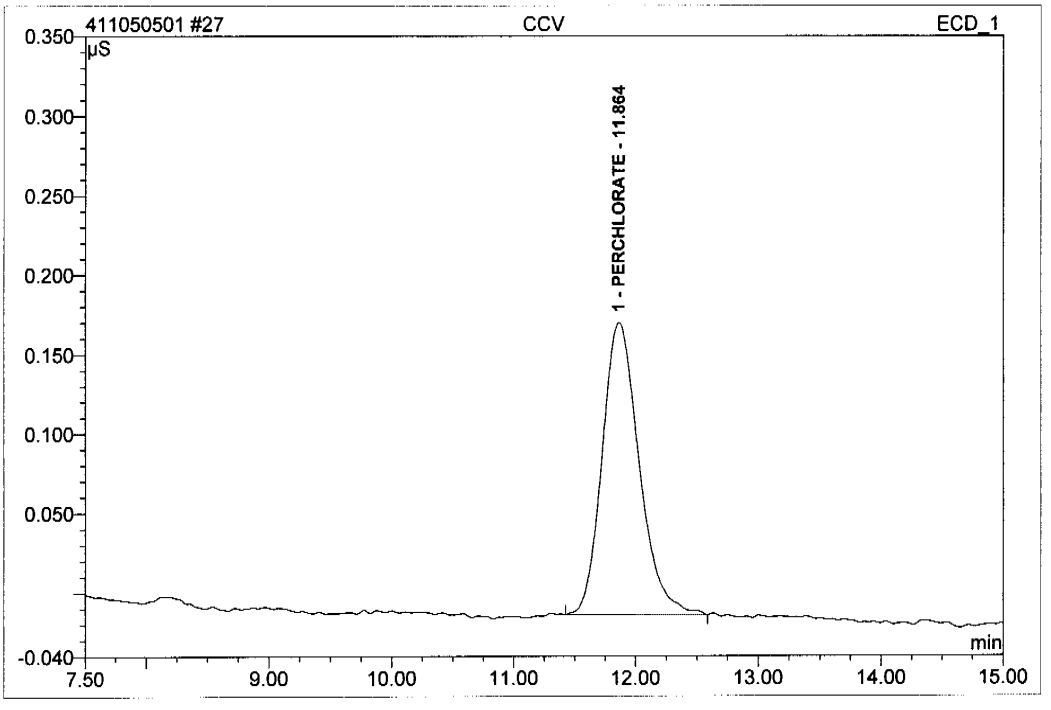
Sample Name:	**JA74312-3**	*Injection Volume:*	**1000.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 13:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

27 CCV

Sample Name:	**CCV**	*Injection Volume:*	**1000.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 13:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

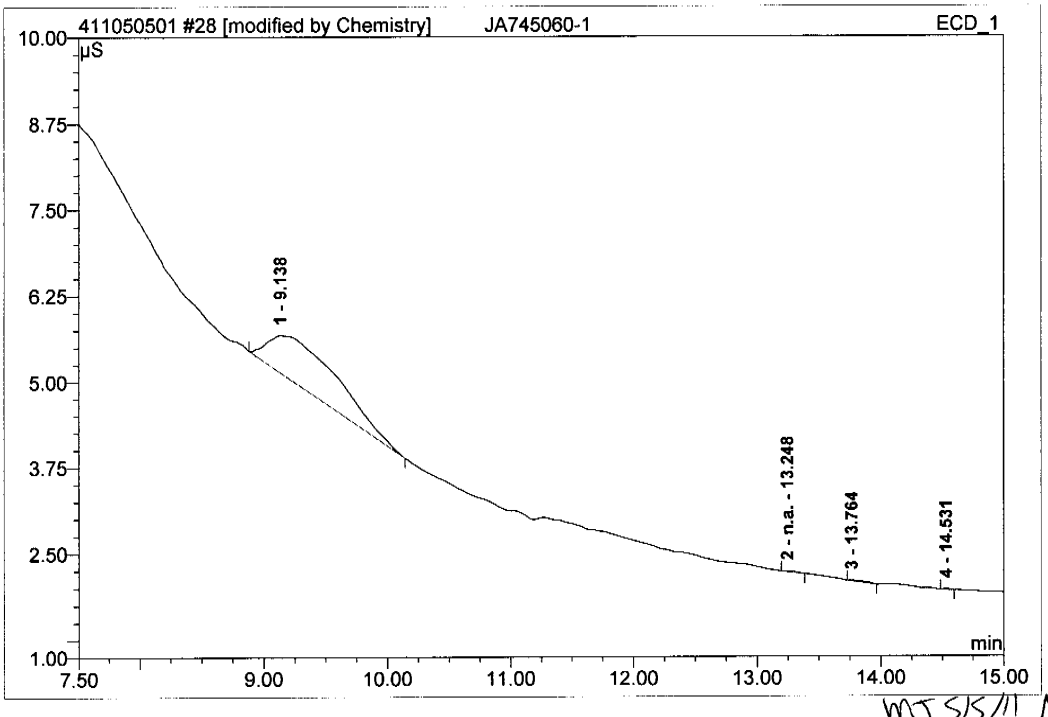


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.86	PERCHLORATE	0.184	0.065	100.00	27.568	BMB
Total:			0.184	0.065	100.00	27.568	

Rec=110% N=25

28 JA745060-1

Sample Name:	**JA745060-1**	*Injection Volume:*	**1000.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**2.0000**
Recording Time:	**5/5/2011 14:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



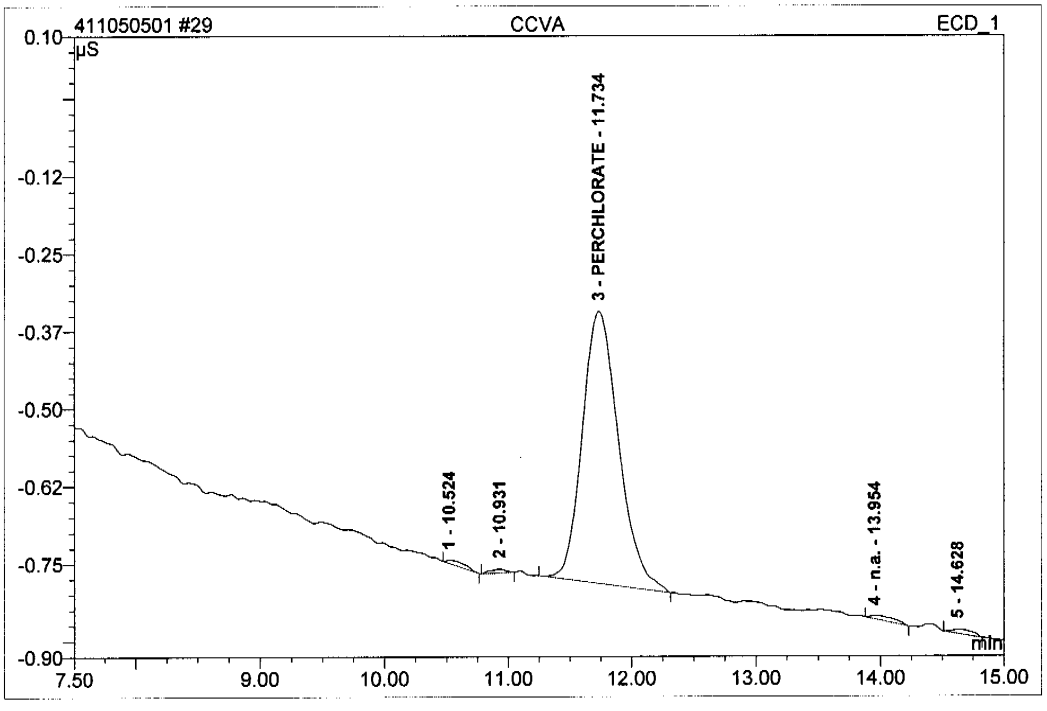
MJ 5/5/11 MP

No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	9.14	n.a.	0.542	0.447	98.93	n.a.	BMB
2	13.25	n.a.	0.013	0.001	0.33	n.a.	BMB
3	13.76	n.a.	0.009	0.003	0.56	n.a.	BMB
4	14.53	n.a.	0.015	0.001	0.19	n.a.	BMB
Total:			0.579	0.452	100.00	0.000	

rerun - CCVA fails

29 CCVA

Sample Name:	**CCVA**	*Injection Volume:*	**1000.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/5/2011 14:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	10.52	n.a.	0.006	0.001	0.88	n.a.	BMB
2	10.93	n.a.	0.007	0.001	0.62	n.a.	BMB
3	11.73	PERCHLORATE	0.439	0.150	96.52	64.045	BMB
4	13.95	n.a.	0.006	0.002	1.05	n.a.	BMB
5	14.63	n.a.	0.007	0.001	0.92	n.a.	BMB
Total:			0.464	0.155	100.00	64.045	

Rec=128% NC=50

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Sequence: 411051002 GN50648
Operator: Chemistry
Page 1 of 2
Printed: 5/10/2011 3:16:32 PM

Title:
Datasource: NJMTLIC2_local
Location: Accutest_System_4\System 4 Sequences\2011\April
Timebase: Accutest_Sysyem_4
#Samples: 37
Created: 5/10/2011 9:50:33 AM by Chemistry
Last Update: 5/10/2011 3:15:50 PM by Chemistry

No.	Name	Type	Pos.	Inj. Vol.	Dil. Factor	Status	Inj. Date/Time	Comment
1	BLANKCONF	Unknown	1	1000.0	1.0000	Finished	5/10/2011 9:58:38 AM	
2	STDA	Standard	2	1000.0	1.0000	Finished	5/10/2011 10:15:42 AM	
3	STDB	Standard	3	1000.0	1.0000	Finished	5/10/2011 10:33:01 AM	
4	STDC	Standard	4	1000.0	1.0000	Finished	5/10/2011 10:50:19 AM	
5	STDD	Standard	5	1000.0	1.0000	Finished	5/10/2011 11:07:37 AM	
6	STDE	Standard	6	1000.0	1.0000	Finished	5/10/2011 11:24:54 AM	
7	STDF	Standard	7	1000.0	1.0000	Finished	5/10/2011 11:42:12 AM	
8	IPC	Unknown	8	1000.0	1.0000	Finished	5/10/2011 11:59:30 AM	
9	ICV	Unknown	9	1000.0	1.0000	Finished	5/10/2011 12:16:48 PM	
10	MB	Unknown	10	1000.0	1.0000	Finished	5/10/2011 12:34:06 PM	
11	CRI	Unknown	11	1000.0	1.0000	Finished	5/10/2011 12:51:24 PM	
12	BS	Unknown	12	1000.0	1.0000	Finished	5/10/2011 1:08:41 PM	
13	CCV	Unknown	13	1000.0	1.0000	Finished	5/10/2011 1:25:59 PM	
14	ICV2	Unknown	14	1000.0	1.0000	Finished	5/10/2011 1:43:17 PM	
15	JA74509-3	Unknown	15	1000.0	1.0000	Finished	5/10/2011 2:00:35 PM	
16	JA74883-1MS	Unknown	16	1000.0	1.0000	Finished	5/10/2011 2:17:52 PM	
17	JA74883-1DUP	Unknown	17	1000.0	1.0000	Finished	5/10/2011 2:35:10 PM	
18	JA74883-1	Unknown	18	1000.0	1.0000	Finished	5/10/2011 2:52:29 PM	
	JA74883-2	Unknown	19	1000.0	1.0000	Running	5/10/2011 3:09:47 PM	
20	JA74883-3	Unknown	20	1000.0	1.0000	Single		
21	JA74883-4	Unknown	21	1000.0	1.0000	Single		
22	JA74883-5	Unknown	22	1000.0	1.0000	Single		
23	JA74883-7	Unknown	23	1000.0	10.0000	Single		
24	CCVA	Unknown	24	1000.0	1.0000	Single		
25	JA74883-8	Unknown	25	1000.0	1.0000	Single		
26	JA74883-9	Unknown	26	1000.0	1.0000	Single		
27	JA74883-10	Unknown	27	1000.0	1.0000	Single		
28	JA74883-11	Unknown	28	1000.0	25.0000	Single		
29	JA74883-12	Unknown	29	1000.0	1.0000	Single		
30	JA74883-13	Unknown	30	1000.0	1.0000	Single		
31	JA74883-14	Unknown	31	1000.0	1.0000	Single		
32	JA74883-16	Unknown	32	1000.0	1.0000	Single		
33	JA74883-1MS	Unknown	37	1000.0	5.0000	Single		
34	CCV	Unknown	33	1000.0	1.0000	Single		
35	JA74060-1	Unknown	34	1000.0	4.0000	Single		
36	CCVA	Unknown	35	1000.0	1.0000	Single		
37	STANDBY	Unknown	36	1000.0	1.0000	Single		

GPS8614 AQ (2) ICV2

GPS8691 AQ (1)

GPS8614 see above

(1)

7

Chromeleon © Dionex Corporation, Version 6.80 SR9a Build 2680 (163077)

6.2
6

ACCUTEST.

Analyst AE Product PERCHLT

Date 5/10/11 Batch ID GN50648

Sample Dilution Prep Log

Sample ID	Dilution	Initial Volume	Final Volume	Comments
BS			50	0.5mL of GNEY-28104-1C
MS(JA74883-1)			50	↓
JA74883-7	1:10	3	30	
JA74883-11	1:25	1	25	
MS(JA74883-1)	1:5	10	50	0.5mL of GNEY-28104-1C
JA74060-1	1:4	10	40	

QC Reviewer: Date:

Form: GN165-01
Rev. Date: 2/25/03

ACCUTEST.

Test: Specific conductivity
Product: SCON
Method: SM20 2510, SW846 9050A ● Units: umhos/cm

Analyst: SS
GN Batch ID: GN50448
Date: 5/5/2011

$$SCON = \frac{Km \times C}{\{1 + 0.0191 \times (T - 25)\}}$$

Cell Constant (C) Date calculated: 3/31/2011 Cell Constant = 0.9806

QC Summary:

Check Standard 1	1402	True Value	1412	Recovery	99.3	Accetable?	Y
Check Standard 2	1404	True Value	1412	Recovery	99.4	Accetable?	Y
Check Standard 3		True Value	1412	Recovery	0.0	Accetable?	Y
Duplicate ID:		Samp Result:	78.41	Dup Result:	82.41	% RPD:	-5.0

Bottle #	Sample ID	Temp. in deg. C	Measured SCON in umhos/cm (Km)	Calculated SCON in umhos/cm (Km)	Detection Limit umhos/cm	Units	Factor
	ccv1conf	25.00	1430.00	1402.3	0.50	umhos/cm	1.0
	ipc-3	25.00	2620.00	2569.2	0.50	umhos/cm	1.0
	ipc-4	25.00	3380.00	3314.4	0.50	umhos/cm	1.0
	ipc-5	25.00	4110.00	4030.3	0.50	umhos/cm	1.0
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
	ccv1conf	25.00	1432.00	1404.2	0.50	umhos/cm	1.0
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
		25.00					
	ccv1conf	25.00					
		25.00					
		25.00					

Reagent - 1M KCL Solution -> GNF3 27704 - SCON
exp 9/14/11

(0.01 M KCL -> 1 ml of 1 MKCL -> 100 ml DI H_2O)

Analyst: [signature] Date: 5/5/11 QC Reviewer: _____ Date: _____

ACCUTEST

GENERAL CHEMISTRY STANDARD PREPARATION LOG

Product: Perchlorate

GN or GP Number: GN50648

Intermediate Standard Description	Stock used to prepare standard	Stock concentration	Stock volume or weight used with units	Balance or Autopipet ID (*)	Diluent	Final Volume	Final Conc. of Intermediate (mg/l)	Expiration Date	Analyst	Date
100 ppm	GNE4-28090-IC	1000 ppm	50 mL	Class A	DI Water	500 mL	100 ppm	5/22/2011	AE	5/10/11
1 ppm	GNE4-28091-IC	100 ppm	5 mL	Class A	DI Water	500 mL	1 ppm	5/22/2011	AE	
100 ppm (ICV)	GNE4-28092-IC	1000 ppm	20 mL	Class A	DI Water	200 mL	100 ppm	5/22/2011	AE	
1 ppm (ICV)	GNE4-28093-IC	100 ppm	2 mL	Class A	DI Water	200 mL	1 ppm	5/22/2011	AE	
Standard Description	Intermediate or Stock used to prepare standard	Intermediate or Stock concentration	Intermediate or Stock volume used in ml	Balance or Autopipet ID (*)	Diluent	Final Volume	Final Conc. of Standard (mg/l)	Expiration Date	Analyst	Date
Standard B	GNE4-28094-IC	1 ppm	3 mL	Class A	DI Water	1000 mL	3 ppb	5/22/2011	AE	5/10/11
Standard C	GNE4-28095-IC	1 ppm	3 mL	Class A	DI Water	500 mL	6 ppb	5/22/2011	AE	
Standard D	GNE4-28096-IC	1 ppm	5 mL	Class A	DI Water	500 mL	10 ppb	5/22/2011	AE	
Standard E	GNE4-28097-IC	1 ppm	25 mL	Class A	DI Water	1000 mL	25 ppb	5/22/2011	AE	
Standard F	GNE4-28098-IC	1 ppm	25 mL	Class A	DI Water	500 mL	50 ppb	5/22/2011	AE	
ICV 1	GNE4-28099-IC	1 ppm	25 mL	Class A	DI Water	1000 mL	25 ppb	5/22/2011	AE	
ICV 2	GNE4-28100-IC	1 ppm	8 mL	Class A	DI Water	1000 mL	8 ppb	5/22/2011	AE	

* 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

ACCUTEST.

Reagent Information Log - PERCHLT - Water /Soil

GN Batch ID#: GN50648

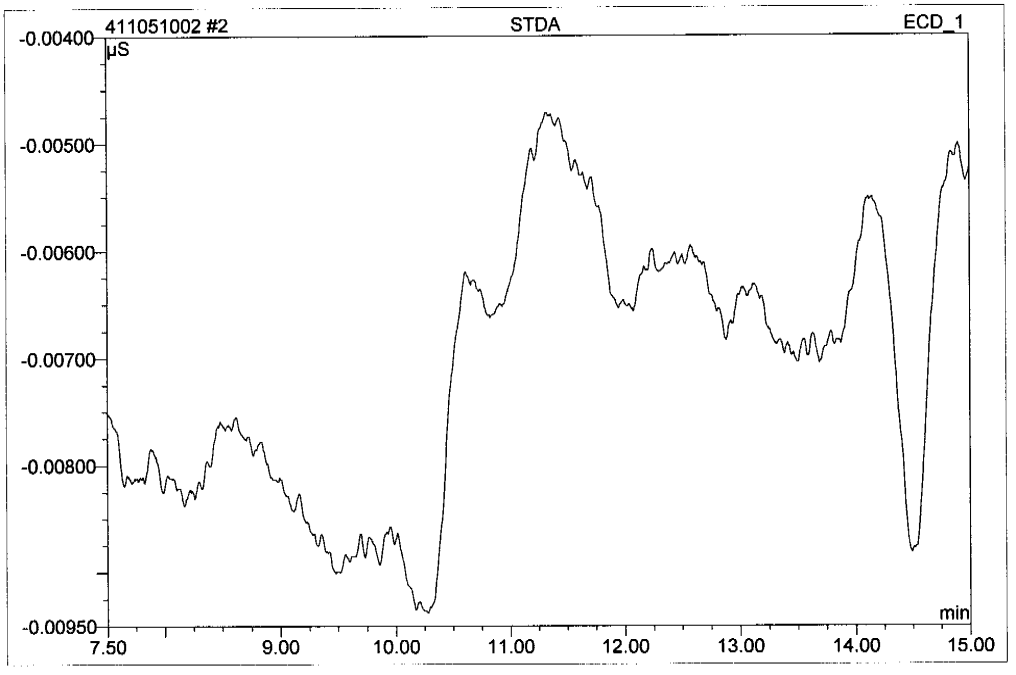
Reagent	Reagent # or Manufacturer/Lot	Exp. Date
Calibration Curve Standards:		
Standard Stock Solution, 1000 mg/L	GNE4-28087-IC	5/22/2011
Standard Intermediate, 100 mg/L	GNE4-28090-IC	5/22/2011
Standard Intermediate, 1 mg/L	GNE4-28091-IC	5/22/2011
Calibration Standard, 50 ug/L (CCVA)	GNE4-28098-IC	5/22/2011
Calibration Standard, 25 ug/L (CCV)	GNE4-28097-IC	5/22/2011
Calibration Standard, 10 ug/L	GNE4-28096-IC	5/22/2011
Calibration Standard, 6 ug/L	GNE4-28095-IC	5/22/2011
Calibration Standard, 3 ug/L (CRI)	GNE4-28094-IC	5/22/2011
External Stock Solution, 1000 mg/L	GNE4-28088-IC	5/22/2011
External Stock Solution, 100 mg/L	GNE4-28092-IC	5/22/2011
External Intermediate, 1 mg/L	GNE4-28093-IC	5/22/2011
External Standard, 25 ug/L (ICV1)	GNE4-28099-IC	5/22/2011
External Standard, 8 ug/L (ICV2)	GNE4-28100-IC	5/22/2011
IPC	GNE4-28104-IC	5/22/2011
KOH Eluent	110201654011	2/1/13
25000 mg/L MCT Stock	GNE4-28089-IC	5/22/2011
Filter lot numbers	21764038	NA
Perchlorate Spike, 2.5 mg/L	GNE4-28104-IC	5/22/2011

Reason codes for data corrections: 1-reviewer error correction: 2-transcription error; 3-computer error; 4-analyst error

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

2 STDA

Sample Name:	**STDA**	*Injection Volume:*	**1000.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 10:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



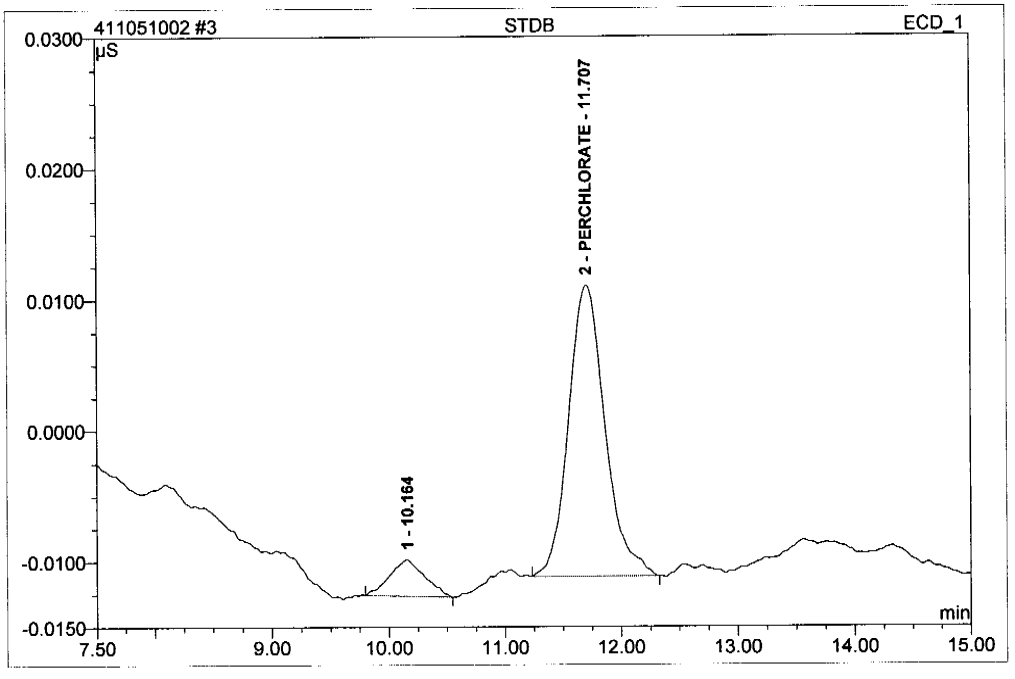
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

3 STDB

Sample Name:	**STDB**	*Injection Volume:*	**1000.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 10:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	10.16	n.a.	0.003	0.001	10.77	n.a.	BMB
2	11.71	PERCHLORATE	0.022	0.008	89.23	3.339	BMB
Total:			0.025	0.009	100.00	3.339	

Default_perchlorate_accutest/Integration

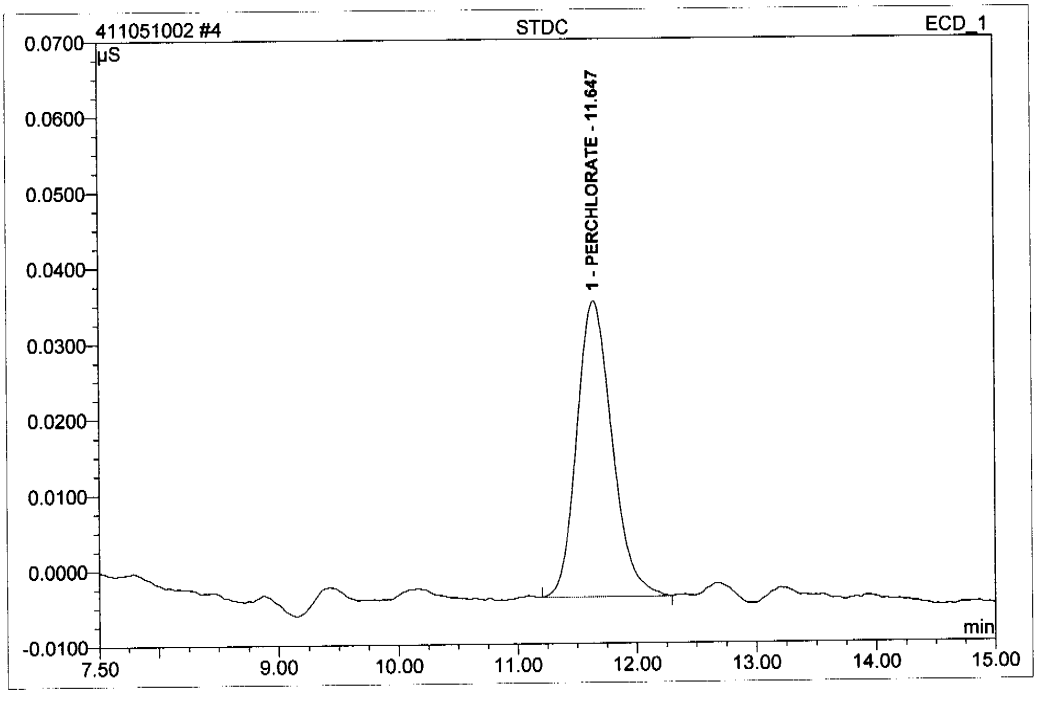
Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

5/11/2011 3:21 PM

4 STDC

Sample Name:	**STDC**	*Injection Volume:*	**1000.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 10:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.65	PERCHLORATE	0.039	0.013	100.00	5.561	BMB
Total:			0.039	0.013	100.00	5.561	

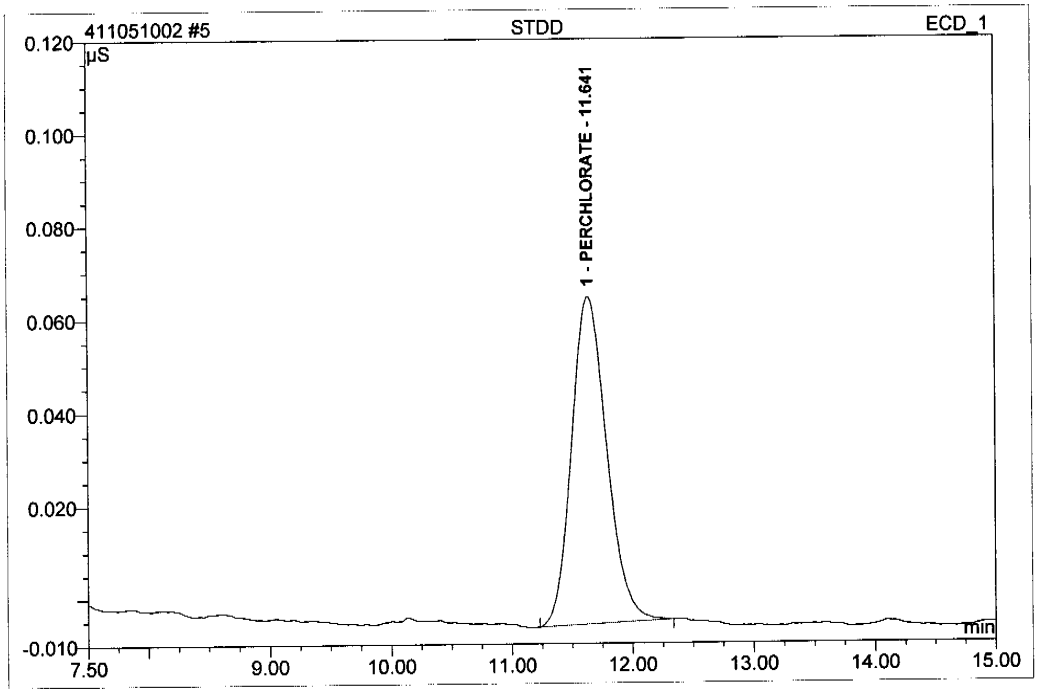
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

5 STDD

Sample Name:	**STDD**	*Injection Volume:*	**1000.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 11:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.64	PERCHLORATE	0.070	0.024	100.00	9.868	BMB
Total:			0.070	0.024	100.00	9.868	

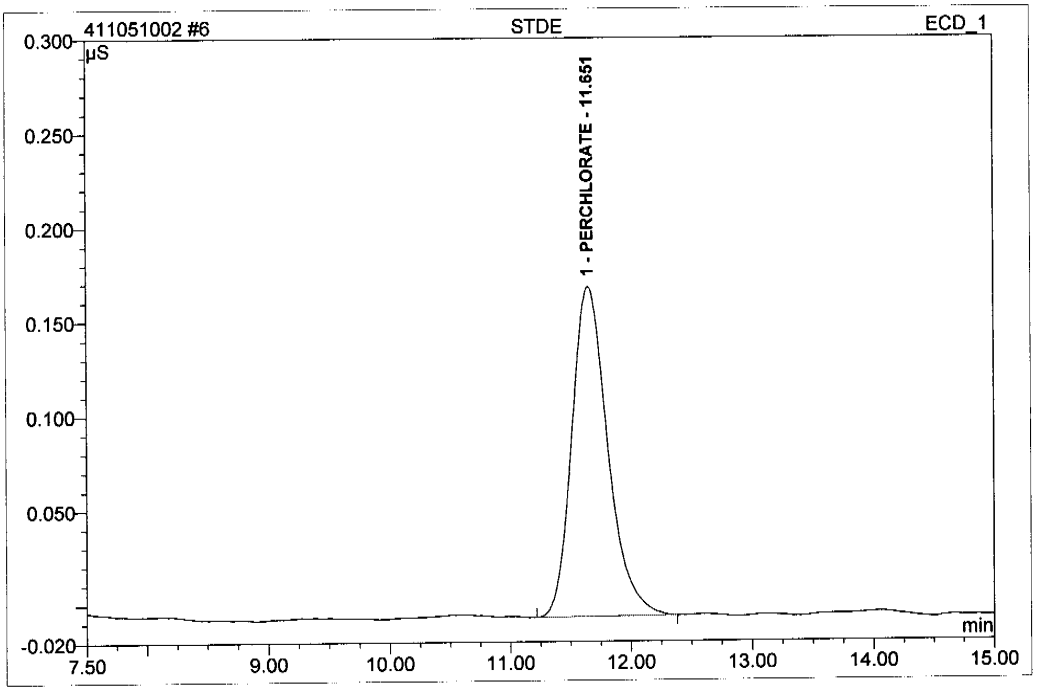
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

6 STDE

Sample Name:	**STDE**	*Injection Volume:*	**1000.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 11:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



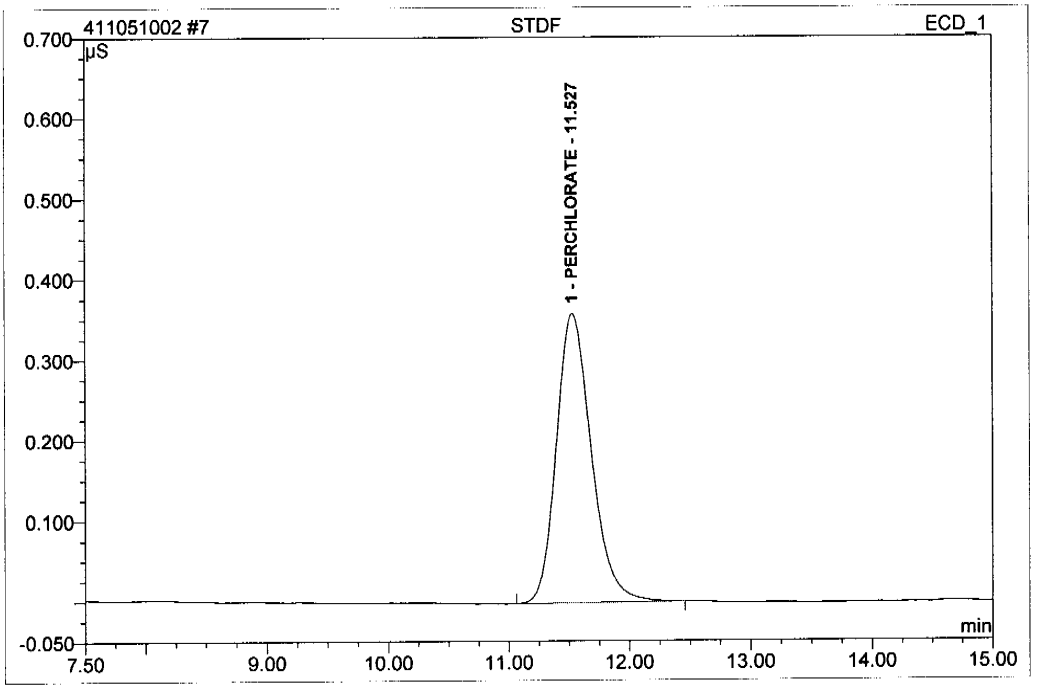
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.65	PERCHLORATE	0.175	0.060	100.00	24.989	BMB
Total:			0.175	0.060	100.00	24.989	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

7 STDF

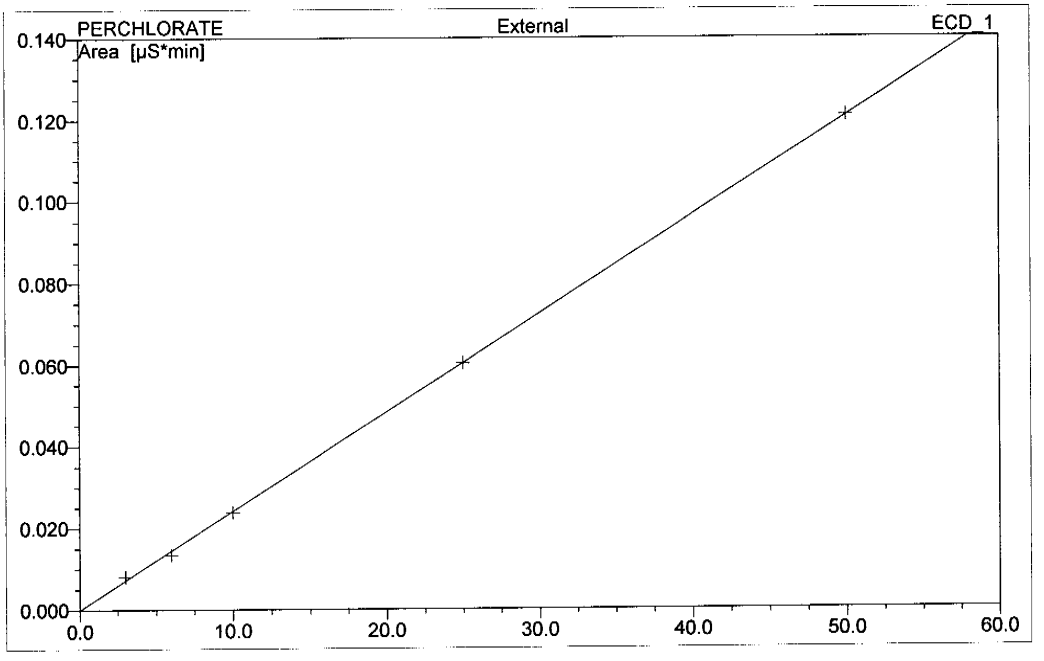
Sample Name:	**STDF**	*Injection Volume:*	**1000.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 11:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.53	PERCHLORATE	0.359	0.121	100.00	50.064	BMB
Total:			0.359	0.121	100.00	50.064	

7 STDF

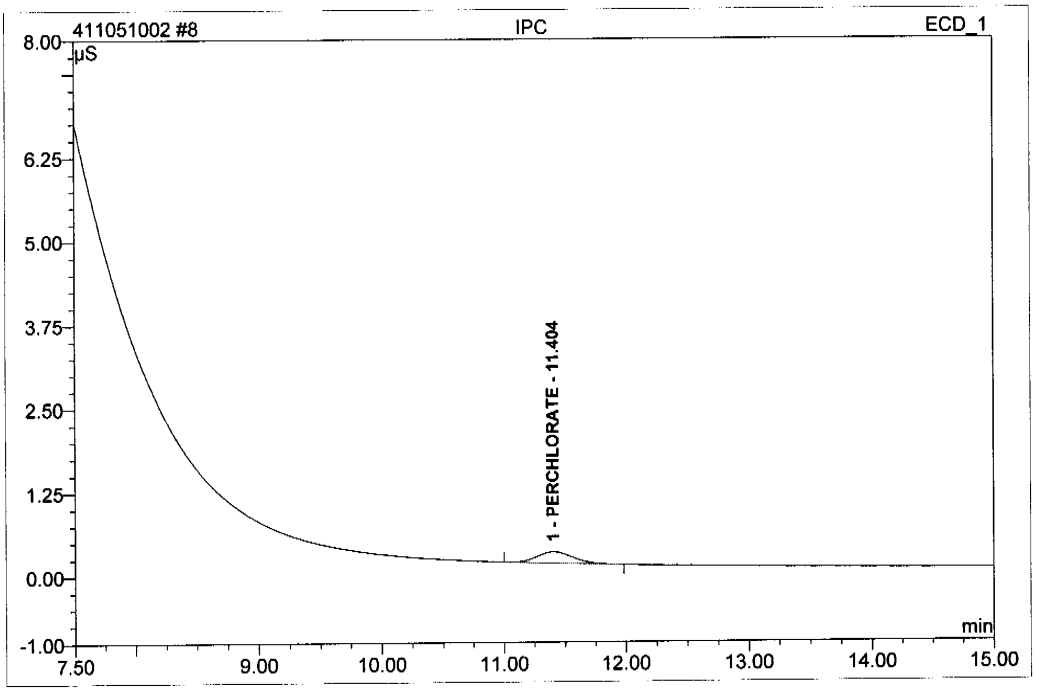
Sample Name:	**STDF**	*Injection Volume:*	**1000.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 11:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	11.53	PERCHLORATE	ALin	5	99.9896	0.0000	0.0024	0.0000
Average:					99.9896	0.0000	0.0024	0.0000

8 IPC

Sample Name:	**IPC**	*Injection Volume:*	**1000.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 11:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.40	PERCHLORATE	0.168	0.057	100.00	23.474	BMB
Total:			0.168	0.057	100.00	23.474	

Rec = 94% TV=25

IPC = $\frac{0.057}{0.168} = 0.339$

RPD = 1.8%

BS = $\frac{0.060}{0.180} = 0.333$

Default_perchlorate_accutest/Integration

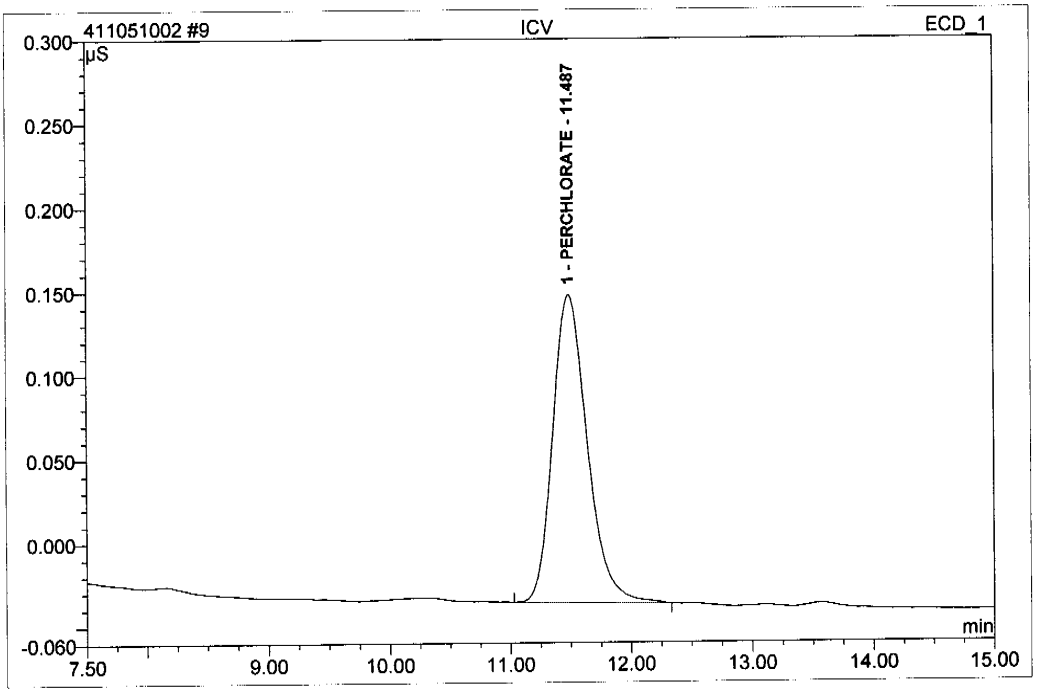
Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

5/11/2011 3:21 PM

9 ICV

Sample Name:	**ICV**	*Injection Volume:*	**1000.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 12:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.49	PERCHLORATE	0.184	0.061	100.00	25.413	BMB
Total:			0.184	0.061	100.00	25.413	

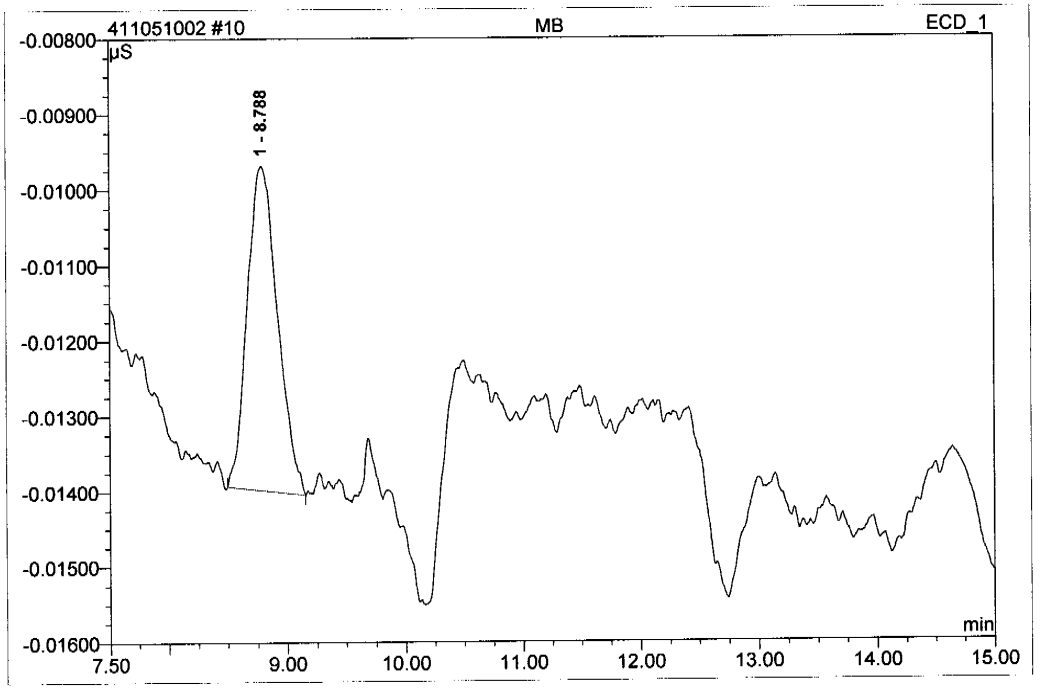
Rec = 102% TV = 25

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

10 MB

Sample Name:	**MB**	*Injection Volume:*	**1000.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 12:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



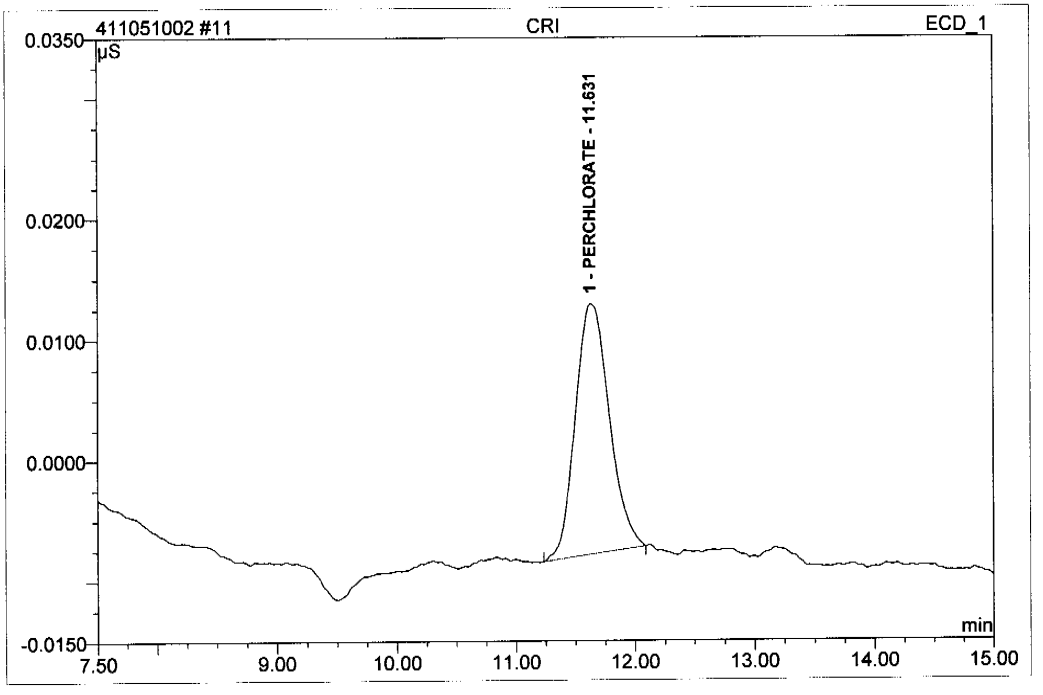
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	8.79	n.a.	0.004	0.001	100.00	n.a.	BMB
Total:			0.004	0.001	100.00	0.000	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

11 CRI

Sample Name:	**CRI**	*Injection Volume:*	**1000.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 12:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



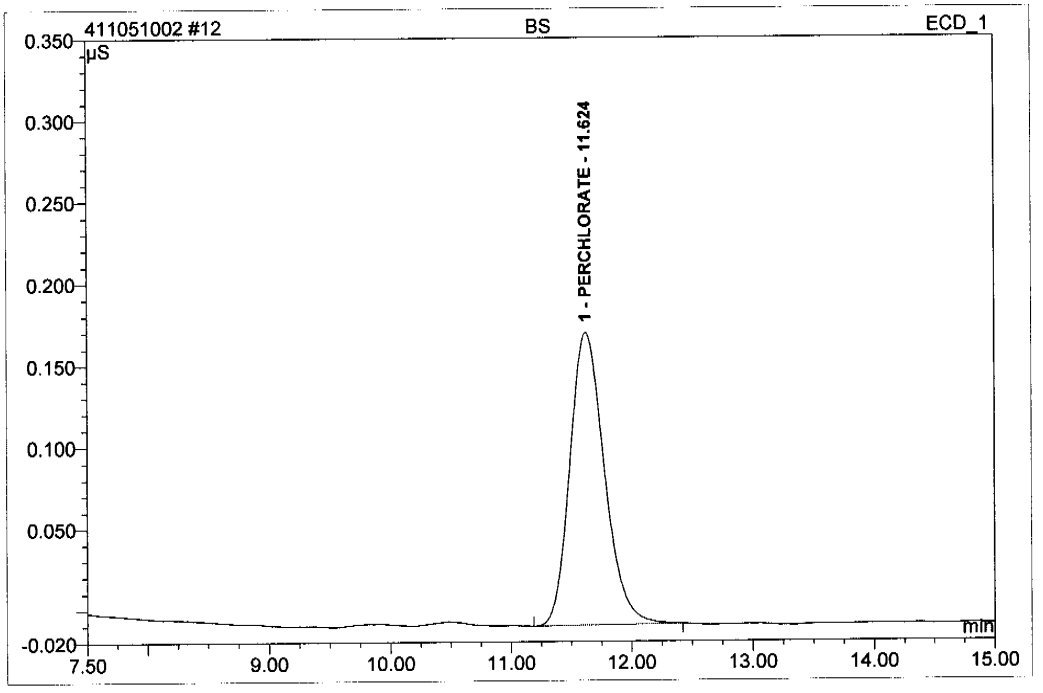
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.63	PERCHLORATE	0.021	0.007	100.00	2.845	BMB
Total:			0.021	0.007	100.00	2.845	

Rec = 94.8 % TV = 3.0

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

12 BS

Sample Name:	**BS**	*Injection Volume:*	**1000.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 13:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.62	PERCHLORATE	0.180	0.060	100.00	24.768	BMB
Total:			0.180	0.060	100.00	24.768	

Rec = 99.1 % TV= 25

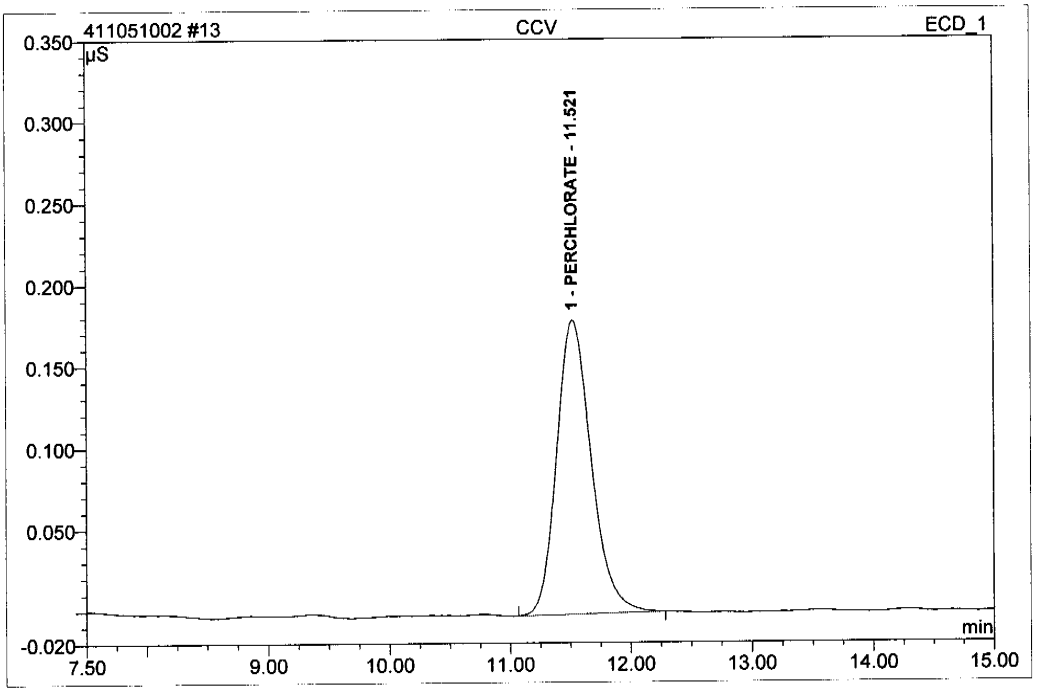
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

13 CCV

Sample Name:	**CCV**	*Injection Volume:*	**1000.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 13:25**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.52	PERCHLORATE	0.180	0.060	100.00	24.883	BMB
Total:			0.180	0.060	100.00	24.883	

Rec = 99.5 % TV= 25

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

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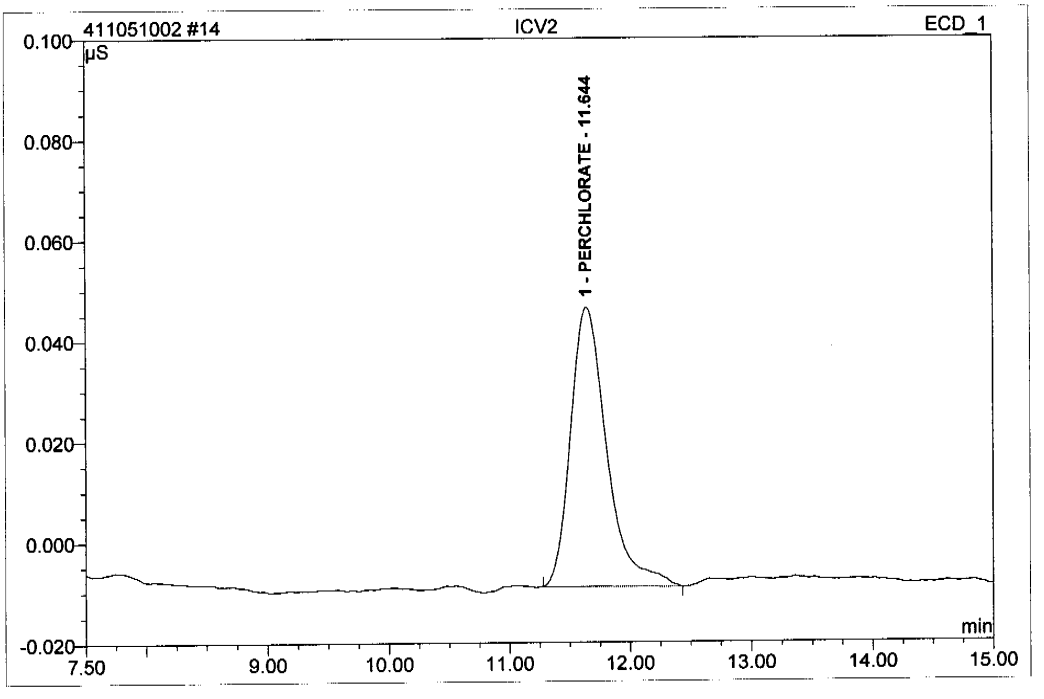
14 ICV2

Sample Name:	**ICV2**	*Injection Volume:*	**1000.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 13:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.64	PERCHLORATE	0.055	0.019	100.00	7.996	BMB
Total:			0.055	0.019	100.00	7.996	

Rec = 100% TV = 8.0

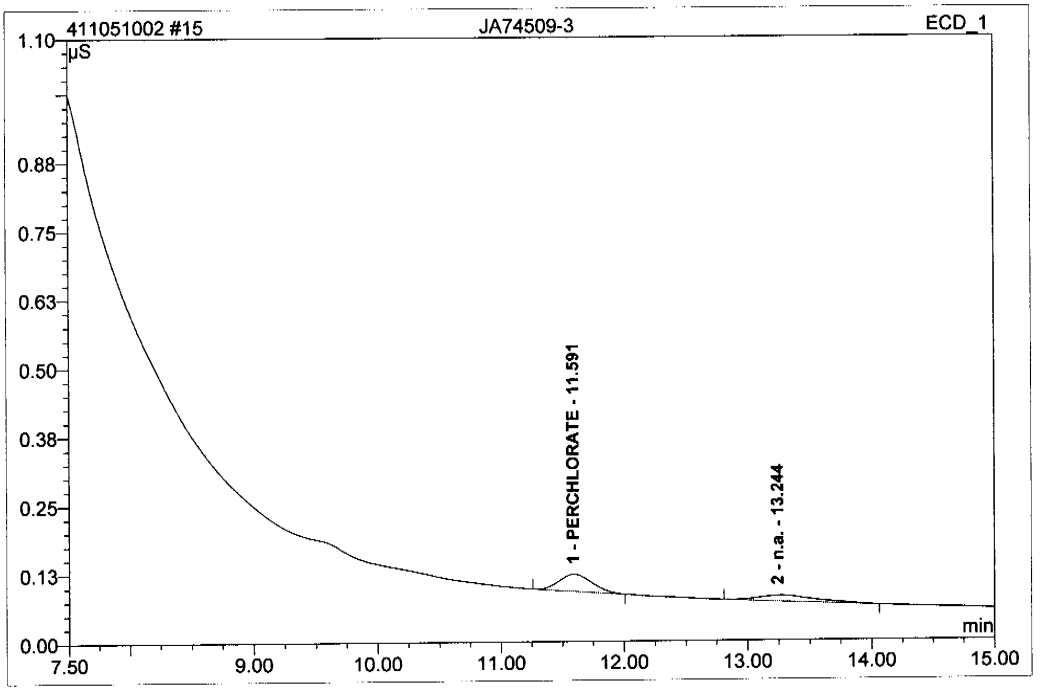
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

15 JA74509-3

Sample Name:	**JA74509-3**	*Injection Volume:*	**1000.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 14:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.59	PERCHLORATE	0.030	0.009	62.05	3.921	BMB
2	13.24	n.a.	0.010	0.006	37.95	n.a.	BMB
Total:			0.041	0.015	100.00	3.921	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

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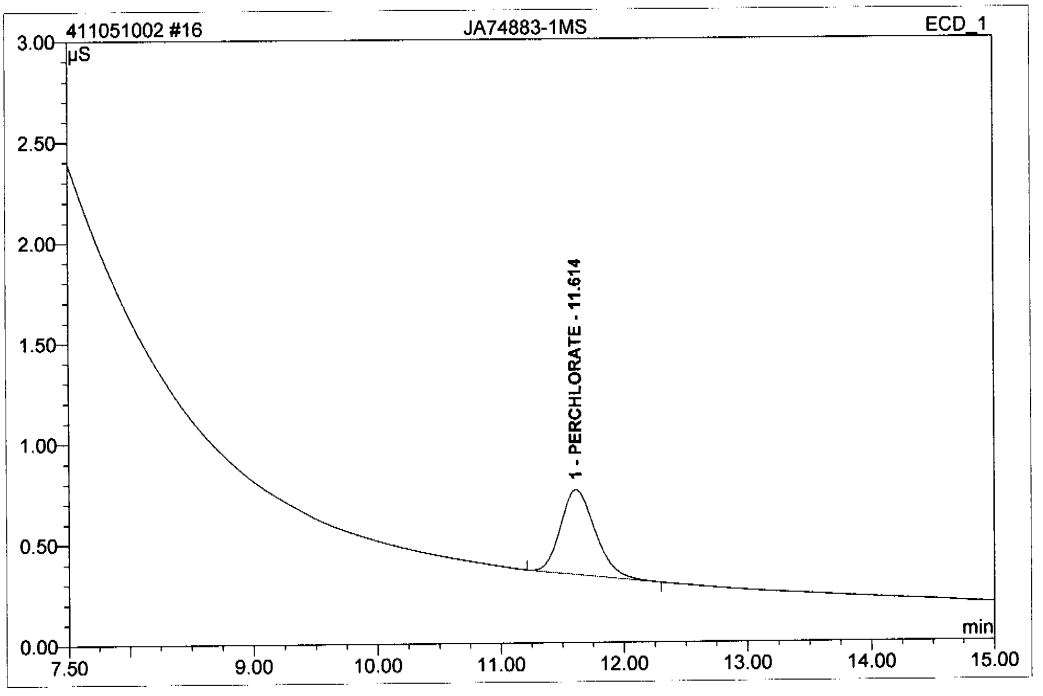
16 JA74883-1MS

Sample Name:	**JA74883-1MS**	*Injection Volume:*	**1000.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 14:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.61	PERCHLORATE	0.420	0.137	100.00	56.829	BMB
Total:			0.420	0.137	100.00	56.829	

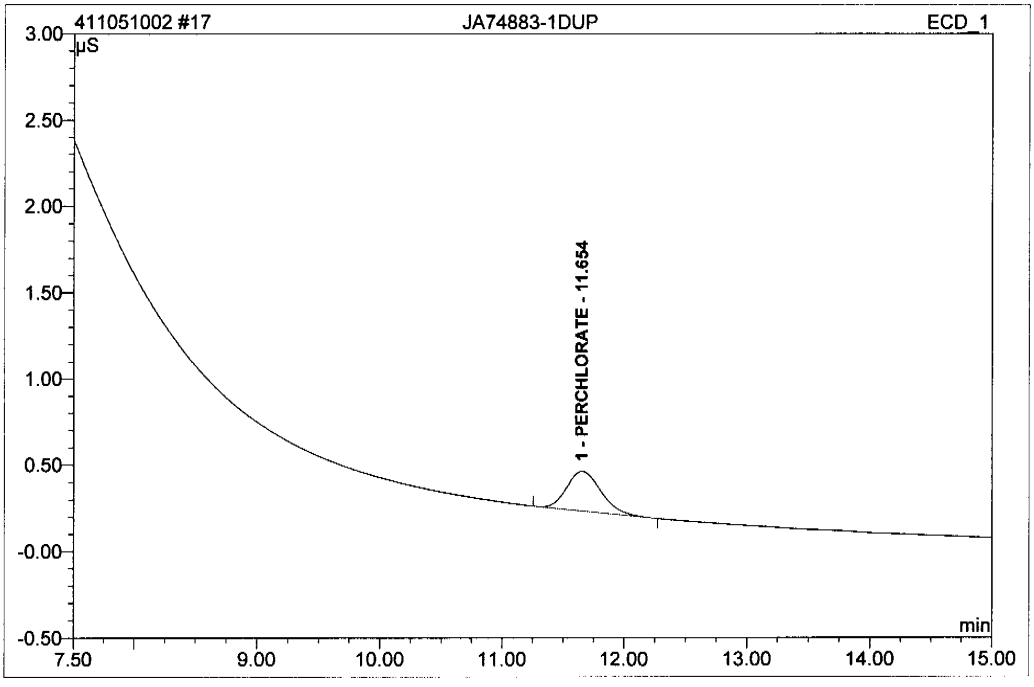
Overrange
See rerun 1:5

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

17 JA74883-1DUP

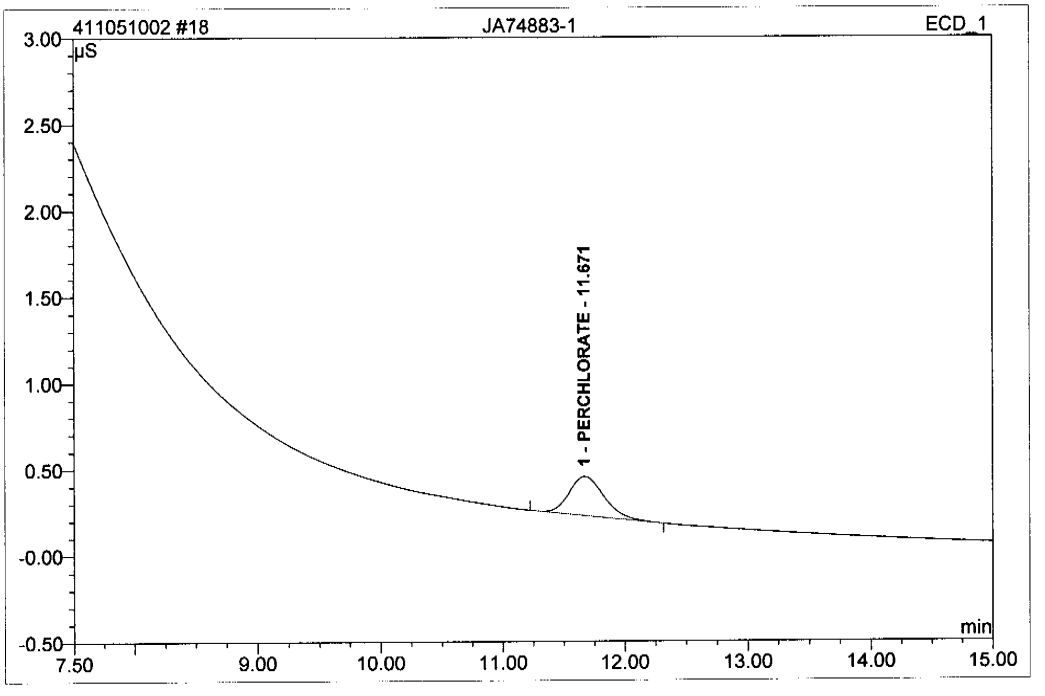
Sample Name:	**JA74883-1DUP**	*Injection Volume:*	**1000.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 14:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.65	PERCHLORATE	0.227	0.074	100.00	30.749	BMB
Total:			0.227	0.074	100.00	30.749	

18 JA74883-1

Sample Name:	**JA74883-1**	*Injection Volume:*	**1000.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 14:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



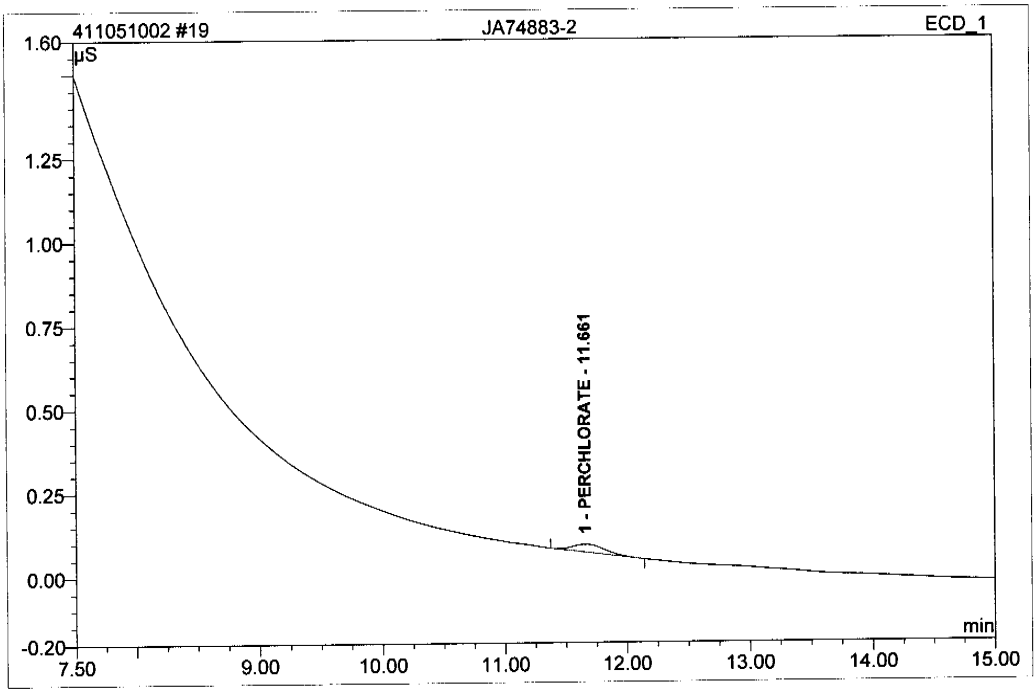
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.67	PERCHLORATE	0.227	0.075	100.00	31.075	BMB
Total:			0.227	0.075	100.00	31.075	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

19 JA74883-2

Sample Name:	**JA74883-2**	*Injection Volume:*	**1000.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 15:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



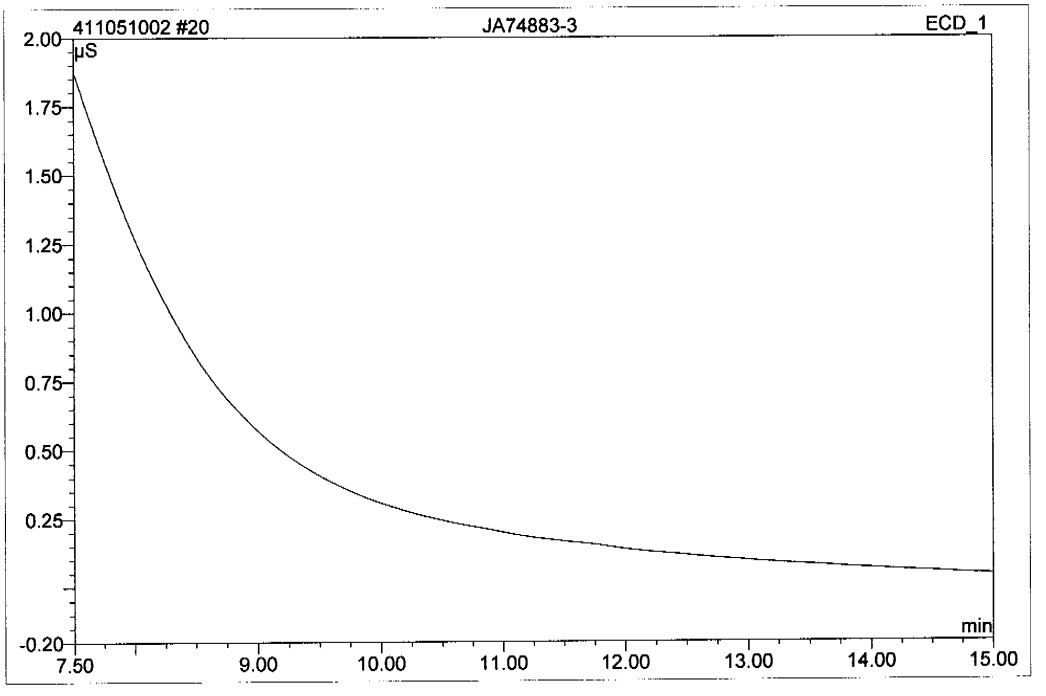
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.66	PERCHLORATE	0.023	0.007	100.00	2.974	BMB
Total:			0.023	0.007	100.00	2.974	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

20 JA74883-3

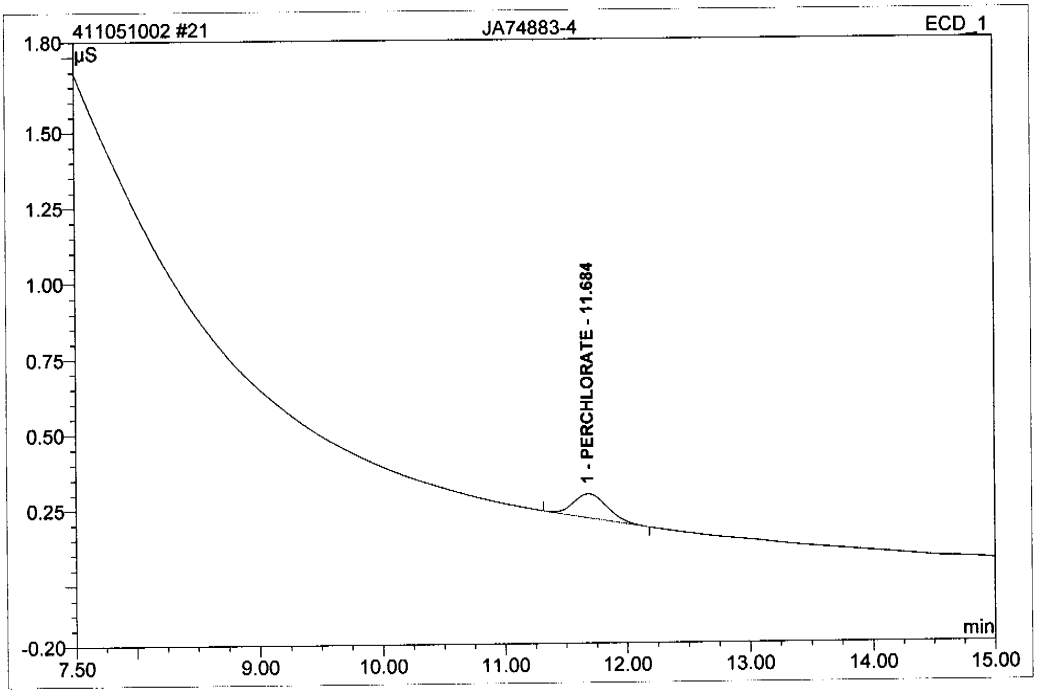
Sample Name:	**JA74883-3**	*Injection Volume:*	**1000.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 15:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

21 JA74883-4

Sample Name:	**JA74883-4**	*Injection Volume:*	**1000.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 15:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

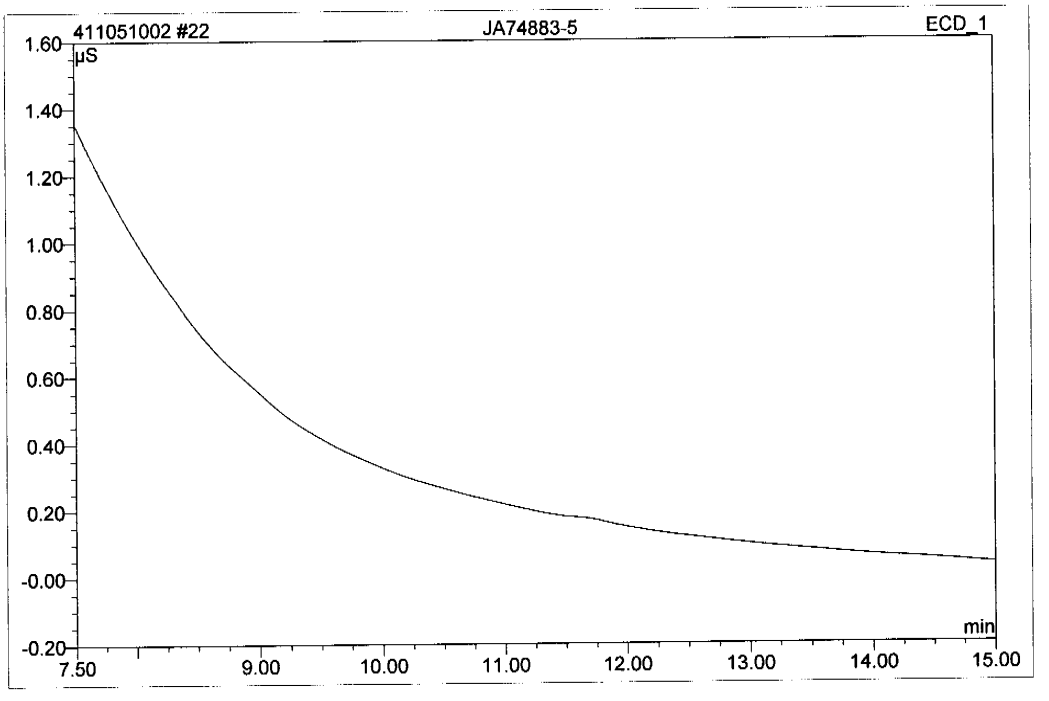


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.68	PERCHLORATE	0.080	0.025	100.00	10.508	BMB
Total:			0.080	0.025	100.00	10.508	

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

22 JA74883-5

Sample Name:	**JA74883-5**	*Injection Volume:*	**1000.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 16:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



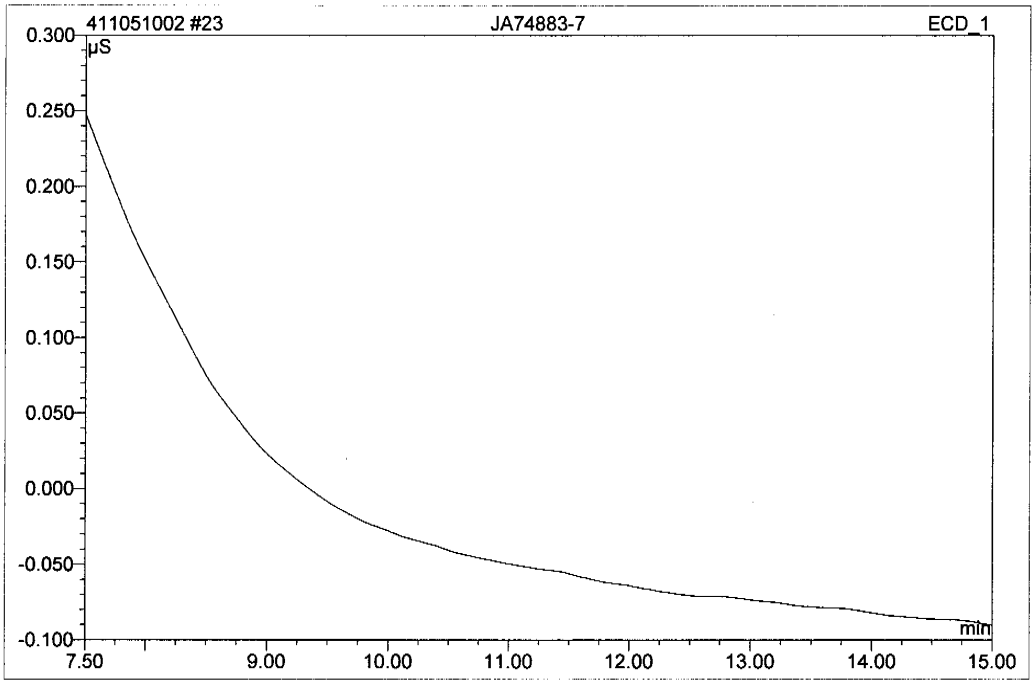
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

23 JA74883-7

Sample Name:	**JA74883-7**	*Injection Volume:*	**1000.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**10.0000**
Recording Time:	**5/10/2011 16:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

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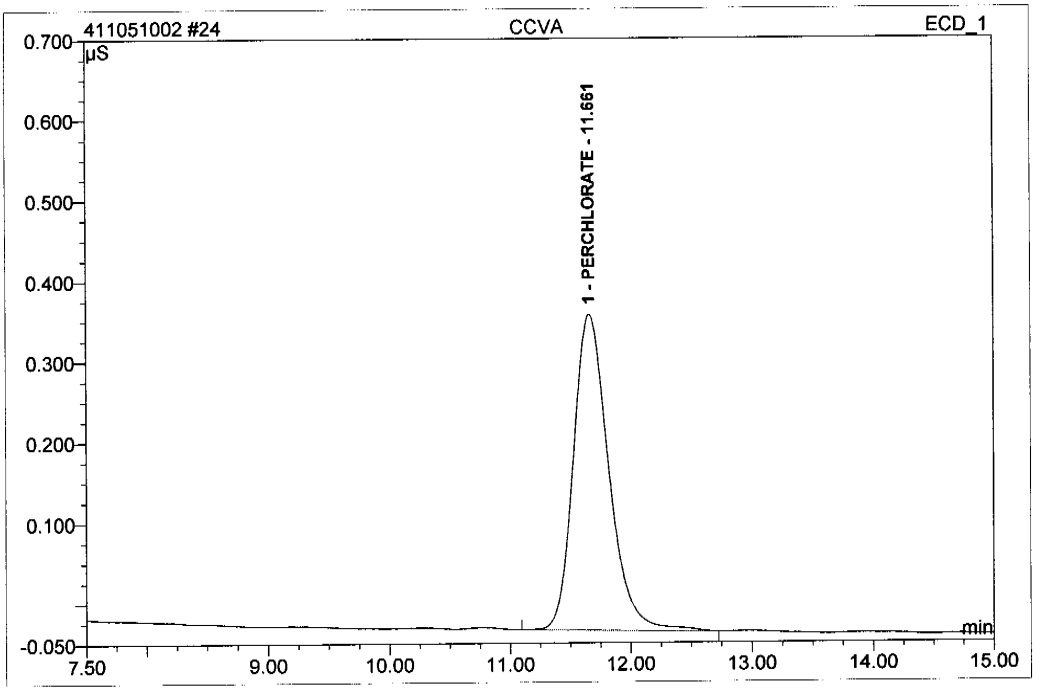
24 CCVA

Sample Name:	**CCVA**	*Injection Volume:*	**1000.0**
Vial Number:	**24**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 16:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.66	PERCHLORATE	0.392	0.133	100.00	55.248	BMB
Total:			0.392	0.133	100.00	55.248	

Rec = 110% TV= 50

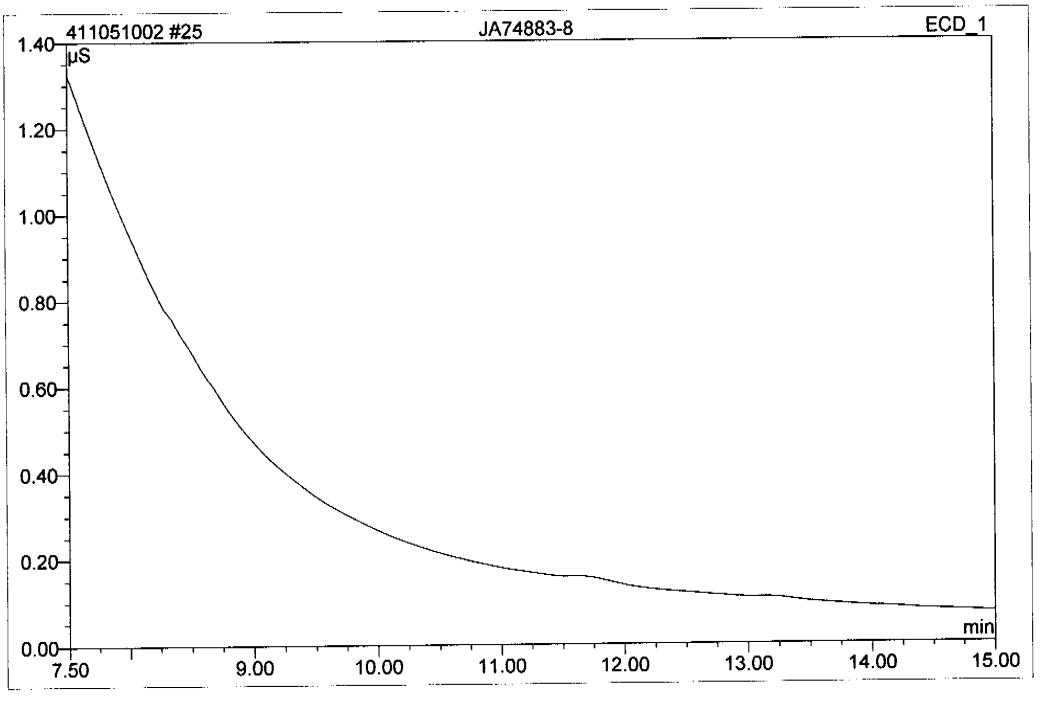
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

25 JA74883-8

Sample Name:	**JA74883-8**	*Injection Volume:*	**1000.0**
Vial Number:	**25**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 16:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

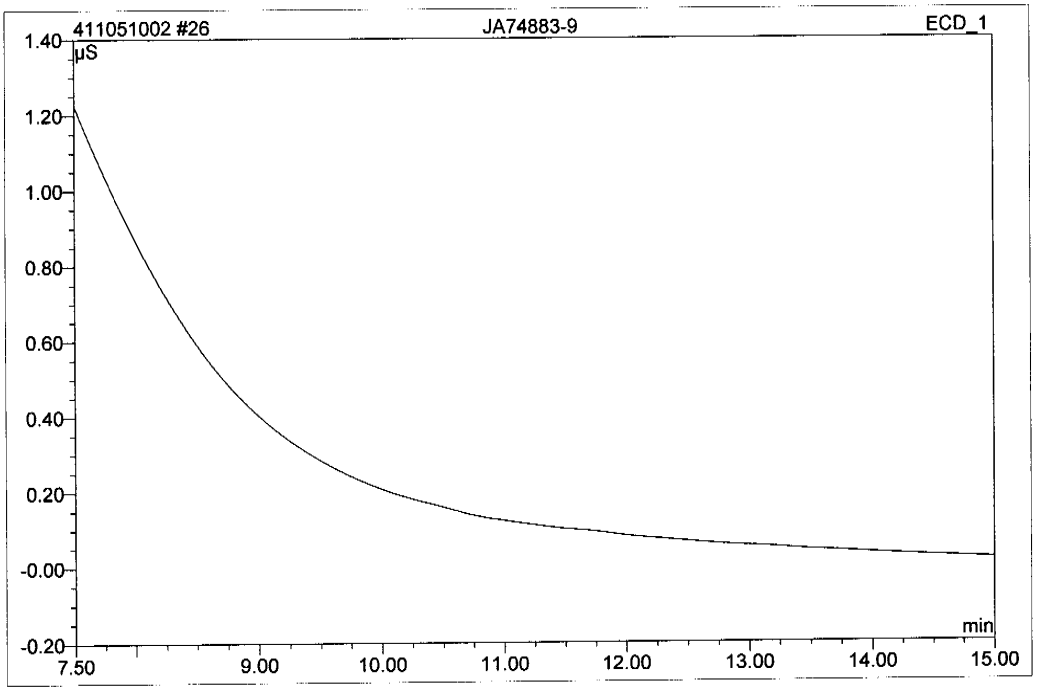
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

26 JA74883-9

Sample Name:	**JA74883-9**	*Injection Volume:*	**1000.0**
Vial Number:	**26**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 17:10**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

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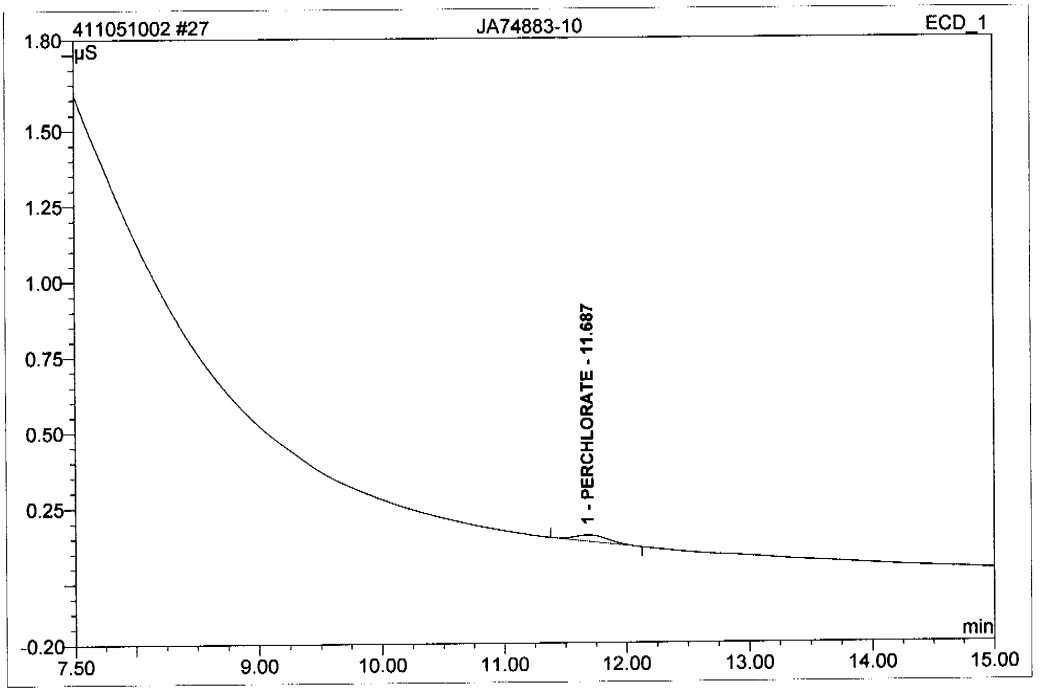
27 JA74883-10

Sample Name:	**JA74883-10**	*Injection Volume:*	**1000.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 17:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.69	PERCHLORATE	0.021	0.007	100.00	2.781	BMB
Total:			0.021	0.007	100.00	2.781	

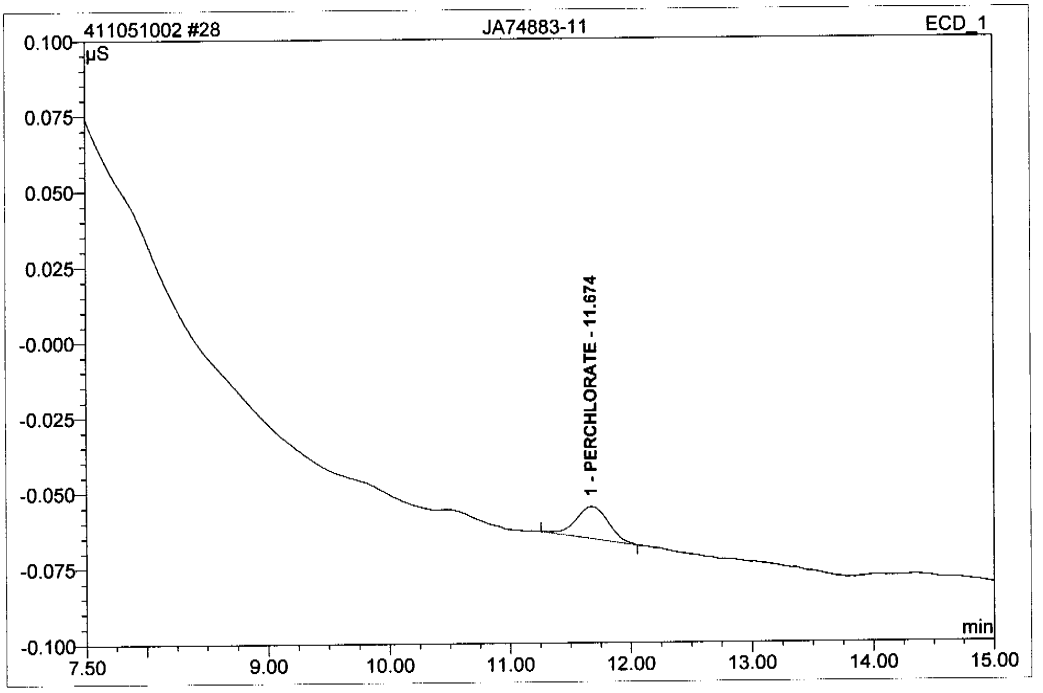
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

28 JA74883-11

Sample Name:	**JA74883-11**	*Injection Volume:*	**1000.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**25.0000**
Recording Time:	**5/10/2011 17:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.67	PERCHLORATE	0.011	0.003	100.00	34.211	BMB
Total:			0.011	0.003	100.00	34.211	

overdiluted
rerun straight

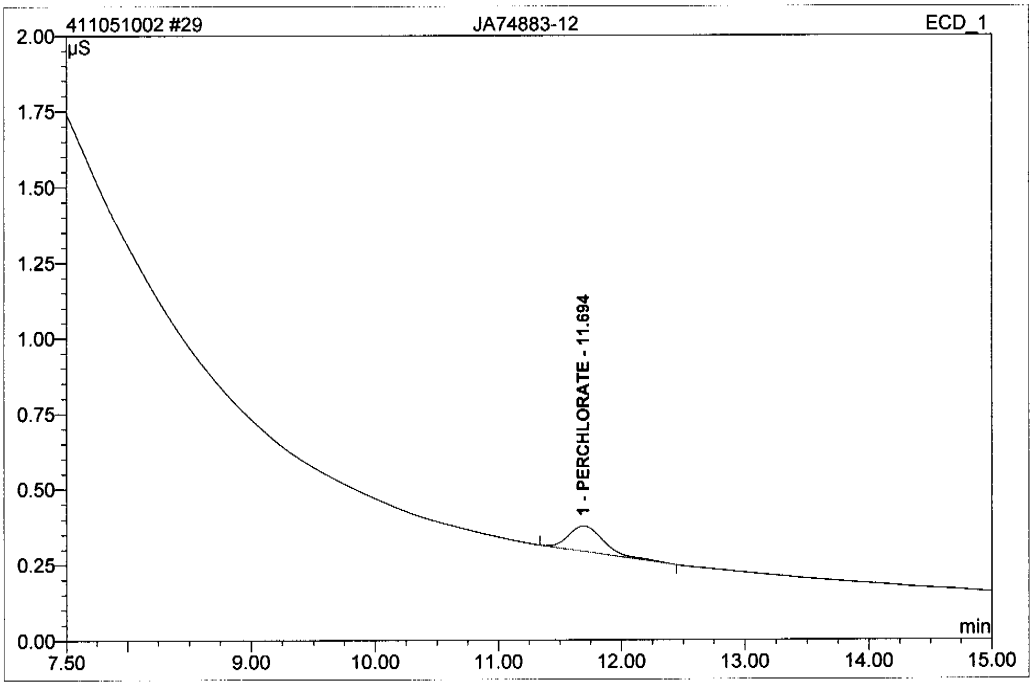
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

29 JA74883-12

Sample Name:	**JA74883-12**	*Injection Volume:*	**1000.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 18:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.69	PERCHLORATE	0.084	0.028	100.00	11.609	BMB
Total:			0.084	0.028	100.00	11.609	

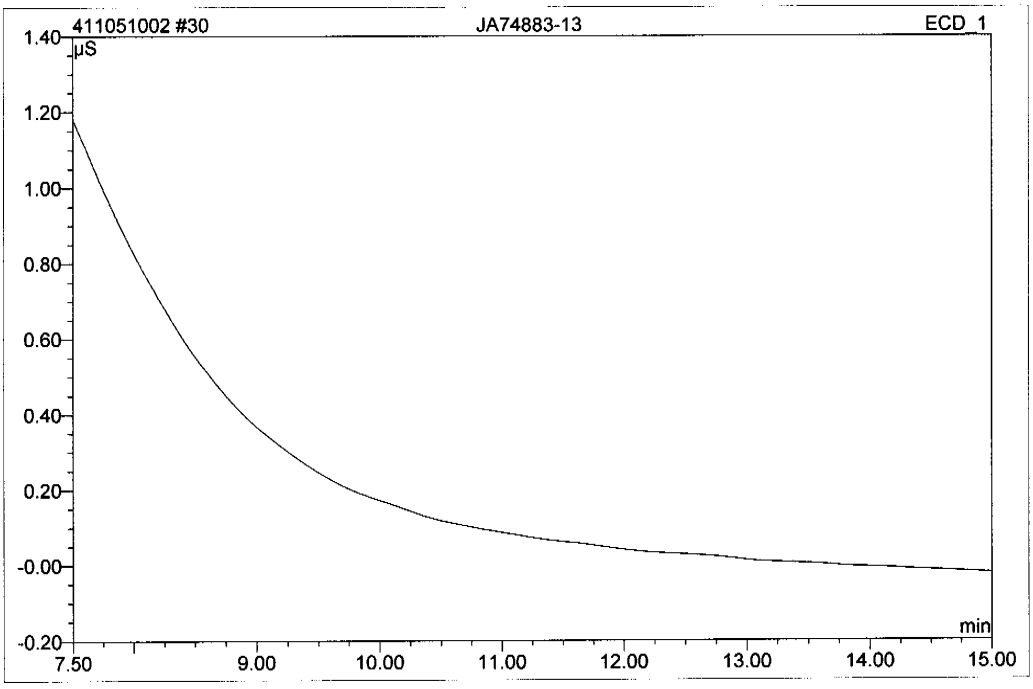
Rerun for Confirmation -Tailing

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

30 JA74883-13

Sample Name:	**JA74883-13**	*Injection Volume:*	**1000.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 18:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**

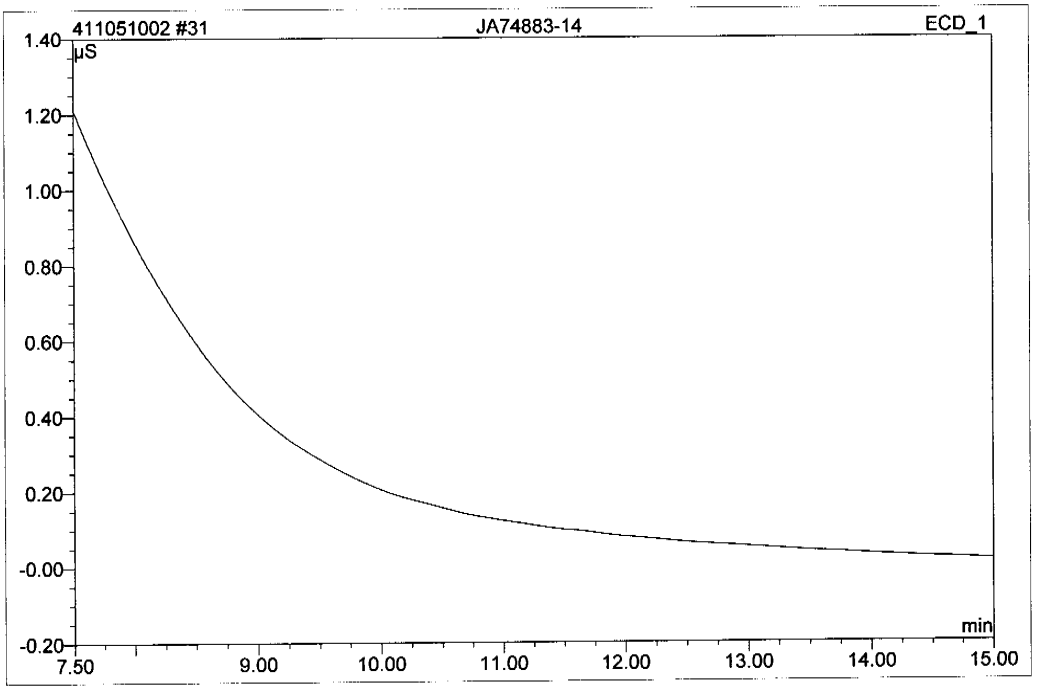


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

31 JA74883-14

Sample Name:	**JA74883-14**	*Injection Volume:*	**1000.0**
Vial Number:	**31**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 18:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

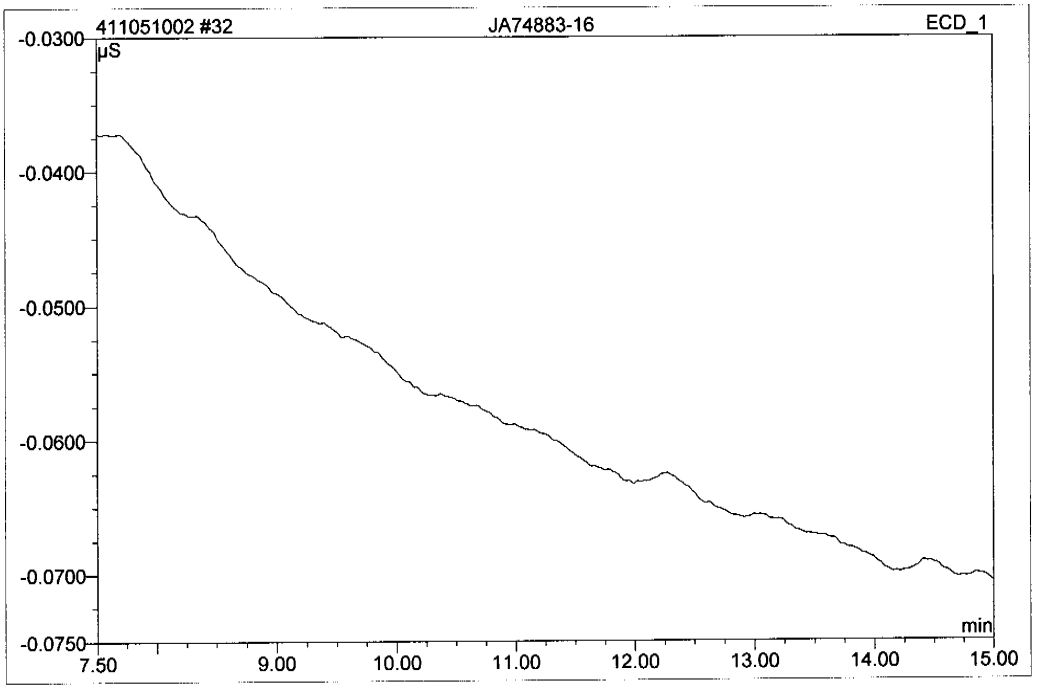
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

32 JA74883-16

Sample Name:	**JA74883-16**	*Injection Volume:*	**1000.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 18:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



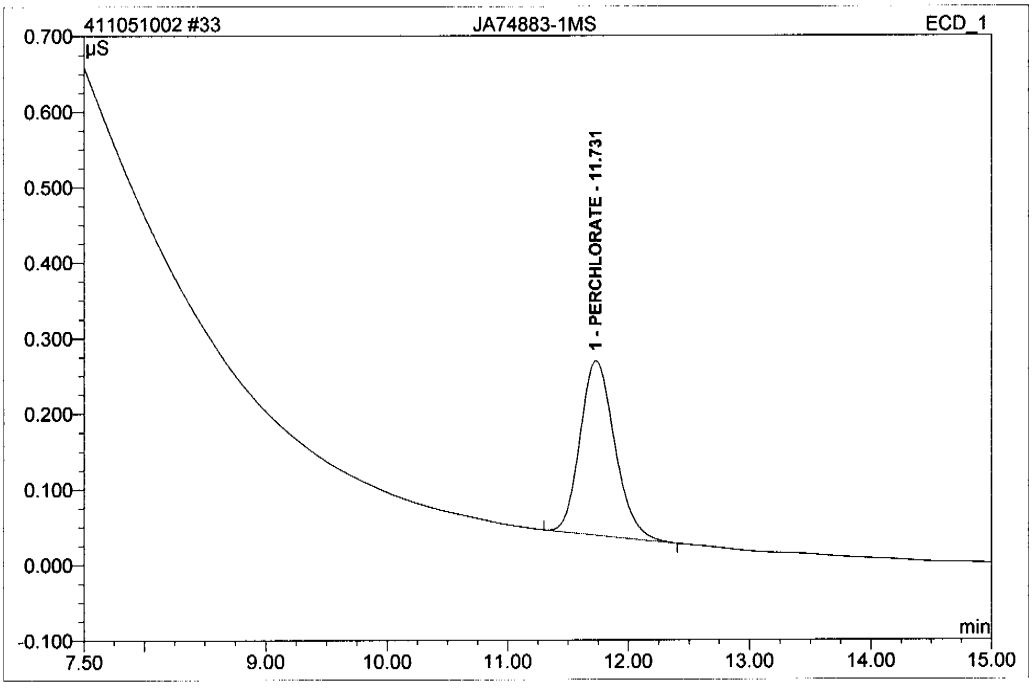
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

33 JA74883-1MS

Sample Name:	**JA74883-1MS**	*Injection Volume:*	**1000.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**5.0000**
Recording Time:	**5/10/2011 19:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



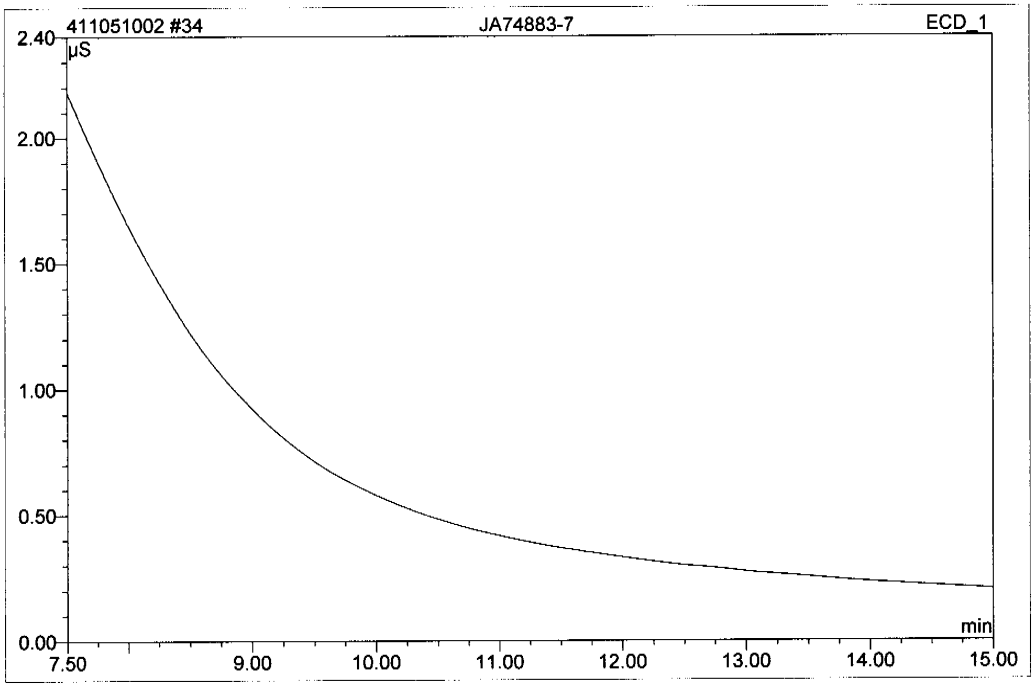
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.73	PERCHLORATE	0.231	0.077	100.00	159.113	BMB
Total:			0.231	0.077	100.00	159.113	

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

5/11/2011 3:21 PM

34 JA74883-7

Sample Name:	**JA74883-7**	*Injection Volume:*	**1000.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	1.0 ~~5.0000~~ ② 5/13/11
Recording Time:	**5/10/2011 19:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

Default_perchlorate_accutest/Integration

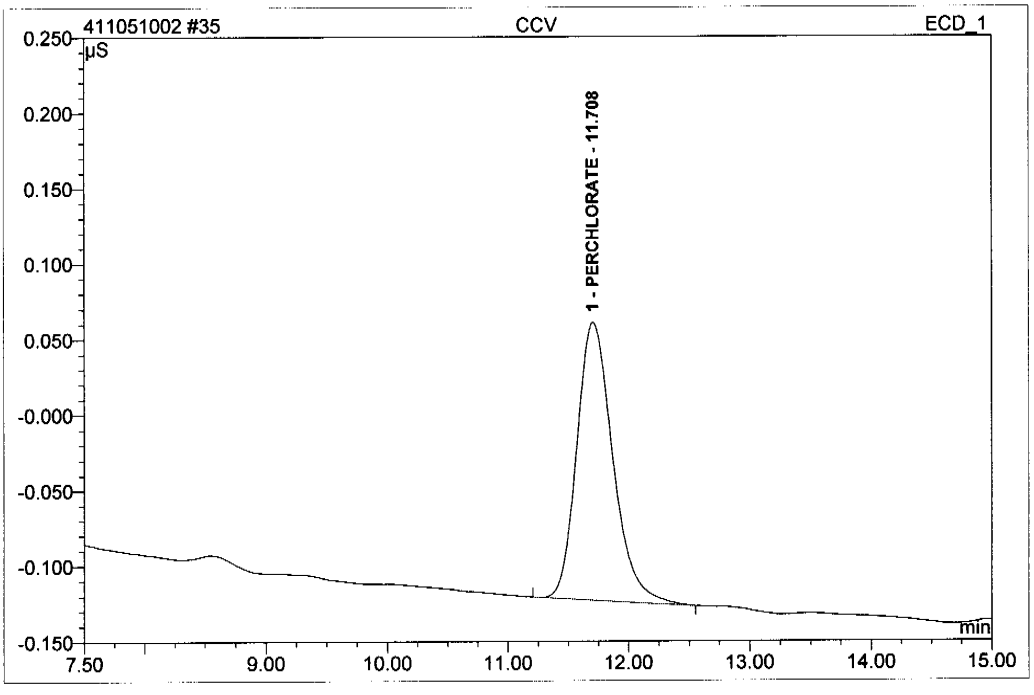
Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

5/11/2011 3:21 PM

35 CCV

Sample Name:	**CCV**	*Injection Volume:*	**1000.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 19:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	11.71	PERCHLORATE	0.184	0.063	100.00	26.303	BMB
Total:			0.184	0.063	100.00	26.303	

Rec = 105% TV= 25

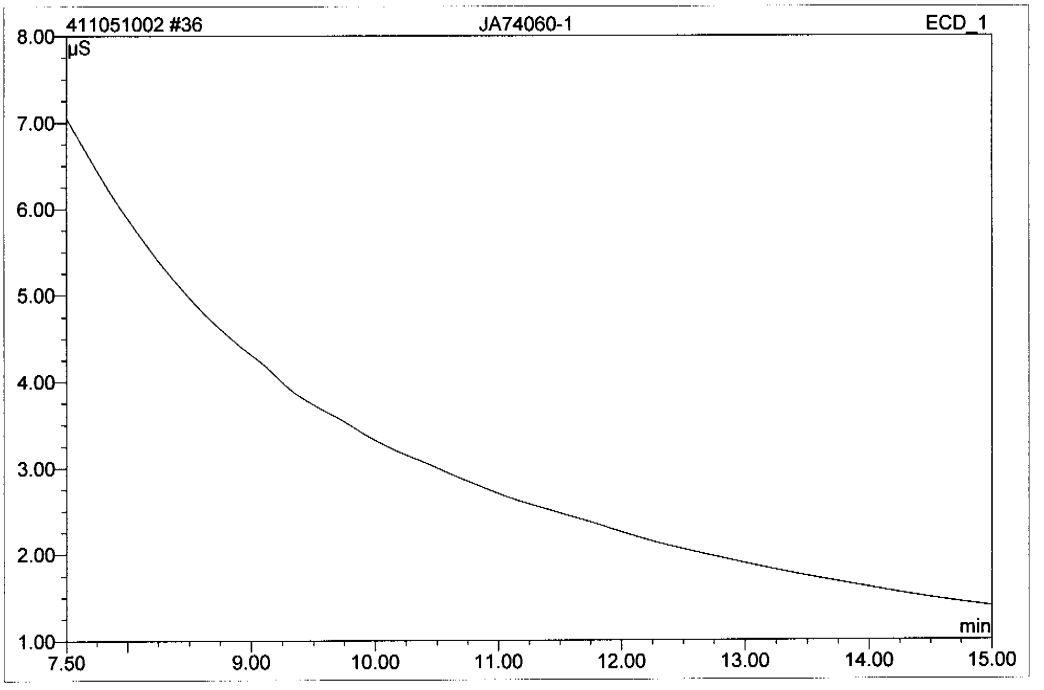
Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

36 JA74060-1

Sample Name:	**JA74060-1**	*Injection Volume:*	**1000.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**4.0000**
Recording Time:	**5/10/2011 20:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



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

Next ccv fails high
Rerun 1:10

Default_perchlorate_accutest/Integration

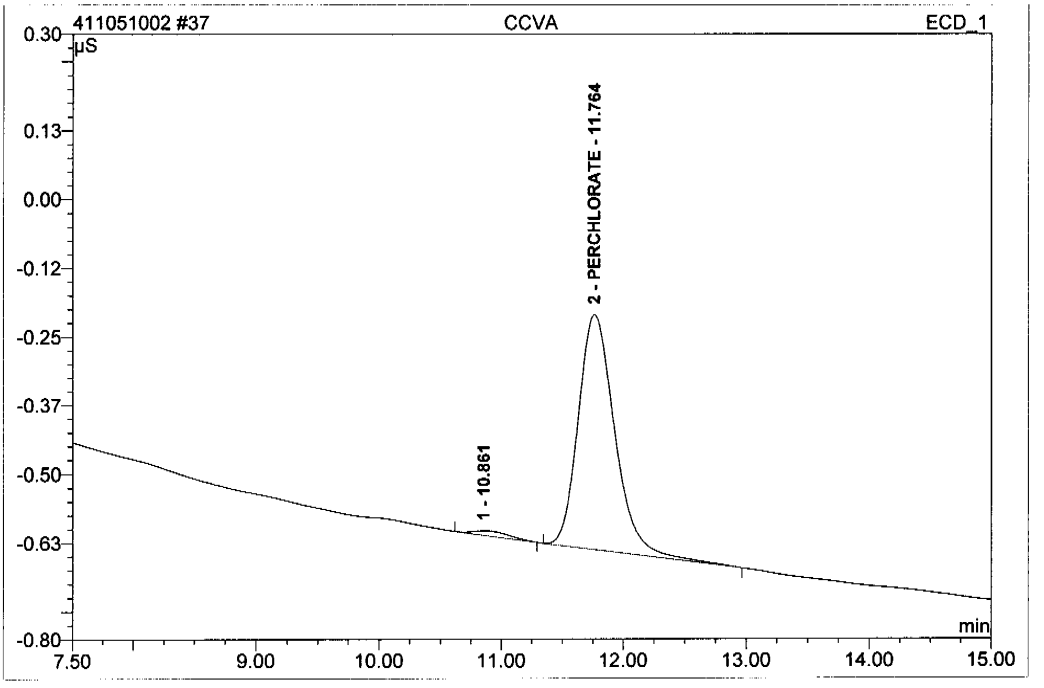
Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

Operator:Chemistry Timebase:Accutest_Sysyem_4 Sequence:411051002

5/11/2011 3:21 PM

37 CCVA

Sample Name:	**CCVA**	*Injection Volume:*	**1000.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**System 4 Perchlorate_ASDV**	*Bandwidth:*	**n.a.**
Quantif. Method:	**System 4 Perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**5/10/2011 20:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**15.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	10.86	n.a.	0.008	0.003	2.04	n.a.	BMB
2	11.76	PERCHLORATE	0.428	0.148	97.96	61.380	BMB
Total:			0.436	0.151	100.00	61.380	

TV = 50

Rec - 123%

Fails high
No samples reported

Default_perchlorate_accutest/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SR9a Build 2680 (163077)

ACCUTEST

Test: Specific conductivity
Product: SCON
Method: SM20 2510, SW846 9050A ● Units: umhos/cm

Analyst: S.A.
GN Batch ID: GN50803
Date: 5/13/2011

SCON = $\frac{Km \times C}{\{1 + 0.0191 \times (T - 25)\}}$

Cell Constant (C) Date calculated: 5/13/2011 Cell Constant = 0.9011

QC Summary:

Check Standard 1	1406	True Value	1412	Recovery	99.6	Accetable?	Y
Check Standard 2	1408	True Value	1412	Recovery	99.7	Accetable?	Y
Check Standard 3	1413	True Value	1412	Recovery	100.1	Accetable?	Y
Duplicate ID:	GN50803-D1	Samp Result:	364.00	Dup Result:	376.70	% RPD:	-3.4

Bottle #	Sample ID	Temp. in deg. C	Measured SCON in umhos/cm (Km)	Calculated SCON in umhos/cm (Km)	Detection Limit umhos/cm	Units
	ccv1conf	25.00	1560.00	1405.7	0.50	umhos/cm
1	GN50803-D1	25.00	418.00	376.7	0.50	umhos/cm
4	JA74830-4	25.00	436.00	392.9	0.50	umhos/cm
1	JA74509-1	25.00	14.00	12.6	0.50	umhos/cm
2	JA74509-2	25.00	404.00	364.0	0.50	umhos/cm
1	JA74509-3	25.00	397.00	357.7	0.50	umhos/cm
1	JA75337-1	25.00	522.00	470.4	0.50	umhos/cm
1	JA75337-2	25.00	718.00	647.0	0.50	umhos/cm
1	JA75337-3	25.00	461.00	415.4	0.50	umhos/cm
1	JA75337-4	25.00	502.00	452.4	0.50	umhos/cm
1	JA75337-5	25.00	506.00	456.0	0.50	umhos/cm
	ccv1conf	25.00	1562.00	1407.5	0.50	umhos/cm
1	GN50803-D2	25.00	526.00	474.0	0.50	umhos/cm
1	JA75337-7	25.00	8.00	7.2	0.50	umhos/cm
2	JA75468-1	25.00	392.00	353.2	0.50	umhos/cm
2	JA75468-2	25.00	390.00	351.4	0.50	umhos/cm
2	JA75468-3	25.00	168.00	151.4	0.50	umhos/cm
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
	ccv1conf	25.00	1568.00	1412.9	0.50	umhos/cm
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
	ccv1conf	25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				
		25.00				

D2 ID = 3A75337-1 SampRes: 470.4 DupRes: 474 % RPD = 0.8

Reagent: 1MKC → GNE3-27704 → Scon exp: 9/14/2011

(0.0)MKCl → 1m 2 of 1MKCl → 100mL DI H2O

Analyst: S.A Date: 5/13/11 QC Reviewer: [signature] Date:

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.000030.000000

Accutest Job Number: JA31353

Sampling Date: 10/26/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **62**

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David N. Speis
VP Ops, Laboratory Director

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Client Service contact: Marie Meidhof 732-329-0200

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Sample Summary

TRC

Job No: JA31353

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31353-1	10/26/09	08:20	JM	10/26/09	SO	Soil	SS-01(5-7')
JA31353-2	10/26/09	08:25	JM	10/26/09	SO	Soil	SS-01(12-14')
JA31353-3	10/26/09	09:10	JM	10/26/09	SO	Soil	SS-02(1-3')
JA31353-4	10/26/09	09:15	JM	10/26/09	SO	Soil	SS-02(14-16')
JA31353-5	10/26/09	09:45	JM	10/26/09	SO	Soil	SS-03(0-2')
JA31353-6	10/26/09	09:55	JM	10/26/09	SO	Soil	SS-03(13-15')
JA31353-7	10/26/09	10:20	JM	10/26/09	SO	Soil	SS-04(2-4')
JA31353-8	10/26/09	10:25	JM	10/26/09	SO	Soil	SS-04(14-16')
JA31353-9	10/26/09	10:55	JM	10/26/09	SO	Soil	SS-05(5-7')
JA31353-10	10/26/09	11:05	JM	10/26/09	SO	Soil	SS-05(13-15')
JA31353-11	10/26/09	11:20	JM	10/26/09	SO	Soil	SS-06(1-3')
JA31353-12	10/26/09	11:25	JM	10/26/09	SO	Soil	SS-06(14-16')
JA31353-13	10/26/09	11:50	JM	10/26/09	SO	Soil	SS-07(6-8')

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

Sample Summary
(continued)

TRC

Job No: JA31353

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA31353-14	10/26/09	12:00	JM	10/26/09	SO	Soil	SS-07(13-15')
JA31353-15	10/26/09	13:15	JM	10/26/09	SO	Soil	SS-08(3-4')
JA31353-16	10/26/09	13:25	JM	10/26/09	SO	Soil	SS-08(12-14')
JA31353-17	10/26/09	14:00	JM	10/26/09	SO	Soil	SS-09(6-8')
JA31353-18	10/26/09	14:05	JM	10/26/09	SO	Soil	SS-09(12-14')
JA31353-19	10/26/09	14:40	JM	10/26/09	SO	Soil	SS-10(2-4')
JA31353-20	10/26/09	14:45	JM	10/26/09	SO	Soil	SS-10(4-6')
JA31353-21	10/26/09	10:10	JM	10/26/09	AQ	Field Blank Soil	FB102609(1)
JA31353-22	10/26/09	10:40	JM	10/26/09	AQ	Field Blank Soil	FB102609(2)
JA31353-23	10/26/09	11:55	JM	10/26/09	SO	Soil	SS-27(6-8')

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA31353

Site: SMC Perchlorate On-Site Investigation, Newfield, NJ **Report Date** 11/19/2009 2:38:01 PM

On 10/26/2009, 21 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 JA31353 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 EPA 314

Matrix AQ **Batch ID:** GP51549

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31793-8DUP, JA31793-8MS were used as the QC samples for Perchlorate.

Matrix AQ **Batch ID:** GP51565

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31506-2DUP, JA31506-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method EPA 314 M

Matrix SO **Batch ID:** GP51486

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31353-1DUP, JA31353-1MS were used as the QC samples for Perchlorate.

Matrix SO **Batch ID:** GP51526

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31399-1DUP, JA31399-1MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM18 2540G

Matrix SO **Batch ID:** GN32166

- The data for SM18 2540G meets quality control requirements.

Matrix SO **Batch ID:** GN32167

- The data for SM18 2540G meets quality control requirements.

Matrix SO **Batch ID:** GN32185

- The data for SM18 2540G meets quality control requirements.

Wet Chemistry By Method SM19 2510B M

Matrix	SO	Batch ID:	GN32122

- Sample(s) JA31353-1DUP were used as the QC samples for Specific Conductivity.

Matrix	SO	Batch ID:	GN32280

- Sample(s) JA31399-1DUP were used as the QC samples for Specific Conductivity.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix	AQ	Batch ID:	GN32058

- Sample(s) JA31977-6DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SS-01(5-7')		
Lab Sample ID:	JA31353-1	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	93.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/12/09 20:56	MS	EPA 314 M
Solids, Percent	93.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	16.8	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-01(12-14')		
Lab Sample ID:	JA31353-2	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	90.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	10	1.8	ug/kg	1	11/12/09 21:14	MS	EPA 314 M
Solids, Percent	90.1			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	13.3	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-02(1-3')		
Lab Sample ID:	JA31353-3	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	91.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.1 B	9.9	1.8	ug/kg	1	11/12/09 21:31	MS	EPA 314 M
Solids, Percent	91.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	195	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-02(14-16')		
Lab Sample ID:	JA31353-4	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	93.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.7	1.8	ug/kg	1	11/12/09 21:49	MS	EPA 314 M
Solids, Percent	93.3			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	50.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-03(0-2')		
Lab Sample ID:	JA31353-5	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	84.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.9 U	10	1.9	ug/kg	1	11/12/09 22:06	MS	EPA 314 M
Solids, Percent	84.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	1900	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-03(13-15')		
Lab Sample ID:	JA31353-6	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	94.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.6 B	9.4	1.7	ug/kg	1	11/13/09 14:04	MS	EPA 314 M
Solids, Percent	94.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	48.5	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-04(2-4')		
Lab Sample ID:	JA31353-7	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	89.8
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.9 B	9.9	1.8	ug/kg	1	11/13/09 14:22	MS	EPA 314 M
Solids, Percent	89.8			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	48.6	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-04(14-16')		
Lab Sample ID:	JA31353-8	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	89.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.2 B	10	1.9	ug/kg	1	11/13/09 14:39	MS	EPA 314 M
Solids, Percent	89.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	27.7	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-05(5-7')		
Lab Sample ID:	JA31353-9	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	92.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	58.3	9.6	1.8	ug/kg	1	11/12/09 23:33	MS	EPA 314 M
Solids, Percent	92.7			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	76.2	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-05(13-15')		
Lab Sample ID:	JA31353-10	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	92.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	18.3	9.7	1.8	ug/kg	1	11/12/09 23:51	MS	EPA 314 M
Solids, Percent	92.1			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	49.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-06(1-3')		
Lab Sample ID:	JA31353-11	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	88.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.9 U	10	1.9	ug/kg	1	11/13/09 00:08	MS	EPA 314 M
Solids, Percent	88.9			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	40.1	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-06(14-16')		
Lab Sample ID:	JA31353-12	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	92.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.9 B	9.8	1.8	ug/kg	1	11/13/09 00:25	MS	EPA 314 M
Solids, Percent	92.7			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	20.4	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-07(6-8')		
Lab Sample ID:	JA31353-13	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	94.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/13/09 00:43	MS	EPA 314 M
Solids, Percent	94.1			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	105	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: SS-07(13-15')
Lab Sample ID: JA31353-14
Matrix: SO - Soil
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Date Sampled: 10/26/09
Date Received: 10/26/09
Percent Solids: 92.3

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 B	9.8	1.8	ug/kg	1	11/13/09 01:00	MS	EPA 314 M
Solids, Percent	92.3			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	23.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-08(3-4')		
Lab Sample ID:	JA31353-15	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	90.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.9	1.8	ug/kg	1	11/13/09 01:18	MS	EPA 314 M
Solids, Percent	90.6			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	35.7	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-08(12-14')		
Lab Sample ID:	JA31353-16	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	93.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/13/09 01:35	MS	EPA 314 M
Solids, Percent	93.4			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	21.8	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-09(6-8')		
Lab Sample ID:	JA31353-17	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	88.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	10	1.8	ug/kg	1	11/13/09 01:52	MS	EPA 314 M
Solids, Percent	88.4			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	47.9	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-09(12-14')		
Lab Sample ID:	JA31353-18	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	90.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	10	1.8	ug/kg	1	11/13/09 02:10	MS	EPA 314 M
Solids, Percent	90.2			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	33.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-10(2-4')		
Lab Sample ID:	JA31353-19	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	91.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.8	1.8	ug/kg	1	11/13/09 02:45	MS	EPA 314 M
Solids, Percent	91.3			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	35.9	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-10(4-6')		
Lab Sample ID:	JA31353-20	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	96.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.7 U	9.4	1.7	ug/kg	1	11/13/09 03:02	MS	EPA 314 M
Solids, Percent	96.5			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	17.4	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102609(1)		
Lab Sample ID:	JA31353-21	**Date Sampled:**	10/26/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/26/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/13/09 14:57	MS	EPA 314
Specific Conductivity	3.4	0.50		umhos/cm	1	11/06/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102609(2)		
Lab Sample ID:	JA31353-22	**Date Sampled:**	10/26/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/26/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/13/09 12:55	MS	EPA 314
Specific Conductivity	3.0	0.50		umhos/cm	1	11/06/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-27(6-8')		
Lab Sample ID:	JA31353-23	**Date Sampled:**	10/26/09
Matrix:	SO - Soil	**Date Received:**	10/26/09
		Percent Solids:	94.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/13/09 21:02	MS	EPA 314 M
Solids, Percent	94.2			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	96.8	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

1 SO FB

CHAIN OF CUSTODY

JA31353 PAGE 1 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # JA31356

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttlien E-mail: lbuttlien@trcsolutions.com
Phone: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC - on-site perchlorate
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.00000.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	SS-01 (5-7')		10/26/09	8:20	JDM	soil	1					1				X	UTC42
2	SS-01 (12-14')			8:25												X	
3	SS-02 (1-3')			9:10												X	
4	SS-02 (14-16')			9:15												X	
5	SS-03 (0-2')			9:45												X	
6	SS-03 (13-15')			9:55												X	
7	SS-04 (2-4')			10:20												X	
8	SS-04 (14-16')			10:25												X	
9	SS-05 (5-7')			10:55												X	
10	SS-05 (13-15')			11:05												X	
11	SS-06 (1-3')			11:20												X	
12	SS-06 (14-16')			11:25												X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labiink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [X] EDD Format WATSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		10/26/09 15:20				
2					10-26-9 1735	
3						
4						
5						

Custody Seals: [ ] Intact [ ] Not intact | Preserved where applicable: [ ] | On Ice: [ ] | Cooler Temp: 30

TB

JA31353: Chain of Custody
Page 1 of 3

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 2 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA31353

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butkien E-mail: lbutkien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC on site perchlorate
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.000030.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
13	SS-07 (6-8')		10/26/09	11:50	JBM	Soil	1					1				X	
14	SS-07 (13-15')			12:00												X	
15	SS08 (3-4')			13:15												X	
16	SS-08 (12-14')			13:25												X	
17	SS-09 (6-8')			14:00												X	
18	SS-09 (12-14')			14:05												X	
19	SS-10 (2-4')			14:40												X	
20	SS-10 (4-6')			14:45												X	
21	FB102609(1)			10:10		DI										X	
22	FB102609(2)			10:40		DI										X	
23	SS-27 (6-8')			11:55		Soil										X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1 John Moss	10/26/09 15:20	1 S Ruder	2 S Ruder	10-26-9 1735	
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact Preserved where applicable ☐ On Ice ☑ Cooler Temp. 3 Bc

B

4.1 4

JA31353: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31353 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/26/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31353: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

TRC

Job No: JA31353

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31353-1	Collected: 26-OCT-09 08:20 By: JM		Received: 26-OCT-09		By: RL	
SS-01(5-7')						
JA31353-1	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-1	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-1	EPA 314 M	12-NOV-09 20:56	MS	09-NOV-09	RI	PERCHLT
JA31353-2	Collected: 26-OCT-09 08:25 By: JM		Received: 26-OCT-09		By: RL	
SS-01(12-14')						
JA31353-2	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-2	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-2	EPA 314 M	12-NOV-09 21:14	MS	09-NOV-09	RI	PERCHLT
JA31353-3	Collected: 26-OCT-09 09:10 By: JM		Received: 26-OCT-09		By: RL	
SS-02(1-3')						
JA31353-3	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-3	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-3	EPA 314 M	12-NOV-09 21:31	MS	09-NOV-09	RI	PERCHLT
JA31353-4	Collected: 26-OCT-09 09:15 By: JM		Received: 26-OCT-09		By: RL	
SS-02(14-16')						
JA31353-4	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-4	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-4	EPA 314 M	12-NOV-09 21:49	MS	09-NOV-09	RI	PERCHLT
JA31353-5	Collected: 26-OCT-09 09:45 By: JM		Received: 26-OCT-09		By: RL	
SS-03(0-2')						
JA31353-5	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-5	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-5	EPA 314 M	12-NOV-09 22:06	MS	09-NOV-09	RI	PERCHLT
JA31353-6	Collected: 26-OCT-09 09:55 By: JM		Received: 26-OCT-09		By: RL	
SS-03(13-15')						
JA31353-6	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-6	SM18 2540G	10-NOV-09	RI			%SOL

Internal Sample Tracking Chronicle

TRC

Job No: JA31353

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31353-6	EPA 314 M	13-NOV-09 14:04	MS	12-NOV-09	MS	PERCHLT
JA31353-7	Collected: 26-OCT-09 10:20 By: JM		Received: 26-OCT-09 By: RL			
SS-04(2-4')						
JA31353-7	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-7	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-7	EPA 314 M	13-NOV-09 14:22	MS	12-NOV-09	MS	PERCHLT
JA31353-8	Collected: 26-OCT-09 10:25 By: JM		Received: 26-OCT-09 By: RL			
SS-04(14-16')						
JA31353-8	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-8	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-8	EPA 314 M	13-NOV-09 14:39	MS	12-NOV-09	MS	PERCHLT
JA31353-9	Collected: 26-OCT-09 10:55 By: JM		Received: 26-OCT-09 By: RL			
SS-05(5-7')						
JA31353-9	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-9	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-9	EPA 314 M	12-NOV-09 23:33	MS	09-NOV-09	RI	PERCHLT
JA31353-10	Collected: 26-OCT-09 11:05 By: JM		Received: 26-OCT-09 By: RL			
SS-05(13-15')						
JA31353-10	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-10	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-10	EPA 314 M	12-NOV-09 23:51	MS	09-NOV-09	RI	PERCHLT
JA31353-11	Collected: 26-OCT-09 11:20 By: JM		Received: 26-OCT-09 By: RL			
SS-06(1-3')						
JA31353-11	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-11	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-11	EPA 314 M	13-NOV-09 00:08	MS	09-NOV-09	RI	PERCHLT
JA31353-12	Collected: 26-OCT-09 11:25 By: JM		Received: 26-OCT-09 By: RL			
SS-06(14-16')						

Internal Sample Tracking Chronicle

TRC

Job No: JA31353

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31353-12	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-12	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-12	EPA 314 M	13-NOV-09 00:25	MS	09-NOV-09	RI	PERCHLT
JA31353-13	Collected: 26-OCT-09 11:50 By: JM		Received: 26-OCT-09 By: RL			
SS-07(6-8')						
JA31353-13	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-13	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-13	EPA 314 M	13-NOV-09 00:43	MS	09-NOV-09	RI	PERCHLT
JA31353-14	Collected: 26-OCT-09 12:00 By: JM		Received: 26-OCT-09 By: RL			
SS-07(13-15')						
JA31353-14	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-14	SM18 2540G	10-NOV-09	RI			%SOL
JA31353-14	EPA 314 M	13-NOV-09 01:00	MS	09-NOV-09	RI	PERCHLT
JA31353-15	Collected: 26-OCT-09 13:15 By: JM		Received: 26-OCT-09 By: RL			
SS-08(3-4')						
JA31353-15	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-15	SM18 2540G	10-NOV-09	DD			%SOL
JA31353-15	EPA 314 M	13-NOV-09 01:18	MS	09-NOV-09	RI	PERCHLT
JA31353-16	Collected: 26-OCT-09 13:25 By: JM		Received: 26-OCT-09 By: RL			
SS-08(12-14')						
JA31353-16	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-16	SM18 2540G	10-NOV-09	DD			%SOL
JA31353-16	EPA 314 M	13-NOV-09 01:35	MS	09-NOV-09	RI	PERCHLT
JA31353-17	Collected: 26-OCT-09 14:00 By: JM		Received: 26-OCT-09 By: RL			
SS-09(6-8')						
JA31353-17	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-17	SM18 2540G	10-NOV-09	DD			%SOL
JA31353-17	EPA 314 M	13-NOV-09 01:52	MS	09-NOV-09	RI	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA31353

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31353-18 Collected: 26-OCT-09 14:05 By: JM SS-09(12-14')			Received: 26-OCT-09		By: RL	
JA31353-18	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-18	SM18 2540G	10-NOV-09	DD			%SOL
JA31353-18	EPA 314 M	13-NOV-09 02:10	MS	09-NOV-09	RI	PERCHLT
JA31353-19 Collected: 26-OCT-09 14:40 By: JM SS-10(2-4')			Received: 26-OCT-09		By: RL	
JA31353-19	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-19	SM18 2540G	11-NOV-09	DD			%SOL
JA31353-19	EPA 314 M	13-NOV-09 02:45	MS	09-NOV-09	RI	PERCHLT
JA31353-20 Collected: 26-OCT-09 14:45 By: JM SS-10(4-6')			Received: 26-OCT-09		By: RL	
JA31353-20	SM19 2510B M	09-NOV-09	RI			SCON
JA31353-20	SM18 2540G	10-NOV-09	DD			%SOL
JA31353-20	EPA 314 M	13-NOV-09 03:02	MS	09-NOV-09	RI	PERCHLT
JA31353-21 Collected: 26-OCT-09 10:10 By: JM FB102609(1)			Received: 26-OCT-09		By: RL	
JA31353-21	SM19 2510B/SW 9050A	06-NOV-09	RI			SCON
JA31353-21	EPA 314	13-NOV-09 14:57	MS	13-NOV-09	MS	PERCHLT
JA31353-22 Collected: 26-OCT-09 10:40 By: JM FB102609(2)			Received: 26-OCT-09		By: RL	
JA31353-22	SM19 2510B/SW 9050A	06-NOV-09	RI			SCON
JA31353-22	EPA 314	13-NOV-09 12:55	MS	13-NOV-09	MS	PERCHLT
JA31353-23 Collected: 26-OCT-09 11:55 By: JM SS-27(6-8')			Received: 26-OCT-09		By: RL	
JA31353-23	SM18 2540G	10-NOV-09	DD			%SOL
JA31353-23	SM19 2510B M	13-NOV-09	BD			SCON
JA31353-23	EPA 314 M	13-NOV-09 21:02	MS	11-NOV-09	RI	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/26/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31353-1.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-1.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-1.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-1.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-1.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-1.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-2.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-2.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-2.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-2.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-2.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-2.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-3.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-3.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-3.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-3.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-3.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-3.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-4.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-4.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-4.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-5.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-5.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-5.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-5.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-5.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-5.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-6.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-6.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-6.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-6.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-6.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-6.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-7.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-7.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-7.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-7.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-7.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/26/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31353-7.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-8.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-8.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-8.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-8.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-8.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-8.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-9.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-9.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-9.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-9.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-9.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-9.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-10.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-10.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-10.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-10.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-10.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-10.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-11.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-11.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-11.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-11.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-11.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-11.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-12.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-12.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-12.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-12.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-12.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-12.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-13.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-13.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-13.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-13.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-13.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-13.1	Dave Hunkele		12/15/09 07:01	Disposed

Accutest Internal Chain of Custody

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/26/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31353-14.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-14.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-14.1	Secured Storage	John Thomas	11/10/09 13:16	Retrieve from Storage
JA31353-14.1	John Thomas	Rie Iwasaki	11/10/09 13:21	Custody Transfer
JA31353-14.1	Rie Iwasaki	Secured Storage	11/10/09 15:12	Return to Storage
JA31353-14.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-15.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-15.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-15.1	Secured Storage	John Thomas	11/10/09 14:30	Retrieve from Storage
JA31353-15.1	John Thomas	Donna DiGiovanni	11/10/09 14:33	Custody Transfer
JA31353-15.1	Donna DiGiovanni	Secured Storage	11/10/09 16:03	Return to Storage
JA31353-15.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-16.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-16.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-16.1	Secured Storage	John Thomas	11/10/09 14:30	Retrieve from Storage
JA31353-16.1	John Thomas	Donna DiGiovanni	11/10/09 14:33	Custody Transfer
JA31353-16.1	Donna DiGiovanni	Secured Storage	11/10/09 16:03	Return to Storage
JA31353-16.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-17.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-17.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-17.1	Secured Storage	John Thomas	11/10/09 14:30	Retrieve from Storage
JA31353-17.1	John Thomas	Donna DiGiovanni	11/10/09 14:33	Custody Transfer
JA31353-17.1	Donna DiGiovanni	Secured Storage	11/10/09 16:03	Return to Storage
JA31353-17.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-18.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-18.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-18.1	Secured Storage	John Thomas	11/10/09 14:30	Retrieve from Storage
JA31353-18.1	John Thomas	Donna DiGiovanni	11/10/09 14:33	Custody Transfer
JA31353-18.1	Donna DiGiovanni	Secured Storage	11/10/09 16:03	Return to Storage
JA31353-18.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-19.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-19.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-19.1	Secured Storage	Adam Scott	11/11/09 09:11	Retrieve from Storage
JA31353-19.1	Adam Scott	Donna DiGiovanni	11/11/09 09:13	Custody Transfer
JA31353-19.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31353-19.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-20.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-20.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/26/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31353-20.1	Secured Storage	John Thomas	11/10/09 14:30	Retrieve from Storage
JA31353-20.1	John Thomas	Donna DiGiovanni	11/10/09 14:33	Custody Transfer
JA31353-20.1	Donna DiGiovanni	Secured Storage	11/10/09 16:03	Return to Storage
JA31353-20.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-21.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31353-21.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31353-21.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31353-21.1	Secured Storage	Adam Scott	11/06/09 09:21	Retrieve from Storage
JA31353-21.1	Adam Scott	Rie Iwasaki	11/06/09 09:24	Custody Transfer
JA31353-21.1	Rie Iwasaki	Secured Storage	11/06/09 14:49	Return to Storage
JA31353-21.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31353-21.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31353-21.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31353-21.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-22.1	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31353-22.1	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31353-22.1	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31353-22.1	Secured Storage	Adam Scott	11/06/09 09:21	Retrieve from Storage
JA31353-22.1	Adam Scott	Rie Iwasaki	11/06/09 09:24	Custody Transfer
JA31353-22.1	Rie Iwasaki	Secured Storage	11/06/09 14:49	Return to Storage
JA31353-22.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-22.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-22.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31353-22.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31353-22.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31353-22.1	Secured Storage	Todd Shoemaker	11/12/09 09:15	Retrieve from Storage
JA31353-22.1	Todd Shoemaker	Melissa Smith	11/12/09 09:16	Custody Transfer
JA31353-22.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31353-22.1	Secured Storage	Melissa Smith	11/13/09 11:48	Retrieve from Storage
JA31353-22.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31353-22.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31353-23.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31353-23.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31353-23.1	Secured Storage	John Thomas	11/10/09 14:30	Retrieve from Storage
JA31353-23.1	John Thomas	Donna DiGiovanni	11/10/09 14:33	Custody Transfer
JA31353-23.1	Donna DiGiovanni	Secured Storage	11/10/09 16:03	Return to Storage
JA31353-23.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31353-23.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31353-23.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31353-23.1	Dave Hunkele		12/15/09 07:01	Disposed

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: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51486/GN32251	9.1	0.0	ug/kg	75.8	74.8	98.7	75-125%
Perchlorate	GP51526/GN32290	9.1	0.0	ug/kg	75.8	79.3	104.7	75-125%
Perchlorate	GP51549/GN32290	3.0	0.0	ug/l	25	24.7	98.8	85-115%
Perchlorate	GP51565/GN32290	3.0	0.0	ug/l	25	24.7	98.8	85-115%

Associated Samples:
Batch GP51486: JA31353-1, JA31353-10, JA31353-11, JA31353-12, JA31353-13, JA31353-14, JA31353-15, JA31353-16, JA31353-17, JA31353-18, JA31353-19, JA31353-2, JA31353-20, JA31353-3, JA31353-4, JA31353-5, JA31353-6, JA31353-7, JA31353-8, JA31353-9
Batch GP51526: JA31353-23
Batch GP51549: JA31353-22
Batch GP51565: JA31353-21
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51486/GN32251	JA31353-1	ug/kg	1.8 U	0.0	0.0	0-30%
Perchlorate	GP51526/GN32290	JA31399-1	ug/kg	1.8 U	0.0	0.0	0-30%
Perchlorate	GP51549/GN32251	JA31793-8	ug/l	0.0	0.0	0.0	0-15%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	2.0	10.5	0-15%
Specific Conductivity	GN32058	JA31977-6	umhos/cm	1020	997	2.3	0-10%
Specific Conductivity	GN32122	JA31353-1	umhos/cm	16.8	16.6	1.2	0-15%
Specific Conductivity	GN32280	JA31399-1	umhos/cm	40.5	37.7	7.2	0-15%

Associated Samples:
Batch GN32058: JA31353-21, JA31353-22
Batch GN32122: JA31353-1, JA31353-10, JA31353-11, JA31353-12, JA31353-13, JA31353-14, JA31353-15, JA31353-16, JA31353-17, JA31353-18, JA31353-19, JA31353-2, JA31353-20, JA31353-3, JA31353-4, JA31353-5, JA31353-6, JA31353-7, JA31353-8, JA31353-9
Batch GN32280: JA31353-23
Batch GP51486: JA31353-1, JA31353-10, JA31353-11, JA31353-12, JA31353-13, JA31353-14, JA31353-15, JA31353-16, JA31353-17, JA31353-18, JA31353-19, JA31353-2, JA31353-20, JA31353-3, JA31353-4, JA31353-5, JA31353-6, JA31353-7, JA31353-8, JA31353-9
Batch GP51526: JA31353-23
Batch GP51549: JA31353-22
Batch GP51565: JA31353-21
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51486/GN32251	JA31353-1	ug/kg	1.8 U	80.3	80.7	100.5	70-130%
Perchlorate	GP51526/GN32348	JA31399-1	ug/kg	1.8 U	82.1	86.3	105.1	70-130%
Perchlorate	GP51549/GN32251	JA31793-8	ug/l	0.0	25	22.1	88.4	80-120%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	25	26.2	97.6	80-120%

Associated Samples:
Batch GP51486: JA31353-1, JA31353-10, JA31353-11, JA31353-12, JA31353-13, JA31353-14, JA31353-15, JA31353-16, JA31353-17, JA31353-18, JA31353-19, JA31353-2, JA31353-20, JA31353-3, JA31353-4, JA31353-5, JA31353-6, JA31353-7, JA31353-8, JA31353-9
Batch GP51526: JA31353-23
Batch GP51549: JA31353-22
Batch GP51565: JA31353-21
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32251
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32251-STD1	1		STDA
10:23	GN32251-STD2	1		STDB
10:41	GN32251-STD3	1		STDC
11:34	GN32251-STD4	1		STDD
11:51	GN32251-STD5	1		STDE
12:09	GN32251-STD6	1		STDF
09:02	GN32251-IPC1	1		SCON=4290
09:20	GN32251-ICV1	1		
09:37	GP51509-MB2	1		
09:37	GP51549-MB1	1		Sample shown for QC tracking purposes only.
10:13	GN32251-CRI1	1		
10:30	GP51509-B2	1		
10:30	GP51549-B1	1		Sample shown for QC tracking purposes only.
10:47	GN32251-CCV1	1		
11:05	GP51509-ICV1	1		
11:22	ZZZZZZ	1		
11:40	ZZZZZZ	1		
11:57	ZZZZZZ	1		
12:14	ZZZZZZ	1		
12:32	ZZZZZZ	1		
12:49	GN32251-CCVA1	1		
13:07	GP51549-S1	1		
13:24	GP51549-D1	1		
13:41	JA31793-8	1		(sample used for QC only; not part of login JA31353)
13:59	ZZZZZZ	1		
14:16	ZZZZZZ	1		
14:34	ZZZZZZ	1		
14:51	ZZZZZZ	1		
15:08	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	ZZZZZZ	1		
16:01	GN32251-CCV2	1		
16:18	ZZZZZZ	60		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32251
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:35	ZZZZZZ	1		
16:53	ZZZZZZ	1		
17:10	ZZZZZZ	150		
17:28	ZZZZZZ	150		
17:45	ZZZZZZ	1		
18:02	JA31353-22	1		To reanalysis due to noisy baseline.
18:20	GN32251-CCVA2	1		
18:37	GN32251-CCV3	1		
18:55	GN32251-IPC2	1		
19:12	GP51486-MB1	1		
19:29	GN32251-CRI2	1		
19:47	GP51486-B1	1		
20:04	GN32251-CCVA3	1		
20:22	GP51486-S1	1		
20:39	GP51486-D1	1		
20:56	JA31353-1	1		
21:14	JA31353-2	1		
21:31	JA31353-3	1		
21:49	JA31353-4	1		
22:06	JA31353-5	1		
22:24	JA31353-6	1		to reanalysis to confirm. Noisy baseline.
22:41	JA31353-7	1		To reanalysis to confirm.
22:58	JA31353-8	1		To reanalysis to confirm.
23:16	GN32251-CCV4	1		
23:33	JA31353-9	1		
23:51	JA31353-10	1		
00:08	JA31353-11	1		
00:25	JA31353-12	1		
00:43	JA31353-13	1		
01:00	JA31353-14	1		
01:18	JA31353-15	1		
01:35	JA31353-16	1		
01:52	JA31353-17	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32251
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:10	JA31353-18	1		
02:27	GN32251-CCVA4	1		
02:45	JA31353-19	1		
03:02	JA31353-20	1		
03:19	GN32251-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111201.TXT Date Analyzed: 11/12/09 Methods: EPA 314, EPA 314 M
Run ID: GN32251 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32251-IPC1	Perchlorate	23.6	3.0	0.92	25	94.4	80-120
GN32251-ICV1	Perchlorate	26.4	3.0	0.92	25	105.6	90-110
GN32251-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32251-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32251-CCVA1	Perchlorate	51.8	3.0	0.92	50	103.6	
GN32251-CCV2	Perchlorate	24.6	3.0	0.92	25	98.4	85-115
GN32251-CCVA2	Perchlorate	49.5	3.0	0.92	50	99.0	
GN32251-CCV3	Perchlorate	26.3	3.0	0.92	25	105.2	85-115
GN32251-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN32251-CRI2	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32251-CCVA3	Perchlorate	51.1	3.0	0.92	50	102.2	
GN32251-CCV4	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN32251-CCVA4	Perchlorate	53.6	3.0	0.92	50	107.2	
GN32251-CCV5	Perchlorate	26.1	3.0	0.92	25	104.4	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32290-STD1	1		STDA
10:23	GN32290-STD2	1		STDB
10:41	GN32290-STD3	1		STDC
11:34	GN32290-STD4	1		STDD
11:51	GN32290-STD5	1		STDE
12:09	GN32290-STD6	1		STDF
10:01	GN32290-IPC1	1		scon=4290
10:18	GN32290-ICV1	1		
10:35	GP51509-MB3	1		
10:35	GP51549-MB2	1		Sample shown for QC tracking purposes only.
10:35	GP51565-MB1	1		Sample shown for QC tracking purposes only.
10:53	GN32290-CRI1	1		
11:10	GP51509-B3	1		
11:10	GP51549-B2	1		Sample shown for QC tracking purposes only.
11:10	GP51565-B1	1		Sample shown for QC tracking purposes only.
11:28	GN32290-CCV1	1		
11:45	GP51509-ICV2	1		
12:02	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:37	ZZZZZZ	150		
12:55	JA31353-22	1		
13:12	GN32290-CCVA1	1		
13:30	ZZZZZZ	1		
13:47	ZZZZZZ	1		
14:04	JA31353-6	1		
14:22	JA31353-7	1		
14:39	JA31353-8	1		
14:57	JA31353-21	1		
15:14	ZZZZZZ	1		
15:31	ZZZZZZ	1		
15:49	GN32290-CCV2	1		
16:06	ZZZZZZ	1		
16:24	GP51565-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:41	GP51565-D1	1		
16:58	JA31506-2	1		(sample used for QC only; not part of login JA31353)
17:16	ZZZZZZ	1		
17:33	ZZZZZZ	1		
17:51	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:25	ZZZZZZ	1		
18:43	ZZZZZZ	1		
19:00	GN32290-CCVA2	1		fails high
19:18	GN32290-CCV3	1		
19:35	GN32290-IPC2	1		
19:52	GP51526-MB1	1		
20:10	GN32290-CRI2	1		
20:27	GP51526-B1	1		
20:45	GN32290-CCVA3	1		
21:02	JA31353-23	1		
21:19	GP51526-S1	1		rerun for confirmation
21:37	GP51526-D1	1		
21:54	JA31399-1	1		(sample used for QC only; not part of login JA31353)
22:12	ZZZZZZ	1		
22:29	ZZZZZZ	1		
22:46	ZZZZZZ	1		
23:04	ZZZZZZ	1		
23:21	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:56	GN32290-CCV4	1		
00:13	ZZZZZZ	1		
00:31	ZZZZZZ	1		
00:48	ZZZZZZ	1		
01:06	ZZZZZZ	1		
01:23	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:58	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:15	ZZZZZZ	1		
02:33	ZZZZZZ	1		
02:50	ZZZZZZ	1		
03:08	GN32290-CCVA4	1		
03:25	ZZZZZZ	1		
03:42	ZZZZZZ	1		
04:00	GN32290-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Run ID: GN32290 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32290-IPC1	Perchlorate	25.4	3.0	0.92	25	101.6	80-120
GN32290-ICV1	Perchlorate	27.0	3.0	0.92	25	108.0	90-110
GN32290-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32290-CCV1	Perchlorate	24.6	3.0	0.92	25	98.4	85-115
GN32290-CCVA1	Perchlorate	54.0	3.0	0.92	50	108.0	
GN32290-CCV2	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32290-CCVA2	Perchlorate	58.8	3.0	0.92	50	117.6!(a)	
GN32290-CCV3	Perchlorate	28.0	3.0	0.92	25	112.0	85-115
GN32290-IPC2	Perchlorate	26.5	3.0	0.92	25	106.0	80-120
GN32290-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32290-CCVA3	Perchlorate	49.9	3.0	0.92	50	99.8	
GN32290-CCV4	Perchlorate	26.9	3.0	0.92	25	107.6	85-115
GN32290-CCVA4	Perchlorate	54.6	3.0	0.92	50	109.2	
GN32290-CCV5	Perchlorate	27.6	3.0	0.92	25	110.4	85-115

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:44	GN32348-STD1	1		STDA
10:19	GN32348-STD2	1		STDB
10:53	GN32348-STD3	1		STDD
11:11	GN32348-STD4	1		STDC
12:22	GN32348-STD5	1		STDE
12:39	GN32348-STD6	1		STDF
12:57	GN32348-IPC1	1		scon=4160
13:14	GN32348-ICV1	1		
13:32	GP51576-MB1	1		
13:49	GN32348-CRI1	1		
14:06	GP51576-B1	1		
14:24	GN32348-CCV1	1		
14:41	GP51565-ICV1	1		
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	GP51526-S1	1		tailing peak; see rerun
15:51	ZZZZZZ	1		
16:08	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:43	GP51564-MB1	1		
17:01	GP51564-B1	1		
17:18	GP51564-S1	1		did not inject (power failure)
17:50	GN32348-CCVA1	1		
18:08	GP51564-D1	1		
18:25	JA31399-20	1		(sample used for QC only; not part of login JA31353)
18:43	ZZZZZZ	1		
19:00	GP51565-MB2	1		
19:00	GP51595-MB1	1		Sample shown for QC tracking purposes only.
19:17	GP51565-B2	1		
19:17	GP51595-B1	1		Sample shown for QC tracking purposes only.
19:35	ZZZZZZ	1		
19:52	GP51565-S1	1		
20:10	GP51565-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:27	JA31506-2	1		(sample used for QC only; not part of login JA31353)
20:44	ZZZZZZ	1		
21:02	GN32348-CCV2	1		
21:19	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:54	ZZZZZZ	1		
22:11	ZZZZZZ	1		
22:29	ZZZZZZ	1		
22:46	ZZZZZZ	1		
23:04	GP51526-S1	1		
23:21	GN32348-CCVA2	1		
23:38	GN32348-CCV3	1		
23:56	GN32348-IPC2	1		
00:13	ZZZZZZ	1		
00:31	GN32348-CRI2	1		
00:48	ZZZZZZ	1		
01:05	GN32348-CCVA3	1		
01:23	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:15	ZZZZZZ	1		
02:32	ZZZZZZ	1		
02:50	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:42	ZZZZZZ	1		
03:59	ZZZZZZ	1		
04:17	GN32348-CCV4	1		
04:34	ZZZZZZ	1		
04:52	ZZZZZZ	1		
05:09	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:44	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:01	GP51576-S1	1		
06:19	GP51576-D1	1		
06:36	JA31582-4	1		(sample used for QC only; not part of login JA31353)
06:54	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:28	GN32348-CCVA4	1		
07:46	ZZZZZZ	1		
08:03	ZZZZZZ	1		
08:21	GN32348-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31353
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Run ID: GN32348 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32348-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN32348-ICV1	Perchlorate	25.9	3.0	0.92	25	103.6	90-110
GN32348-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32348-CCV1	Perchlorate	24.1	3.0	0.92	25	96.4	85-115
GN32348-CCVA1	Perchlorate	55.3	3.0	0.92	50	110.6	
GN32348-CCV2	Perchlorate	26.8	3.0	0.92	25	107.2	85-115
GN32348-CCVA2	Perchlorate	56.6	3.0	0.92	50	113.2	
GN32348-CCV3	Perchlorate	26.7	3.0	0.92	25	106.8	85-115
GN32348-IPC2	Perchlorate	27.4	3.0	0.92	25	109.6	80-120
GN32348-CRI2	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32348-CCVA3	Perchlorate	55.0	3.0	0.92	50	110.0	
GN32348-CCV4	Perchlorate	26.6	3.0	0.92	25	106.4	85-115
GN32348-CCVA4	Perchlorate	57.2	3.0	0.92	50	114.4	
GN32348-CCV5	Perchlorate	28.0	3.0	0.92	25	112.0	85-115

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31353-1	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-01(5-7')			
Wet Weight (Total)	31.86	g	
Tare Weight	23.66	g	
Dry Weight (Total)	31.3	g	
Solids, Percent	93.2	%	
Sample: JA31353-2	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-01(12-14')			
Wet Weight (Total)	35.02	g	
Tare Weight	26.09	g	
Dry Weight (Total)	34.14	g	
Solids, Percent	90.1	%	
Sample: JA31353-3	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-02(1-3')			
Wet Weight (Total)	32.82	g	
Tare Weight	26.5	g	
Dry Weight (Total)	32.29	g	
Solids, Percent	91.6	%	
Sample: JA31353-4	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-02(14-16')			
Wet Weight (Total)	28.3	g	
Tare Weight	22.6	g	
Dry Weight (Total)	27.92	g	
Solids, Percent	93.3	%	
Sample: JA31353-5	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-03(0-2')			
Wet Weight (Total)	33.68	g	
Tare Weight	27.76	g	
Dry Weight (Total)	32.77	g	
Solids, Percent	84.6	%	
Sample: JA31353-6	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-03(13-15')			
Wet Weight (Total)	33.35	g	
Tare Weight	23.89	g	
Dry Weight (Total)	32.84	g	
Solids, Percent	94.6	%	

Percent Solids Raw Data Summary

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31353-7 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-04(2-4')

Wet Weight (Total)	34.05	g
Tare Weight	28.34	g
Dry Weight (Total)	33.47	g
Solids, Percent	89.8	%

Sample: JA31353-8 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-04(14-16')

Wet Weight (Total)	36.71	g
Tare Weight	28.06	g
Dry Weight (Total)	35.78	g
Solids, Percent	89.2	%

Sample: JA31353-9 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-05(5-7')

Wet Weight (Total)	33.67	g
Tare Weight	27.2	g
Dry Weight (Total)	33.2	g
Solids, Percent	92.7	%

Sample: JA31353-10 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-05(13-15')

Wet Weight (Total)	36.51	g
Tare Weight	28	g
Dry Weight (Total)	35.84	g
Solids, Percent	92.1	%

Sample: JA31353-11 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-06(1-3')

Wet Weight (Total)	35.13	g
Tare Weight	25.87	g
Dry Weight (Total)	34.1	g
Solids, Percent	88.9	%

Sample: JA31353-12 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-06(14-16')

Wet Weight (Total)	32.57	g
Tare Weight	25.29	g
Dry Weight (Total)	32.04	g
Solids, Percent	92.7	%

Percent Solids Raw Data Summary

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31353-13	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-07(6-8')			
Wet Weight (Total)	35.36	g	
Tare Weight	28.28	g	
Dry Weight (Total)	34.94	g	
Solids, Percent	94.1	%	
Sample: JA31353-14	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-07(13-15')			
Wet Weight (Total)	38.93	g	
Tare Weight	30.37	g	
Dry Weight (Total)	38.27	g	
Solids, Percent	92.3	%	
Sample: JA31353-15	**Analyzed:** 10-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-08(3-4')			
Wet Weight (Total)	29.72	g	
Tare Weight	24.72	g	
Dry Weight (Total)	29.25	g	
Solids, Percent	90.6	%	
Sample: JA31353-16	**Analyzed:** 10-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-08(12-14')			
Wet Weight (Total)	29.8	g	
Tare Weight	21.26	g	
Dry Weight (Total)	29.24	g	
Solids, Percent	93.4	%	
Sample: JA31353-17	**Analyzed:** 10-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-09(6-8')			
Wet Weight (Total)	29.44	g	
Tare Weight	20.75	g	
Dry Weight (Total)	28.43	g	
Solids, Percent	88.4	%	
Sample: JA31353-18	**Analyzed:** 10-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-09(12-14')			
Wet Weight (Total)	32.96	g	
Tare Weight	24.2	g	
Dry Weight (Total)	32.1	g	
Solids, Percent	90.2	%	

Percent Solids Raw Data Summary

Job Number: JA31353
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31353-19 **Analyzed:** 11-NOV-09 by DD **Method:** SM18 2540G
ClientID: SS-10(2-4')

Wet Weight (Total)	27.88	g
Tare Weight	19.65	g
Dry Weight (Total)	27.16	g
Solids, Percent	91.3	%

Sample: JA31353-20 **Analyzed:** 10-NOV-09 by DD **Method:** SM18 2540G
ClientID: SS-10(4-6')

Wet Weight (Total)	30.83	g
Tare Weight	21.67	g
Dry Weight (Total)	30.51	g
Solids, Percent	96.5	%

Sample: JA31353-23 **Analyzed:** 10-NOV-09 by DD **Method:** SM18 2540G
ClientID: SS-27(6-8')

Wet Weight (Total)	28.73	g
Tare Weight	21.7	g
Dry Weight (Total)	28.32	g
Solids, Percent	94.2	%

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.000030.000000

Accutest Job Number: JA31399

Sampling Date: 10/27/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **62**

ACCREDITED IN ACCORDANCE WITH nelac

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

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Accutest LabLink@544321 09:50 23-Feb-2010

Sample Summary

TRC

Job No: JA31399

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31399-1	10/27/09	08:00	JDM	10/27/09	SO	Soil	SS-11 (1-3')
JA31399-2	10/27/09	08:05	JDM	10/27/09	SO	Soil	SS-11 (5-7')
JA31399-3	10/27/09	08:30	JDM	10/27/09	SO	Soil	SS-12 (2-4')
JA31399-4	10/27/09	08:35	JDM	10/27/09	SO	Soil	SS-12 (5-7')
JA31399-5	10/27/09	09:50	JDM	10/27/09	SO	Soil	SS-13 (1-3')
JA31399-6	10/27/09	10:00	JDM	10/27/09	SO	Soil	SS-13 (5-7')
JA31399-7	10/27/09	10:50	JDM	10/27/09	SO	Soil	SS-14 (1-3')
JA31399-8	10/27/09	10:55	JDM	10/27/09	SO	Soil	SS-14 (6-8')
JA31399-9	10/27/09	11:30	JDM	10/27/09	SO	Soil	SS-15 (2-4')
JA31399-10	10/27/09	11:40	JDM	10/27/09	SO	Soil	SS-15 (4-6')
JA31399-11	10/27/09	11:50	JDM	10/27/09	SO	Soil	SS-16 (1-3')
JA31399-12	10/27/09	11:55	JDM	10/27/09	SO	Soil	SS-16 (6-8')
JA31399-13	10/27/09	12:10	JDM	10/27/09	SO	Soil	SS-17 (1-3')

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

Sample Summary
(continued)

TRC

Job No: JA31399

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31399-14	10/27/09	12:15	JDM	10/27/09	SO	Soil	SS-17 (5-7')
JA31399-15	10/27/09	12:30	JDM	10/27/09	SO	Soil	SS-18 (1-3')
JA31399-16	10/27/09	12:35	JDM	10/27/09	SO	Soil	SS-18 (6-8')
JA31399-17	10/27/09	13:05	JDM	10/27/09	SO	Soil	SS-19 (1-3')
JA31399-18	10/27/09	13:10	JDM	10/27/09	SO	Soil	SS-19 (6-8')
JA31399-19	10/27/09	13:20	JDM	10/27/09	SO	Soil	SS-20 (1-3')
JA31399-20	10/27/09	13:25	JDM	10/27/09	SO	Soil	SS-20 (4-6')
JA31399-21	10/27/09	08:40	JDM	10/27/09	SO	Soil	SS-32 (5-7')
JA31399-22	10/27/09	11:05	JDM	10/27/09	AQ	Field Blank Soil	FB102709(1)
JA31399-23	10/27/09	12:50	JDM	10/27/09	AQ	Field Blank Soil	FB102709(2)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA31399

Site: SMC Perchlorate On-Site Investigation, Newfield, NJ **Report Date** 11/20/2009 1:11:45 PM

On 10/27/2009, 21 Sample(s), 0 Trip Blank(s) and 2 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31399 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 EPA 314

Matrix AQ **Batch ID:** GP51565

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31506-2DUP, JA31506-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method EPA 314 M

Matrix SO **Batch ID:** GP51526

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31399-1DUP, JA31399-1MS were used as the QC samples for Perchlorate.

Matrix SO **Batch ID:** GP51564

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31399-20DUP, JA31399-20MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM18 2540G

Matrix SO **Batch ID:** GN32169

- The data for SM18 2540G meets quality control requirements.

Matrix SO **Batch ID:** GN32171

- The data for SM18 2540G meets quality control requirements.

Wet Chemistry By Method SM19 2510B M

Matrix SO **Batch ID:** GN32280

- Sample(s) JA31399-1DUP were used as the QC samples for Specific Conductivity.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix	AQ	Batch ID:	GN32130

- Sample(s) JA31394-1DUP were used as the QC samples for Specific Conductivity. For GN32349: Sample(s) JA31399-20DUP were used as QC samples for Specific conductivity.

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

Client Sample ID:	SS-11 (1-3')		
Lab Sample ID:	JA31399-1	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	90.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.8	1.8	ug/kg	1	11/13/09 21:54	MS	EPA 314 M
Solids, Percent	90.9			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	40.5	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-11 (5-7')		
Lab Sample ID:	JA31399-2	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	90.0
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.8 B	10	1.8	ug/kg	1	11/13/09 22:12	MS	EPA 314 M
Solids, Percent	90			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	104	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-12 (2-4')		
Lab Sample ID:	JA31399-3	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	91.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.7	1.8	ug/kg	1	11/13/09 22:29	MS	EPA 314 M
Solids, Percent	91.9			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	46.1	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-12 (5-7')		
Lab Sample ID:	JA31399-4	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	94.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/13/09 22:46	MS	EPA 314 M
Solids, Percent	94.1			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	18.8	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-13 (1-3')		
Lab Sample ID:	JA31399-5	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	91.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.0 B	9.9	1.8	ug/kg	1	11/16/09 15:51	MS	EPA 314 M
Solids, Percent	91.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	42.9	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-13 (5-7')		
Lab Sample ID:	JA31399-6	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	89.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.9 B	10	1.8	ug/kg	1	11/13/09 23:21	MS	EPA 314 M
Solids, Percent	89.9			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	51.0	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-14 (1-3')		
Lab Sample ID:	JA31399-7	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	93.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.7 U	9.5	1.7	ug/kg	1	11/13/09 23:39	MS	EPA 314 M
Solids, Percent	93.4			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	134	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-14 (6-8')		
Lab Sample ID:	JA31399-8	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	92.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/14/09 00:13	MS	EPA 314 M
Solids, Percent	92.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	45.7	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-15 (2-4')		
Lab Sample ID:	JA31399-9	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	93.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.7	1.8	ug/kg	1	11/14/09 00:31	MS	EPA 314 M
Solids, Percent	93.7			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	30.9	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-15 (4-6')		
Lab Sample ID:	JA31399-10	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	90.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.9	1.8	ug/kg	1	11/16/09 16:08	MS	EPA 314 M
Solids, Percent	90.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	40.9	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-16 (1-3')		
Lab Sample ID:	JA31399-11	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	94.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/14/09 01:06	MS	EPA 314 M
Solids, Percent	94.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	99.0	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-16 (6-8')		
Lab Sample ID:	JA31399-12	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	91.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.9	1.8	ug/kg	1	11/14/09 01:23	MS	EPA 314 M
Solids, Percent	91.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	71.6	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-17 (1-3')		
Lab Sample ID:	JA31399-13	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	93.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.7	1.8	ug/kg	1	11/14/09 01:40	MS	EPA 314 M
Solids, Percent	93.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	159	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: SS-17 (5-7')
Lab Sample ID: JA31399-14
Matrix: SO - Soil
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Date Sampled: 10/27/09
Date Received: 10/27/09
Percent Solids: 91.7

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.8 B	9.8	1.8	ug/kg	1	11/14/09 01:58	MS	EPA 314 M
Solids, Percent	91.7			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	89.5	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-18 (1-3')		
Lab Sample ID:	JA31399-15	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	89.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	10	1.8	ug/kg	1	11/14/09 02:15	MS	EPA 314 M
Solids, Percent	89.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	143	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-18 (6-8')		
Lab Sample ID:	JA31399-16	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	95.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.7 U	9.3	1.7	ug/kg	1	11/16/09 16:26	MS	EPA 314 M
Solids, Percent	95.7			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	18.4	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-19 (1-3')		
Lab Sample ID:	JA31399-17	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	92.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.8	1.8	ug/kg	1	11/14/09 02:50	MS	EPA 314 M
Solids, Percent	92.1			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	18.2	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-19 (6-8')		
Lab Sample ID:	JA31399-18	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	94.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/14/09 03:25	MS	EPA 314 M
Solids, Percent	94.4			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	12.0	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-20 (1-3')		
Lab Sample ID:	JA31399-19	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	93.0
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.3 B	9.7	1.8	ug/kg	1	11/14/09 03:42	MS	EPA 314 M
Solids, Percent	93			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	14.1	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-20 (4-6')		
Lab Sample ID:	JA31399-20	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	90.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	10	1.8	ug/kg	1	11/16/09 18:25	MS	EPA 314 M
Solids, Percent	90.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	266	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-32 (5-7')		
Lab Sample ID:	JA31399-21	**Date Sampled:**	10/27/09
Matrix:	SO - Soil	**Date Received:**	10/27/09
		Percent Solids:	94.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.6	1.8	ug/kg	1	11/16/09 18:43	MS	EPA 314 M
Solids, Percent	94.3			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	258	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102709(1)		
Lab Sample ID:	JA31399-22	**Date Sampled:**	10/27/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/27/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/13/09 15:14	MS	EPA 314
Specific Conductivity	9.6	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102709(2)		
Lab Sample ID:	JA31399-23	**Date Sampled:**	10/27/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/27/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/13/09 15:31	MS	EPA 314
Specific Conductivity	26.5	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA31399

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttien E-mail: lbuttien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC on-site perchlorate investigation
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.000030.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	SS-11 (1-3')		10/27/09	8:00	JDM	Soil	1					1				X	
2	SS-11 (5-7')			8:05			1					1				X	UTC42
3	SS-12 (2-4')			8:30			1					1				X	
4	SS-12 (5-7')			8:35			1					1				X	
5	SS-13 (1-3')			9:50			1					1				X	
6	SS-13 (5-7')			10:00			1					1				X	
7	SS-14 (1-3')			10:50			1					1				X	
8	SS-14 (6-8')			10:55			1					1				X	
9	SS-15 (2-4')			11:30			1					1				X	
10	SS-15 (4-6')			11:40			1					1				X	
11	SS-16 (1-3')			11:50			1					1				X	
12	SS-16 (6-8')			11:55			1					1				X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM) / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [X] EDD Format HAZSITE
- [ ] Other

Comments / Special Instructions

NO CUST SEAL MM

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
John Moss	10/27/09 14:50	1	2 10-27-09 1450	3 10-27-09 1630	2
Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by:	Date Time:	Received By: 5	Custody Seals: [ ] Intact [ ] Not Intact	Preserved where applicable: [ ]	On Ice: [X] Cooler Temp. 2.8c

JA31399: Chain of Custody
Page 1 of 3

ACCUTEST. Laboratories

SDG FB

CHAIN OF CUSTODY

PAGE 2 OF 2

2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA31399

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttien E-mail: lbuttien@trcsolutions.com
Phone: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC on-site perchlorate investigation
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.000030.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
13	SS-17 (1-3')		10/27/09	12:10	JDM	Soil	1					1				X	
14	SS-17 (5-7')			12:15			1					1				X	
15	SS-18 (1-3')			12:30			1					1				X	
16	SS-18 (6-8')			12:35			1					1				X	
17	SS-19 (1-3')			13:05			1					1				X	
18	SS-19 (6-8')			13:10			1					1				X	
19	SS-20 (1-3')			13:20			1					1				X	
20	SS-20 (4-6')			13:25			1					1				X	
4	SS-32 (5-7')			8:40			1					1				X	
22	FB102709 (1)			11:05		W	1					1				X	
23	FB102709 (2)			12:50		W	1					1				X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labilink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCTW2 HAZSITE
- [X] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

NO CUST. SEAL M.M

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	John Moss	10/27/09 14:50	2	10-27-09 1450		
2					1630	2
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [ ]	Cooler Temp: 2.8c

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31399 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/27/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

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JA31399: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

TRC

Job No: JA31399

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31399-1	Collected: 27-OCT-09 08:00 By: JDM		Received: 27-OCT-09		By: MPC	
SS-11 (1-3')						
JA31399-1	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-1	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-1	EPA 314 M	13-NOV-09 21:54	MS	11-NOV-09	RI	PERCHLT
JA31399-2	Collected: 27-OCT-09 08:05 By: JDM		Received: 27-OCT-09		By: MPC	
SS-11 (5-7')						
JA31399-2	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-2	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-2	EPA 314 M	13-NOV-09 22:12	MS	11-NOV-09	RI	PERCHLT
JA31399-3	Collected: 27-OCT-09 08:30 By: JDM		Received: 27-OCT-09		By: MPC	
SS-12 (2-4')						
JA31399-3	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-3	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-3	EPA 314 M	13-NOV-09 22:29	MS	11-NOV-09	RI	PERCHLT
JA31399-4	Collected: 27-OCT-09 08:35 By: JDM		Received: 27-OCT-09		By: MPC	
SS-12 (5-7')						
JA31399-4	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-4	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-4	EPA 314 M	13-NOV-09 22:46	MS	11-NOV-09	RI	PERCHLT
JA31399-5	Collected: 27-OCT-09 09:50 By: JDM		Received: 27-OCT-09		By: MPC	
SS-13 (1-3')						
JA31399-5	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-5	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-5	EPA 314 M	16-NOV-09 15:51	MS	13-NOV-09	MS	PERCHLT
JA31399-6	Collected: 27-OCT-09 10:00 By: JDM		Received: 27-OCT-09		By: MPC	
SS-13 (5-7')						
JA31399-6	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-6	SM19 2510B M	13-NOV-09	BD			SCON

Internal Sample Tracking Chronicle

TRC

Job No: JA31399

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31399-6	EPA 314 M	13-NOV-09 23:21	MS	11-NOV-09	RI	PERCHLT
JA31399-7	Collected: 27-OCT-09 10:50 By: JDM		Received: 27-OCT-09 By: MPC			
SS-14 (1-3')						
JA31399-7	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-7	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-7	EPA 314 M	13-NOV-09 23:39	MS	11-NOV-09	RI	PERCHLT
JA31399-8	Collected: 27-OCT-09 10:55 By: JDM		Received: 27-OCT-09 By: MPC			
SS-14 (6-8')						
JA31399-8	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-8	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-8	EPA 314 M	14-NOV-09 00:13	MS	11-NOV-09	RI	PERCHLT
JA31399-9	Collected: 27-OCT-09 11:30 By: JDM		Received: 27-OCT-09 By: MPC			
SS-15 (2-4')						
JA31399-9	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-9	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-9	EPA 314 M	14-NOV-09 00:31	MS	11-NOV-09	RI	PERCHLT
JA31399-10	Collected: 27-OCT-09 11:40 By: JDM		Received: 27-OCT-09 By: MPC			
SS-15 (4-6')						
JA31399-10	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-10	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-10	EPA 314 M	16-NOV-09 16:08	MS	13-NOV-09	MS	PERCHLT
JA31399-11	Collected: 27-OCT-09 11:50 By: JDM		Received: 27-OCT-09 By: MPC			
SS-16 (1-3')						
JA31399-11	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-11	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-11	EPA 314 M	14-NOV-09 01:06	MS	11-NOV-09	RI	PERCHLT
JA31399-12	Collected: 27-OCT-09 11:55 By: JDM		Received: 27-OCT-09 By: MPC			
SS-16 (6-8')						

Internal Sample Tracking Chronicle

TRC

Job No: JA31399

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31399-12	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-12	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-12	EPA 314 M	14-NOV-09 01:23	MS	11-NOV-09	RI	PERCHLT
JA31399-13	Collected: 27-OCT-09 12:10 By: JDM		Received: 27-OCT-09 By: MPC			
SS-17 (1-3')						
JA31399-13	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-13	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-13	EPA 314 M	14-NOV-09 01:40	MS	11-NOV-09	RI	PERCHLT
JA31399-14	Collected: 27-OCT-09 12:15 By: JDM		Received: 27-OCT-09 By: MPC			
SS-17 (5-7')						
JA31399-14	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-14	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-14	EPA 314 M	14-NOV-09 01:58	MS	11-NOV-09	RI	PERCHLT
JA31399-15	Collected: 27-OCT-09 12:30 By: JDM		Received: 27-OCT-09 By: MPC			
SS-18 (1-3')						
JA31399-15	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-15	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-15	EPA 314 M	14-NOV-09 02:15	MS	11-NOV-09	RI	PERCHLT
JA31399-16	Collected: 27-OCT-09 12:35 By: JDM		Received: 27-OCT-09 By: MPC			
SS-18 (6-8')						
JA31399-16	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-16	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-16	EPA 314 M	16-NOV-09 16:26	MS	13-NOV-09	MS	PERCHLT
JA31399-17	Collected: 27-OCT-09 13:05 By: JDM		Received: 27-OCT-09 By: MPC			
SS-19 (1-3')						
JA31399-17	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-17	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-17	EPA 314 M	14-NOV-09 02:50	MS	11-NOV-09	RI	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA31399

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31399-18	Collected: 27-OCT-09 13:10 By: JDM SS-19 (6-8')		Received: 27-OCT-09	By: MPC		
JA31399-18	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-18	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-18	EPA 314 M	14-NOV-09 03:25	MS	11-NOV-09	RI	PERCHLT
JA31399-19	Collected: 27-OCT-09 13:20 By: JDM SS-20 (1-3')		Received: 27-OCT-09	By: MPC		
JA31399-19	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-19	SM19 2510B M	13-NOV-09	BD			SCON
JA31399-19	EPA 314 M	14-NOV-09 03:42	MS	11-NOV-09	RI	PERCHLT
JA31399-20	Collected: 27-OCT-09 13:25 By: JDM SS-20 (4-6')		Received: 27-OCT-09	By: MPC		
JA31399-20	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-20	SM19 2510B M	16-NOV-09	RI			SCON
JA31399-20	EPA 314 M	16-NOV-09 18:25	MS	13-NOV-09	SN	PERCHLT
JA31399-21	Collected: 27-OCT-09 08:40 By: JDM SS-32 (5-7')		Received: 27-OCT-09	By: MPC		
JA31399-21	SM18 2540G	10-NOV-09	RI			%SOL
JA31399-21	SM19 2510B M	16-NOV-09	RI			SCON
JA31399-21	EPA 314 M	16-NOV-09 18:43	MS	13-NOV-09	SN	PERCHLT
JA31399-22	Collected: 27-OCT-09 11:05 By: JDM FB102709(1)		Received: 27-OCT-09	By: MPC		
JA31399-22	SM19 2510B/SW 9050A	09-NOV-09	RI			SCON
JA31399-22	EPA 314	13-NOV-09 15:14	MS	13-NOV-09	MS	PERCHLT
JA31399-23	Collected: 27-OCT-09 12:50 By: JDM FB102709(2)		Received: 27-OCT-09	By: MPC		
JA31399-23	SM19 2510B/SW 9050A	09-NOV-09	RI			SCON
JA31399-23	EPA 314	13-NOV-09 15:31	MS	13-NOV-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/27/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31399-1.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-1.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-1.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-1.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-1.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-1.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-1.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-2.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-2.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-2.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-2.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-2.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-2.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-2.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-3.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-3.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-3.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-3.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-3.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-3.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-3.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-4.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-4.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-4.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-4.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-4.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-4.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-4.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-5.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-5.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-5.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-5.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-5.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-5.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-5.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-6.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-6.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-6.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-6.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/27/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31399-6.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-6.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-6.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-7.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-7.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-7.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-7.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-7.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-7.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-7.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-8.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-8.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-8.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-8.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-8.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-8.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-8.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-9.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-9.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-9.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-9.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-9.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-9.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-9.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-10.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-10.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-10.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-10.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-10.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-10.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-10.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-11.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-11.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-11.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-11.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-11.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-11.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-11.1	Dave Hunkele		12/15/09 07:01	Disposed

Accutest Internal Chain of Custody

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/27/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31399-12.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-12.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-12.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-12.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-12.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-12.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-12.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-13.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-13.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-13.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-13.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-13.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-13.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-13.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-14.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-14.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-14.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-14.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-14.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-14.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-14.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-15.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-15.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-15.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-15.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-15.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-15.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-15.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-16.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-16.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-16.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-16.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-16.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-16.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-16.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-17.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-17.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-17.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-17.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/27/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31399-17.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-17.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-17.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-18.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-18.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-18.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-18.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-18.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-18.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-18.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-19.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-19.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-19.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-19.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-19.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-19.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-19.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-20.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-20.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-20.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-20.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-20.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-20.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-20.1	Secured Storage	Michael Grieco	11/13/09 11:33	Retrieve from Storage
JA31399-20.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31399-20.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-21.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31399-21.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31399-21.1	Secured Storage	John Thomas	11/10/09 15:10	Retrieve from Storage
JA31399-21.1	John Thomas	Rie Iwasaki	11/10/09 15:12	Custody Transfer
JA31399-21.1	Rie Iwasaki	Secured Storage	11/10/09 17:14	Return to Storage
JA31399-21.1	Secured Storage	Adam Scott	11/11/09 08:55	Retrieve from Storage
JA31399-21.1	Adam Scott	Rie Iwasaki	11/11/09 08:57	Custody Transfer
JA31399-21.1	Rie Iwasaki	Secured Storage	11/11/09 16:52	Return to Storage
JA31399-21.1	Secured Storage	Michael Grieco	11/13/09 11:33	Retrieve from Storage
JA31399-21.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31399-21.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-22.1	Secured Storage	Rie Iwasaki	11/09/09 09:15	Retrieve from Storage
JA31399-22.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/27/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31399-22.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31399-22.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31399-22.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31399-22.1	Secured Storage	Todd Shoemaker	11/12/09 09:15	Retrieve from Storage
JA31399-22.1	Todd Shoemaker	Melissa Smith	11/12/09 09:16	Custody Transfer
JA31399-22.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31399-22.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31399-22.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31399-22.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31399-22.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31399-23.1	Secured Storage	Adam Scott	11/09/09 11:22	Retrieve from Storage
JA31399-23.1	Adam Scott	Rie Iwasaki	11/09/09 11:27	Custody Transfer
JA31399-23.1	Rie Iwasaki	Secured Storage	11/09/09 17:26	Return to Storage
JA31399-23.1	Secured Storage	Adam Scott	11/11/09 09:03	Retrieve from Storage
JA31399-23.1	Adam Scott	Melissa Smith	11/11/09 09:04	Custody Transfer
JA31399-23.1	Melissa Smith	Secured Storage	11/11/09 16:02	Return to Storage
JA31399-23.1	Secured Storage	Todd Shoemaker	11/12/09 09:15	Retrieve from Storage
JA31399-23.1	Todd Shoemaker	Melissa Smith	11/12/09 09:16	Custody Transfer
JA31399-23.1	Melissa Smith	Secured Storage	11/12/09 16:20	Return to Storage
JA31399-23.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31399-23.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31399-23.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31399-23.1	Dave Hunkele		12/15/09 07:01	Disposed

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: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51526/GN32290	9.1	0.0	ug/kg	75.8	79.3	104.7	75-125%
Perchlorate	GP51564/GN32348	9.1	0.0	ug/kg	75.8	73.3	96.8	75-125%
Perchlorate	GP51565/GN32290	3.0	0.0	ug/l	25	24.7	98.8	85-115%

Associated Samples:
Batch GP51526: JA31399-1, JA31399-10, JA31399-11, JA31399-12, JA31399-13, JA31399-14, JA31399-15, JA31399-16, JA31399-17, JA31399-18, JA31399-19, JA31399-2, JA31399-3, JA31399-4, JA31399-5, JA31399-6, JA31399-7, JA31399-8, JA31399-9
Batch GP51564: JA31399-20, JA31399-21
Batch GP51565: JA31399-22, JA31399-23
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51526/GN32290	JA31399-1	ug/kg	1.8 U	0.0	0.0	0-30%
Perchlorate	GP51564/GN32348	JA31399-20	ug/kg	1.8 U	0.0	0.0	0-30%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	2.0	10.5	0-15%
Specific Conductivity	GN32130	JA31394-1	umhos/cm	11900	11900	0.0	0-10%
Specific Conductivity	GN32280	JA31399-1	umhos/cm	40.5	37.7	7.2	0-15%
Specific Conductivity	GN32349	JA31399-20	umhos/cm	266	254	4.6	0-10%

Associated Samples:
Batch GN32130: JA31399-22, JA31399-23
Batch GN32280: JA31399-1, JA31399-10, JA31399-11, JA31399-12, JA31399-13, JA31399-14, JA31399-15, JA31399-16, JA31399-17, JA31399-18, JA31399-19, JA31399-2, JA31399-3, JA31399-4, JA31399-5, JA31399-6, JA31399-7, JA31399-8, JA31399-9
Batch GN32349: JA31399-20, JA31399-21
Batch GP51526: JA31399-1, JA31399-10, JA31399-11, JA31399-12, JA31399-13, JA31399-14, JA31399-15, JA31399-16, JA31399-17, JA31399-18, JA31399-19, JA31399-2, JA31399-3, JA31399-4, JA31399-5, JA31399-6, JA31399-7, JA31399-8, JA31399-9
Batch GP51564: JA31399-20, JA31399-21
Batch GP51565: JA31399-22, JA31399-23
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51526/GN32348	JA31399-1	ug/kg	1.8 U	82.1	86.3	105.1	70-130%
Perchlorate	GP51564/GN32429	JA31399-20	ug/kg	1.8 U	83.9	86.2	102.8	70-130%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	25	26.2	97.6	80-120%

Associated Samples:
Batch GP51526: JA31399-1, JA31399-10, JA31399-11, JA31399-12, JA31399-13, JA31399-14, JA31399-15, JA31399-16, JA31399-17, JA31399-18, JA31399-19, JA31399-2, JA31399-3, JA31399-4, JA31399-5, JA31399-6, JA31399-7, JA31399-8, JA31399-9
Batch GP51564: JA31399-20, JA31399-21
Batch GP51565: JA31399-22, JA31399-23
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:06	GN32290-STD1	1		STDA
10:23	GN32290-STD2	1		STDB
10:41	GN32290-STD3	1		STDC
11:34	GN32290-STD4	1		STDD
11:51	GN32290-STD5	1		STDE
12:09	GN32290-STD6	1		STDF
10:01	GN32290-IPC1	1		scon=4290
10:18	GN32290-ICV1	1		
10:35	GP51509-MB3	1		
10:35	GP51549-MB2	1		Sample shown for QC tracking purposes only.
10:35	GP51565-MB1	1		Sample shown for QC tracking purposes only.
10:53	GN32290-CRI1	1		
11:10	GP51509-B3	1		
11:10	GP51549-B2	1		Sample shown for QC tracking purposes only.
11:10	GP51565-B1	1		Sample shown for QC tracking purposes only.
11:28	GN32290-CCV1	1		
11:45	GP51509-ICV2	1		
12:02	ZZZZZZ	1		
12:20	ZZZZZZ	1		
12:37	ZZZZZZ	150		
12:55	ZZZZZZ	1		
13:12	GN32290-CCVA1	1		
13:30	ZZZZZZ	1		
13:47	ZZZZZZ	1		
14:04	ZZZZZZ	1		
14:22	ZZZZZZ	1		
14:39	ZZZZZZ	1		
14:57	ZZZZZZ	1		
15:14	JA31399-22	1		
15:31	JA31399-23	1		
15:49	GN32290-CCV2	1		
16:06	ZZZZZZ	1		
16:24	GP51565-S1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:41	GP51565-D1	1		
16:58	JA31506-2	1		(sample used for QC only; not part of login JA31399)
17:16	ZZZZZZ	1		
17:33	ZZZZZZ	1		
17:51	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:25	ZZZZZZ	1		
18:43	ZZZZZZ	1		
19:00	GN32290-CCVA2	1		fails high
19:18	GN32290-CCV3	1		
19:35	GN32290-IPC2	1		
19:52	GP51526-MB1	1		
20:10	GN32290-CRI2	1		
20:27	GP51526-B1	1		
20:45	GN32290-CCVA3	1		
21:02	ZZZZZZ	1		
21:19	GP51526-S1	1		rerun for confirmation
21:37	GP51526-D1	1		
21:54	JA31399-1	1		
22:12	JA31399-2	1		
22:29	JA31399-3	1		
22:46	JA31399-4	1		
23:04	JA31399-5	1		rerun for confirmation
23:21	JA31399-6	1		
23:39	JA31399-7	1		
23:56	GN32290-CCV4	1		
00:13	JA31399-8	1		
00:31	JA31399-9	1		
00:48	JA31399-10	1		rerun for confirmation
01:06	JA31399-11	1		
01:23	JA31399-12	1		
01:40	JA31399-13	1		
01:58	JA31399-14	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32290
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:15	JA31399-15	1		
02:33	JA31399-16	1		rerun for confirmation
02:50	JA31399-17	1		
03:08	GN32290-CCVA4	1		
03:25	JA31399-18	1		
03:42	JA31399-19	1		
04:00	GN32290-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111301.TXT Date Analyzed: 11/13/09 Methods: EPA 314, EPA 314 M
Run ID: GN32290 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32290-IPC1	Perchlorate	25.4	3.0	0.92	25	101.6	80-120
GN32290-ICV1	Perchlorate	27.0	3.0	0.92	25	108.0	90-110
GN32290-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32290-CCV1	Perchlorate	24.6	3.0	0.92	25	98.4	85-115
GN32290-CCVA1	Perchlorate	54.0	3.0	0.92	50	108.0	
GN32290-CCV2	Perchlorate	24.4	3.0	0.92	25	97.6	85-115
GN32290-CCVA2	Perchlorate	58.8	3.0	0.92	50	117.6!(a)	
GN32290-CCV3	Perchlorate	28.0	3.0	0.92	25	112.0	85-115
GN32290-IPC2	Perchlorate	26.5	3.0	0.92	25	106.0	80-120
GN32290-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32290-CCVA3	Perchlorate	49.9	3.0	0.92	50	99.8	
GN32290-CCV4	Perchlorate	26.9	3.0	0.92	25	107.6	85-115
GN32290-CCVA4	Perchlorate	54.6	3.0	0.92	50	109.2	
GN32290-CCV5	Perchlorate	27.6	3.0	0.92	25	110.4	85-115

(!) Outside of QC limits
(a) No samples reported for this test in the area associated with this QC.

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:44	GN32348-STD1	1		STDA
10:19	GN32348-STD2	1		STDB
10:53	GN32348-STD3	1		STDD
11:11	GN32348-STD4	1		STDC
12:22	GN32348-STD5	1		STDE
12:39	GN32348-STD6	1		STDF
12:57	GN32348-IPC1	1		scon=4160
13:14	GN32348-ICV1	1		
13:32	GP51576-MB1	1		
13:49	GN32348-CRI1	1		
14:06	GP51576-B1	1		
14:24	GN32348-CCV1	1		
14:41	GP51565-ICV1	1		
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	GP51526-S1	1		tailing peak; see rerun
15:51	JA31399-5	1		
16:08	JA31399-10	1		
16:26	JA31399-16	1		
16:43	GP51564-MB1	1		
17:01	GP51564-B1	1		
17:18	GP51564-S1	1		did not inject (power failure)
17:50	GN32348-CCVA1	1		
18:08	GP51564-D1	1		
18:25	JA31399-20	1		
18:43	JA31399-21	1		
19:00	GP51565-MB2	1		
19:00	GP51595-MB1	1		Sample shown for QC tracking purposes only.
19:17	GP51565-B2	1		
19:17	GP51595-B1	1		Sample shown for QC tracking purposes only.
19:35	ZZZZZZ	1		
19:52	GP51565-S1	1		
20:10	GP51565-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:27	JA31506-2	1		(sample used for QC only; not part of login JA31399)
20:44	ZZZZZZ	1		
21:02	GN32348-CCV2	1		
21:19	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:54	ZZZZZZ	1		
22:11	ZZZZZZ	1		
22:29	ZZZZZZ	1		
22:46	ZZZZZZ	1		
23:04	GP51526-S1	1		
23:21	GN32348-CCVA2	1		
23:38	GN32348-CCV3	1		
23:56	GN32348-IPC2	1		
00:13	ZZZZZZ	1		
00:31	GN32348-CRI2	1		
00:48	ZZZZZZ	1		
01:05	GN32348-CCVA3	1		
01:23	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:15	ZZZZZZ	1		
02:32	ZZZZZZ	1		
02:50	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:42	ZZZZZZ	1		
03:59	ZZZZZZ	1		
04:17	GN32348-CCV4	1		
04:34	ZZZZZZ	1		
04:52	ZZZZZZ	1		
05:09	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:44	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:01	GP51576-S1	1		
06:19	GP51576-D1	1		
06:36	JA31582-4	1		(sample used for QC only; not part of login JA31399)
06:54	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:28	GN32348-CCVA4	1		
07:46	ZZZZZZ	1		
08:03	ZZZZZZ	1		
08:21	GN32348-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Run ID: GN32348 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32348-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN32348-ICV1	Perchlorate	25.9	3.0	0.92	25	103.6	90-110
GN32348-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32348-CCV1	Perchlorate	24.1	3.0	0.92	25	96.4	85-115
GN32348-CCVA1	Perchlorate	55.3	3.0	0.92	50	110.6	
GN32348-CCV2	Perchlorate	26.8	3.0	0.92	25	107.2	85-115
GN32348-CCVA2	Perchlorate	56.6	3.0	0.92	50	113.2	
GN32348-CCV3	Perchlorate	26.7	3.0	0.92	25	106.8	85-115
GN32348-IPC2	Perchlorate	27.4	3.0	0.92	25	109.6	80-120
GN32348-CRI2	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32348-CCVA3	Perchlorate	55.0	3.0	0.92	50	110.0	
GN32348-CCV4	Perchlorate	26.6	3.0	0.92	25	106.4	85-115
GN32348-CCVA4	Perchlorate	57.2	3.0	0.92	50	114.4	
GN32348-CCV5	Perchlorate	28.0	3.0	0.92	25	112.0	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:50	GN32429-STD1	1		STDA
15:08	GN32429-STD2	1		STDB
15:25	GN32429-STD3	1		STDC
15:43	GN32429-STD4	1		STDD
16:00	GN32429-STD5	1		STDE
16:18	GN32429-STD6	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
16:35	GN32429-IPC1	1		scon=4160
16:52	GN32429-ICV1	1		
17:10	GP51632-MB1	1		
17:10	GP51565-MB3	1		Sample shown for QC tracking purposes only.
17:27	GN32429-CRI1	1		
17:45	GP51632-B1	1		
17:45	GP51565-B3	1		Sample shown for QC tracking purposes only.
18:02	GN32429-CCV1	1		
18:19	GP51565-ICV2	1		
18:37	GP51632-S1	1		Spike recovery indicates possible matrix interference.
18:54	GP51632-D1	1		
19:12	JA33124-3	1		(sample used for QC only; not part of login JA31399)
19:29	ZZZZZZ	1		
19:46	ZZZZZZ	200		
20:04	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:39	ZZZZZZ	1		
20:56	GN32429-CCVA1	1		
21:13	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:48	ZZZZZZ	10		
22:06	GP51564-S1	1		
22:23	ZZZZZZ	1		
22:40	ZZZZZZ	1		
22:58	ZZZZZZ	1		
23:15	ZZZZZZ	1		
23:33	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:50	ZZZZZZ	1		
00:07	GN32429-CCV2	1		
00:25	GN32429-CCVA2	1		
00:42	GN32429-IPC2	1		
01:00	GP51615-MB1	1		
01:17	GN32429-CRI2	1		manually integrated; rerun all samples between 1 ppb and 25 ppb
01:34	GP51615-B1	1		
01:52	GN32429-CCV3	1		
02:09	GP51615-S1	1		
02:27	GP51615-D1	1		
02:44	JA31582-3	1		(sample used for QC only; not part of login JA31399)
03:01	ZZZZZZ	1		
03:19	ZZZZZZ	1		
03:36	ZZZZZZ	1		
03:54	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:28	ZZZZZZ	1		
04:46	ZZZZZZ	1		
05:03	GN32429-CCVA3	1		
05:21	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:55	ZZZZZZ	1		
06:13	ZZZZZZ	1		
06:30	ZZZZZZ	1		
06:48	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:23	GN32429-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31399
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Run ID: GN32429 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32429-IPC1	Perchlorate	23.2	3.0	0.92	25	92.8	80-120
GN32429-ICV1	Perchlorate	24.8	3.0	0.92	25	99.2	90-110
GN32429-CRI1	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32429-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32429-CCVA1	Perchlorate	50.9	3.0	0.92	50	101.8	
GN32429-CCV2	Perchlorate	25.0	3.0	0.92	25	100.0	85-115
GN32429-CCVA2	Perchlorate	45.4	3.0	0.92	50	90.8	
GN32429-IPC2	Perchlorate	22.1	3.0	0.92	25	88.4	80-120
GN32429-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32429-CCV3	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN32429-CCVA3	Perchlorate	45.0	3.0	0.92	50	90.0	
GN32429-CCV4	Perchlorate	25.2	3.0	0.92	25	100.8	85-115

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31399-1	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-11 (1-3')			
Wet Weight (Total)	37.56	g	
Tare Weight	29.41	g	
Dry Weight (Total)	36.82	g	
Solids, Percent	90.9	%	
Sample: JA31399-2	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-11 (5-7')			
Wet Weight (Total)	35.49	g	
Tare Weight	27.62	g	
Dry Weight (Total)	34.7	g	
Solids, Percent	90	%	
Sample: JA31399-3	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-12 (2-4')			
Wet Weight (Total)	35.18	g	
Tare Weight	27.04	g	
Dry Weight (Total)	34.52	g	
Solids, Percent	91.9	%	
Sample: JA31399-4	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-12 (5-7')			
Wet Weight (Total)	37.9	g	
Tare Weight	28.65	g	
Dry Weight (Total)	37.35	g	
Solids, Percent	94.1	%	
Sample: JA31399-5	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-13 (1-3')			
Wet Weight (Total)	36.05	g	
Tare Weight	26.48	g	
Dry Weight (Total)	35.21	g	
Solids, Percent	91.2	%	
Sample: JA31399-6	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-13 (5-7')			
Wet Weight (Total)	33.3	g	
Tare Weight	23.85	g	
Dry Weight (Total)	32.35	g	
Solids, Percent	89.9	%	

Percent Solids Raw Data Summary

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31399-7	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-14 (1-3')			
Wet Weight (Total)	32.61	g	
Tare Weight	25.21	g	
Dry Weight (Total)	32.12	g	
Solids, Percent	93.4	%	

Sample: JA31399-8	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-14 (6-8')			
Wet Weight (Total)	28.26	g	
Tare Weight	20.6	g	
Dry Weight (Total)	27.69	g	
Solids, Percent	92.6	%	

Sample: JA31399-9	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-15 (2-4')			
Wet Weight (Total)	30.63	g	
Tare Weight	22.66	g	
Dry Weight (Total)	30.13	g	
Solids, Percent	93.7	%	

Sample: JA31399-10	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-15 (4-6')			
Wet Weight (Total)	32.44	g	
Tare Weight	26.91	g	
Dry Weight (Total)	31.9	g	
Solids, Percent	90.2	%	

Sample: JA31399-11	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-16 (1-3')			
Wet Weight (Total)	35	g	
Tare Weight	27.36	g	
Dry Weight (Total)	34.56	g	
Solids, Percent	94.2	%	

Sample: JA31399-12	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-16 (6-8')			
Wet Weight (Total)	26.41	g	
Tare Weight	19.84	g	
Dry Weight (Total)	25.83	g	
Solids, Percent	91.2	%	

Percent Solids Raw Data Summary

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31399-13	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-17 (1-3')			
Wet Weight (Total)	28.13	g	
Tare Weight	20.68	g	
Dry Weight (Total)	27.65	g	
Solids, Percent	93.6	%	

Sample: JA31399-14	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-17 (5-7')			
Wet Weight (Total)	33.46	g	
Tare Weight	27.05	g	
Dry Weight (Total)	32.93	g	
Solids, Percent	91.7	%	

Sample: JA31399-15	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-18 (1-3')			
Wet Weight (Total)	33.77	g	
Tare Weight	25.73	g	
Dry Weight (Total)	32.9	g	
Solids, Percent	89.2	%	

Sample: JA31399-16	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-18 (6-8')			
Wet Weight (Total)	26.75	g	
Tare Weight	19.25	g	
Dry Weight (Total)	26.43	g	
Solids, Percent	95.7	%	

Sample: JA31399-17	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-19 (1-3')			
Wet Weight (Total)	28.76	g	
Tare Weight	22.42	g	
Dry Weight (Total)	28.26	g	
Solids, Percent	92.1	%	

Sample: JA31399-18	**Analyzed:** 10-NOV-09 by RI		**Method:** SM18 2540G
ClientID: SS-19 (6-8')			
Wet Weight (Total)	30.64	g	
Tare Weight	21.86	g	
Dry Weight (Total)	30.15	g	
Solids, Percent	94.4	%	

Percent Solids Raw Data Summary

Job Number: JA31399
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31399-19 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-20 (1-3')

Wet Weight (Total)	34.86	g
Tare Weight	26.15	g
Dry Weight (Total)	34.25	g
Solids, Percent	93	%

Sample: JA31399-20 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-20 (4-6')

Wet Weight (Total)	31.3	g
Tare Weight	22.71	g
Dry Weight (Total)	30.46	g
Solids, Percent	90.2	%

Sample: JA31399-21 **Analyzed:** 10-NOV-09 by RI **Method:** SM18 2540G
ClientID: SS-32 (5-7')

Wet Weight (Total)	36.15	g
Tare Weight	27.6	g
Dry Weight (Total)	35.66	g
Solids, Percent	94.3	%

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.000030.000000

Accutest Job Number: JA31503

Sampling Date: 10/28/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **38**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 732-329-0200

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Sample Summary

TRC

Job No: JA31503

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31503-1	10/28/09	08:40	JDM	10/28/09	SO	Soil	SS-21 (1-3')
JA31503-2	10/28/09	08:45	JDM	10/28/09	SO	Soil	SS-21 (5-7')
JA31503-3	10/28/09	09:30	JDM	10/28/09	SO	Soil	SS-22 (1-3')
JA31503-4	10/28/09	09:40	JDM	10/28/09	SO	Soil	SS-22 (6-8')
JA31503-5	10/28/09	09:50	JDM	10/28/09	SO	Soil	SS-23 (2-4')
JA31503-6	10/28/09	10:00	JDM	10/28/09	SO	Soil	SS-23 (6-8')
JA31503-7	10/28/09	10:15	JDM	10/28/09	SO	Soil	SS-24 (1-3')
JA31503-8	10/28/09	10:25	JDM	10/28/09	SO	Soil	SS-24 (4-6')
JA31503-9	10/28/09	09:55	JDM	10/28/09	SO	Soil	SS-33 (2-4')
JA31503-10	10/28/09	08:00	JDM	10/28/09	AQ	Field Blank Soil	FB102809

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA31503

Site: SMC Perchlorate On-Site Investigation, Newfield, NJ **Report Date** 11/23/2009 3:13:16 P

On 10/28/2009, 9 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.7 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31503 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 EPA 314

Matrix: AQ **Batch ID:** GP51565

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31506-2DUP, JA31506-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method EPA 314 M

Matrix: SO **Batch ID:** GP51564

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31399-20DUP, JA31399-20MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM18 2540G

Matrix: SO **Batch ID:** GN32193

- The data for SM18 2540G meets quality control requirements.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN32349

- Sample(s) JA31399-20DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SS-21 (1-3')		
Lab Sample ID:	JA31503-1	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	93.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	11.0	9.7	1.8	ug/kg	1	11/17/09 01:23	MS	EPA 314 M
Solids, Percent	93.6			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	319	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-21 (5-7')		
Lab Sample ID:	JA31503-2	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	94.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.7	9.6	1.8	ug/kg	1	11/18/09 22:23	MS	EPA 314 M
Solids, Percent	94.9			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	380	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-22 (1-3')		
Lab Sample ID:	JA31503-3	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	92.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.8	1.8	ug/kg	1	11/18/09 22:40	MS	EPA 314 M
Solids, Percent	92.5			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	373	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-22 (6-8')		
Lab Sample ID:	JA31503-4	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	95.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	12.0	9.5	1.7	ug/kg	1	11/19/09 12:23	MS	EPA 314 M
Solids, Percent	95.4			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	401	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-23 (2-4')		
Lab Sample ID:	JA31503-5	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	87.8
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.9 U	10	1.9	ug/kg	1	11/18/09 23:15	MS	EPA 314 M
Solids, Percent	87.8			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	217	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-23 (6-8')		
Lab Sample ID:	JA31503-6	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	93.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 U	9.7	1.8	ug/kg	1	11/17/09 02:50	MS	EPA 314 M
Solids, Percent	93.5			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	281	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-24 (1-3')		
Lab Sample ID:	JA31503-7	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	89.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	26.5	10	1.9	ug/kg	1	11/17/09 03:07	MS	EPA 314 M
Solids, Percent	89.6			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	348	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-24 (4-6')		
Lab Sample ID:	JA31503-8	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	87.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	28.8	10	1.9	ug/kg	1	11/17/09 03:25	MS	EPA 314 M
Solids, Percent	87.6			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	111	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SS-33 (2-4')		
Lab Sample ID:	JA31503-9	**Date Sampled:**	10/28/09
Matrix:	SO - Soil	**Date Received:**	10/28/09
		Percent Solids:	89.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.9 U	10	1.9	ug/kg	1	11/17/09 03:42	MS	EPA 314 M
Solids, Percent	89.4			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	36.5	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102809		
Lab Sample ID:	JA31503-10	**Date Sampled:**	10/28/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/16/09 19:35	MS	EPA 314
Specific Conductivity	9.0	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

SO
FB

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA31503

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buthien lbuthien@trcsolutions.com E-mail:
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC on-site perchlorate investigation
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.000090.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	SS-21 (1-3')		10/28/09	8:40	JOM	Soil	1					1				X	
2	SS-21 (5-7')			8:45			1					1				X	
3	SS-22 (1-3')			9:30			1					1				X	WC5,
4	SS-22 (6-8')			9:40			1					1				X	WC47
5	SS-23 (2-4')			9:50			1					1				X	
6	SS-23 (6-8')			10:00			1					1				X	
7	SS-24 (1-3')			10:15			1					1				X	
8	SS-24 (4-6')			10:25			1					1				X	
9	SS-33 (2-4')			9:55			1					1				X	
10	FB102809			8:00		W	1					1				X	

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labtrk

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCTW2
- [X] EDD Format HASITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	John Moss	10/28/09 14:55	1	10/29/09 15:00		2
3			3			4
5			5			

Custody Seals: [ ] Intact [ ] Not intact
Preserved where applicable: [ ]
On Ice: [X]
Cooler Temp: 2.7°C

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31503 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/28/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31503: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA31503

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31503-1	Collected: 28-OCT-09 08:40 By: JDM		Received: 28-OCT-09 By: MPC			
SS-21 (1-3')						
JA31503-1	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-1	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-1	EPA 314 M	17-NOV-09 01:23	MS	13-NOV-09	SN	PERCHLT
JA31503-2	Collected: 28-OCT-09 08:45 By: JDM		Received: 28-OCT-09 By: MPC			
SS-21 (5-7')						
JA31503-2	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-2	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-2	EPA 314 M	18-NOV-09 22:23	MS	13-NOV-09	SN	PERCHLT
JA31503-3	Collected: 28-OCT-09 09:30 By: JDM		Received: 28-OCT-09 By: MPC			
SS-22 (1-3')						
JA31503-3	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-3	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-3	EPA 314 M	18-NOV-09 22:40	MS	13-NOV-09	SN	PERCHLT
JA31503-4	Collected: 28-OCT-09 09:40 By: JDM		Received: 28-OCT-09 By: MPC			
SS-22 (6-8')						
JA31503-4	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-4	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-4	EPA 314 M	19-NOV-09 12:23	MS	13-NOV-09	SN	PERCHLT
JA31503-5	Collected: 28-OCT-09 09:50 By: JDM		Received: 28-OCT-09 By: MPC			
SS-23 (2-4')						
JA31503-5	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-5	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-5	EPA 314 M	18-NOV-09 23:15	MS	13-NOV-09	SN	PERCHLT
JA31503-6	Collected: 28-OCT-09 10:00 By: JDM		Received: 28-OCT-09 By: MPC			
SS-23 (6-8')						
JA31503-6	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-6	SM19 2510B M	16-NOV-09	RI			SCON

Internal Sample Tracking Chronicle

TRC

Job No: JA31503

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000030.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31503-6	EPA 314 M	17-NOV-09 02:50	MS	13-NOV-09	SN	PERCHLT
JA31503-7	Collected: 28-OCT-09 10:15 By: JDM		Received: 28-OCT-09 By: MPC			
SS-24 (1-3')						
JA31503-7	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-7	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-7	EPA 314 M	17-NOV-09 03:07	MS	13-NOV-09	SN	PERCHLT
JA31503-8	Collected: 28-OCT-09 10:25 By: JDM		Received: 28-OCT-09 By: MPC			
SS-24 (4-6')						
JA31503-8	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-8	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-8	EPA 314 M	17-NOV-09 03:25	MS	13-NOV-09	SN	PERCHLT
JA31503-9	Collected: 28-OCT-09 09:55 By: JDM		Received: 28-OCT-09 By: MPC			
SS-33 (2-4')						
JA31503-9	SM18 2540G	11-NOV-09	DD			%SOL
JA31503-9	SM19 2510B M	16-NOV-09	RI			SCON
JA31503-9	EPA 314 M	17-NOV-09 03:42	MS	13-NOV-09	SN	PERCHLT
JA31503-10	Collected: 28-OCT-09 08:00 By: JDM		Received: 28-OCT-09 By: MPC			
FB102809						
JA31503-10	SM19 2510B/SW 9050A	16-NOV-09	RI			SCON
JA31503-10	EPA 314	16-NOV-09 19:35	MS	16-NOV-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31503
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/28/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31503-1.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-1.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-1.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-1.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-1.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-1.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-1.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-2.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-2.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-2.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-2.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-2.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-2.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-2.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-3.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-3.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-3.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-3.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-3.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-3.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-3.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-4.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-4.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-4.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-4.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-4.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-4.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-4.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-5.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-5.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-5.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-5.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-5.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-5.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-5.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-6.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-6.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-6.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-6.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA31503
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/28/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31503-6.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-6.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-6.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-7.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-7.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-7.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-7.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-7.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-7.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-7.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-8.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-8.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-8.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-8.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-8.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-8.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-8.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-9.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31503-9.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31503-9.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31503-9.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-9.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-9.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31503-9.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31503-10.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31503-10.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31503-10.1	Michael Grieco	Melissa Smith	11/13/09 12:03	Custody Transfer
JA31503-10.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31503-10.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31503-10.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31503-10.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31503-10.1	Secured Storage	Rie Iwasaki	11/16/09 16:43	Retrieve from Storage
JA31503-10.1	Rie Iwasaki	Secured Storage	11/16/09 16:48	Return to Storage
JA31503-10.1	Dave Hunkele		12/15/09 07:01	Disposed

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: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51564/GN32348	9.1	0.0	ug/kg	75.8	73.3	96.8	75-125%
Perchlorate	GP51565/GN32348	3.0	0.0	ug/l	8	8.82	110.3	85-115%
Perchlorate	GP51565/GN32348			ug/l	25	28.4	113.6	85-115%

Associated Samples:
Batch GP51564: JA31503-1, JA31503-2, JA31503-3, JA31503-4, JA31503-5, JA31503-6, JA31503-7, JA31503-8, JA31503-9
Batch GP51565: JA31503-10
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51564/GN32348	JA31399-20	ug/kg	1.8 U	0.0	0.0	0-30%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	2.0	10.5	0-15%
Specific Conductivity	GN32349	JA31399-20	umhos/cm	266	254	4.6	0-10%

Associated Samples:
Batch GN32349: JA31503-1, JA31503-10, JA31503-2, JA31503-3, JA31503-4, JA31503-5, JA31503-6, JA31503-7, JA31503-8, JA31503-9
Batch GP51564: JA31503-1, JA31503-2, JA31503-3, JA31503-4, JA31503-5, JA31503-6, JA31503-7, JA31503-8, JA31503-9
Batch GP51565: JA31503-10
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51564/GN32429	JA31399-20	ug/kg	1.8 U	83.9	86.2	102.8	70-130%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	25	26.2	97.6	80-120%

Associated Samples:
Batch GP51564: JA31503-1, JA31503-2, JA31503-3, JA31503-4, JA31503-5, JA31503-6, JA31503-7, JA31503-8, JA31503-9
Batch GP51565: JA31503-10
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:44	GN32348-STD1	1		STDA
10:19	GN32348-STD2	1		STDB
10:53	GN32348-STD3	1		STDD
11:11	GN32348-STD4	1		STDC
12:22	GN32348-STD5	1		STDE
12:39	GN32348-STD6	1		STDF
12:57	GN32348-IPC1	1		scon=4160
13:14	GN32348-ICV1	1		
13:32	GP51576-MB1	1		
13:49	GN32348-CRI1	1		
14:06	GP51576-B1	1		
14:24	GN32348-CCV1	1		
14:41	GP51565-ICV1	1		
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	GP51526-S1	1		tailing peak; see rerun
15:51	ZZZZZZ	1		
16:08	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:43	GP51564-MB1	1		
17:01	GP51564-B1	1		
17:18	GP51564-S1	1		did not inject (power failure)
17:50	GN32348-CCVA1	1		
18:08	GP51564-D1	1		
18:25	JA31399-20	1		(sample used for QC only; not part of login JA31503)
18:43	ZZZZZZ	1		
19:00	GP51565-MB2	1		
19:00	GP51595-MB1	1		Sample shown for QC tracking purposes only.
19:17	GP51565-B2	1		
19:17	GP51595-B1	1		Sample shown for QC tracking purposes only.
19:35	JA31503-10	1		
19:52	GP51565-S1	1		
20:10	GP51565-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:27	JA31506-2	1		(sample used for QC only; not part of login JA31503)
20:44	ZZZZZZ	1		
21:02	GN32348-CCV2	1		
21:19	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:54	ZZZZZZ	1		
22:11	ZZZZZZ	1		
22:29	ZZZZZZ	1		
22:46	ZZZZZZ	1		
23:04	GP51526-S1	1		
23:21	GN32348-CCVA2	1		
23:38	GN32348-CCV3	1		
23:56	GN32348-IPC2	1		
00:13	ZZZZZZ	1		
00:31	GN32348-CRI2	1		
00:48	ZZZZZZ	1		
01:05	GN32348-CCVA3	1		
01:23	JA31503-1	1		
01:40	JA31503-2	1		tailing peak; rerun for confirmation
01:58	JA31503-3	1		unusual peak shape; rerun for confirmation
02:15	JA31503-4	1		unusual peak shape; rerun for confirmation
02:32	JA31503-5	1		unusual peak shape; rerun for confirmation
02:50	JA31503-6	1		
03:07	JA31503-7	1		
03:25	JA31503-8	1		
03:42	JA31503-9	1		
03:59	ZZZZZZ	1		
04:17	GN32348-CCV4	1		
04:34	ZZZZZZ	1		
04:52	ZZZZZZ	1		
05:09	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:44	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:01	GP51576-S1	1		
06:19	GP51576-D1	1		
06:36	JA31582-4	1		(sample used for QC only; not part of login JA31503)
06:54	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:28	GN32348-CCVA4	1		
07:46	ZZZZZZ	1		
08:03	ZZZZZZ	1		
08:21	GN32348-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Run ID: GN32348 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32348-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN32348-ICV1	Perchlorate	25.9	3.0	0.92	25	103.6	90-110
GN32348-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32348-CCV1	Perchlorate	24.1	3.0	0.92	25	96.4	85-115
GN32348-CCVA1	Perchlorate	55.3	3.0	0.92	50	110.6	
GN32348-CCV2	Perchlorate	26.8	3.0	0.92	25	107.2	85-115
GN32348-CCVA2	Perchlorate	56.6	3.0	0.92	50	113.2	
GN32348-CCV3	Perchlorate	26.7	3.0	0.92	25	106.8	85-115
GN32348-IPC2	Perchlorate	27.4	3.0	0.92	25	109.6	80-120
GN32348-CRI2	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32348-CCVA3	Perchlorate	55.0	3.0	0.92	50	110.0	
GN32348-CCV4	Perchlorate	26.6	3.0	0.92	25	106.4	85-115
GN32348-CCVA4	Perchlorate	57.2	3.0	0.92	50	114.4	
GN32348-CCV5	Perchlorate	28.0	3.0	0.92	25	112.0	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:50	GN32429-STD1	1		STDA
15:08	GN32429-STD2	1		STDB
15:25	GN32429-STD3	1		STDC
15:43	GN32429-STD4	1		STDD
16:00	GN32429-STD5	1		STDE
16:18	GN32429-STD6	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
16:35	GN32429-IPC1	1		scon=4160
16:52	GN32429-ICV1	1		
17:10	GP51632-MB1	1		
17:10	GP51565-MB3	1		Sample shown for QC tracking purposes only.
17:27	GN32429-CRI1	1		
17:45	GP51632-B1	1		
17:45	GP51565-B3	1		Sample shown for QC tracking purposes only.
18:02	GN32429-CCV1	1		
18:19	GP51565-ICV2	1		
18:37	GP51632-S1	1		Spike recovery indicates possible matrix interference.
18:54	GP51632-D1	1		
19:12	JA33124-3	1		(sample used for QC only; not part of login JA31503)
19:29	ZZZZZZ	1		
19:46	ZZZZZZ	200		
20:04	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:39	ZZZZZZ	1		
20:56	GN32429-CCVA1	1		
21:13	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:48	ZZZZZZ	10		
22:06	GP51564-S1	1		
22:23	JA31503-2	1		
22:40	JA31503-3	1		
22:58	JA31503-4	1		rerun for confirmation. Not matching previous analyses.
23:15	JA31503-5	1		
23:33	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:50	ZZZZZZ	1		
00:07	GN32429-CCV2	1		
00:25	GN32429-CCVA2	1		
00:42	GN32429-IPC2	1		
01:00	GP51615-MB1	1		
01:17	GN32429-CRI2	1		manually integrated; rerun all samples between 1 ppb and 25 ppb
01:34	GP51615-B1	1		
01:52	GN32429-CCV3	1		
02:09	GP51615-S1	1		
02:27	GP51615-D1	1		
02:44	JA31582-3	1		(sample used for QC only; not part of login JA31503)
03:01	ZZZZZZ	1		
03:19	ZZZZZZ	1		
03:36	ZZZZZZ	1		
03:54	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:28	ZZZZZZ	1		
04:46	ZZZZZZ	1		
05:03	GN32429-CCVA3	1		
05:21	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:55	ZZZZZZ	1		
06:13	ZZZZZZ	1		
06:30	ZZZZZZ	1		
06:48	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:23	GN32429-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Run ID: GN32429 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32429-IPC1	Perchlorate	23.2	3.0	0.92	25	92.8	80-120
GN32429-ICV1	Perchlorate	24.8	3.0	0.92	25	99.2	90-110
GN32429-CRI1	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32429-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32429-CCVA1	Perchlorate	50.9	3.0	0.92	50	101.8	
GN32429-CCV2	Perchlorate	25.0	3.0	0.92	25	100.0	85-115
GN32429-CCVA2	Perchlorate	45.4	3.0	0.92	50	90.8	
GN32429-IPC2	Perchlorate	22.1	3.0	0.92	25	88.4	80-120
GN32429-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32429-CCV3	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN32429-CCVA3	Perchlorate	45.0	3.0	0.92	50	90.0	
GN32429-CCV4	Perchlorate	25.2	3.0	0.92	25	100.8	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111901.TXT Date Analyzed: 11/19/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32461
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:50	GN32461-STD1	1		STDA
15:08	GN32461-STD2	1		STDB
15:25	GN32461-STD3	1		STDC
15:43	GN32461-STD4	1		STDD
16:00	GN32461-STD5	1		STDE
16:18	GN32461-STD6	1		STDF
09:26	GN32461-IPC1	1		scon=4160
09:44	GN32461-ICV1	1		
10:01	ZZZZZZ	1		
10:18	GN32461-CRI1	1		
10:36	ZZZZZZ	1		
10:53	GN32461-CCV1	1		
12:05	GP51615-ICV1	1		
12:23	JA31503-4	1		
12:40	GP51615-MB2	1		
12:40	GP51651-MB1	1		Sample shown for QC tracking purposes only.
12:58	GP51615-B2	1		
12:58	GP51651-B1	1		Sample shown for QC tracking purposes only.
13:15	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:50	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:42	GN32461-CCVA1	1		
15:00	ZZZZZZ	1		
15:17	ZZZZZZ	1		
15:34	ZZZZZZ	1		
15:52	ZZZZZZ	5		
16:09	ZZZZZZ	1		
16:27	ZZZZZZ	1		
16:44	GP51651-S1	1		Spike recovery indicates possible matrix interference.
17:01	GP51651-D1	1		
17:19	JA32509-13	1		(sample used for QC only; not part of login JA31503)

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111901.TXT Date Analyzed: 11/19/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32461
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:36	ZZZZZZ	1		
17:54	GN32461-CCV2	1		
18:11	ZZZZZZ	1		
18:28	ZZZZZZ	1		
18:46	ZZZZZZ	1		
19:03	ZZZZZZ	1		
19:21	ZZZZZZ	1		
19:38	GN32461-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31503
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111901.TXT Date Analyzed: 11/19/09 Methods: EPA 314, EPA 314 M
Run ID: GN32461 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32461-IPC1	Perchlorate	21.2	3.0	0.92	25	84.8	80-120
GN32461-ICV1	Perchlorate	26.1	3.0	0.92	25	104.4	90-110
GN32461-CRI1	Perchlorate	2.5	3.0	0.92	3	83.3	75-125
GN32461-CCV1	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN32461-CCVA1	Perchlorate	48.5	3.0	0.92	50	97.0	
GN32461-CCV2	Perchlorate	24.0	3.0	0.92	25	96.0	85-115
GN32461-CCVA2	Perchlorate	47.0	3.0	0.92	50	94.0	

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JA31503
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31503-1	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-21 (1-3')			
Wet Weight (Total)	34.6	g	
Tare Weight	24.88	g	
Dry Weight (Total)	33.98	g	
Solids, Percent	93.6	%	
Sample: JA31503-2	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-21 (5-7')			
Wet Weight (Total)	34.97	g	
Tare Weight	25.42	g	
Dry Weight (Total)	34.48	g	
Solids, Percent	94.9	%	
Sample: JA31503-3	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-22 (1-3')			
Wet Weight (Total)	32.05	g	
Tare Weight	24.73	g	
Dry Weight (Total)	31.5	g	
Solids, Percent	92.5	%	
Sample: JA31503-4	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-22 (6-8')			
Wet Weight (Total)	34.44	g	
Tare Weight	25.34	g	
Dry Weight (Total)	34.02	g	
Solids, Percent	95.4	%	
Sample: JA31503-5	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-23 (2-4')			
Wet Weight (Total)	35.1	g	
Tare Weight	27.96	g	
Dry Weight (Total)	34.23	g	
Solids, Percent	87.8	%	
Sample: JA31503-6	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SS-23 (6-8')			
Wet Weight (Total)	37.46	g	
Tare Weight	29.57	g	
Dry Weight (Total)	36.95	g	
Solids, Percent	93.5	%	

Percent Solids Raw Data Summary

Job Number: JA31503
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31503-7 **Analyzed:** 11-NOV-09 by DD **Method:** SM18 2540G
ClientID: SS-24 (1-3')

Wet Weight (Total)	30.13	g
Tare Weight	21.59	g
Dry Weight (Total)	29.24	g
Solids, Percent	89.6	%

Sample: JA31503-8 **Analyzed:** 11-NOV-09 by DD **Method:** SM18 2540G
ClientID: SS-24 (4-6')

Wet Weight (Total)	37.73	g
Tare Weight	28.55	g
Dry Weight (Total)	36.59	g
Solids, Percent	87.6	%

Sample: JA31503-9 **Analyzed:** 11-NOV-09 by DD **Method:** SM18 2540G
ClientID: SS-33 (2-4')

Wet Weight (Total)	33.03	g
Tare Weight	25.77	g
Dry Weight (Total)	32.26	g
Solids, Percent	89.4	%

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000 PO#16372

Accutest Job Number: JA31506

Sampling Date: 10/28/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **40**

ACCREDITED IN ACCORDANCE WITH nelac

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

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Client Service contact: Marie Meidhof 732-329-0200

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Sample Summary

TRC

Job No: JA31506

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA31506-1	10/28/09	07:45	CC	10/28/09	AQ	Field Blank Soil	FB102809
JA31506-2	10/28/09	09:00	CC	10/28/09	AQ	Surface Water	SW-1A
JA31506-3	10/28/09	09:00	CC	10/28/09	SO	Sediment	SED-1A
JA31506-4	10/28/09	10:30	CC	10/28/09	AQ	Surface Water	SW-1
JA31506-5	10/28/09	10:30	CC	10/28/09	SO	Sediment	SED-1
JA31506-6	10/28/09	11:20	CC	10/28/09	AQ	Surface Water	SW-2
JA31506-7	10/28/09	11:20	CC	10/28/09	SO	Sediment	SED-2
JA31506-8	10/28/09	12:05	CC	10/28/09	AQ	Surface Water	SW-3
JA31506-9	10/28/09	12:05	CC	10/28/09	SO	Sediment	SED-3
JA31506-10	10/28/09	14:30	CC	10/28/09	AQ	Surface Water	SW-4
JA31506-11	10/28/09	14:30	CC	10/28/09	SO	Sediment	SED-4
JA31506-12	10/28/09	15:00	CC	10/28/09	AQ	Surface Water	SW-10
JA31506-13	10/28/09	15:00	CC	10/28/09	SO	Sediment	SED-10

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA31506
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	11/23/2009 2:48:55 P

On 10/28/2009, 12 Sample(s), 0 Trip Blank(s) and 1 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 JA31506 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 EPA 314

Matrix: AQ **Batch ID:** GP51565

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31506-2DUP, JA31506-2MS were used as the QC samples for Perchlorate.
- GP51565-ICV2 for Perchlorate: 8 ppb external source check.

Wet Chemistry By Method EPA 314 M

Matrix: SO **Batch ID:** GP51564

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31399-20DUP, JA31399-20MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM18 2540G

Matrix: SO **Batch ID:** GN32195

- The data for SM18 2540G meets quality control requirements.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN32349

- Sample(s) JA31399-20DUP were used as the QC samples for Specific Conductivity.

Matrix: AQ **Batch ID:** GN32358

- Sample(s) JA31506-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB102809		
Lab Sample ID:	JA31506-1	**Date Sampled:**	10/28/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/16/09 20:44	MS	EPA 314
Specific Conductivity	9.1	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-1A		
Lab Sample ID:	JA31506-2	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 B	3.0	0.92	ug/l	1	11/16/09 20:27	MS	EPA 314
Specific Conductivity	167	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-1A		
Lab Sample ID:	JA31506-3	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/28/09
		Percent Solids:	73.0
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.3 U	12	2.3	ug/kg	1	11/17/09 03:59	MS	EPA 314 M
Solids, Percent	73			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	34.5	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	JA31506-4	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/16/09 21:19	MS	EPA 314
Specific Conductivity	111	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-1		
Lab Sample ID:	JA31506-5	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/28/09
		Percent Solids:	51.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.2 U	18	3.2	ug/kg	1	11/17/09 04:34	MS	EPA 314 M
Solids, Percent	51.5			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	73.5	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	JA31506-6	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/18/09 23:50	MS	EPA 314
Specific Conductivity	141	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-2		
Lab Sample ID:	JA31506-7	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/28/09
		Percent Solids:	47.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.5 U	19	3.5	ug/kg	1	11/17/09 04:52	MS	EPA 314 M
Solids, Percent	47.3			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	140	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	JA31506-8	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/16/09 21:54	MS	EPA 314
Specific Conductivity	127	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-3		
Lab Sample ID:	JA31506-9	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/28/09
		Percent Solids:	71.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.3 U	13	2.3	ug/kg	1	11/18/09 23:33	MS	EPA 314 M
Solids, Percent	71.7			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	120	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	JA31506-10	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/16/09 22:11	MS	EPA 314
Specific Conductivity	127	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-4		
Lab Sample ID:	JA31506-11	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/28/09
		Percent Solids:	21.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.9 B	41	7.6	ug/kg	1	11/17/09 05:27	MS	EPA 314 M
Solids, Percent	21.9			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	181	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-10		
Lab Sample ID:	JA31506-12	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/16/09 22:29	MS	EPA 314
Specific Conductivity	128	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-10		
Lab Sample ID:	JA31506-13	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/28/09
		Percent Solids:	21.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.7 U	42	7.7	ug/kg	1	11/17/09 05:44	MS	EPA 314 M
Solids, Percent	21.5			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	174	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

FB, SED

CHAIN OF CUSTODY

PAGE 1 OF 2

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # | Bottle Order Control #

Accutest Quote # | Accutest Job # JA31506

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttlien E-mail: lbuttlien@trcsolutions.com
Phone #: 860 298-6225 Fax #: 860 298-6399
Sampler(s) Name(s): Chris Carlson / Chris Lindahl Phone #:

Project Information

Project Name: SMC Perchlorate Sed/SW Sampling
Street: 35 Old Blvd
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Buttlien

Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
-1	FB102809		10/28/09	0745	cclc	FB	1					1				
-2	SW-1A			0900		SW	1					1				WC5,
-3	SED-1A			0900		SED	1					1				WC47
-4	SW-1			1030		SW	1					1				
-5	SED-1			1030		SED	1					1				
-6	SW-2			1120		SW	1					1				
-7	SED-2			1120		SED	1					1				
-8	SW-3			1205		SW	1					1				
-9	SED-3			1205		SED	1					1				
-10	SW-4			1430		SW	1					1				
-11	SED-4		↓	1430		SED	1					1				

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format Excel
- [X] Other Excel TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1			10-28-09 1515	10-28-09	1640	2
3			3	4		4
5			5			

Custody Seal # 231 [ ] Intact [ ] Not Intact | Preserved where applicable [ ] | On Ice [X] | Cooler Temp. 3.0°C

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JA31506: Chain of Custody
Page 1 of 3

ACCUTEST Laboratories

SW SED

CHAIN OF CUSTODY

PAGE 2 OF 2

2235 Route 130, Dayton, NJ 08810
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www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA31506

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City / State / Zip: Windsor CT 06095
Project Contact / E-mail: Larry Butlien lbutlien@trcsolutions.com
Phone # / Fax #: (860) 298-6225 (860) 298 6399
Sampler(s) Name(s) / Phone #: Chris Carlson/Chris Lindahl

Project Information

Project Name: SMC Perchlorate Sed/SW Sampling
Street: 35 SW Blvd
City / State: Newfield NJ
Project #: 171441.0000.00000
Client Purchase Order #: 16372
Project Manager: Larry Butlien

Billing Information (If different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MECH	ENCORE	Perchlorate	LAB USE ONLY
12	SW-10		10/28/09	1500	CC/CL	SW	1					1				X	
13	SED-10		↓	1500	CC/CL	SED	1					1				X	

Turnaround Time (Business days)
- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format Hazsite
- [x] Other Excel TRCCTW2

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]		[signature] 10-28-09 1515	2 [signature] 10-28-09	1640	2 [signature]
3		3	4		4
5		5	Custody Seal # 231 ☐ Intact ☐ Not intact	Preserved where applicable ☐	On ice ☑ Cooler Temp. 3.0°C

4.1

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JA31506: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31506 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/28/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31506: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

TRC

Job No: JA31506

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31506-1 FB102809	Collected: 28-OCT-09 07:45 By: CC		Received: 28-OCT-09 By: MPC			
JA31506-1	SM19 2510B/SW 9050A	16-NOV-09	RI			SCON
JA31506-1	EPA 314	16-NOV-09 20:44	MS	16-NOV-09	MS	PERCHLT
JA31506-2 SW-1A	Collected: 28-OCT-09 09:00 By: CC		Received: 28-OCT-09 By: MPC			
JA31506-2	EPA 314	16-NOV-09 20:27	MS	16-NOV-09	MS	PERCHLT
JA31506-2	SM19 2510B/SW 9050A	17-NOV-09	BD			SCON
JA31506-3 SED-1A	Collected: 28-OCT-09 09:00 By: CC		Received: 28-OCT-09 By: MPC			
JA31506-3	SM18 2540G	11-NOV-09	DD			%SOL
JA31506-3	SM19 2510B M	16-NOV-09	RI			SCON
JA31506-3	EPA 314 M	17-NOV-09 03:59	MS	13-NOV-09	SN	PERCHLT
JA31506-4 SW-1	Collected: 28-OCT-09 10:30 By: CC		Received: 28-OCT-09 By: MPC			
JA31506-4	EPA 314	16-NOV-09 21:19	MS	16-NOV-09	MS	PERCHLT
JA31506-4	SM19 2510B/SW 9050A	17-NOV-09	BD			SCON
JA31506-5 SED-1	Collected: 28-OCT-09 10:30 By: CC		Received: 28-OCT-09 By: MPC			
JA31506-5	SM18 2540G	11-NOV-09	DD			%SOL
JA31506-5	SM19 2510B M	16-NOV-09	RI			SCON
JA31506-5	EPA 314 M	17-NOV-09 04:34	MS	13-NOV-09	SN	PERCHLT
JA31506-6 SW-2	Collected: 28-OCT-09 11:20 By: CC		Received: 28-OCT-09 By: MPC			
JA31506-6	SM19 2510B/SW 9050A	17-NOV-09	BD			SCON
JA31506-6	EPA 314	18-NOV-09 23:50	MS	18-NOV-09	MS	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA31506

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31506-7	Collected: 28-OCT-09 11:20 By: CC		Received: 28-OCT-09		By: MPC	
SED-2						
JA31506-7	SM18 2540G	11-NOV-09	DD			%SOL
JA31506-7	SM19 2510B M	16-NOV-09	RI			SCON
JA31506-7	EPA 314 M	17-NOV-09 04:52	MS	13-NOV-09	SN	PERCHLT
JA31506-8	Collected: 28-OCT-09 12:05 By: CC		Received: 28-OCT-09		By: MPC	
SW-3						
JA31506-8	EPA 314	16-NOV-09 21:54	MS	16-NOV-09	MS	PERCHLT
JA31506-8	SM19 2510B/SW 9050A	17-NOV-09	BD			SCON
JA31506-9	Collected: 28-OCT-09 12:05 By: CC		Received: 28-OCT-09		By: MPC	
SED-3						
JA31506-9	SM18 2540G	11-NOV-09	DD			%SOL
JA31506-9	SM19 2510B M	16-NOV-09	RI			SCON
JA31506-9	EPA 314 M	18-NOV-09 23:33	MS	13-NOV-09	SN	PERCHLT
JA31506-10	Collected: 28-OCT-09 14:30 By: CC		Received: 28-OCT-09		By: MPC	
SW-4						
JA31506-10	EPA 314	16-NOV-09 22:11	MS	16-NOV-09	MS	PERCHLT
JA31506-10	SM19 2510B/SW 9050A	17-NOV-09	BD			SCON
JA31506-11	Collected: 28-OCT-09 14:30 By: CC		Received: 28-OCT-09		By: MPC	
SED-4						
JA31506-11	SM18 2540G	11-NOV-09	DD			%SOL
JA31506-11	SM19 2510B M	16-NOV-09	RI			SCON
JA31506-11	EPA 314 M	17-NOV-09 05:27	MS	13-NOV-09	SN	PERCHLT
JA31506-12	Collected: 28-OCT-09 15:00 By: CC		Received: 28-OCT-09		By: MPC	
SW-10						
JA31506-12	EPA 314	16-NOV-09 22:29	MS	16-NOV-09	MS	PERCHLT
JA31506-12	SM19 2510B/SW 9050A	17-NOV-09	BD			SCON

Internal Sample Tracking Chronicle

TRC

Job No: JA31506

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31506-13	Collected: 28-OCT-09 15:00 By: CC		Received: 28-OCT-09 By: MPC			
SED-10						
JA31506-13	SM18 2540G	11-NOV-09	DD			%SOL
JA31506-13	SM19 2510B M	16-NOV-09	RI			SCON
JA31506-13	EPA 314 M	17-NOV-09 05:44	MS	13-NOV-09	SN	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31506
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/28/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31506-1.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-1.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-1.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-1.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-1.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-1.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-1.1	Secured Storage	Rie Iwasaki	11/16/09 16:43	Retrieve from Storage
JA31506-1.1	Rie Iwasaki	Secured Storage	11/16/09 16:48	Return to Storage
JA31506-1.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-2.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-2.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-2.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-2.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-2.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-2.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-2.1	Secured Storage	Todd Shoemaker	11/17/09 08:01	Retrieve from Storage
JA31506-2.1	Todd Shoemaker	Barbara Dula	11/17/09 08:04	Custody Transfer
JA31506-2.1	Barbara Dula	Melissa Smith	11/17/09 10:38	Custody Transfer
JA31506-2.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31506-2.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-3.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31506-3.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31506-3.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31506-3.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31506-3.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31506-3.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31506-3.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-4.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-4.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-4.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-4.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-4.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-4.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-4.1	Secured Storage	Todd Shoemaker	11/17/09 08:01	Retrieve from Storage
JA31506-4.1	Todd Shoemaker	Barbara Dula	11/17/09 08:04	Custody Transfer
JA31506-4.1	Barbara Dula	Secured Storage	11/17/09 15:05	Return to Storage
JA31506-4.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-5.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31506-5.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31506-5.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31506
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/28/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31506-5.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31506-5.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31506-5.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31506-5.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-6.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-6.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-6.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-6.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-6.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-6.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-6.1	Secured Storage	Todd Shoemaker	11/17/09 08:01	Retrieve from Storage
JA31506-6.1	Todd Shoemaker	Barbara Dula	11/17/09 08:04	Custody Transfer
JA31506-6.1	Barbara Dula	Melissa Smith	11/17/09 10:38	Custody Transfer
JA31506-6.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31506-6.1	Secured Storage	Melissa Smith	11/18/09 12:08	Retrieve from Storage
JA31506-6.1	Melissa Smith	Secured Storage	11/18/09 16:09	Return to Storage
JA31506-6.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-7.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31506-7.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31506-7.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31506-7.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31506-7.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31506-7.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31506-7.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-8.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-8.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-8.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-8.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-8.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-8.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-8.1	Secured Storage	Todd Shoemaker	11/17/09 08:01	Retrieve from Storage
JA31506-8.1	Todd Shoemaker	Barbara Dula	11/17/09 08:04	Custody Transfer
JA31506-8.1	Barbara Dula	Secured Storage	11/17/09 15:05	Return to Storage
JA31506-8.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-9.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31506-9.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31506-9.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31506-9.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31506-9.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31506-9.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31506
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/28/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31506-9.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-10.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-10.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-10.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-10.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-10.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-10.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-10.1	Secured Storage	Todd Shoemaker	11/17/09 08:01	Retrieve from Storage
JA31506-10.1	Todd Shoemaker	Barbara Dula	11/17/09 08:04	Custody Transfer
JA31506-10.1	Barbara Dula	Secured Storage	11/17/09 15:05	Return to Storage
JA31506-10.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-11.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31506-11.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31506-11.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31506-11.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31506-11.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31506-11.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31506-11.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-12.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31506-12.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31506-12.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31506-12.1	Secured Storage	Adam Scott	11/16/09 11:17	Retrieve from Storage
JA31506-12.1	Adam Scott	Melissa Smith	11/16/09 11:18	Custody Transfer
JA31506-12.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31506-12.1	Secured Storage	Todd Shoemaker	11/17/09 08:01	Retrieve from Storage
JA31506-12.1	Todd Shoemaker	Barbara Dula	11/17/09 08:04	Custody Transfer
JA31506-12.1	Barbara Dula	Secured Storage	11/17/09 15:05	Return to Storage
JA31506-12.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31506-13.1	Secured Storage	Dave Hunkele	11/11/09 12:29	Retrieve from Storage
JA31506-13.1	Dave Hunkele	Donna DiGiovanni	11/11/09 13:39	Custody Transfer
JA31506-13.1	Donna DiGiovanni	Secured Storage	11/11/09 14:10	Return to Storage
JA31506-13.1	Secured Storage	Todd Shoemaker	11/13/09 09:02	Retrieve from Storage
JA31506-13.1	Todd Shoemaker	Michael Grieco	11/13/09 09:05	Custody Transfer
JA31506-13.1	Michael Grieco	Secured Storage	11/13/09 12:47	Return to Storage
JA31506-13.1	Dave Hunkele		12/15/09 07:01	Disposed

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: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51564/GN32348	9.1	0.0	ug/kg	75.8	73.3	96.8	75-125%
Perchlorate	GP51565/GN32348	3.0	0.0	ug/l	8	8.82	110.3	85-115%
Perchlorate	GP51565/GN32348			ug/l	25	28.4	113.6	85-115%
Perchlorate	GP51565/GN32429	3.0	0.0	ug/l	25	25.0	100.0	85-115%
Perchlorate	GP51565/GN32429			ug/l	8	8.93	111.6(a)	85-115%

Associated Samples:
Batch GP51564: JA31506-11, JA31506-13, JA31506-3, JA31506-5, JA31506-7, JA31506-9
Batch GP51565: JA31506-1, JA31506-10, JA31506-12, JA31506-2, JA31506-4, JA31506-6, JA31506-8
(*) Outside of QC limits
(a) 8 ppb external source check.

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51564/GN32348	JA31399-20	ug/kg	1.8 U	0.0	0.0	0-30%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	2.0	10.5	0-15%
Specific Conductivity	GN32349	JA31399-20	umhos/cm	266	254	4.6	0-10%
Specific Conductivity	GN32358	JA31506-2	umhos/cm	167	166	0.6	0-10%

Associated Samples:
Batch GN32349: JA31506-1, JA31506-11, JA31506-13, JA31506-3, JA31506-5, JA31506-7, JA31506-9
Batch GN32358: JA31506-10, JA31506-12, JA31506-2, JA31506-4, JA31506-6, JA31506-8
Batch GP51564: JA31506-11, JA31506-13, JA31506-3, JA31506-5, JA31506-7, JA31506-9
Batch GP51565: JA31506-1, JA31506-10, JA31506-12, JA31506-2, JA31506-4, JA31506-6, JA31506-8
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51564/GN32429	JA31399-20	ug/kg	1.8 U	83.9	86.2	102.8	70-130%
Perchlorate	GP51565/GN32348	JA31506-2	ug/l	1.8 B	25	26.2	97.6	80-120%

Associated Samples:
Batch GP51564: JA31506-11, JA31506-13, JA31506-3, JA31506-5, JA31506-7, JA31506-9
Batch GP51565: JA31506-1, JA31506-10, JA31506-12, JA31506-2, JA31506-4, JA31506-6, JA31506-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:44	GN32348-STD1	1		STDA
10:19	GN32348-STD2	1		STDB
10:53	GN32348-STD3	1		STDD
11:11	GN32348-STD4	1		STDC
12:22	GN32348-STD5	1		STDE
12:39	GN32348-STD6	1		STDF
12:57	GN32348-IPC1	1		scon=4160
13:14	GN32348-ICV1	1		
13:32	GP51576-MB1	1		
13:49	GN32348-CRI1	1		
14:06	GP51576-B1	1		
14:24	GN32348-CCV1	1		
14:41	GP51565-ICV1	1		
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	GP51526-S1	1		tailing peak; see rerun
15:51	ZZZZZZ	1		
16:08	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:43	GP51564-MB1	1		
17:01	GP51564-B1	1		
17:18	GP51564-S1	1		did not inject (power failure)
17:50	GN32348-CCVA1	1		
18:08	GP51564-D1	1		
18:25	JA31399-20	1		(sample used for QC only; not part of login JA31506)
18:43	ZZZZZZ	1		
19:00	GP51565-MB2	1		
19:00	GP51595-MB1	1		Sample shown for QC tracking purposes only.
19:17	GP51565-B2	1		
19:17	GP51595-B1	1		Sample shown for QC tracking purposes only.
19:35	ZZZZZZ	1		
19:52	GP51565-S1	1		
20:10	GP51565-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:27	JA31506-2	1		
20:44	JA31506-1	1		
21:02	GN32348-CCV2	1		
21:19	JA31506-4	1		
21:37	JA31506-6	1		rerun for confirmation
21:54	JA31506-8	1		
22:11	JA31506-10	1		
22:29	JA31506-12	1		
22:46	ZZZZZZ	1		
23:04	GP51526-S1	1		
23:21	GN32348-CCVA2	1		
23:38	GN32348-CCV3	1		
23:56	GN32348-IPC2	1		
00:13	ZZZZZZ	1		
00:31	GN32348-CRI2	1		
00:48	ZZZZZZ	1		
01:05	GN32348-CCVA3	1		
01:23	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:15	ZZZZZZ	1		
02:32	ZZZZZZ	1		
02:50	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:42	ZZZZZZ	1		
03:59	JA31506-3	1		
04:17	GN32348-CCV4	1		
04:34	JA31506-5	1		
04:52	JA31506-7	1		
05:09	JA31506-9	1		unusual peak shape; rerun for confirmation
05:27	JA31506-11	1		
05:44	JA31506-13	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:01	GP51576-S1	1		
06:19	GP51576-D1	1		
06:36	JA31582-4	1		(sample used for QC only; not part of login JA31506)
06:54	ZZZZZZ	1		
07:11	ZZZZZZ	1		
07:28	GN32348-CCVA4	1		
07:46	ZZZZZZ	1		
08:03	ZZZZZZ	1		
08:21	GN32348-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Run ID: GN32348 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32348-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN32348-ICV1	Perchlorate	25.9	3.0	0.92	25	103.6	90-110
GN32348-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32348-CCV1	Perchlorate	24.1	3.0	0.92	25	96.4	85-115
GN32348-CCVA1	Perchlorate	55.3	3.0	0.92	50	110.6	
GN32348-CCV2	Perchlorate	26.8	3.0	0.92	25	107.2	85-115
GN32348-CCVA2	Perchlorate	56.6	3.0	0.92	50	113.2	
GN32348-CCV3	Perchlorate	26.7	3.0	0.92	25	106.8	85-115
GN32348-IPC2	Perchlorate	27.4	3.0	0.92	25	109.6	80-120
GN32348-CRI2	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32348-CCVA3	Perchlorate	55.0	3.0	0.92	50	110.0	
GN32348-CCV4	Perchlorate	26.6	3.0	0.92	25	106.4	85-115
GN32348-CCVA4	Perchlorate	57.2	3.0	0.92	50	114.4	
GN32348-CCV5	Perchlorate	28.0	3.0	0.92	25	112.0	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:50	GN32429-STD1	1		STDA
15:08	GN32429-STD2	1		STDB
15:25	GN32429-STD3	1		STDC
15:43	GN32429-STD4	1		STDD
16:00	GN32429-STD5	1		STDE
16:18	GN32429-STD6	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
16:35	GN32429-IPC1	1		scon=4160
16:52	GN32429-ICV1	1		
17:10	GP51632-MB1	1		
17:10	GP51565-MB3	1		Sample shown for QC tracking purposes only.
17:27	GN32429-CRI1	1		
17:45	GP51632-B1	1		
17:45	GP51565-B3	1		Sample shown for QC tracking purposes only.
18:02	GN32429-CCV1	1		
18:19	GP51565-ICV2	1		
18:37	GP51632-S1	1		Spike recovery indicates possible matrix interference.
18:54	GP51632-D1	1		
19:12	JA33124-3	1		(sample used for QC only; not part of login JA31506)
19:29	ZZZZZZ	1		
19:46	ZZZZZZ	200		
20:04	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:39	ZZZZZZ	1		
20:56	GN32429-CCVA1	1		
21:13	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:48	ZZZZZZ	10		
22:06	GP51564-S1	1		
22:23	ZZZZZZ	1		
22:40	ZZZZZZ	1		
22:58	ZZZZZZ	1		
23:15	ZZZZZZ	1		
23:33	JA31506-9	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:50	JA31506-6	1		
00:07	GN32429-CCV2	1		
00:25	GN32429-CCVA2	1		
00:42	GN32429-IPC2	1		
01:00	GP51615-MB1	1		
01:17	GN32429-CRI2	1		manually integrated; rerun all samples between 1 ppb and 25 ppb
01:34	GP51615-B1	1		
01:52	GN32429-CCV3	1		
02:09	GP51615-S1	1		
02:27	GP51615-D1	1		
02:44	JA31582-3	1		(sample used for QC only; not part of login JA31506)
03:01	ZZZZZZ	1		
03:19	ZZZZZZ	1		
03:36	ZZZZZZ	1		
03:54	ZZZZZZ	1		
04:11	ZZZZZZ	1		
04:28	ZZZZZZ	1		
04:46	ZZZZZZ	1		
05:03	GN32429-CCVA3	1		
05:21	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:55	ZZZZZZ	1		
06:13	ZZZZZZ	1		
06:30	ZZZZZZ	1		
06:48	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:23	GN32429-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31506
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Run ID: GN32429 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32429-IPC1	Perchlorate	23.2	3.0	0.92	25	92.8	80-120
GN32429-ICV1	Perchlorate	24.8	3.0	0.92	25	99.2	90-110
GN32429-CRI1	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32429-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32429-CCVA1	Perchlorate	50.9	3.0	0.92	50	101.8	
GN32429-CCV2	Perchlorate	25.0	3.0	0.92	25	100.0	85-115
GN32429-CCVA2	Perchlorate	45.4	3.0	0.92	50	90.8	
GN32429-IPC2	Perchlorate	22.1	3.0	0.92	25	88.4	80-120
GN32429-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32429-CCV3	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN32429-CCVA3	Perchlorate	45.0	3.0	0.92	50	90.0	
GN32429-CCV4	Perchlorate	25.2	3.0	0.92	25	100.8	85-115

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JA31506
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31506-3	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-1A			
Wet Weight (Total)	34.3	g	
Tare Weight	27.09	g	
Dry Weight (Total)	32.35	g	
Solids, Percent	73	%	
Sample: JA31506-5	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-1			
Wet Weight (Total)	29.9	g	
Tare Weight	23.12	g	
Dry Weight (Total)	26.61	g	
Solids, Percent	51.5	%	
Sample: JA31506-7	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-2			
Wet Weight (Total)	33	g	
Tare Weight	27.76	g	
Dry Weight (Total)	30.24	g	
Solids, Percent	47.3	%	
Sample: JA31506-9	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-3			
Wet Weight (Total)	30.91	g	
Tare Weight	24.91	g	
Dry Weight (Total)	29.21	g	
Solids, Percent	71.7	%	
Sample: JA31506-11	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-4			
Wet Weight (Total)	30.83	g	
Tare Weight	23.3	g	
Dry Weight (Total)	24.95	g	
Solids, Percent	21.9	%	
Sample: JA31506-13	**Analyzed:** 11-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-10			
Wet Weight (Total)	36.7	g	
Tare Weight	28.7	g	
Dry Weight (Total)	30.42	g	
Solids, Percent	21.5	%	

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.0000.0000 PO#16372

Accutest Job Number: JA31582

Sampling Dates: 10/28/09 - 10/29/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **38**

ACCREDITED IN ACCORDANCE WITH nelac

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

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Client Service contact: Marie Meidhof 732-329-0200

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Accutest LabLink@544321 09:52 23-Feb-2010

Sample Summary

TRC

Job No: JA31582

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA31582-1	10/28/09	15:40	CC	10/29/09	AQ	Surface Water	SW-5
JA31582-2	10/28/09	15:40	CC	10/29/09	SO	Sediment	SED-5
JA31582-3	10/28/09	16:10	CC	10/29/09	AQ	Surface Water	SW-6
JA31582-3D	10/28/09	16:10	CC	10/29/09	AQ	Water Dup/MSD	SW-6
JA31582-3S	10/28/09	16:10	CC	10/29/09	AQ	Water Matrix Spike	SW-6
JA31582-4	10/28/09	16:10	CC	10/29/09	SO	Sediment	SED-6
JA31582-4D	10/28/09	16:10	CC	10/29/09	SO	Soil Dup/MSD	SED-6
JA31582-4S	10/28/09	16:10	CC	10/29/09	SO	Soil Matrix Spike	SED-6
JA31582-5	10/29/09	07:30	CC	10/29/09	AQ	Field Blank Soil	FB102909
JA31582-6	10/29/09	08:30	CC	10/29/09	AQ	Surface Water	SW-7
JA31582-7	10/29/09	08:30	CC	10/29/09	SO	Sediment	SED-7
JA31582-8	10/29/09	09:10	CC	10/29/09	SO	Sediment	SED-8
JA31582-9	10/29/09	09:45	CC	10/29/09	AQ	Surface Water	SW-9

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

Sample Summary
(continued)

TRC

Job No: JA31582

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA31582-10	10/29/09	09:45	CC	10/29/09	SO	Sediment	SED-9

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA31582

Site: SMC Perchlorate On-Site Investigation, Newfield, NJ **Report Date** 11/23/2009 3:55:12 P

On 10/29/2009, 9 Sample(s), 0 Trip Blank(s) and 1 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 JA31582 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 EPA 314

Matrix: AQ **Batch ID:** GP51615

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31582-3DUP, JA31582-3MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method EPA 314 M

Matrix: SO **Batch ID:** GP51576

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31582-4DUP, JA31582-4MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM18 2540G

Matrix: SO **Batch ID:** GN32244

- The data for SM18 2540G meets quality control requirements.

Matrix: SO **Batch ID:** GN32254

- The data for SM18 2540G meets quality control requirements.

Matrix: SO **Batch ID:** GN32299

- The data for SM18 2540G meets quality control requirements.

Wet Chemistry By Method SM19 2510B M

Matrix: SO **Batch ID:** GN32355

- Sample(s) JA31582-4DUP were used as the QC samples for Specific Conductivity.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN32414

- Sample(s) JA31582-3DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	SW-5		
Lab Sample ID:	JA31582-1	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/29/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/19/09 03:01	MS	EPA 314
Specific Conductivity	129	0.50		umhos/cm	1	11/18/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-5		
Lab Sample ID:	JA31582-2	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/29/09
		Percent Solids:	33.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.9 U	27	4.9	ug/kg	1	11/17/09 06:54	MS	EPA 314 M
Solids, Percent	33.4			%	1	11/13/09	KD	SM18 2540G
Specific Conductivity	121	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-6		
Lab Sample ID:	JA31582-3	**Date Sampled:**	10/28/09
Matrix:	AQ - Surface Water	**Date Received:**	10/29/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/19/09 02:44	MS	EPA 314
Specific Conductivity	116	0.50		umhos/cm	1	11/18/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-6		
Lab Sample ID:	JA31582-4	**Date Sampled:**	10/28/09
Matrix:	SO - Sediment	**Date Received:**	10/29/09
		Percent Solids:	57.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.9 U	16	2.9	ug/kg	1	11/17/09 06:36	MS	EPA 314 M
Solids, Percent	57.1			%	1	11/12/09	DD	SM18 2540G
Specific Conductivity	105	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102909		
Lab Sample ID:	JA31582-5	**Date Sampled:**	10/29/09
Matrix:	AQ - Field Blank Soil	**Date Received:**	10/29/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/19/09 03:19	MS	EPA 314
Specific Conductivity	3.1	0.50		umhos/cm	1	11/18/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-7		
Lab Sample ID:	JA31582-6	**Date Sampled:**	10/29/09
Matrix:	AQ - Surface Water	**Date Received:**	10/29/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/19/09 03:36	MS	EPA 314
Specific Conductivity	35.9	0.50		umhos/cm	1	11/18/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-7		
Lab Sample ID:	JA31582-7	**Date Sampled:**	10/29/09
Matrix:	SO - Sediment	**Date Received:**	10/29/09
		Percent Solids:	43.0
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.8 U	21	3.8	ug/kg	1	11/17/09 07:11	MS	EPA 314 M
Solids, Percent	43			%	1	11/12/09	DD	SM18 2540G
Specific Conductivity	25.7	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-8		
Lab Sample ID:	JA31582-8	**Date Sampled:**	10/29/09
Matrix:	SO - Sediment	**Date Received:**	10/29/09
		Percent Solids:	81.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.0 U	11	2.0	ug/kg	1	11/17/09 07:46	MS	EPA 314 M
Solids, Percent	81.1			%	1	11/12/09	DD	SM18 2540G
Specific Conductivity	49.0	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SW-9		
Lab Sample ID:	JA31582-9	**Date Sampled:**	10/29/09
Matrix:	AQ - Surface Water	**Date Received:**	10/29/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/19/09 03:54	MS	EPA 314
Specific Conductivity	125	0.50		umhos/cm	1	11/18/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	SED-9		
Lab Sample ID:	JA31582-10	**Date Sampled:**	10/29/09
Matrix:	SO - Sediment	**Date Received:**	10/29/09
		Percent Solids:	19.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.7 U	47	8.7	ug/kg	1	11/17/09 08:03	MS	EPA 314 M
Solids, Percent	19.1			%	1	11/12/09	DD	SM18 2540G
Specific Conductivity	47.9	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

SW SED FB

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA31582

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buthen E-mail: lbuthen@trcsolutions.com
Phone #: (860) 298 6225 Fax #: (860) 298 6399
Sampler(s) Name(s): Chris Carlson / Chris Lindahl Phone #:

Project Information

Project Name: SMC Perchlorate Sed/Sw Sampling
Street: 35 SCW Blvd
City: Newfield State: NJ
Project #: 171441.0000.0000
Client Purchase Order #: 16372
Project Manager: Larry Buthen

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
1	SW-5		10/28/09	1540	CC/KL	SW	1					1				WC5,
2	SED-5			1540	CC/KL	SED	1					1				WC8
3	SW-6			1610	CC/KL	SW	3					3				
4	SED-6			1610	CC/KL	SED	3					3				
5	FB102909		10/29/09	0730	CC/KL	FB	1					1				
6	SW-7			0830	CC/KL	SW	1					1				
7	SED-7			0830	CC/KL	SED	1					1				
8	SED-8			0910	CC/KL	SED	1					1				
9	SW-9			0945	CC/KL	SW	1					1				
10	SED-9			0945	CC/KL	SED	1					1				

MS/MSD Volume Included
MS/MSD Volume Included

Turnaround Time (Business days)

- [X] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labtink

Approved By [Accutest PM]: / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [X] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format Hazsite
- [X] Other Excel

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 10/29/09 1445		1	2		2
3		3	4		4
5		5			

Custody Seal # | [ ] Intact [ ] Not Intact | Preserved where applicable [ ] | On Ice [X] | Cooler Temp. 2.4°C

4.1 4

R2-0002277

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31582 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/29/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31582: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA31582

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31582-1	Collected: 28-OCT-09 15:40 By: CC		Received: 29-OCT-09 By: MPC			
SW-5						
JA31582-1	SM19 2510B/SW 9050A	18-NOV-09	BD			SCON
JA31582-1	EPA 314	19-NOV-09 03:01	MS	18-NOV-09	MS	PERCHLT
JA31582-2	Collected: 28-OCT-09 15:40 By: CC		Received: 29-OCT-09 By: MPC			
SED-5						
JA31582-2	SM18 2540G	13-NOV-09	KD			%SOL
JA31582-2	SM19 2510B M	17-NOV-09	BD			SCON
JA31582-2	EPA 314 M	17-NOV-09 06:54	MS	16-NOV-09	RI	PERCHLT
JA31582-3	Collected: 28-OCT-09 16:10 By: CC		Received: 29-OCT-09 By: MPC			
SW-6						
JA31582-3	SM19 2510B/SW 9050A	18-NOV-09	BD			SCON
JA31582-3	EPA 314	19-NOV-09 02:44	MS	18-NOV-09	MS	PERCHLT
JA31582-4	Collected: 28-OCT-09 16:10 By: CC		Received: 29-OCT-09 By: MPC			
SED-6						
JA31582-4	SM18 2540G	12-NOV-09	DD			%SOL
JA31582-4	SM19 2510B M	17-NOV-09	BD			SCON
JA31582-4	EPA 314 M	17-NOV-09 06:36	MS	16-NOV-09	RI	PERCHLT
JA31582-5	Collected: 29-OCT-09 07:30 By: CC		Received: 29-OCT-09 By: MPC			
FB102909						
JA31582-5	SM19 2510B/SW 9050A	18-NOV-09	BD			SCON
JA31582-5	EPA 314	19-NOV-09 03:19	MS	18-NOV-09	MS	PERCHLT
JA31582-6	Collected: 29-OCT-09 08:30 By: CC		Received: 29-OCT-09 By: MPC			
SW-7						
JA31582-6	SM19 2510B/SW 9050A	18-NOV-09	BD			SCON
JA31582-6	EPA 314	19-NOV-09 03:36	MS	18-NOV-09	MS	PERCHLT

Internal Sample Tracking Chronicle

TRC

Job No: JA31582

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.0000.0000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31582-7	Collected: 29-OCT-09 08:30 By: CC		Received: 29-OCT-09		By: MPC	
SED-7						
JA31582-7	SM18 2540G	12-NOV-09	DD			%SOL
JA31582-7	SM19 2510B M	17-NOV-09	BD			SCON
JA31582-7	EPA 314 M	17-NOV-09 07:11	MS	16-NOV-09	RI	PERCHLT
JA31582-8	Collected: 29-OCT-09 09:10 By: CC		Received: 29-OCT-09		By: MPC	
SED-8						
JA31582-8	SM18 2540G	12-NOV-09	DD			%SOL
JA31582-8	SM19 2510B M	17-NOV-09	BD			SCON
JA31582-8	EPA 314 M	17-NOV-09 07:46	MS	16-NOV-09	RI	PERCHLT
JA31582-9	Collected: 29-OCT-09 09:45 By: CC		Received: 29-OCT-09		By: MPC	
SW-9						
JA31582-9	SM19 2510B/SW 9050A	18-NOV-09	BD			SCON
JA31582-9	EPA 314	19-NOV-09 03:54	MS	18-NOV-09	MS	PERCHLT
JA31582-10	Collected: 29-OCT-09 09:45 By: CC		Received: 29-OCT-09		By: MPC	
SED-9						
JA31582-10	SM18 2540G	12-NOV-09	DD			%SOL
JA31582-10	SM19 2510B M	17-NOV-09	BD			SCON
JA31582-10	EPA 314 M	17-NOV-09 08:03	MS	16-NOV-09	RI	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA31582
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/29/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31582-1.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-1.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-1.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-1.1	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-1.1	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-1.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-1.1	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-1.1	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer
JA31582-1.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-1.1	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-1.1	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-1.1	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-1.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-2.1	Secured Storage	Adam Scott	11/13/09 10:18	Retrieve from Storage
JA31582-2.1	Adam Scott	Kathleen Dwyer	11/13/09 10:19	Custody Transfer
JA31582-2.1	Kathleen Dwyer	Secured Storage	11/13/09 16:53	Return to Storage
JA31582-2.1	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-2.1	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-2.1	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-2.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-3.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-3.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-3.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-3.1	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-3.1	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-3.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-3.1	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-3.1	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer
JA31582-3.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-3.1	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-3.1	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-3.1	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-3.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-3.2	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-3.2	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-3.2	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-3.2	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-3.2	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-3.2	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-3.2	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-3.2	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer

Accutest Internal Chain of Custody

Job Number: JA31582
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/29/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31582-3.2	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-3.2	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-3.2	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-3.2	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-3.2	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-3.3	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-3.3	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-3.3	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-3.3	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-3.3	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-3.3	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-3.3	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-3.3	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer
JA31582-3.3	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-3.3	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-3.3	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-3.3	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-3.3	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-4.1	Secured Storage	Adam Scott	11/12/09 12:19	Retrieve from Storage
JA31582-4.1	Adam Scott	Donna DiGiovanni	11/12/09 12:22	Custody Transfer
JA31582-4.1	Donna DiGiovanni	Secured Storage	11/12/09 14:45	Return to Storage
JA31582-4.1	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-4.1	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-4.1	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-4.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-4.2	Secured Storage	Adam Scott	11/12/09 12:19	Retrieve from Storage
JA31582-4.2	Adam Scott	Donna DiGiovanni	11/12/09 12:22	Custody Transfer
JA31582-4.2	Donna DiGiovanni	Secured Storage	11/12/09 14:45	Return to Storage
JA31582-4.2	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-4.2	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-4.2	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-4.2	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-4.3	Secured Storage	Adam Scott	11/12/09 12:19	Retrieve from Storage
JA31582-4.3	Adam Scott	Donna DiGiovanni	11/12/09 12:22	Custody Transfer
JA31582-4.3	Donna DiGiovanni	Secured Storage	11/12/09 14:45	Return to Storage
JA31582-4.3	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-4.3	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-4.3	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-4.3	Dave Hunkele		12/15/09 07:01	Disposed

Accutest Internal Chain of Custody

Job Number: JA31582
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/29/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31582-5.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-5.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-5.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-5.1	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-5.1	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-5.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-5.1	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-5.1	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer
JA31582-5.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-5.1	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-5.1	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-5.1	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-5.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-6.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-6.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-6.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-6.1	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-6.1	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-6.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-6.1	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-6.1	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer
JA31582-6.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-6.1	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-6.1	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-6.1	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-6.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-7.1	Secured Storage	Adam Scott	11/12/09 12:19	Retrieve from Storage
JA31582-7.1	Adam Scott	Donna DiGiovanni	11/12/09 12:22	Custody Transfer
JA31582-7.1	Donna DiGiovanni	Secured Storage	11/12/09 14:45	Return to Storage
JA31582-7.1	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-7.1	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-7.1	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-7.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-8.1	Secured Storage	Adam Scott	11/12/09 12:19	Retrieve from Storage
JA31582-8.1	Adam Scott	Donna DiGiovanni	11/12/09 12:22	Custody Transfer
JA31582-8.1	Donna DiGiovanni	Secured Storage	11/12/09 14:45	Return to Storage
JA31582-8.1	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-8.1	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-8.1	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-8.1	Dave Hunkele		12/15/09 07:01	Disposed

Accutest Internal Chain of Custody

Job Number: JA31582
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/29/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31582-9.1	Secured Storage	Todd Shoemaker	11/13/09 08:57	Retrieve from Storage
JA31582-9.1	Todd Shoemaker	Melissa Smith	11/13/09 08:58	Custody Transfer
JA31582-9.1	Melissa Smith	Secured Storage	11/13/09 16:49	Return to Storage
JA31582-9.1	Secured Storage	Adam Scott	11/16/09 07:26	Retrieve from Storage
JA31582-9.1	Adam Scott	Melissa Smith	11/16/09 07:58	Custody Transfer
JA31582-9.1	Melissa Smith	Secured Storage	11/16/09 15:44	Return to Storage
JA31582-9.1	Secured Storage	Todd Shoemaker	11/17/09 08:52	Retrieve from Storage
JA31582-9.1	Todd Shoemaker	Melissa Smith	11/17/09 08:53	Custody Transfer
JA31582-9.1	Melissa Smith	Secured Storage	11/17/09 16:09	Return to Storage
JA31582-9.1	Secured Storage	Dave Hunkele	11/18/09 08:41	Retrieve from Storage
JA31582-9.1	Dave Hunkele	Barbara Dula	11/18/09 08:43	Custody Transfer
JA31582-9.1	Barbara Dula	Secured Storage	11/18/09 15:56	Return to Storage
JA31582-9.1	Dave Hunkele		12/15/09 07:01	Disposed
JA31582-10.1	Secured Storage	Adam Scott	11/12/09 14:45	Retrieve from Storage
JA31582-10.1	Adam Scott	Donna DiGiovanni	11/12/09 14:47	Custody Transfer
JA31582-10.1	Donna DiGiovanni	Secured Storage	11/12/09 15:51	Return to Storage
JA31582-10.1	Secured Storage	Todd Shoemaker	11/16/09 08:55	Retrieve from Storage
JA31582-10.1	Todd Shoemaker	Rie Iwasaki	11/16/09 08:56	Custody Transfer
JA31582-10.1	Rie Iwasaki	Secured Storage	11/16/09 10:09	Return to Storage
JA31582-10.1	Dave Hunkele		12/15/09 07:01	Disposed

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: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51576/GN32348	9.1	0.0	ug/kg	75.8	76.3	100.7	75-125%
Perchlorate	GP51615/GN32429	3.0	0.0	ug/l	25	25.6	102.4	85-115%

Associated Samples:
Batch GP51576: JA31582-10, JA31582-2, JA31582-4, JA31582-7, JA31582-8
Batch GP51615: JA31582-1, JA31582-3, JA31582-5, JA31582-6, JA31582-9
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51576/GN32348	JA31582-4	ug/kg	2.9 U	0.0	0.0	0-30%
Perchlorate	GP51615/GN32429	JA31582-3	ug/l	0.92 U	0.0	0.0	0-15%
Specific Conductivity	GN32355	JA31582-4	umhos/cm	105	108	2.8	0-15%
Specific Conductivity	GN32414	JA31582-3	umhos/cm	116	116	0.0	0-10%

Associated Samples:
Batch GN32355: JA31582-10, JA31582-2, JA31582-4, JA31582-7, JA31582-8
Batch GN32414: JA31582-1, JA31582-3, JA31582-5, JA31582-6, JA31582-9
Batch GP51576: JA31582-10, JA31582-2, JA31582-4, JA31582-7, JA31582-8
Batch GP51615: JA31582-1, JA31582-3, JA31582-5, JA31582-6, JA31582-9
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51576/GN32348	JA31582-4	ug/kg	2.9 U	131	129	98.3	70-130%
Perchlorate	GP51615/GN32429	JA31582-3	ug/l	0.92 U	25	26.6	106.4	80-120%

Associated Samples:
Batch GP51576: JA31582-10, JA31582-2, JA31582-4, JA31582-7, JA31582-8
Batch GP51615: JA31582-1, JA31582-3, JA31582-5, JA31582-6, JA31582-9
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:44	GN32348-STD1	1		STDA
10:19	GN32348-STD2	1		STDB
10:53	GN32348-STD3	1		STDD
11:11	GN32348-STD4	1		STDC
12:22	GN32348-STD5	1		STDE
12:39	GN32348-STD6	1		STDF
12:57	GN32348-IPC1	1		scon=4160
13:14	GN32348-ICV1	1		
13:32	GP51576-MB1	1		
13:49	GN32348-CRI1	1		
14:06	GP51576-B1	1		
14:24	GN32348-CCV1	1		
14:41	GP51565-ICV1	1		
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	GP51526-S1	1		tailing peak; see rerun
15:51	ZZZZZZ	1		
16:08	ZZZZZZ	1		
16:26	ZZZZZZ	1		
16:43	GP51564-MB1	1		
17:01	GP51564-B1	1		
17:18	GP51564-S1	1		did not inject (power failure)
17:50	GN32348-CCVA1	1		
18:08	GP51564-D1	1		
18:25	JA31399-20	1		(sample used for QC only; not part of login JA31582)
18:43	ZZZZZZ	1		
19:00	GP51565-MB2	1		
19:00	GP51595-MB1	1		Sample shown for QC tracking purposes only.
19:17	GP51565-B2	1		
19:17	GP51595-B1	1		Sample shown for QC tracking purposes only.
19:35	ZZZZZZ	1		
19:52	GP51565-S1	1		
20:10	GP51565-D1	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:27	JA31506-2	1		(sample used for QC only; not part of login JA31582)
20:44	ZZZZZZ	1		
21:02	GN32348-CCV2	1		
21:19	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:54	ZZZZZZ	1		
22:11	ZZZZZZ	1		
22:29	ZZZZZZ	1		
22:46	ZZZZZZ	1		
23:04	GP51526-S1	1		
23:21	GN32348-CCVA2	1		
23:38	GN32348-CCV3	1		
23:56	GN32348-IPC2	1		
00:13	ZZZZZZ	1		
00:31	GN32348-CRI2	1		
00:48	ZZZZZZ	1		
01:05	GN32348-CCVA3	1		
01:23	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:58	ZZZZZZ	1		
02:15	ZZZZZZ	1		
02:32	ZZZZZZ	1		
02:50	ZZZZZZ	1		
03:07	ZZZZZZ	1		
03:25	ZZZZZZ	1		
03:42	ZZZZZZ	1		
03:59	ZZZZZZ	1		
04:17	GN32348-CCV4	1		
04:34	ZZZZZZ	1		
04:52	ZZZZZZ	1		
05:09	ZZZZZZ	1		
05:27	ZZZZZZ	1		
05:44	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32348
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
06:01	GP51576-S1	1		
06:19	GP51576-D1	1		
06:36	JA31582-4	1		
06:54	JA31582-2	1		
07:11	JA31582-7	1		
07:28	GN32348-CCVA4	1		
07:46	JA31582-8	1		
08:03	JA31582-10	1		
08:21	GN32348-CCV5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111601.TXT Date Analyzed: 11/16/09 Methods: EPA 314, EPA 314 M
Run ID: GN32348 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32348-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN32348-ICV1	Perchlorate	25.9	3.0	0.92	25	103.6	90-110
GN32348-CRI1	Perchlorate	2.4	3.0	0.92	3	80.0	75-125
GN32348-CCV1	Perchlorate	24.1	3.0	0.92	25	96.4	85-115
GN32348-CCVA1	Perchlorate	55.3	3.0	0.92	50	110.6	
GN32348-CCV2	Perchlorate	26.8	3.0	0.92	25	107.2	85-115
GN32348-CCVA2	Perchlorate	56.6	3.0	0.92	50	113.2	
GN32348-CCV3	Perchlorate	26.7	3.0	0.92	25	106.8	85-115
GN32348-IPC2	Perchlorate	27.4	3.0	0.92	25	109.6	80-120
GN32348-CRI2	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN32348-CCVA3	Perchlorate	55.0	3.0	0.92	50	110.0	
GN32348-CCV4	Perchlorate	26.6	3.0	0.92	25	106.4	85-115
GN32348-CCVA4	Perchlorate	57.2	3.0	0.92	50	114.4	
GN32348-CCV5	Perchlorate	28.0	3.0	0.92	25	112.0	85-115

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:50	GN32429-STD1	1		STDA
15:08	GN32429-STD2	1		STDB
15:25	GN32429-STD3	1		STDC
15:43	GN32429-STD4	1		STDD
16:00	GN32429-STD5	1		STDE
16:18	GN32429-STD6	1		Manually integrated chrom. peaks reviewed and verified to comply with criteria of Accutest SOP EQA044.
16:35	GN32429-IPC1	1		scon=4160
16:52	GN32429-ICV1	1		
17:10	GP51632-MB1	1		
17:10	GP51565-MB3	1		Sample shown for QC tracking purposes only.
17:27	GN32429-CRI1	1		
17:45	GP51632-B1	1		
17:45	GP51565-B3	1		Sample shown for QC tracking purposes only.
18:02	GN32429-CCV1	1		
18:19	GP51565-ICV2	1		
18:37	GP51632-S1	1		Spike recovery indicates possible matrix interference.
18:54	GP51632-D1	1		
19:12	JA33124-3	1		(sample used for QC only; not part of login JA31582)
19:29	ZZZZZZ	1		
19:46	ZZZZZZ	200		
20:04	ZZZZZZ	1		
20:21	ZZZZZZ	1		
20:39	ZZZZZZ	1		
20:56	GN32429-CCVA1	1		
21:13	ZZZZZZ	1		
21:31	ZZZZZZ	1		
21:48	ZZZZZZ	10		
22:06	GP51564-S1	1		
22:23	ZZZZZZ	1		
22:40	ZZZZZZ	1		
22:58	ZZZZZZ	1		
23:15	ZZZZZZ	1		
23:33	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN32429
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:50	ZZZZZZ	1		
00:07	GN32429-CCV2	1		
00:25	GN32429-CCVA2	1		
00:42	GN32429-IPC2	1		
01:00	GP51615-MB1	1		
01:17	GN32429-CRI2	1		manually integrated; rerun all samples between 1 ppb and 25 ppb
01:34	GP51615-B1	1		
01:52	GN32429-CCV3	1		
02:09	GP51615-S1	1		
02:27	GP51615-D1	1		
02:44	JA31582-3	1		
03:01	JA31582-1	1		
03:19	JA31582-5	1		
03:36	JA31582-6	1		
03:54	JA31582-9	1		
04:11	ZZZZZZ	1		
04:28	ZZZZZZ	1		
04:46	ZZZZZZ	1		
05:03	GN32429-CCVA3	1		
05:21	ZZZZZZ	1		
05:38	ZZZZZZ	1		
05:55	ZZZZZZ	1		
06:13	ZZZZZZ	1		
06:30	ZZZZZZ	1		
06:48	ZZZZZZ	1		
07:05	ZZZZZZ	1		
07:23	GN32429-CCV4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31582
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409111802.TXT Date Analyzed: 11/18/09 Methods: EPA 314, EPA 314 M
Run ID: GN32429 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN32429-IPC1	Perchlorate	23.2	3.0	0.92	25	92.8	80-120
GN32429-ICV1	Perchlorate	24.8	3.0	0.92	25	99.2	90-110
GN32429-CRI1	Perchlorate	2.6	3.0	0.92	3	86.7	75-125
GN32429-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN32429-CCVA1	Perchlorate	50.9	3.0	0.92	50	101.8	
GN32429-CCV2	Perchlorate	25.0	3.0	0.92	25	100.0	85-115
GN32429-CCVA2	Perchlorate	45.4	3.0	0.92	50	90.8	
GN32429-IPC2	Perchlorate	22.1	3.0	0.92	25	88.4	80-120
GN32429-CRI2	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN32429-CCV3	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN32429-CCVA3	Perchlorate	45.0	3.0	0.92	50	90.0	
GN32429-CCV4	Perchlorate	25.2	3.0	0.92	25	100.8	85-115

(!) Outside of QC limits

Percent Solids Raw Data Summary

Job Number: JA31582
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample: JA31582-2	**Analyzed:** 13-NOV-09 by KD		**Method:** SM18 2540G
ClientID: SED-5			
Wet Weight (Total)	31.58	g	
Tare Weight	23.62	g	
Dry Weight (Total)	26.28	g	
Solids, Percent	33.4	%	
Sample: JA31582-4	**Analyzed:** 12-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-6			
Wet Weight (Total)	33.89	g	
Tare Weight	24.76	g	
Dry Weight (Total)	29.97	g	
Solids, Percent	57.1	%	
Sample: JA31582-7	**Analyzed:** 12-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-7			
Wet Weight (Total)	31.36	g	
Tare Weight	25.24	g	
Dry Weight (Total)	27.87	g	
Solids, Percent	43	%	
Sample: JA31582-8	**Analyzed:** 12-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-8			
Wet Weight (Total)	31.86	g	
Tare Weight	23.4	g	
Dry Weight (Total)	30.26	g	
Solids, Percent	81.1	%	
Sample: JA31582-10	**Analyzed:** 12-NOV-09 by DD		**Method:** SM18 2540G
ClientID: SED-9			
Wet Weight (Total)	32.18	g	
Tare Weight	23.31	g	
Dry Weight (Total)	25	g	
Solids, Percent	19.1	%	

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

Accutest Job Number: JA30215

Sampling Date: 10/12/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **17**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

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: Marie Meidhof 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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Test results relate only to samples analyzed.

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Sample Summary

TRC

Job No: JA30215

SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30215-1	10/12/09	14:40	JDM	10/12/09	AQ	Water	VP-15 (30-35')
JA30215-2	10/12/09	15:35	JDM	10/12/09	AQ	Water	VP-15 (45-50')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30215
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	10/31/2009 1:33:16 P

On 10/12/2009, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.6 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30215 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 EPA 314

Matrix: AQ **Batch ID:** GP51074

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30063-2DUP, JA30063-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31123

- Sample(s) JA29319-1ADUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-15 (30-35')		
Lab Sample ID:	JA30215-1	**Date Sampled:**	10/12/09
Matrix:	AQ - Water	**Date Received:**	10/12/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/13/09 13:51	MS	EPA 314
Specific Conductivity	136	0.50		umhos/cm	1	10/13/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-15 (45-50')		
Lab Sample ID:	JA30215-2	**Date Sampled:**	10/12/09
Matrix:	AQ - Water	**Date Received:**	10/12/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/13/09 14:08	MS	EPA 314
Specific Conductivity	82.8	0.50		umhos/cm	1	10/13/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

WW

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE ___ OF ___

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30215

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd N
City / State / Zip: Windsor, CT 06095
Project Contact / E-mail: Larry Butlien LButlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s) / Phone #: John Moss

Project Information

Project Name: SMC
Street: 35 SW Blvd
City / State: Newfield, NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	VP-15 (30-35')		10/12/09	14:40			1					X				X	UTC1
-2	VP-15 (45-50')		10/12/09	15:35			1					X				X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [x] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other TRC CT W2 (EDD) HAZSITE (EDD)

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 John Moss	10/12/09 16:35	G Rider	G Rider	10-12-9 1750	2 PD
3		3	4		4
5		5			

Custody Seal # — [ ] Intact [x] Not intact — Preserved where applicable [ ] — On Ice [x] — Cooler Temp. 2.6

VB

4.1

4

JA30215: Chain of Custody
Page 1 of 1

Internal Sample Tracking Chronicle

TRC

Job No: JA30215

SMC Perchlorate On-Site Investigation, Newfield, NJ

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30215-1	Collected: 12-OCT-09 14:40 By: JDM		Received: 12-OCT-09 By:			
VP-15 (30-35')						
JA30215-1	SM19 2510B/SW 9050A	13-OCT-09	ST			SCON
JA30215-1	EPA 314	13-OCT-09 13:51	MS	13-OCT-09	MS	PERCHLT
JA30215-2	Collected: 12-OCT-09 15:35 By: JDM		Received: 12-OCT-09 By:			
VP-15 (45-50')						
JA30215-2	SM19 2510B/SW 9050A	13-OCT-09	ST			SCON
JA30215-2	EPA 314	13-OCT-09 14:08	MS	13-OCT-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30215
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/12/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30215-1.1	Secured Storage	Adam Scott	10/13/09 09:08	Retrieve from Storage
JA30215-1.1	Adam Scott	Melissa Smith	10/13/09 09:10	Custody Transfer
JA30215-1.1	Melissa Smith	Sarvadaman Tripathi	10/13/09 14:41	Custody Transfer
JA30215-1.1	Sarvadaman Tripathi	Secured Storage	10/13/09 16:35	Return to Storage
JA30215-1.1	Dave Hunkele		11/25/09 12:47	Disposed
JA30215-2.1	Secured Storage	Adam Scott	10/13/09 09:08	Retrieve from Storage
JA30215-2.1	Adam Scott	Melissa Smith	10/13/09 09:10	Custody Transfer
JA30215-2.1	Melissa Smith	Sarvadaman Tripathi	10/13/09 14:41	Custody Transfer
JA30215-2.1	Sarvadaman Tripathi	Secured Storage	10/13/09 16:35	Return to Storage
JA30215-2.1	Dave Hunkele		11/25/09 12:47	Disposed

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: JA30215
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51074/GN31152	3.0	0.0	ug/l	25	22.6	90.4	85-115%
Perchlorate	GP51074/GN31152			ug/l	8	7.28	91.0	85-115%

Associated Samples:
Batch GP51074: JA30215-1, JA30215-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30215
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31123	JA29319-1A	umhos/cm	8270	8290	0.2	0-10%

Associated Samples:
Batch GN31123: JA30215-1, JA30215-2
Batch GP51074: JA30215-1, JA30215-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30215
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	25	21.8	87.2	80-120%

Associated Samples:
Batch GP51074: JA30215-1, JA30215-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30215
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Analyst: MS Run ID: GN31152
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:54	GN31152-STD1	1		STDA
12:40	GN31152-STD2	1		STDB
12:57	GN31152-STD3	1		STDC
13:15	GN31152-STD4	1		STDD
13:32	GN31152-STD5	1		STDE
13:49	GN31152-STD6	1		STDF
10:22	GN31152-IPC1	1		
10:39	GN31152-ICV1	1		
10:56	GP51074-MB1	1		
11:14	GN31152-CRI1	1		
11:31	GP51074-B1	1		
11:49	GN31152-CCV1	1		
12:06	GP51074-ICV1	1		
12:24	GP51074-S1	1		
12:41	GP51074-D1	1		
12:58	JA30063-2	1		(sample used for QC only; not part of login JA30215)
13:16	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:51	JA30215-1	1		
14:08	JA30215-2	1		
14:25	ZZZZZZ	1		
14:43	ZZZZZZ	1		
15:00	GN31152-CCVA1	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30215
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Run ID: GN31152 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31152-IPC1	Perchlorate	20.6	3.0	0.92	25	82.4	80-120
GN31152-ICV1	Perchlorate	22.7	3.0	0.92	25	90.8	90-110
GN31152-CRI1	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31152-CCV1	Perchlorate	22.5	3.0	0.92	25	90.0	85-115
GN31152-CCVA1	Perchlorate	52.2	3.0	0.92	50	104.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.000010.0000000 PO#16372

Accutest Job Number: JA30232

Sampling Dates: 10/12/09 - 10/13/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **17**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA30232

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000010.0000000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA30232-1	10/12/09	16:20	JDM	10/13/09	AQ	Field Blank Water	FB101209
JA30232-2	10/13/09	09:15	JDM	10/13/09	AQ	Ground Water	VP-15(65-70')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30232
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	10/31/2009 1:53:06 P

On 10/13/2009, 1 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30232 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 EPA 314

Matrix: AQ **Batch ID:** GP51074

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30063-2DUP, JA30063-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31123

- Sample(s) JA30232-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB101209		
Lab Sample ID:	JA30232-1	**Date Sampled:**	10/12/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/13/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Perchlorate	< 3.0	3.0	ug/l	1	10/13/09 14:25	MS	EPA 314
Specific Conductivity	4.2	0.50	umhos/cm	1	10/13/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit

R2-0002319

Report of Analysis

Client Sample ID:	VP-15(65-70')		
Lab Sample ID:	JA30232-2	**Date Sampled:**	10/13/09
Matrix:	AQ - Ground Water	**Date Received:**	10/13/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Perchlorate	< 3.0	3.0	ug/l	1	10/13/09 14:43	MS	EPA 314
Specific Conductivity	82.8	0.50	umhos/cm	1	10/13/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

FB
GW

ACCUTEST Laboratories

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
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FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # ~~JA36~~ JA30232

Client / Reporting Information

Company Name: TRC
Street Address: 21 Griffin Rd. North
City / State / Zip: Windsor CT 06095
Project Contact / E-mail: Larry Butlien lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC
Street: 35 SW Blvd
City / State: Newfield NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	FB101209		10/12/09	16:20	JDM	GW	1					1				X	0101
-2	VP-15 (65-70')		10/13/09	9:15	JDM	GW	1					1				X	

Turnaround Time (Business days)
- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCTTW2
- [x] EDD Format HAZSITE
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions: NAB

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/13/09 10:08	1 [signature] 10-13-09 10:08	2 [signature] 10-13-09	11:35	2 [signature]
3		3	4		4
5		5			

Custody Seal #: [ ] Intact [ ] Not intact
Preserved where applicable: [ ]
On Ice: X
Cooler Temp: 5.0C

4.1
4

JA30232: Chain of Custody
Page 1 of 1

Internal Sample Tracking Chronicle

TRC

Job No: JA30232

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000010.0000000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30232-1	Collected: 12-OCT-09 16:20 By: JDM		Received: 13-OCT-09 By: MP			
FB101209						
JA30232-1	SM19 2510B/SW 9050A	13-OCT-09	ST			SCON
JA30232-1	EPA 314	13-OCT-09 14:25	MS	13-OCT-09	MS	PERCHLT
JA30232-2	Collected: 13-OCT-09 09:15 By: JDM		Received: 13-OCT-09 By: MP			
VP-15(65-70')						
JA30232-2	SM19 2510B/SW 9050A	13-OCT-09	ST			SCON
JA30232-2	EPA 314	13-OCT-09 14:43	MS	13-OCT-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30232
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/13/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30232-1.1	Secured Storage	Adam Scott	10/13/09 14:03	Retrieve from Storage
JA30232-1.1	Adam Scott	Melissa Smith	10/13/09 14:04	Custody Transfer
JA30232-1.1	Melissa Smith	Sarvadaman Tripathi	10/13/09 14:41	Custody Transfer
JA30232-1.1	Sarvadaman Tripathi	Secured Storage	10/13/09 16:35	Return to Storage
JA30232-1.1	Secured Storage	Melissa Smith	10/16/09 10:09	Retrieve from Storage
JA30232-1.1	Melissa Smith	Secured Storage	10/16/09 16:40	Return to Storage
JA30232-1.1	Dave Hunkele		11/25/09 12:47	Disposed
JA30232-2.1	Secured Storage	Adam Scott	10/13/09 14:03	Retrieve from Storage
JA30232-2.1	Adam Scott	Melissa Smith	10/13/09 14:04	Custody Transfer
JA30232-2.1	Melissa Smith	Sarvadaman Tripathi	10/13/09 14:41	Custody Transfer
JA30232-2.1	Sarvadaman Tripathi	Secured Storage	10/13/09 16:35	Return to Storage
JA30232-2.1	Secured Storage	Melissa Smith	10/16/09 10:09	Retrieve from Storage
JA30232-2.1	Melissa Smith	Secured Storage	10/16/09 16:40	Return to Storage
JA30232-2.1	Dave Hunkele		11/25/09 12:47	Disposed

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: JA30232
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51074/GN31152	3.0	0.0	ug/l	25	22.6	90.4	85-115%
Perchlorate	GP51074/GN31152			ug/l	8	7.28	91.0	85-115%

Associated Samples:
Batch GP51074: JA30232-1, JA30232-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30232
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31123	JA30232-2	umhos/cm	82.8	86.4	4.3	0-10%

Associated Samples:
Batch GN31123: JA30232-1, JA30232-2
Batch GP51074: JA30232-1, JA30232-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30232
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	25	21.8	87.2	80-120%

Associated Samples:
Batch GP51074: JA30232-1, JA30232-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30232
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Analyst: MS Run ID: GN31152
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:54	GN31152-STD1	1		STDA
12:40	GN31152-STD2	1		STDB
12:57	GN31152-STD3	1		STDC
13:15	GN31152-STD4	1		STDD
13:32	GN31152-STD5	1		STDE
13:49	GN31152-STD6	1		STDF
10:22	GN31152-IPC1	1		
10:39	GN31152-ICV1	1		
10:56	GP51074-MB1	1		
11:14	GN31152-CRI1	1		
11:31	GP51074-B1	1		
11:49	GN31152-CCV1	1		
12:06	GP51074-ICV1	1		
12:24	GP51074-S1	1		
12:41	GP51074-D1	1		
12:58	JA30063-2	1		(sample used for QC only; not part of login JA30232)
13:16	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:51	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:25	JA30232-1	1		
14:43	JA30232-2	1		
15:00	GN31152-CCVA1	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30232
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Run ID: GN31152 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31152-IPC1	Perchlorate	20.6	3.0	0.92	25	82.4	80-120
GN31152-ICV1	Perchlorate	22.7	3.0	0.92	25	90.8	90-110
GN31152-CRI1	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31152-CCV1	Perchlorate	22.5	3.0	0.92	25	90.0	85-115
GN31152-CCVA1	Perchlorate	52.2	3.0	0.92	50	104.4	

(!) Outside of QC limits

New Jersey ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

02/23/10

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.000010.000000

Accutest Job Number: JA30294

Sampling Date: 10/13/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **21**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

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: Marie Meidhof 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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Test results relate only to samples analyzed.

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Sample Summary

TRC

Job No: JA30294

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30294-1	10/13/09	10:40	JDM	10/13/09	AQ	Ground Water	VP-15 (88-93')
JA30294-2	10/13/09	12:15	JDM	10/13/09	AQ	Ground Water	VP-15 (114-119')
JA30294-3	10/13/09	13:50	JDM	10/13/09	AQ	Field Blank Water	FB101309

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30294
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	10/31/2009 2:02:39 P

On 10/13/2009, 2 Sample(s), 0 Trip Blank(s) and 1 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 JA30294 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 EPA 314

Matrix: AQ **Batch ID:** GP51074

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30063-2DUP, JA30063-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31205

- Sample(s) JA30294-1DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-15 (88-93')		
Lab Sample ID:	JA30294-1	**Date Sampled:**	10/13/09
Matrix:	AQ - Ground Water	**Date Received:**	10/13/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.9	3.0	0.92	ug/l	1	10/15/09 11:48	MS	EPA 314
Specific Conductivity	72.8	0.50		umhos/cm	1	10/15/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-15 (114-119')		
Lab Sample ID:	JA30294-2	**Date Sampled:**	10/13/09
Matrix:	AQ - Ground Water	**Date Received:**	10/13/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/15/09 11:13	MS	EPA 314
Specific Conductivity	40.4	0.50		umhos/cm	1	10/15/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB101309		
Lab Sample ID:	JA30294-3	**Date Sampled:**	10/13/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/13/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/15/09 11:30	MS	EPA 314
Specific Conductivity	3.4	0.50		umhos/cm	1	10/15/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

GW
FB

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JA30294

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Buttien E-mail: lbuttien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC off-site vertical profiling
Street: 35 Sw Blvd.
City: Newfield State: NJ
Project #: 171441.000010.00000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	VP-1S (88-93')		10/13/09	10:40	JOM	GW	1					1				X	
2	VP-1S (114-119')		10/13/09	12:15	↓	↓	1					1				X	VTC3
3	FB101309		10/13/09	13:50	↓	↓	1					1				X	

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [x] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format LIA2 SITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	John Moss	10/13/09 16:15	F ZAK 303	F ZAK 303	10/13/09 18:3	MDa
3		Date Time:	3	4	Date Time:	4
5	Relinquished by:	Date Time:	5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable [ ]

On Ice [x] Cooler Temp. 3 4 °C

Internal Sample Tracking Chronicle

TRC

Job No: JA30294

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30294-1	Collected: 13-OCT-09 10:40 By: JDM		Received: 13-OCT-09		By: MPC	
VP-15 (88-93')						
JA30294-1	SM19 2510B/SW 9050A	15-OCT-09	BD			SCON
JA30294-1	EPA 314	15-OCT-09 11:48	MS	15-OCT-09	MS	PERCHLT
JA30294-2	Collected: 13-OCT-09 12:15 By: JDM		Received: 13-OCT-09		By: MPC	
VP-15 (114-119')						
JA30294-2	SM19 2510B/SW 9050A	15-OCT-09	BD			SCON
JA30294-2	EPA 314	15-OCT-09 11:13	MS	15-OCT-09	MS	PERCHLT
JA30294-3	Collected: 13-OCT-09 13:50 By: JDM		Received: 13-OCT-09		By: MPC	
FB101309						
JA30294-3	SM19 2510B/SW 9050A	15-OCT-09	BD			SCON
JA30294-3	EPA 314	15-OCT-09 11:30	MS	15-OCT-09	MS	PERCHLT

R2-0002341

Accutest Internal Chain of Custody

Job Number: JA30294
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/13/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30294-1.1	Secured Storage	Melissa Smith	10/14/09 08:14	Retrieve from Storage
JA30294-1.1	Melissa Smith	Secured Storage	10/14/09 16:26	Return to Storage
JA30294-1.1	Secured Storage	Adam Scott	10/15/09 08:34	Retrieve from Storage
JA30294-1.1	Adam Scott	Barbara Dula	10/15/09 08:36	Custody Transfer
JA30294-1.1	Barbara Dula	Secured Storage	10/15/09 15:30	Return to Storage
JA30294-1.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30294-1.1.1	Barbara Dula	Melissa Smith	10/15/09 09:44	Aliquot from JA30294-1.1
JA30294-1.1.1	Melissa Smith		10/15/09 16:49	Depleted
JA30294-2.1	Secured Storage	Melissa Smith	10/14/09 08:14	Retrieve from Storage
JA30294-2.1	Melissa Smith	Secured Storage	10/14/09 16:26	Return to Storage
JA30294-2.1	Secured Storage	Adam Scott	10/15/09 08:34	Retrieve from Storage
JA30294-2.1	Adam Scott	Barbara Dula	10/15/09 08:36	Custody Transfer
JA30294-2.1	Barbara Dula	Secured Storage	10/15/09 15:30	Return to Storage
JA30294-2.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30294-2.1.1	Barbara Dula	Melissa Smith	10/15/09 09:44	Aliquot from JA30294-2.1
JA30294-2.1.1	Melissa Smith		10/15/09 16:49	Depleted
JA30294-3.1	Secured Storage	Melissa Smith	10/14/09 08:14	Retrieve from Storage
JA30294-3.1	Melissa Smith	Secured Storage	10/14/09 16:26	Return to Storage
JA30294-3.1	Secured Storage	Adam Scott	10/15/09 08:34	Retrieve from Storage
JA30294-3.1	Adam Scott	Barbara Dula	10/15/09 08:36	Custody Transfer
JA30294-3.1	Barbara Dula	Secured Storage	10/15/09 15:30	Return to Storage
JA30294-3.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30294-3.1.1	Barbara Dula	Melissa Smith	10/15/09 09:44	Aliquot from JA30294-3.1
JA30294-3.1.1	Melissa Smith		10/15/09 16:49	Depleted

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: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51074/GN31237	3.0	0.0	ug/l	25	24.9	99.6	85-115%
Perchlorate	GP51074/GN31237			ug/l	8	7.97	99.6	85-115%

Associated Samples:
Batch GP51074: JA30294-1, JA30294-2, JA30294-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31205	JA30294-1	umhos/cm	72.8	71.5	1.8	0-10%

Associated Samples:
Batch GN31205: JA30294-1, JA30294-2, JA30294-3
Batch GP51074: JA30294-1, JA30294-2, JA30294-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	25	21.8	87.2	80-120%

Associated Samples:
Batch GP51074: JA30294-1, JA30294-2, JA30294-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Analyst: MS Run ID: GN31152
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:54	GN31152-STD1	1		STDA
12:40	GN31152-STD2	1		STDB
12:57	GN31152-STD3	1		STDC
13:15	GN31152-STD4	1		STDD
13:32	GN31152-STD5	1		STDE
13:49	GN31152-STD6	1		STDF
10:22	GN31152-IPC1	1		
10:39	GN31152-ICV1	1		
10:56	GP51074-MB1	1		
11:14	GN31152-CRI1	1		
11:31	GP51074-B1	1		
11:49	GN31152-CCV1	1		
12:06	GP51074-ICV1	1		
12:24	GP51074-S1	1		
12:41	GP51074-D1	1		
12:58	JA30063-2	1		(sample used for QC only; not part of login JA30294)
13:16	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:51	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:43	ZZZZZZ	1		
15:00	GN31152-CCVA1	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Run ID: GN31152 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31152-IPC1	Perchlorate	20.6	3.0	0.92	25	82.4	80-120
GN31152-ICV1	Perchlorate	22.7	3.0	0.92	25	90.8	90-110
GN31152-CRI1	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31152-CCV1	Perchlorate	22.5	3.0	0.92	25	90.0	85-115
GN31152-CCVA1	Perchlorate	52.2	3.0	0.92	50	104.4	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31237
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31237-STD1	1		STDA
10:36	GN31237-STD2	1		STDB
10:54	GN31237-STD3	1		STDC
11:11	GN31237-STD4	1		STDD
11:28	GN31237-STD5	1		STDE
11:46	GN31237-STD6	1		STDF
08:54	GN31237-IPC1	1		SCON=4240
09:11	GN31237-ICV1	1		
09:28	GP51074-MB2	1		
09:46	GN31237-CRI1	1		
10:03	GP51074-B2	1		
10:21	GN31237-CCV1	1		
10:38	GP51074-ICV2	1		
10:55	JA30294-1	1		see rerun for confirmation
11:13	JA30294-2	1		
11:30	JA30294-3	1		
11:48	JA30294-1	1		
12:05	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:57	ZZZZZZ	1		
13:15	GN31237-CCVA1	1		
13:32	GP51094-MB1	1		
13:49	GP51094-B1	1		
14:07	GP51094-S1	1		%sol
14:24	GP51094-D1	1		%sol
14:42	JA30236-6	1		(sample used for QC only; not part of login JA30294)
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	ZZZZZZ	1		
15:51	ZZZZZZ	1		
16:09	ZZZZZZ	1		
16:26	GN31237-CCV2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31237
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:44	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:53	ZZZZZZ	1		
18:11	ZZZZZZ	1		
18:28	GN31237-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30294
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Run ID: GN31237 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31237-IPC1	Perchlorate	24.6	3.0	0.92	25	98.4	80-120
GN31237-ICV1	Perchlorate	26.6	3.0	0.92	25	106.4	90-110
GN31237-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN31237-CCV1	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN31237-CCVA1	Perchlorate	51.5	3.0	0.92	50	103.0	
GN31237-CCV2	Perchlorate	25.9	3.0	0.92	25	103.6	85-115
GN31237-CCVA2	Perchlorate	53.2	3.0	0.92	50	106.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate On-Site Investigation, Newfield, NJ

171441.000010.000000

Accutest Job Number: JA30398

Sampling Date: 10/14/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **22**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA30398

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA30398-1	10/14/09	15:15	JDM	10/14/09	AQ	Field Blank Water	FB101409
JA30398-2	10/14/09	11:35	JDM	10/14/09	AQ	Ground Water	VP13(25-30')
JA30398-3	10/14/09	13:45	JDM	10/14/09	AQ	Ground Water	VP13(50-55')
JA30398-4	10/14/09	14:55	JDM	10/14/09	AQ	Ground Water	VP13(75-80')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30398
Site:	SMC Perchlorate On-Site Investigation, Newfield, NJ	**Report Date**	10/31/2009 4:42:25 P

On 10/14/2009, 3 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.7 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30398 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 EPA 314

Matrix: AQ **Batch ID:** GP51074

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30063-2DUP, JA30063-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31249

- Sample(s) JA30398-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB101409		
Lab Sample ID:	JA30398-1	**Date Sampled:**	10/14/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/14/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/15/09 12:05	MS	EPA 314
Specific Conductivity	29.1	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP13(25-30')		
Lab Sample ID:	JA30398-2	**Date Sampled:**	10/14/09
Matrix:	AQ - Ground Water	**Date Received:**	10/14/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/15/09 12:22	MS	EPA 314
Specific Conductivity	206	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP13(50-55')		
Lab Sample ID:	JA30398-3	**Date Sampled:**	10/14/09
Matrix:	AQ - Ground Water	**Date Received:**	10/14/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/15/09 12:40	MS	EPA 314
Specific Conductivity	229	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP13(75-80')		
Lab Sample ID:	JA30398-4	**Date Sampled:**	10/14/09
Matrix:	AQ - Ground Water	**Date Received:**	10/14/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.9	3.0	0.92	ug/l	1	10/15/09 12:57	MS	EPA 314
Specific Conductivity	156	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

FB
ON

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

2245 Fresh Pond Rd.

PAGE 1 OF 1

FED-EX Tracking # 13759608
Bottle Order Control #
Accutest Quote #
Accutest Job # JA30398

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	perchlorate	LAB USE ONLY
1	FB101409	0	10/14/09	15:15	JDM	GW	1					1				X	
2	VP-13 (25-30')		10/14/09	11:35			1					1				X	UTC1
3	VP-13 (50-55')		10/14/09	13:45			1					1				X	
4	VP-13 (75-80')		10/14/09	14:55			1					1				X	

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

0 125ml NAB rec'd 10-14-09 mf

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1 John Moss	10/14/09 16:15	1 C. Findora Priority	2 C. Findora Priority	10-14-09 18:15	2 [signature]
3		3	4		4
5		5	Custody Seal # N/A	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☑ Cooler Temp. 2.7°C

A.

4.1

4

JA30398: Chain of Custody
Page 1 of 1

Internal Sample Tracking Chronicle

TRC

Job No: JA30398

SMC Perchlorate On-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30398-1	Collected: 14-OCT-09 15:15 By: JDM		Received: 14-OCT-09 By: MPC			
FB101409						
JA30398-1	EPA 314	15-OCT-09 12:05	MS	15-OCT-09	MS	PERCHLT
JA30398-1	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON
JA30398-2	Collected: 14-OCT-09 11:35 By: JDM		Received: 14-OCT-09 By: MPC			
VP13(25-30')						
JA30398-2	EPA 314	15-OCT-09 12:22	MS	15-OCT-09	MS	PERCHLT
JA30398-2	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON
JA30398-3	Collected: 14-OCT-09 13:45 By: JDM		Received: 14-OCT-09 By: MPC			
VP13(50-55')						
JA30398-3	EPA 314	15-OCT-09 12:40	MS	15-OCT-09	MS	PERCHLT
JA30398-3	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON
JA30398-4	Collected: 14-OCT-09 14:55 By: JDM		Received: 14-OCT-09 By: MPC			
VP13(75-80')						
JA30398-4	EPA 314	15-OCT-09 12:57	MS	15-OCT-09	MS	PERCHLT
JA30398-4	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON

Accutest Internal Chain of Custody

Job Number: JA30398
Account: TRCCTW TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ
Received: 10/14/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30398-1.1	Secured Storage	Adam Scott	10/15/09 09:01	Retrieve from Storage
JA30398-1.1	Adam Scott	Melissa Smith	10/15/09 09:02	Custody Transfer
JA30398-1.1	Melissa Smith	Secured Storage	10/15/09 16:07	Return to Storage
JA30398-1.1	Secured Storage	Adam Scott	10/16/09 10:23	Retrieve from Storage
JA30398-1.1	Adam Scott	Sarvadaman Tripathi	10/16/09 10:43	Custody Transfer
JA30398-1.1	Sarvadaman Tripathi	Secured Storage	10/16/09 15:47	Return to Storage
JA30398-1.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30398-2.1	Secured Storage	Adam Scott	10/15/09 09:01	Retrieve from Storage
JA30398-2.1	Adam Scott	Melissa Smith	10/15/09 09:02	Custody Transfer
JA30398-2.1	Melissa Smith	Secured Storage	10/15/09 16:07	Return to Storage
JA30398-2.1	Secured Storage	Adam Scott	10/16/09 10:23	Retrieve from Storage
JA30398-2.1	Adam Scott	Sarvadaman Tripathi	10/16/09 10:43	Custody Transfer
JA30398-2.1	Sarvadaman Tripathi	Secured Storage	10/16/09 15:47	Return to Storage
JA30398-2.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30398-3.1	Secured Storage	Adam Scott	10/15/09 09:01	Retrieve from Storage
JA30398-3.1	Adam Scott	Melissa Smith	10/15/09 09:02	Custody Transfer
JA30398-3.1	Melissa Smith	Secured Storage	10/15/09 16:07	Return to Storage
JA30398-3.1	Secured Storage	Adam Scott	10/16/09 10:23	Retrieve from Storage
JA30398-3.1	Adam Scott	Sarvadaman Tripathi	10/16/09 10:43	Custody Transfer
JA30398-3.1	Sarvadaman Tripathi	Secured Storage	10/16/09 15:47	Return to Storage
JA30398-3.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30398-4.1	Secured Storage	Adam Scott	10/15/09 09:01	Retrieve from Storage
JA30398-4.1	Adam Scott	Melissa Smith	10/15/09 09:02	Custody Transfer
JA30398-4.1	Melissa Smith	Secured Storage	10/15/09 16:07	Return to Storage
JA30398-4.1	Secured Storage	Adam Scott	10/16/09 10:23	Retrieve from Storage
JA30398-4.1	Adam Scott	Sarvadaman Tripathi	10/16/09 10:43	Custody Transfer
JA30398-4.1	Sarvadaman Tripathi	Secured Storage	10/16/09 15:47	Return to Storage
JA30398-4.1	Dave Hunkele		11/25/09 12:48	Disposed

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: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51074/GN31237	3.0	0.0	ug/l	25	24.9	99.6	85-115%
Perchlorate	GP51074/GN31237			ug/l	8	7.97	99.6	85-115%

Associated Samples:
Batch GP51074: JA30398-1, JA30398-2, JA30398-3, JA30398-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31249	JA30398-2	umhos/cm	206	206	0.0	0-10%

Associated Samples:
Batch GN31249: JA30398-1, JA30398-2, JA30398-3, JA30398-4
Batch GP51074: JA30398-1, JA30398-2, JA30398-3, JA30398-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	25	21.8	87.2	80-120%

Associated Samples:
Batch GP51074: JA30398-1, JA30398-2, JA30398-3, JA30398-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Analyst: MS Run ID: GN31152
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:54	GN31152-STD1	1		STDA
12:40	GN31152-STD2	1		STDB
12:57	GN31152-STD3	1		STDC
13:15	GN31152-STD4	1		STDD
13:32	GN31152-STD5	1		STDE
13:49	GN31152-STD6	1		STDF
10:22	GN31152-IPC1	1		
10:39	GN31152-ICV1	1		
10:56	GP51074-MB1	1		
11:14	GN31152-CRI1	1		
11:31	GP51074-B1	1		
11:49	GN31152-CCV1	1		
12:06	GP51074-ICV1	1		
12:24	GP51074-S1	1		
12:41	GP51074-D1	1		
12:58	JA30063-2	1		(sample used for QC only; not part of login JA30398)
13:16	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:51	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:43	ZZZZZZ	1		
15:00	GN31152-CCVA1	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Run ID: GN31152 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31152-IPC1	Perchlorate	20.6	3.0	0.92	25	82.4	80-120
GN31152-ICV1	Perchlorate	22.7	3.0	0.92	25	90.8	90-110
GN31152-CRI1	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31152-CCV1	Perchlorate	22.5	3.0	0.92	25	90.0	85-115
GN31152-CCVA1	Perchlorate	52.2	3.0	0.92	50	104.4	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31237
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31237-STD1	1		STDA
10:36	GN31237-STD2	1		STDB
10:54	GN31237-STD3	1		STDC
11:11	GN31237-STD4	1		STDD
11:28	GN31237-STD5	1		STDE
11:46	GN31237-STD6	1		STDF
08:54	GN31237-IPC1	1		SCON=4240
09:11	GN31237-ICV1	1		
09:28	GP51074-MB2	1		
09:46	GN31237-CRI1	1		
10:03	GP51074-B2	1		
10:21	GN31237-CCV1	1		
10:38	GP51074-ICV2	1		
10:55	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:48	ZZZZZZ	1		
12:05	JA30398-1	1		
12:22	JA30398-2	1		scon
12:40	JA30398-3	1		scon
12:57	JA30398-4	1		scon
13:15	GN31237-CCVA1	1		
13:32	GP51094-MB1	1		
13:49	GP51094-B1	1		
14:07	GP51094-S1	1		%sol
14:24	GP51094-D1	1		%sol
14:42	JA30236-6	1		(sample used for QC only; not part of login JA30398)
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	ZZZZZZ	1		
15:51	ZZZZZZ	1		
16:09	ZZZZZZ	1		
16:26	GN31237-CCV2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31237
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:44	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:53	JA30398-4	1		for confirmation only; report original
18:11	ZZZZZZ	1		
18:28	GN31237-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30398
Account: TRCCTW - TRC
Project: SMC Perchlorate On-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Run ID: GN31237 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31237-IPC1	Perchlorate	24.6	3.0	0.92	25	98.4	80-120
GN31237-ICV1	Perchlorate	26.6	3.0	0.92	25	106.4	90-110
GN31237-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN31237-CCV1	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN31237-CCVA1	Perchlorate	51.5	3.0	0.92	50	103.0	
GN31237-CCV2	Perchlorate	25.9	3.0	0.92	25	103.6	85-115
GN31237-CCVA2	Perchlorate	53.2	3.0	0.92	50	106.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

Vertical Profiling

Accutest Job Number: JA30457

Sampling Date: 10/15/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **19**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA30457

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: Vertical Profiling

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA30457-1	10/15/09	09:15	JDM	10/15/09	AQ	Ground Water	VP-13(100-105')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30457
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/2/2009 6:39:46 PM

On 10/15/2009, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30457 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 EPA 314

Matrix: AQ **Batch ID:** GP51074

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30063-2DUP, JA30063-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31249

- Sample(s) JA30398-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-13(100-105')		
Lab Sample ID:	JA30457-1	**Date Sampled:**	10/15/09
Matrix:	AQ - Ground Water	**Date Received:**	10/15/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.6	3.0	0.92	ug/l	1	10/15/09 18:11	MS	EPA 314
Specific Conductivity	139	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ACCUTEST Laboratories

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TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

GW

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA 30457

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor | State: CT | Zip: 06095
Project Contact: Larry Buthien | E-mail: lbuthien@trcsolutions.com
Phone #: 860-298-6225 | Fax #:
Sampler(s) Name(s): John Moss | Phone #:

Project Information

Project Name: SMC off-site Vertical profiling
Street: 95 Sw Blvd
City: Newfield | State: NJ
Project #: 171441.0000.10.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: | State: | Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
	VP-13 (100-105')		10/15/09	9:15	JDM	GW	1					1				X	UTC 1

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [x] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	John Moss	10/15/09 10:06	[signature] 10-15-09 10:06	2 [signature] 10-15-09	12:05	2 [signature]
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp. 3.2c

A

JA30457: Chain of Custody
Page 1 of 1

Internal Sample Tracking Chronicle

TRC

Job No: JA30457

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: Vertical Profiling

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30457-1	Collected: 15-OCT-09 09:15 By: JDM		Received: 15-OCT-09 By: RL			
VP-13(100-105')						
JA30457-1	EPA 314	15-OCT-09 18:11	MS	15-OCT-09	MS	PERCHLT
JA30457-1	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON

R2-0002382

Accutest Internal Chain of Custody

Job Number: JA30457
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/15/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30457-1.1	Secured Storage	Adam Scott	10/15/09 15:14	Retrieve from Storage
JA30457-1.1	Adam Scott	Melissa Smith	10/15/09 15:15	Custody Transfer
JA30457-1.1	Melissa Smith	Secured Storage	10/15/09 16:07	Return to Storage
JA30457-1.1	Secured Storage	Adam Scott	10/16/09 10:23	Retrieve from Storage
JA30457-1.1	Adam Scott	Sarvadaman Tripathi	10/16/09 10:43	Custody Transfer
JA30457-1.1	Sarvadaman Tripathi	Secured Storage	10/16/09 15:47	Return to Storage
JA30457-1.1	Dave Hunkele		11/25/09 12:48	Disposed

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: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51074/GN31237	3.0	0.0	ug/l	25	24.9	99.6	85-115%
Perchlorate	GP51074/GN31237			ug/l	8	7.97	99.6	85-115%

Associated Samples:
Batch GP51074: JA30457-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31249	JA30398-2	umhos/cm	206	206	0.0	0-10%

Associated Samples:
Batch GN31249: JA30457-1
Batch GP51074: JA30457-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51074/GN31152	JA30063-2	ug/l	0.0	25	21.8	87.2	80-120%

Associated Samples:
Batch GP51074: JA30457-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Analyst: MS Run ID: GN31152
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:54	GN31152-STD1	1		STDA
12:40	GN31152-STD2	1		STDB
12:57	GN31152-STD3	1		STDC
13:15	GN31152-STD4	1		STDD
13:32	GN31152-STD5	1		STDE
13:49	GN31152-STD6	1		STDF
10:22	GN31152-IPC1	1		
10:39	GN31152-ICV1	1		
10:56	GP51074-MB1	1		
11:14	GN31152-CRI1	1		
11:31	GP51074-B1	1		
11:49	GN31152-CCV1	1		
12:06	GP51074-ICV1	1		
12:24	GP51074-S1	1		
12:41	GP51074-D1	1		
12:58	JA30063-2	1		(sample used for QC only; not part of login JA30457)
13:16	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:51	ZZZZZZ	1		
14:08	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:43	ZZZZZZ	1		
15:00	GN31152-CCVA1	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101301.TXT Date Analyzed: 10/13/09 Methods: EPA 314
Run ID: GN31152 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31152-IPC1	Perchlorate	20.6	3.0	0.92	25	82.4	80-120
GN31152-ICV1	Perchlorate	22.7	3.0	0.92	25	90.8	90-110
GN31152-CRI1	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31152-CCV1	Perchlorate	22.5	3.0	0.92	25	90.0	85-115
GN31152-CCVA1	Perchlorate	52.2	3.0	0.92	50	104.4	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31237
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31237-STD1	1		STDA
10:36	GN31237-STD2	1		STDB
10:54	GN31237-STD3	1		STDC
11:11	GN31237-STD4	1		STDD
11:28	GN31237-STD5	1		STDE
11:46	GN31237-STD6	1		STDF
08:54	GN31237-IPC1	1		SCON=4240
09:11	GN31237-ICV1	1		
09:28	GP51074-MB2	1		
09:46	GN31237-CRI1	1		
10:03	GP51074-B2	1		
10:21	GN31237-CCV1	1		
10:38	GP51074-ICV2	1		
10:55	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:48	ZZZZZZ	1		
12:05	ZZZZZZ	1		
12:22	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:57	ZZZZZZ	1		
13:15	GN31237-CCVA1	1		
13:32	GP51094-MB1	1		
13:49	GP51094-B1	1		
14:07	GP51094-S1	1		%sol
14:24	GP51094-D1	1		%sol
14:42	JA30236-6	1		(sample used for QC only; not part of login JA30457)
14:59	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:34	ZZZZZZ	1		
15:51	ZZZZZZ	1		
16:09	ZZZZZZ	1		
16:26	GN31237-CCV2	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31237
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:44	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:18	ZZZZZZ	1		
17:36	ZZZZZZ	1		
17:53	ZZZZZZ	1		
18:11	JA30457-1	1		%sol
18:28	GN31237-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30457
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101501.TXT Date Analyzed: 10/15/09 Methods: EPA 314, EPA 314 M
Run ID: GN31237 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31237-IPC1	Perchlorate	24.6	3.0	0.92	25	98.4	80-120
GN31237-ICV1	Perchlorate	26.6	3.0	0.92	25	106.4	90-110
GN31237-CRI1	Perchlorate	2.8	3.0	0.92	3	93.3	75-125
GN31237-CCV1	Perchlorate	24.9	3.0	0.92	25	99.6	85-115
GN31237-CCVA1	Perchlorate	51.5	3.0	0.92	50	103.0	
GN31237-CCV2	Perchlorate	25.9	3.0	0.92	25	103.6	85-115
GN31237-CCVA2	Perchlorate	53.2	3.0	0.92	50	106.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.000010.000000

Accutest Job Number: JA30523

Sampling Date: 10/15/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **17**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Accutest LabLink@544321 09:19 23-Feb-2010

Sample Summary

TRC

Job No: JA30523

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30523-1	10/15/09	11:40	JDM	10/15/09	AQ	Ground Water	VP-13(125-130')
JA30523-2	10/15/09	13:00	JDM	10/15/09	AQ	Field Blank Water	FB101509

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30523
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/2/2009 5:46:21 PM

On 10/15/2009, 1 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30523 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 EPA 314

Matrix: AQ **Batch ID:** GP51151

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30572-4DUP, JA30572-4MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31249

- Sample(s) JA30398-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-13(125-130')		
Lab Sample ID:	JA30523-1	**Date Sampled:**	10/15/09
Matrix:	AQ - Ground Water	**Date Received:**	10/15/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	5.7	3.0	0.92	ug/l	1	10/16/09 11:30	MS	EPA 314
Specific Conductivity	41.6	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB101509		
Lab Sample ID:	JA30523-2	**Date Sampled:**	10/15/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/15/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/16/09 11:47	MS	EPA 314
Specific Conductivity	2.2	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

ON FB

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: JA30523

Client / Reporting Information

Company Name: TRC Environmental Corp
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC off-site vertical profiling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Purchase to

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
1	VP-13 (125-130')		10/15/09	11:40	JOM	GW	1					1				X
2	FB101509		10/15/09	13:00	JOM	GW	1					1				X VTC1

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [x] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCT W2
- [x] EDD Format HASITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	John Moss	10/15/09 16:16	1	2	10-15-09 1805	2
2	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
	3		3	4		4
3	Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact / Not Intact	Preserved where applicable	On Ice	Cooler Temp
	5		5				9	3.2c

JA

JA30523: Chain of Custody
Page 1 of 1

R2-0002401

Internal Sample Tracking Chronicle

TRC

Job No: JA30523

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30523-1	Collected: 15-OCT-09 11:40 By: JDM		Received: 15-OCT-09 By: MPC			
VP-13(125-130')						
JA30523-1	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON
JA30523-1	EPA 314	16-OCT-09 11:30	MS	16-OCT-09	MS	PERCHLT
JA30523-2	Collected: 15-OCT-09 13:00 By: JDM		Received: 15-OCT-09 By: MPC			
FB101509						
JA30523-2	SM19 2510B/SW 9050A	16-OCT-09	ST			SCON
JA30523-2	EPA 314	16-OCT-09 11:47	MS	16-OCT-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30523
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/15/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30523-1.1	Secured Storage	Melissa Smith	10/16/09 10:09	Retrieve from Storage
JA30523-1.1	Melissa Smith	Secured Storage	10/16/09 16:40	Return to Storage
JA30523-1.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30523-1.1.1	Melissa Smith	Sarvadaman Tripathi	10/16/09 10:57	Aliquot from JA30523-1.1
JA30523-1.1.1	Sarvadaman Tripathi		10/16/09 15:48	Depleted
JA30523-2.1	Secured Storage	Melissa Smith	10/16/09 10:09	Retrieve from Storage
JA30523-2.1	Melissa Smith	Secured Storage	10/16/09 16:40	Return to Storage
JA30523-2.1	Dave Hunkele		11/25/09 12:48	Disposed
JA30523-2.1.1	Melissa Smith	Sarvadaman Tripathi	10/16/09 10:57	Aliquot from JA30523-2.1
JA30523-2.1.1	Sarvadaman Tripathi		10/16/09 15:48	Depleted

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: JA30523
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51151/GN31286	3.0	0.0	ug/l	25	24.9	99.6	85-115%
Perchlorate	GP51151/GN31286			ug/l	8	8.21	102.6	85-115%

Associated Samples:
Batch GP51151: JA30523-1, JA30523-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30523
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31249	JA30398-2	umhos/cm	206	206	0.0	0-10%

Associated Samples:
Batch GN31249: JA30523-1, JA30523-2
Batch GP51151: JA30523-1, JA30523-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30523
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	25	24.2	96.8	80-120%

Associated Samples:
Batch GP51151: JA30523-1, JA30523-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30523
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Analyst: MS Run ID: GN31286
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31286-STD1	1		STDA
10:36	GN31286-STD2	1		STDB
10:54	GN31286-STD3	1		STDC
11:11	GN31286-STD4	1		STDD
11:28	GN31286-STD5	1		STDE
11:46	GN31286-STD6	1		STDF
09:28	GN31286-IPC1	1		scon=4240
09:45	GN31286-ICV1	1		
10:03	GP51151-MB1	1		
10:20	GN31286-CRI1	1		
10:37	GP51151-B1	1		
10:55	GN31286-CCV1	1		
11:12	GP51151-ICV1	1		
11:30	JA30523-1	1		
11:47	JA30523-2	1		
12:04	GN31286-CCVA1	1		
13:42	GN31286-CCV2	1		
13:59	GP51151-S1	1		
14:16	GP51151-D1	1		
14:34	JA30572-4	1		(sample used for QC only; not part of login JA30523)
14:51	ZZZZZZ	1		
15:09	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:18	ZZZZZZ	10		
16:36	GN31286-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30523
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Run ID: GN31286 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31286-IPC1	Perchlorate	24.4	3.0	0.92	25	97.6	80-120
GN31286-ICV1	Perchlorate	27.1	3.0	0.92	25	108.4	90-110
GN31286-CRI1	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN31286-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN31286-CCVA1	Perchlorate	51.9	3.0	0.92	50	103.8	
GN31286-CCV2	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31286-CCVA2	Perchlorate	53.8	3.0	0.92	50	107.6	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

PO#16372 171441.000010.000000

Accutest Job Number: JA30622

Sampling Date: 10/16/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **23**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Accutest LabLink@544321 09:20 23-Feb-2010

Sample Summary

TRC

Job No: JA30622

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: PO#16372 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA30622-1	10/16/09	13:10	JDM	10/16/09	AQ	Ground Water	VP-14(35-40')
JA30622-2	10/16/09	14:15	JDM	10/16/09	AQ	Ground Water	VP-14(55-60')
JA30622-3	10/16/09	13:35	JDM	10/16/09	AQ	Field Blank Water	FB101609

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30622
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/3/2009 4:55:53 PM

On 10/16/2009, 2 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30622 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 EPA 314

Matrix: AQ **Batch ID:** GP51181

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30672-6DUP, JA30672-6MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31332

- Sample(s) JA30622-1DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-14(35-40')		
Lab Sample ID:	JA30622-1	**Date Sampled:**	10/16/09
Matrix:	AQ - Ground Water	**Date Received:**	10/16/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.93 B	3.0	0.92	ug/l	1	10/19/09 13:08	MS	EPA 314
Specific Conductivity	315	0.50		umhos/cm	1	10/19/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002415

Report of Analysis

Client Sample ID:	VP-14(55-60')		
Lab Sample ID:	JA30622-2	**Date Sampled:**	10/16/09
Matrix:	AQ - Ground Water	**Date Received:**	10/16/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/19/09 13:26	MS	EPA 314
Specific Conductivity	101	0.50		umhos/cm	1	10/19/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB101609		
Lab Sample ID:	JA30622-3	**Date Sampled:**	10/16/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/16/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/19/09 13:43	MS	EPA 314
Specific Conductivity	4.9	0.50		umhos/cm	1	10/19/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

SW FB

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30622

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC off-site vert. prof.
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	VP-14 (35-40')		10/16/09	13:10	JDM	GW	1					1				X	
2	VP-14 (55-60')		10/16/09	14:15	JDM	GW	1					1				X	UTC1
3	FB101609		10/16/09	13:35	JDM	GW	1					1				X	

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 John Moss	10/16/09 17:30	1 [signature]	2		2
3		3	4		4
5		5			

Custody Seal #: — ☐ Intact ☒ Not intact — Preserved where applicable ☐ — On Ice ☑ — Cooler Temp. 2.0°

A

4.1

4

JA30622: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30622 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/16/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA30622: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA30622

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: PO#16372 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30622-1	Collected: 16-OCT-09 13:10 By: JDM		Received: 16-OCT-09		By: MPC	
VP-14(35-40')						
JA30622-1	SM19 2510B/SW 9050A	19-OCT-09	BD			SCON
JA30622-1	EPA 314	19-OCT-09 13:08	MS	19-OCT-09	MS	PERCHLT
JA30622-2	Collected: 16-OCT-09 14:15 By: JDM		Received: 16-OCT-09		By: MPC	
VP-14(55-60')						
JA30622-2	SM19 2510B/SW 9050A	19-OCT-09	BD			SCON
JA30622-2	EPA 314	19-OCT-09 13:26	MS	19-OCT-09	MS	PERCHLT
JA30622-3	Collected: 16-OCT-09 13:35 By: JDM		Received: 16-OCT-09		By: MPC	
FB101609						
JA30622-3	SM19 2510B/SW 9050A	19-OCT-09	BD			SCON
JA30622-3	EPA 314	19-OCT-09 13:43	MS	19-OCT-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30622
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/16/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30622-1.1	Secured Storage	Todd Shoemaker	10/19/09 09:18	Retrieve from Storage
JA30622-1.1	Todd Shoemaker	Melissa Smith	10/19/09 09:19	Custody Transfer
JA30622-1.1	Melissa Smith	Barbara Dula	10/19/09 14:04	Custody Transfer
JA30622-1.1	Barbara Dula	Secured Storage	10/19/09 14:54	Return to Storage
JA30622-1.1	Dave Hunkele		11/25/09 12:49	Disposed
JA30622-2.1	Secured Storage	Todd Shoemaker	10/19/09 09:18	Retrieve from Storage
JA30622-2.1	Todd Shoemaker	Melissa Smith	10/19/09 09:19	Custody Transfer
JA30622-2.1	Melissa Smith	Barbara Dula	10/19/09 14:04	Custody Transfer
JA30622-2.1	Barbara Dula	Secured Storage	10/19/09 14:54	Return to Storage
JA30622-2.1	Dave Hunkele		11/25/09 12:49	Disposed
JA30622-3.1	Secured Storage	Todd Shoemaker	10/19/09 09:18	Retrieve from Storage
JA30622-3.1	Todd Shoemaker	Melissa Smith	10/19/09 09:19	Custody Transfer
JA30622-3.1	Melissa Smith	Barbara Dula	10/19/09 14:04	Custody Transfer
JA30622-3.1	Barbara Dula	Secured Storage	10/19/09 14:54	Return to Storage
JA30622-3.1	Dave Hunkele		11/25/09 12:49	Disposed

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: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51181/GN31340	3.0	0.0	ug/l	25	24.5	98.0	85-115%
Perchlorate	GP51181/GN31340			ug/l	8	7.88	98.5	85-115%

Associated Samples:
Batch GP51181: JA30622-1, JA30622-2, JA30622-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51181/GN31340	JA30672-6	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31332	JA30622-1	umhos/cm	315	310	1.6	0-10%

Associated Samples:
Batch GN31332: JA30622-1, JA30622-2, JA30622-3
Batch GP51181: JA30622-1, JA30622-2, JA30622-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51181/GN31381	JA30672-6	ug/l	0.0	25	25.2	100.8	80-120%

Associated Samples:
Batch GP51181: JA30622-1, JA30622-2, JA30622-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101901.TXT Date Analyzed: 10/19/09 Methods: EPA 314
Analyst: MS Run ID: GN31340
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	GN31340-STD1	1		STDA
09:22	GN31340-STD2	1		STDB
09:40	GN31340-STD3	1		STDC
09:57	GN31340-STD4	1		STDD
10:14	GN31340-STD5	1		STDE
10:32	GN31340-STD6	1		STDF
10:49	GN31340-STD7	1		STDD
11:07	GN31340-IPC1	1		scon=4290
11:24	GN31340-ICV1	1		
11:41	GP51181-MB1	1		
11:59	GN31340-CRI1	1		
12:16	GP51181-B1	1		
12:34	GN31340-CCV1	1		
12:51	GP51181-ICV1	1		
13:08	JA30622-1	1		
13:26	JA30622-2	1		
13:43	JA30622-3	1		
14:01	GP51181-S1	1		interfering peak; rerun for confirmation
14:18	GP51181-D1	1		
14:35	JA30672-6	1		(sample used for QC only; not part of login JA30622)
14:53	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:28	ZZZZZZ	1		
15:45	GN31340-CCVA1	1		
16:02	ZZZZZZ	1		
16:20	ZZZZZZ	1		
16:37	ZZZZZZ	1		
16:55	ZZZZZZ	1		
17:12	ZZZZZZ	1		
17:29	ZZZZZZ	1		
17:47	ZZZZZZ	1		
18:04	ZZZZZZ	1		
18:22	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101901.TXT Date Analyzed: 10/19/09 Methods: EPA 314
Analyst: MS Run ID: GN31340
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:39	ZZZZZZ	1		
18:57	GN31340-CCV2	1		
19:14	GP51181-S1	1		rerun for confirmation
19:31	GN31340-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101901.TXT Date Analyzed: 10/19/09 Methods: EPA 314
Run ID: GN31340 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31340-IPC1	Perchlorate	28.4	3.0	0.92	25	113.6	80-120
GN31340-ICV1	Perchlorate	24.9	3.0	0.92	25	99.6	90-110
GN31340-CRI1	Perchlorate	3.7	3.0	0.92	3	123.3	75-125
GN31340-CCV1	Perchlorate	24.6	3.0	0.92	25	98.4	85-115
GN31340-CCVA1	Perchlorate	51.5	3.0	0.92	50	103.0	
GN31340-CCV2	Perchlorate	27.7	3.0	0.92	25	110.8	85-115
GN31340-CCVA2	Perchlorate	55.3	3.0	0.92	50	110.6	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102001.TXT Date Analyzed: 10/20/09 Methods: EPA 314
Analyst: MS Run ID: GN31381
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	GN31381-STD1	1		STDA
09:22	GN31381-STD2	1		STDB
09:40	GN31381-STD3	1		STDC
10:14	GN31381-STD5	1		STDE
10:32	GN31381-STD6	1		STDF
10:49	GN31381-STD4	1		STDD
09:50	GN31381-IPC1	1		scon=4290
10:07	GN31381-ICV1	1		
10:24	GP51193-MB1	1		
10:24	GP51181-MB2	1		Sample shown for QC tracking purposes only.
10:42	GN31381-CRI1	1		
10:59	GP51193-B1	1		
10:59	GP51181-B2	1		Sample shown for QC tracking purposes only.
11:17	GN31381-CCV1	1		
15:27	GN31381-CCVA1	1		
16:22	GP51193-ICV1	1		
16:40	GP51193-S1	1		
16:57	GP51193-D1	1		
17:15	JA30759-2	1		(sample used for QC only; not part of login JA30622)
17:32	ZZZZZZ	1		
17:49	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:24	ZZZZZZ	1		
18:42	ZZZZZZ	1		
18:59	ZZZZZZ	200		
19:16	GN31381-CCV2	1		
19:34	ZZZZZZ	1		
19:51	ZZZZZZ	1		
20:09	ZZZZZZ	1		
20:26	ZZZZZZ	1		
20:43	GN31381-CCVA2	1		
21:01	ZZZZZZ	1		
21:18	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102001.TXT Date Analyzed: 10/20/09 Methods: EPA 314
Analyst: MS Run ID: GN31381
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:36	ZZZZZZ	1		
21:53	ZZZZZZ	1		
22:10	ZZZZZZ	3		
22:28	ZZZZZZ	1		
22:45	GP51181-S1	1		
23:03	GN31381-CCV3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30622
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102001.TXT Date Analyzed: 10/20/09 Methods: EPA 314
Run ID: GN31381 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31381-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN31381-ICV1	Perchlorate	26.4	3.0	0.92	25	105.6	90-110
GN31381-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN31381-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN31381-CCVA1	Perchlorate	55.1	3.0	0.92	50	110.2	
GN31381-CCV2	Perchlorate	26.0	3.0	0.92	25	104.0	85-115
GN31381-CCVA2	Perchlorate	50.5	3.0	0.92	50	101.0	
GN31381-CCV3	Perchlorate	28.1	3.0	0.92	25	112.4	85-115

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.000010.000000 PO#16372

Accutest Job Number: JA30759

Sampling Date: 10/19/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **23**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA30759

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000 PO#16372

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30759-1	10/19/09	10:25	JM	10/19/09	AQ	Ground Water	VP-14(80-85')
JA30759-2	10/19/09	12:15	JM	10/19/09	AQ	Ground Water	VP-14(105-110')
JA30759-2D	10/19/09	12:15	JM	10/19/09	AQ	Water Dup/MSD	VP-14MSD(105-110')
JA30759-2S	10/19/09	12:15	JM	10/19/09	AQ	Water Matrix Spike	VP-14MS(105-110')
JA30759-3	10/19/09	16:00	JM	10/19/09	AQ	Ground Water	VP-24(105-110')
JA30759-4	10/19/09	14:00	JM	10/19/09	AQ	Field Blank Water	FB101909
JA30759-5	10/19/09	15:10	JM	10/19/09	AQ	Ground Water	VP-14(130-135')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30759
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/3/2009 12:15:35 PM

On 10/19/2009, 4 Sample(s), 0 Trip Blank(s) and 1 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 JA30759 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 EPA 314

Matrix: AQ **Batch ID:** GP51193

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30759-2DUP, JA30759-2MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31396

- Sample(s) JA30759-2DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-14(80-85')		
Lab Sample ID:	JA30759-1	**Date Sampled:**	10/19/09
Matrix:	AQ - Ground Water	**Date Received:**	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.6 B	3.0	0.92	ug/l	1	10/20/09 17:32	MS	EPA 314
Specific Conductivity	332	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-14(105-110')		
Lab Sample ID:	JA30759-2	**Date Sampled:**	10/19/09
Matrix:	AQ - Ground Water	**Date Received:**	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.2	3.0	0.92	ug/l	1	10/20/09 17:15	MS	EPA 314
Specific Conductivity	334	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-24(105-110')		
Lab Sample ID:	JA30759-3	**Date Sampled:**	10/19/09
Matrix:	AQ - Ground Water	**Date Received:**	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	5.9	3.0	0.92	ug/l	1	10/20/09 17:49	MS	EPA 314
Specific Conductivity	327	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB101909		
Lab Sample ID:	JA30759-4	**Date Sampled:**	10/19/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/20/09 18:07	MS	EPA 314
Specific Conductivity	4.3	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-14(130-135')		
Lab Sample ID:	JA30759-5	**Date Sampled:**	10/19/09
Matrix:	AQ - Ground Water	**Date Received:**	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	12.5	3.0	0.92	ug/l	1	10/20/09 18:24	MS	EPA 314
Specific Conductivity	77.2	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

GW FB

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30759

Client / Reporting Information

Company Name: TRC Environmental Corp
Street Address: 21 Griffin Rd. North
City / State / Zip: Windsor CT 06095
Project Contact / E-mail: Larry Butlien lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s) / Phone #: John Moss

Project Information

Project Name: SMC off-site vert. prof.
Street: 35 SW Blvd.
City / State: Newfield NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	VP-14 (80-85')		10/19/09	10:25	JDM	GW	1					1				X	UTC1
/	VP-14 (105-110')		10/19/09	12:15	JDM	GW	1					1				X	
-2	VP-14MS (105-110')		10/19/09	12:15	JDM	GW	1					1				X	
\	VP-14MSD (105-110')		10/19/09	12:15	JDM	GW	1					1				X	
-3	VP-24 (105-110')		10/19/09	16:00	JDM	GW	1					1				X	
-4	FB101909		10/19/09	14:00	JDM	GW	1					1				X	
-5	VP-14 (130-135')		10/19/09	15:10	JDM	GW	1					1				X	

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 John D. Moss	10/19/09 / 16:00	1 [signature]	2 [signature]	10-19-9 17:45	2 PDr
3		3	4		4
5		5	Custody Seal # —	[ ] Intact [x] Not intact	Preserved where applicable [ ] On Ice [x] Cooler Temp. 2.4

1B

4.1 4

JA30759: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30759 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/19/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
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2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

4.1
4

JA30759: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA30759

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000 PO#16372

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30759-1	Collected: 19-OCT-09 10:25 By: JM		Received: 19-OCT-09 By:			
VP-14(80-85')						
JA30759-1	EPA 314	20-OCT-09 17:32	MS	20-OCT-09	MS	PERCHLT
JA30759-1	SM19 2510B/SW 9050A	21-OCT-09	BD			SCON
JA30759-2	Collected: 19-OCT-09 12:15 By: JM		Received: 19-OCT-09 By:			
VP-14(105-110')						
JA30759-2	EPA 314	20-OCT-09 17:15	MS	20-OCT-09	MS	PERCHLT
JA30759-2	SM19 2510B/SW 9050A	21-OCT-09	BD			SCON
JA30759-3	Collected: 19-OCT-09 16:00 By: JM		Received: 19-OCT-09 By:			
VP-24(105-110')						
JA30759-3	EPA 314	20-OCT-09 17:49	MS	20-OCT-09	MS	PERCHLT
JA30759-3	SM19 2510B/SW 9050A	21-OCT-09	BD			SCON
JA30759-4	Collected: 19-OCT-09 14:00 By: JM		Received: 19-OCT-09 By:			
FB101909						
JA30759-4	EPA 314	20-OCT-09 18:07	MS	20-OCT-09	MS	PERCHLT
JA30759-4	SM19 2510B/SW 9050A	21-OCT-09	BD			SCON
JA30759-5	Collected: 19-OCT-09 15:10 By: JM		Received: 19-OCT-09 By:			
VP-14(130-135')						
JA30759-5	EPA 314	20-OCT-09 18:24	MS	20-OCT-09	MS	PERCHLT
JA30759-5	SM19 2510B/SW 9050A	21-OCT-09	BD			SCON

Accutest Internal Chain of Custody

Job Number: JA30759
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/19/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30759-1.1	Secured Storage	Todd Shoemaker	10/20/09 08:31	Retrieve from Storage
JA30759-1.1	Todd Shoemaker	Melissa Smith	10/20/09 08:32	Custody Transfer
JA30759-1.1	Melissa Smith	Secured Storage	10/20/09 16:27	Return to Storage
JA30759-1.1	Secured Storage	Adam Scott	10/21/09 08:06	Retrieve from Storage
JA30759-1.1	Adam Scott	Barbara Dula	10/21/09 08:07	Custody Transfer
JA30759-1.1	Barbara Dula	Secured Storage	10/21/09 16:16	Return to Storage
JA30759-1.1	Dave Hunkele		11/25/09 12:49	Disposed
JA30759-2.1	Secured Storage	Todd Shoemaker	10/20/09 08:31	Retrieve from Storage
JA30759-2.1	Todd Shoemaker	Melissa Smith	10/20/09 08:32	Custody Transfer
JA30759-2.1	Melissa Smith	Secured Storage	10/20/09 16:27	Return to Storage
JA30759-2.1	Secured Storage	Adam Scott	10/21/09 08:06	Retrieve from Storage
JA30759-2.1	Adam Scott	Barbara Dula	10/21/09 08:07	Custody Transfer
JA30759-2.1	Barbara Dula	Secured Storage	10/21/09 16:16	Return to Storage
JA30759-2.1	Dave Hunkele		11/25/09 12:49	Disposed
JA30759-2.3	Secured Storage	Todd Shoemaker	10/20/09 08:31	Retrieve from Storage
JA30759-2.3	Todd Shoemaker	Melissa Smith	10/20/09 08:32	Custody Transfer
JA30759-2.3	Melissa Smith	Secured Storage	10/20/09 16:27	Return to Storage
JA30759-2.3	Secured Storage	Adam Scott	10/21/09 08:06	Retrieve from Storage
JA30759-2.3	Adam Scott	Barbara Dula	10/21/09 08:07	Custody Transfer
JA30759-2.3	Barbara Dula	Secured Storage	10/21/09 16:16	Return to Storage
JA30759-2.3	Dave Hunkele		11/25/09 12:49	Disposed
JA30759-3.1	Secured Storage	Todd Shoemaker	10/20/09 08:31	Retrieve from Storage
JA30759-3.1	Todd Shoemaker	Melissa Smith	10/20/09 08:32	Custody Transfer
JA30759-3.1	Melissa Smith	Secured Storage	10/20/09 16:27	Return to Storage
JA30759-3.1	Secured Storage	Adam Scott	10/21/09 08:06	Retrieve from Storage
JA30759-3.1	Adam Scott	Barbara Dula	10/21/09 08:07	Custody Transfer
JA30759-3.1	Barbara Dula	Secured Storage	10/21/09 16:16	Return to Storage
JA30759-3.1	Dave Hunkele		11/25/09 12:49	Disposed
JA30759-4.1	Secured Storage	Todd Shoemaker	10/20/09 08:31	Retrieve from Storage
JA30759-4.1	Todd Shoemaker	Melissa Smith	10/20/09 08:32	Custody Transfer
JA30759-4.1	Melissa Smith	Secured Storage	10/20/09 16:27	Return to Storage
JA30759-4.1	Secured Storage	Adam Scott	10/21/09 08:06	Retrieve from Storage
JA30759-4.1	Adam Scott	Barbara Dula	10/21/09 08:07	Custody Transfer
JA30759-4.1	Barbara Dula	Secured Storage	10/21/09 16:16	Return to Storage
JA30759-4.1	Dave Hunkele		11/25/09 12:49	Disposed
JA30759-5.1	Secured Storage	Todd Shoemaker	10/20/09 08:31	Retrieve from Storage
JA30759-5.1	Todd Shoemaker	Melissa Smith	10/20/09 08:32	Custody Transfer
JA30759-5.1	Melissa Smith	Secured Storage	10/20/09 16:27	Return to Storage
JA30759-5.1	Secured Storage	Adam Scott	10/21/09 08:06	Retrieve from Storage

Accutest Internal Chain of Custody

Job Number: JA30759
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/19/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30759-5.1	Adam Scott	Barbara Dula	10/21/09 08:07	Custody Transfer
JA30759-5.1	Barbara Dula	Secured Storage	10/21/09 16:16	Return to Storage
JA30759-5.1	Dave Hunkele		11/25/09 12:49	Disposed

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: JA30759
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51193/GN31381	3.0	0.0	ug/l	25	24.7	98.8	85-115%
Perchlorate	GP51193/GN31381			ug/l	8	7.99	99.9	85-115%

Associated Samples:
Batch GP51193: JA30759-1, JA30759-2, JA30759-3, JA30759-4, JA30759-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30759
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51193/GN31381	JA30759-2	ug/l	6.2	6.2	0.0	0-15%
Specific Conductivity	GN31396	JA30759-2	umhos/cm	334	331	0.9	0-10%

Associated Samples:
Batch GN31396: JA30759-1, JA30759-2, JA30759-3, JA30759-4, JA30759-5
Batch GP51193: JA30759-1, JA30759-2, JA30759-3, JA30759-4, JA30759-5
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30759
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51193/GN31381	JA30759-2	ug/l	6.2	25	31.0	99.2	80-120%

Associated Samples:
Batch GP51193: JA30759-1, JA30759-2, JA30759-3, JA30759-4, JA30759-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30759
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102001.TXT Date Analyzed: 10/20/09 Methods: EPA 314
Analyst: MS Run ID: GN31381
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	GN31381-STD1	1		STDA
09:22	GN31381-STD2	1		STDB
09:40	GN31381-STD3	1		STDC
10:14	GN31381-STD5	1		STDE
10:32	GN31381-STD6	1		STDF
10:49	GN31381-STD4	1		STDD
09:50	GN31381-IPC1	1		scon=4290
10:07	GN31381-ICV1	1		
10:24	GP51193-MB1	1		
10:24	GP51181-MB2	1		Sample shown for QC tracking purposes only.
10:42	GN31381-CRI1	1		
10:59	GP51193-B1	1		
10:59	GP51181-B2	1		Sample shown for QC tracking purposes only.
11:17	GN31381-CCV1	1		
15:27	GN31381-CCVA1	1		
16:22	GP51193-ICV1	1		
16:40	GP51193-S1	1		
16:57	GP51193-D1	1		
17:15	JA30759-2	1		
17:32	JA30759-1	1		
17:49	JA30759-3	1		
18:07	JA30759-4	1		
18:24	JA30759-5	1		
18:42	ZZZZZZ	1		
18:59	ZZZZZZ	200		
19:16	GN31381-CCV2	1		
19:34	ZZZZZZ	1		
19:51	ZZZZZZ	1		
20:09	ZZZZZZ	1		
20:26	ZZZZZZ	1		
20:43	GN31381-CCVA2	1		
21:01	ZZZZZZ	1		
21:18	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30759
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102001.TXT Date Analyzed: 10/20/09 Methods: EPA 314
Analyst: MS Run ID: GN31381
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
21:36	ZZZZZZ	1		
21:53	ZZZZZZ	1		
22:10	ZZZZZZ	3		
22:28	ZZZZZZ	1		
22:45	GP51181-S1	1		
23:03	GN31381-CCV3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30759
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102001.TXT Date Analyzed: 10/20/09 Methods: EPA 314
Run ID: GN31381 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31381-IPC1	Perchlorate	24.2	3.0	0.92	25	96.8	80-120
GN31381-ICV1	Perchlorate	26.4	3.0	0.92	25	105.6	90-110
GN31381-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN31381-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN31381-CCVA1	Perchlorate	55.1	3.0	0.92	50	110.2	
GN31381-CCV2	Perchlorate	26.0	3.0	0.92	25	104.0	85-115
GN31381-CCVA2	Perchlorate	50.5	3.0	0.92	50	101.0	
GN31381-CCV3	Perchlorate	28.1	3.0	0.92	25	112.4	85-115

(!) Outside of QC limits

New Jersey ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

02/23/10

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.000010.000000

Accutest Job Number: JA30903

Sampling Dates: 10/20/09 - 10/21/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **22**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

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: Marie Meidhof 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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Test results relate only to samples analyzed.

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Accutest LabLink@544321 09:21 23-Feb-2010

Sample Summary

TRC

Job No: JA30903

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30903-1	10/20/09	15:40	JM	10/21/09	AQ	Ground Water	VP-15A(15-20')
JA30903-2	10/20/09	16:00	JM	10/21/09	AQ	Field Blank Water	FB102009
JA30903-3	10/21/09	08:50	JM	10/21/09	AQ	Ground Water	VP-15A(38-43')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA30903

Site: SMC Perchlorate Off-Site Investigation, Newfield, NJ **Report Date** 11/9/2009 7:02:15 PM

On 10/21/2009, 2 Sample(s), 0 Trip Blank(s) and 1 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 JA30903 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 EPA 314

Matrix: AQ **Batch ID:** GP51151

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30572-4DUP, JA30572-4MS were used as the QC samples for Perchlorate.
- GP51151-ICV2 for Perchlorate: External check at 8 ppb.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31459

- Sample(s) JA30903-1DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-15A(15-20')		
Lab Sample ID:	JA30903-1	**Date Sampled:**	10/20/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/22/09 11:31	MS	EPA 314
Specific Conductivity	737	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102009		
Lab Sample ID:	JA30903-2	**Date Sampled:**	10/20/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/22/09 11:48	MS	EPA 314
Specific Conductivity	2.9	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-15A(38-43')		
Lab Sample ID:	JA30903-3	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/22/09 12:06	MS	EPA 314
Specific Conductivity	128	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

gw FB

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA30903

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City / State / Zip: Windsor CT 06095
Project Contact: Larry Buttien
E-mail: lbuttien@trcsolutions.com
Phone #: 860-298-6225
Fax #:
Sampler(s) Name(s): John Moss
Phone #:

Project Information

Project Name: SMC off-site vertical profiling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	VP-15A (15-20')		10/20/09	15:40	JDM	GW	1					1				X	UTC1
-2	FB102009		10/20/09	16:00	JDM	GW	1					1				X	
-3	VP-15A (38-43')		10/21/09	8:50	JDM	GW	1					1				X	

Number of preserved Bottles

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms RCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1 John Moss	10/21/09 10:00	1 S. Rider	2 S. Rider	10-21-9 13oc	2 PDr
3		3	4		4
5		5			

Custody Seal #: — [ ] Intact [x] Not intact
Preserved where applicable [ ]
On Ice [ ]
Cooler Temp. 2.4c

4.1

4

JA30903: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30903 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/21/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA30903: Chain of Custody
Page 2 of 3

Job Change Order: JA30903_11/3/2009

Requested Date:	11/3/2009	**Received Date:**	10/21/2009
Account Name:	TRC	**Due Date:**	10/23/2009
Project Description:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Deliverable:**	FULT1
CSR:	MM	**TAT (Days):**	2

Sample #: JA30903-1

Change: Please revise the ID to VP-15A(15-20') ; delete the GW at the end of the ID.

VP-15A(15-20')GW

Sample #: JA30903-3

Change: Please revise the ID to VP-15A(38-43'); delete the GW at the end of the ID.

VP-15A(38-43')GW

Above Changes Per: John Moss **Date:** 11/3/2009

To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.

Page 1 of 1

JA30903: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

TRC

Job No: JA30903

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30903-1	Collected: 20-OCT-09 15:40 By: JM		Received: 21-OCT-09 By:			
VP-15A(15-20')						
JA30903-1	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30903-1	EPA 314	22-OCT-09 11:31	MS	22-OCT-09	MS	PERCHLT
JA30903-2	Collected: 20-OCT-09 16:00 By: JM		Received: 21-OCT-09 By:			
FB102009						
JA30903-2	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30903-2	EPA 314	22-OCT-09 11:48	MS	22-OCT-09	MS	PERCHLT
JA30903-3	Collected: 21-OCT-09 08:50 By: JM		Received: 21-OCT-09 By:			
VP-15A(38-43')						
JA30903-3	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30903-3	EPA 314	22-OCT-09 12:06	MS	22-OCT-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30903
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30903-1.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30903-1.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30903-1.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30903-1.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:35	Retrieve from Storage
JA30903-1.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30903-1.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30903-2.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30903-2.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30903-2.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30903-2.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:35	Retrieve from Storage
JA30903-2.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30903-2.1	Dave Hunkele		12/08/09 10:56	Disposed
JA30903-3.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30903-3.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30903-3.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30903-3.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:35	Retrieve from Storage
JA30903-3.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30903-3.1	Dave Hunkele		12/08/09 10:56	Disposed

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: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51151/GN31493	3.0	0.0	ug/l	25	24.7	98.8	85-115%
Perchlorate	GP51151/GN31493			ug/l	8	8.74	109.3(a)	85-115%
Specific Conductivity	GN31459			umhos/cm	462	458	99.1	99-101%

Associated Samples:
Batch GN31459: JA30903-1, JA30903-2, JA30903-3
Batch GP51151: JA30903-1, JA30903-2, JA30903-3
(*) Outside of QC limits
(a) External check at 8 ppb.

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31459	JA30903-1	umhos/cm	737	735	0.3	0-10%

Associated Samples:
Batch GN31459: JA30903-1, JA30903-2, JA30903-3
Batch GP51151: JA30903-1, JA30903-2, JA30903-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	25	24.2	96.8	80-120%

Associated Samples:
Batch GP51151: JA30903-1, JA30903-2, JA30903-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Analyst: MS Run ID: GN31286
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31286-STD1	1		STDA
10:36	GN31286-STD2	1		STDB
10:54	GN31286-STD3	1		STDC
11:11	GN31286-STD4	1		STDD
11:28	GN31286-STD5	1		STDE
11:46	GN31286-STD6	1		STDF
09:28	GN31286-IPC1	1		scon=4240
09:45	GN31286-ICV1	1		
10:03	GP51151-MB1	1		
10:20	GN31286-CRI1	1		
10:37	GP51151-B1	1		
10:55	GN31286-CCV1	1		
11:12	GP51151-ICV1	1		
11:30	ZZZZZZ	1		
11:47	ZZZZZZ	1		
12:04	GN31286-CCVA1	1		
13:42	GN31286-CCV2	1		
13:59	GP51151-S1	1		
14:16	GP51151-D1	1		
14:34	JA30572-4	1		(sample used for QC only; not part of login JA30903)
14:51	ZZZZZZ	1		
15:09	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:18	ZZZZZZ	10		
16:36	GN31286-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Run ID: GN31286 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31286-IPC1	Perchlorate	24.4	3.0	0.92	25	97.6	80-120
GN31286-ICV1	Perchlorate	27.1	3.0	0.92	25	108.4	90-110
GN31286-CRI1	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN31286-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN31286-CCVA1	Perchlorate	51.9	3.0	0.92	50	103.8	
GN31286-CCV2	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31286-CCVA2	Perchlorate	53.8	3.0	0.92	50	107.6	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102201.TXT Date Analyzed: 10/22/09 Methods: EPA 314
Analyst: MS Run ID: GN31493
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	GN31493-STD1	1		STDA
09:22	GN31493-STD2	1		STDB
09:40	GN31493-STD3	1		STDC
10:14	GN31493-STD5	1		STDE
10:32	GN31493-STD6	1		STDF
10:49	GN31493-STD4	1		STDD
09:29	GN31493-IPC1	1		scon=4290
09:46	GN31493-ICV1	1		
10:04	GP51151-MB2	1		
10:21	GN31493-CRI1	1		
10:39	GP51151-B2	1		
10:56	GN31493-CCV1	1		
11:13	GP51151-ICV2	1		
11:31	JA30903-1	1		
11:48	JA30903-2	1		
12:06	JA30903-3	1		
12:23	ZZZZZZ	1		
12:40	ZZZZZZ	1		
12:58	ZZZZZZ	1		
13:15	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:50	GN31493-CCVA1	1		
14:07	JA29842-7P	1		(sample used for QC only; not part of login JA30903)
14:25	GP51151-D2	1		messy baseline; see rerun
14:42	ZZZZZZ	1		
15:00	JA29842-7P	1		(sample used for QC only; not part of login JA30903)
15:17	GP51151-D2	1		interfering peak; see rerun
15:34	ZZZZZZ	1		
15:52	GN31493-CCV2	1		
16:18	JA29842-7P	1		(sample used for QC only; not part of login JA30903)
16:35	GP51151-D2	1		
16:53	GN31493-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30903
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102201.TXT Date Analyzed: 10/22/09 Methods: EPA 314
Run ID: GN31493 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31493-IPC1	Perchlorate	23.6	3.0	0.92	25	94.4	80-120
GN31493-ICV1	Perchlorate	26.3	3.0	0.92	25	105.2	90-110
GN31493-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN31493-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31493-CCVA1	Perchlorate	52.1	3.0	0.92	50	104.2	
GN31493-CCV2	Perchlorate	24.5	3.0	0.92	25	98.0	85-115
GN31493-CCVA2	Perchlorate	50.7	3.0	0.92	50	101.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.0000010.0000000

Accutest Job Number: JA30950

Sampling Date: 10/21/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **23**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA30950

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.0000010.0000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA30950-1	10/21/09	10:20	JDM	10/21/09	AQ	Ground Water	VP-15A(55-60')
JA30950-2	10/21/09	11:30	JDM	10/21/09	AQ	Ground Water	VP-15A(77-82')
JA30950-3	10/21/09	13:55	JDM	10/21/09	AQ	Ground Water	VP-15A(99-104')
JA30950-4	10/21/09	15:30	JDM	10/21/09	AQ	Ground Water	VP-25A(99-104')
JA30950-5	10/21/09	14:30	JDM	10/21/09	AQ	Field Blank Water	FB102109

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA30950
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/6/2009 12:01:14 P

On 10/21/2009, 4 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.1 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA30950 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 EPA 314

Matrix: AQ **Batch ID:** GP51151

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30572-4DUP, JA30572-4MS were used as the QC samples for Perchlorate.
- GP51151-ICV2 for Perchlorate: External check at 8 ppb.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31459

- Sample(s) JA30903-1DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-15A(55-60')		
Lab Sample ID:	JA30950-1	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/22/09 12:23	MS	EPA 314
Specific Conductivity	73.9	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-15A(77-82')		
Lab Sample ID:	JA30950-2	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.6 B	3.0	0.92	ug/l	1	10/22/09 12:40	MS	EPA 314
Specific Conductivity	67.5	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-15A(99-104')		
Lab Sample ID:	JA30950-3	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.5 B	3.0	0.92	ug/l	1	10/22/09 12:58	MS	EPA 314
Specific Conductivity	81.6	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-25A(99-104')		
Lab Sample ID:	JA30950-4	**Date Sampled:**	10/21/09
Matrix:	AQ - Ground Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.9 B	3.0	0.92	ug/l	1	10/22/09 15:34	MS	EPA 314
Specific Conductivity	80.7	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102109		
Lab Sample ID:	JA30950-5	**Date Sampled:**	10/21/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/22/09 13:33	MS	EPA 314
Specific Conductivity	2.6	0.50		umhos/cm	1	10/22/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

GW FB

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 1

PRIOR

FED-EX Tracking # 13783746

Bottle Order Control #

Accutest Quote #

Accutest Job # JA30950

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)
Company Name: TRC Environmental Corp.	Project Name: SMC off-site vertical profiling	Perchlorate
Street Address: 21 Griffin Rd. North	Street: 35 SW Blvd.	
City / State / Zip: Windsor CT 06095	City / State: Newfield NJ	
Project Contact / E-mail: Larry Butlien lbutlien@trcsolutions.com	Project #: 171441.000010.000000	
Phone #: 860-298-6225 / Fax #:	Client Purchase Order #: 16372	
Sampler(s) Name(s) / Phone #: John Moss	Project Manager:	

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	VP-15A (55-60')		10/21/09	10:20	JDM	GW	1					1				X	
2	VP-15A (77-82')		10/21/09	11:30	JDM	GW	1					1				X	UTC1
3	VP-15A (99-104')		10/21/09	13:55	JDM	GW	1					1				X	
4	VP-25A (99-104')		10/21/09	15:30	JDM	GW	1					1				X	
5	FB102109		10/21/09	14:30	JDM	GW	1					1				X	

Number of preserved Bottles

Turnaround Time (Business days)
- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions: A 125mL DAB's 10-21-09

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 John Moss	10/21/09 14:55	1 [signature]	2 [signature]	10-21-09 1658	2 [signature]
3		3	4		4
5		5	Custody Seal #		

Intact / Not intact — Preserved where applicable — On Ice — Cooler Temp. 2.1°C

IB

4.1

4

JA30950: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA30950 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/21/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
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2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA30950: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA30950

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.0000010.0000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA30950-1	Collected: 21-OCT-09 10:20 By: JDM		Received: 21-OCT-09 By: MPC			
VP-15A(55-60')						
JA30950-1	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30950-1	EPA 314	22-OCT-09 12:23	MS	22-OCT-09	MS	PERCHLT
JA30950-2	Collected: 21-OCT-09 11:30 By: JDM		Received: 21-OCT-09 By: MPC			
VP-15A(77-82')						
JA30950-2	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30950-2	EPA 314	22-OCT-09 12:40	MS	22-OCT-09	MS	PERCHLT
JA30950-3	Collected: 21-OCT-09 13:55 By: JDM		Received: 21-OCT-09 By: MPC			
VP-15A(99-104')						
JA30950-3	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30950-3	EPA 314	22-OCT-09 12:58	MS	22-OCT-09	MS	PERCHLT
JA30950-4	Collected: 21-OCT-09 15:30 By: JDM		Received: 21-OCT-09 By: MPC			
VP-25A(99-104')						
JA30950-4	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30950-4	EPA 314	22-OCT-09 15:34	MS	22-OCT-09	MS	PERCHLT
JA30950-5	Collected: 21-OCT-09 14:30 By: JDM		Received: 21-OCT-09 By: MPC			
FB102109						
JA30950-5	SM19 2510B/SW 9050A	22-OCT-09	ST			SCON
JA30950-5	EPA 314	22-OCT-09 13:33	MS	22-OCT-09	MS	PERCHLT

Accutest Internal Chain of Custody

Job Number: JA30950
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/21/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA30950-1.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30950-1.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30950-1.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30950-1.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:39	Retrieve from Storage
JA30950-1.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30950-1.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30950-2.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30950-2.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30950-2.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30950-2.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:39	Retrieve from Storage
JA30950-2.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30950-2.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30950-3.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30950-3.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30950-3.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30950-3.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:39	Retrieve from Storage
JA30950-3.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30950-3.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30950-4.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30950-4.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30950-4.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30950-4.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:35	Retrieve from Storage
JA30950-4.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30950-4.1	Dave Hunkele		12/08/09 10:57	Disposed
JA30950-5.1	Secured Storage	Adam Scott	10/22/09 08:15	Retrieve from Storage
JA30950-5.1	Adam Scott	Melissa Smith	10/22/09 08:17	Custody Transfer
JA30950-5.1	Melissa Smith	Secured Storage	10/22/09 10:34	Return to Storage
JA30950-5.1	Secured Storage	Sarvadaman Tripathi	10/22/09 11:35	Retrieve from Storage
JA30950-5.1	Sarvadaman Tripathi	Secured Storage	10/22/09 16:38	Return to Storage
JA30950-5.1	Dave Hunkele		12/08/09 10:57	Disposed

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: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51151/GN31493	3.0	0.0	ug/l	25	24.7	98.8	85-115%
Perchlorate	GP51151/GN31493			ug/l	8	8.74	109.3(a)	85-115%
Specific Conductivity	GN31459			umhos/cm	462	458	99.1	99-101%

Associated Samples:
Batch GN31459: JA30950-1, JA30950-2, JA30950-3, JA30950-4, JA30950-5
Batch GP51151: JA30950-1, JA30950-2, JA30950-3, JA30950-4, JA30950-5
(*) Outside of QC limits
(a) External check at 8 ppb.

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31459	JA30903-1	umhos/cm	737	735	0.3	0-10%

Associated Samples:
Batch GN31459: JA30950-1, JA30950-2, JA30950-3, JA30950-4, JA30950-5
Batch GP51151: JA30950-1, JA30950-2, JA30950-3, JA30950-4, JA30950-5
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	25	24.2	96.8	80-120%

Associated Samples:
Batch GP51151: JA30950-1, JA30950-2, JA30950-3, JA30950-4, JA30950-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Analyst: MS Run ID: GN31286
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31286-STD1	1		STDA
10:36	GN31286-STD2	1		STDB
10:54	GN31286-STD3	1		STDC
11:11	GN31286-STD4	1		STDD
11:28	GN31286-STD5	1		STDE
11:46	GN31286-STD6	1		STDF
09:28	GN31286-IPC1	1		scon=4240
09:45	GN31286-ICV1	1		
10:03	GP51151-MB1	1		
10:20	GN31286-CRI1	1		
10:37	GP51151-B1	1		
10:55	GN31286-CCV1	1		
11:12	GP51151-ICV1	1		
11:30	ZZZZZZ	1		
11:47	ZZZZZZ	1		
12:04	GN31286-CCVA1	1		
13:42	GN31286-CCV2	1		
13:59	GP51151-S1	1		
14:16	GP51151-D1	1		
14:34	JA30572-4	1		(sample used for QC only; not part of login JA30950)
14:51	ZZZZZZ	1		
15:09	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:18	ZZZZZZ	10		
16:36	GN31286-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Run ID: GN31286 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31286-IPC1	Perchlorate	24.4	3.0	0.92	25	97.6	80-120
GN31286-ICV1	Perchlorate	27.1	3.0	0.92	25	108.4	90-110
GN31286-CRI1	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN31286-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN31286-CCVA1	Perchlorate	51.9	3.0	0.92	50	103.8	
GN31286-CCV2	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31286-CCVA2	Perchlorate	53.8	3.0	0.92	50	107.6	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102201.TXT Date Analyzed: 10/22/09 Methods: EPA 314
Analyst: MS Run ID: GN31493
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	GN31493-STD1	1		STDA
09:22	GN31493-STD2	1		STDB
09:40	GN31493-STD3	1		STDC
10:14	GN31493-STD5	1		STDE
10:32	GN31493-STD6	1		STDF
10:49	GN31493-STD4	1		STDD
09:29	GN31493-IPC1	1		scon=4290
09:46	GN31493-ICV1	1		
10:04	GP51151-MB2	1		
10:21	GN31493-CRI1	1		
10:39	GP51151-B2	1		
10:56	GN31493-CCV1	1		
11:13	GP51151-ICV2	1		
11:31	ZZZZZZ	1		
11:48	ZZZZZZ	1		
12:06	ZZZZZZ	1		
12:23	JA30950-1	1		
12:40	JA30950-2	1		
12:58	JA30950-3	1		
13:15	JA30950-4	1		see rerun for confirmation
13:33	JA30950-5	1		
13:50	GN31493-CCVA1	1		
14:07	JA29842-7P	1		(sample used for QC only; not part of login JA30950)
14:25	GP51151-D2	1		messy baseline; see rerun
14:42	JA30950-4	1		messy baseline; see rerun
15:00	JA29842-7P	1		(sample used for QC only; not part of login JA30950)
15:17	GP51151-D2	1		interfering peak; see rerun
15:34	JA30950-4	1		
15:52	GN31493-CCV2	1		
16:18	JA29842-7P	1		(sample used for QC only; not part of login JA30950)
16:35	GP51151-D2	1		
16:53	GN31493-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA30950
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102201.TXT Date Analyzed: 10/22/09 Methods: EPA 314
Run ID: GN31493 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31493-IPC1	Perchlorate	23.6	3.0	0.92	25	94.4	80-120
GN31493-ICV1	Perchlorate	26.3	3.0	0.92	25	105.2	90-110
GN31493-CRI1	Perchlorate	3.0	3.0	0.92	3	100.0	75-125
GN31493-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31493-CCVA1	Perchlorate	52.1	3.0	0.92	50	104.2	
GN31493-CCV2	Perchlorate	24.5	3.0	0.92	25	98.0	85-115
GN31493-CCVA2	Perchlorate	50.7	3.0	0.92	50	101.4	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.000010.000000

Accutest Job Number: JA31056

Sampling Date: 10/22/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **21**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA31056

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31056-1	10/22/09	12:35	JDM	10/22/09	AQ	Ground Water	VP-13A(15-20')
JA31056-2	10/22/09	14:15	JDM	10/22/09	AQ	Ground Water	VP-13A(37-42')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA31056
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/6/2009 10:58:24 A

On 10/22/2009, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 1.5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31056 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 EPA 314

Matrix: AQ **Batch ID:** GP51151

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA30572-4DUP, JA30572-4MS were used as the QC samples for Perchlorate.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31527

- Sample(s) JA30097-1ADUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-13A(15-20')		
Lab Sample ID:	JA31056-1	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/23/09 12:55	MS	EPA 314
Specific Conductivity	493	0.50		umhos/cm	1	10/23/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-13A(37-42')		
Lab Sample ID:	JA31056-2	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/22/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/23/09 13:13	MS	EPA 314
Specific Conductivity	219	0.50		umhos/cm	1	10/23/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

CHAIN OF CUSTODY

PVX#13'280

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA31056

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC off-site vertical profiling
Street: 35 SW Blvd.
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
1	VP-13A (15-20')		10/22/09	12:35	JDM	GW	1					1				X	
2	VP-13A (37-42')		10/22/09	14:15	JDM	GW	1					1				X	UTC 1

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [x] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced – Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1 John Moss	10/22/09 15:25	1 James Prester 15:25 10/22/09	2 James Prester 17:10 10/22/09		2 PDor
3		3	4		4
5		5	Custody Seal # 562 [x] Intact [ ] Not intact	Preserved where applicable [ ]	On Ice [x] Cooler Temp. 1.5°C

JA31056: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31056 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/22/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31056: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA31056

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31056-1	Collected: 22-OCT-09 12:35 By: JDM		Received: 22-OCT-09 By: MPC			
VP-13A(15-20')						
JA31056-1	SM19 2510B/SW 9050A	23-OCT-09	BD			SCON
JA31056-1	EPA 314	23-OCT-09 12:55	MS	23-OCT-09	MS	PERCHLT
JA31056-2	Collected: 22-OCT-09 14:15 By: JDM		Received: 22-OCT-09 By: MPC			
VP-13A(37-42')						
JA31056-2	SM19 2510B/SW 9050A	23-OCT-09	BD			SCON
JA31056-2	EPA 314	23-OCT-09 13:13	MS	23-OCT-09	MS	PERCHLT

R2-0002511

Accutest Internal Chain of Custody

Job Number: JA31056
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/22/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31056-1.1	Secured Storage	Dave Hunkele	10/23/09 10:05	Retrieve from Storage
JA31056-1.1	Dave Hunkele	Barbara Dula	10/23/09 10:06	Custody Transfer
JA31056-1.1	Barbara Dula	Secured Storage	10/23/09 15:56	Return to Storage
JA31056-1.1	Secured Storage	Adam Scott	10/26/09 09:47	Retrieve from Storage
JA31056-1.1	Adam Scott	Sarvadaman Tripathi	10/26/09 09:48	Custody Transfer
JA31056-1.1	Sarvadaman Tripathi	Secured Storage	10/26/09 17:16	Return to Storage
JA31056-1.1	Dave Hunkele		12/08/09 10:57	Disposed
JA31056-1.1.1	Barbara Dula	Melissa Smith	10/23/09 10:39	Aliquot from JA31056-1.1
JA31056-1.1.1	Melissa Smith		10/23/09 16:39	Depleted
JA31056-2.1	Secured Storage	Dave Hunkele	10/23/09 10:05	Retrieve from Storage
JA31056-2.1	Dave Hunkele	Barbara Dula	10/23/09 10:06	Custody Transfer
JA31056-2.1	Barbara Dula	Secured Storage	10/23/09 15:56	Return to Storage
JA31056-2.1	Secured Storage	Adam Scott	10/26/09 09:47	Retrieve from Storage
JA31056-2.1	Adam Scott	Sarvadaman Tripathi	10/26/09 09:48	Custody Transfer
JA31056-2.1	Sarvadaman Tripathi	Secured Storage	10/26/09 17:16	Return to Storage
JA31056-2.1	Dave Hunkele		12/08/09 10:57	Disposed
JA31056-2.1.1	Barbara Dula	Melissa Smith	10/23/09 10:39	Aliquot from JA31056-2.1
JA31056-2.1.1	Melissa Smith		10/23/09 16:39	Depleted

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: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51151/GN31533	3.0	0.0	ug/l	25	24.5	98.0	85-115%
Perchlorate	GP51151/GN31533			ug/l	8	8.29	103.6	85-115%

Associated Samples:
Batch GP51151: JA31056-1, JA31056-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	0.0	0.0	0-15%
Specific Conductivity	GN31527	JA30097-1A	umhos/cm	71100	71500	0.6	0-10%

Associated Samples:
Batch GN31527: JA31056-1, JA31056-2
Batch GP51151: JA31056-1, JA31056-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51151/GN31286	JA30572-4	ug/l	0.0	25	24.2	96.8	80-120%

Associated Samples:
Batch GP51151: JA31056-1, JA31056-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Analyst: MS Run ID: GN31286
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	GN31286-STD1	1		STDA
10:36	GN31286-STD2	1		STDB
10:54	GN31286-STD3	1		STDC
11:11	GN31286-STD4	1		STDD
11:28	GN31286-STD5	1		STDE
11:46	GN31286-STD6	1		STDF
09:28	GN31286-IPC1	1		scon=4240
09:45	GN31286-ICV1	1		
10:03	GP51151-MB1	1		
10:20	GN31286-CRI1	1		
10:37	GP51151-B1	1		
10:55	GN31286-CCV1	1		
11:12	GP51151-ICV1	1		
11:30	ZZZZZZ	1		
11:47	ZZZZZZ	1		
12:04	GN31286-CCVA1	1		
13:42	GN31286-CCV2	1		
13:59	GP51151-S1	1		
14:16	GP51151-D1	1		
14:34	JA30572-4	1		(sample used for QC only; not part of login JA31056)
14:51	ZZZZZZ	1		
15:09	ZZZZZZ	1		
15:26	ZZZZZZ	1		
15:43	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:18	ZZZZZZ	10		
16:36	GN31286-CCVA2	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409101601.TXT Date Analyzed: 10/16/09 Methods: EPA 314
Run ID: GN31286 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31286-IPC1	Perchlorate	24.4	3.0	0.92	25	97.6	80-120
GN31286-ICV1	Perchlorate	27.1	3.0	0.92	25	108.4	90-110
GN31286-CRI1	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN31286-CCV1	Perchlorate	25.4	3.0	0.92	25	101.6	85-115
GN31286-CCVA1	Perchlorate	51.9	3.0	0.92	50	103.8	
GN31286-CCV2	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31286-CCVA2	Perchlorate	53.8	3.0	0.92	50	107.6	

(!) Outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102301.TXT Date Analyzed: 10/23/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31533
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:05	GN31533-STD1	1		STDA
09:22	GN31533-STD2	1		STDB
09:40	GN31533-STD3	1		STDC
10:14	GN31533-STD5	1		STDE
10:32	GN31533-STD6	1		STDF
10:49	GN31533-STD4	1		STDD
10:53	GN31533-IPC1	1		scon=4290
11:11	GN31533-ICV1	1		
11:28	GP51151-MB3	1		
11:28	GP51263-MB1	1		Sample shown for QC tracking purposes only.
11:46	GN31533-CRI1	1		
12:03	GP51151-B3	1		
12:03	GP51263-B1	1		Sample shown for QC tracking purposes only.
12:20	GN31533-CCV1	1		
12:38	GP51151-ICV3	1		
12:55	JA31056-1	1		
13:13	JA31056-2	1		
13:30	ZZZZZZ	1		
13:48	GP51247-MB1	1		
14:05	GP51247-B1	1		
14:22	GP51247-S1	1		overrange; rerun @ 1:10
14:40	GP51247-D1	1		overrange; rerun @ 1:5
14:57	JA31025-23	1		(sample used for QC only; not part of login JA31056)
15:15	GN31533-CCVA1	1		
15:32	GN31533-IPC2	1		
15:49	GP51246-MB1	1		
16:07	GN31533-CRI2	1		
16:24	GP51246-B1	1		
16:42	GN31533-CCV2	1		
16:59	GP51246-S1	1		overrange; rerun @ 1:5
17:16	GP51246-D1	1		overrange; rerun @ 1:4
17:34	JA31025-3	1		(sample used for QC only; not part of login JA31056)
17:51	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102301.TXT Date Analyzed: 10/23/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31533
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
18:09	ZZZZZZ	1		
18:26	ZZZZZZ	1		
18:43	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:18	ZZZZZZ	1		
19:36	ZZZZZZ	1		
19:53	GN31533-CCVA2	1		
20:10	ZZZZZZ	1		
20:28	ZZZZZZ	1		
20:45	ZZZZZZ	1		
21:03	ZZZZZZ	1		
21:20	ZZZZZZ	1		
21:37	ZZZZZZ	1		
21:55	ZZZZZZ	1		
22:12	ZZZZZZ	1		
22:30	ZZZZZZ	1		
22:47	ZZZZZZ	1		
23:04	GN31533-CCV3	1		
23:22	ZZZZZZ	1		
23:39	ZZZZZZ	1		
23:57	GN31533-CCVA3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31056
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102301.TXT Date Analyzed: 10/23/09 Methods: EPA 314, EPA 314 M
Run ID: GN31533 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31533-IPC1	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN31533-ICV1	Perchlorate	25.7	3.0	0.92	25	102.8	90-110
GN31533-CRI1	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN31533-CCV1	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31533-CCVA1	Perchlorate	51.7	3.0	0.92	50	103.4	
GN31533-IPC2	Perchlorate	23.5	3.0	0.92	25	94.0	80-120
GN31533-CRI2	Perchlorate	3.1	3.0	0.92	3	103.3	75-125
GN31533-CCV2	Perchlorate	24.7	3.0	0.92	25	98.8	85-115
GN31533-CCVA2	Perchlorate	53.6	3.0	0.92	50	107.2	
GN31533-CCV3	Perchlorate	26.5	3.0	0.92	25	106.0	85-115
GN31533-CCVA3	Perchlorate	56.6	3.0	0.92	50	113.2	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

171441.000010.000000

Accutest Job Number: JA31156

Sampling Dates: 10/22/09 - 10/23/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **21**

ACCREDITED IN ACCORDANCE WITH nelac

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

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Marie Meidhof 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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Sample Summary

TRC

Job No: JA31156

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31156-1	10/22/09	15:50	JDM	10/23/09	AQ	Ground Water	VP-13A(62-67')
JA31156-2	10/22/09	16:05	JDM	10/23/09	AQ	Field Blank Water	FB102209
JA31156-3	10/23/09	08:55	JDM	10/23/09	AQ	Ground Water	VP13A(87-92')
JA31156-3D	10/23/09	08:55	JDM	10/23/09	AQ	Water Dup/MSD	VP13AMSD(87-92') MATRIX SPIKE DUP
JA31156-3S	10/23/09	08:55	JDM	10/23/09	AQ	Water Matrix Spike	VP13AMS(87-92') MATRIX SPIKE

R2-0002524

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: TRC **Job No** JA31156

Site: SMC Perchlorate Off-Site Investigation, Newfield, NJ **Report Date** 11/10/2009 3:00:01 PM

On 10/23/2009, 2 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.4 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31156 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 EPA 314

Matrix: AQ **Batch ID:** GP51300

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31156-3MS, JA31156-3DUP were used as the QC samples for Perchlorate.
- RPD(s) for Duplicate for Perchlorate are outside control limits for sample GP51300-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31590

- Sample(s) JA31156-3DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	VP-13A(62-67')		
Lab Sample ID:	JA31156-1	**Date Sampled:**	10/22/09
Matrix:	AQ - Ground Water	**Date Received:**	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.3	3.0	0.92	ug/l	1	10/26/09 18:58	MS	EPA 314
Specific Conductivity	156	0.50		umhos/cm	1	10/27/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FB102209		
Lab Sample ID:	JA31156-2	**Date Sampled:**	10/22/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/26/09 19:16	MS	EPA 314
Specific Conductivity	3.7	0.50		umhos/cm	1	10/26/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP13A(87-92')		
Lab Sample ID:	JA31156-3	**Date Sampled:**	10/23/09
Matrix:	AQ - Ground Water	**Date Received:**	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.4	3.0	0.92	ug/l	1	10/26/09 18:41	MS	EPA 314
Specific Conductivity	127	0.50		umhos/cm	1	10/26/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST Laboratories

GW
FB

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
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PAGE 1 OF 1 /

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # JA31156

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlier E-mail: lbutlier@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC off-site vertical profiling
Street: 35 SW Blvd
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Perchlorate	LAB USE ONLY
-1	VP-13A (62-67')		10/22/09	15:50	JDM	GW	1					1				X	UTC1
-2	FB102209		10/22/09	16:05	JDM	DI	1					1				X	
-3	VP-13A (87-92')		10/23/09	8:55	JDM	GW	1					1				X	
-4	VP-13AMS (87-92')	Matrix Spike	10/23/09	8:55	JDM	GW	1					1				X	
-5	VP-13AMSD (87-92')	Matrix Spike Dup	10/23/09	8:55	JDM	GW	1					1				X	

3

Turnaround Time (Business days)

- ☐ Std. 15 Business Days
- ☐ Std. 10 Business Days (by Contract only)
- ☐ 10 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☒ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☒ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms TRCCTW2
- ☒ EDD Format HAZSITE
- ☐ Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 John Moss	10/23/09 9:25	1 [signature]	2 [signature]	10/23/09 1059	2 [signature]
3		3	4		4
5		5	Custody Seal # 856 Fed ☒ Intact ☐ Not intact	Preserved where applicable ☐	On Ice ☒ Cooler Temp. 3.4°C

A

TAS 10/23/09

JA31156: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31156 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/23/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31156: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA31156

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31156-1	Collected: 22-OCT-09 15:50 By: JDM		Received: 23-OCT-09 By: RL			
VP-13A(62-67')						
JA31156-1	EPA 314	26-OCT-09 18:58	MS	26-OCT-09	MS	PERCHLT
JA31156-1	SM19 2510B/SW 9050A	27-OCT-09	ST			SCON
JA31156-2	Collected: 22-OCT-09 16:05 By: JDM		Received: 23-OCT-09 By: RL			
FB102209						
JA31156-2	SM19 2510B/SW 9050A	26-OCT-09	ST			SCON
JA31156-2	EPA 314	26-OCT-09 19:16	MS	26-OCT-09	MS	PERCHLT
JA31156-3	Collected: 23-OCT-09 08:55 By: JDM		Received: 23-OCT-09 By: RL			
VP13A(87-92')						
JA31156-3	SM19 2510B/SW 9050A	26-OCT-09	ST			SCON
JA31156-3	EPA 314	26-OCT-09 18:41	MS	26-OCT-09	MS	PERCHLT

R2-0002533

Accutest Internal Chain of Custody

Job Number: JA31156
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/23/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31156-1.1	Secured Storage	John Thomas	10/23/09 13:53	Retrieve from Storage
JA31156-1.1	John Thomas	Melissa Smith	10/23/09 14:14	Custody Transfer
JA31156-1.1	Melissa Smith	Secured Storage	10/23/09 16:37	Return to Storage
JA31156-1.1	Secured Storage	Adam Scott	10/26/09 10:26	Retrieve from Storage
JA31156-1.1	Adam Scott	Melissa Smith	10/26/09 10:27	Custody Transfer
JA31156-1.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA31156-1.1	Secured Storage	Sarvadaman Tripathi	10/27/09 11:20	Retrieve from Storage
JA31156-1.1	Sarvadaman Tripathi	Jaclyn Kalieta	10/27/09 16:17	Custody Transfer
JA31156-1.1	Jaclyn Kalieta	Secured Storage	10/27/09 23:11	Return to Storage
JA31156-1.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31156-2.1	Secured Storage	John Thomas	10/23/09 13:53	Retrieve from Storage
JA31156-2.1	John Thomas	Melissa Smith	10/23/09 14:14	Custody Transfer
JA31156-2.1	Melissa Smith	Secured Storage	10/23/09 16:37	Return to Storage
JA31156-2.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA31156-2.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA31156-2.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA31156-2.1	Secured Storage	Sarvadaman Tripathi	10/27/09 12:32	Retrieve from Storage
JA31156-2.1	Sarvadaman Tripathi	Jaclyn Kalieta	10/27/09 16:17	Custody Transfer
JA31156-2.1	Jaclyn Kalieta	Secured Storage	10/27/09 23:11	Return to Storage
JA31156-2.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31156-3.1	Secured Storage	John Thomas	10/23/09 13:53	Retrieve from Storage
JA31156-3.1	John Thomas	Melissa Smith	10/23/09 14:14	Custody Transfer
JA31156-3.1	Melissa Smith	Secured Storage	10/23/09 16:37	Return to Storage
JA31156-3.1	Secured Storage	Adam Scott	10/26/09 09:47	Retrieve from Storage
JA31156-3.1	Adam Scott	Sarvadaman Tripathi	10/26/09 09:48	Custody Transfer
JA31156-3.1	Sarvadaman Tripathi	Secured Storage	10/26/09 17:16	Return to Storage
JA31156-3.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31156-3.2	Secured Storage	John Thomas	10/23/09 13:53	Retrieve from Storage
JA31156-3.2	John Thomas	Melissa Smith	10/23/09 14:14	Custody Transfer
JA31156-3.2	Melissa Smith	Secured Storage	10/23/09 16:37	Return to Storage
JA31156-3.2	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA31156-3.2	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA31156-3.2	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA31156-3.2	Secured Storage	Dave Hunkele	11/03/09 14:44	Retrieve from Storage
JA31156-3.2	Dave Hunkele	Rie Iwasaki	11/03/09 14:45	Custody Transfer
JA31156-3.2	Rie Iwasaki	Secured Storage	11/03/09 16:43	Return to Storage
JA31156-3.2	Dave Hunkele		12/08/09 10:58	Disposed
JA31156-3.3	Secured Storage	John Thomas	10/23/09 13:53	Retrieve from Storage
JA31156-3.3	John Thomas	Melissa Smith	10/23/09 14:14	Custody Transfer
JA31156-3.3	Melissa Smith	Secured Storage	10/23/09 16:37	Return to Storage

Accutest Internal Chain of Custody

Job Number: JA31156
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/23/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31156-3.3	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA31156-3.3	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA31156-3.3	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA31156-3.3	Secured Storage	Todd Shoemaker	10/29/09 08:55	Retrieve from Storage
JA31156-3.3	Todd Shoemaker	Sarvadaman Tripathi	10/29/09 08:56	Custody Transfer
JA31156-3.3	Sarvadaman Tripathi	Secured Storage	10/29/09 16:20	Return to Storage
JA31156-3.3	Dave Hunkele		12/08/09 10:58	Disposed

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: JA31156
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51300/GN31601	3.0	0.0	ug/l	25	25.2	100.8	85-115%
Perchlorate	GP51300/GN31601			ug/l	8	7.73	96.6	85-115%

Associated Samples:
Batch GP51300: JA31156-1, JA31156-2, JA31156-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31156
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51300/GN31601	JA31156-3	ug/l	3.4	4.2	21.1(a)	0-15%
Specific Conductivity	GN31590	JA31156-3	umhos/cm	127	135	6.1	0-10%

Associated Samples:
Batch GN31590: JA31156-1, JA31156-2, JA31156-3
Batch GP51300: JA31156-1, JA31156-2, JA31156-3
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31156
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51300/GN31601	JA31156-3	ug/l	3.4	25	27.4	96.0	80-120%

Associated Samples:
Batch GP51300: JA31156-1, JA31156-2, JA31156-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31156
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102603.TXT Date Analyzed: 10/26/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31601
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:02	GN31601-STD1	1		STDA
14:20	GN31601-STD2	1		STDB
14:54	GN31601-STD3	1		STDC
15:12	GN31601-STD4	1		STDD
15:29	GN31601-STD5	1		STDE
15:47	GN31601-STD6	1		STDF
16:04	GN31601-IPC1	1		scon=4290
16:22	GN31601-ICV1	1		
16:39	GP51300-MB1	1		
16:56	GN31601-CRI1	1		
17:14	GP51300-B1	1		
17:31	GN31601-CCV1	1		
17:49	GP51300-ICV1	1		
18:06	GP51300-S1	1		
18:23	GP51300-D1	1		
18:41	JA31156-3	1		scon
18:58	JA31156-1	1		scon
19:16	JA31156-2	1		scon
19:33	ZZZZZZ	1		
19:50	ZZZZZZ	1		
20:08	ZZZZZZ	1		
20:25	GN31601-CCVA1	1		
20:43	GN31601-IPC2	1		
21:00	ZZZZZZ	1		
21:17	GN31601-CRI2	1		
21:35	ZZZZZZ	1		
21:52	GN31601-CCV2	1		
22:10	GP51247-S1	10		
22:27	GP51247-D1	5		
22:44	JA31025-23	6		(sample used for QC only; not part of login JA31156)
23:02	GP51246-S1	5		
23:19	GP51246-D1	4		
23:37	JA31025-3	3		(sample used for QC only; not part of login JA31156)

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31156
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102603.TXT Date Analyzed: 10/26/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31601
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:54	ZZZZZZ	15		
00:11	ZZZZZZ	30		
00:29	ZZZZZZ	8		
00:46	ZZZZZZ	10		
01:04	GN31601-CCVA2	1		
01:21	ZZZZZZ	30		
01:38	ZZZZZZ	30		
01:56	ZZZZZZ	25		
02:13	ZZZZZZ	30		
02:31	ZZZZZZ	4		
02:48	ZZZZZZ	10		
03:06	ZZZZZZ	3		
03:23	ZZZZZZ	10		
03:40	ZZZZZZ	2		
03:58	ZZZZZZ	5		
04:15	GN31601-CCV3	1		
04:33	ZZZZZZ	3		
04:50	ZZZZZZ	4		
05:07	GN31601-CCVA3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31156
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102603.TXT Date Analyzed: 10/26/09 Methods: EPA 314, EPA 314 M
Run ID: GN31601 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31601-IPC1	Perchlorate	25.9	3.0	0.92	25	103.6	80-120
GN31601-ICV1	Perchlorate	25.3	3.0	0.92	25	101.2	90-110
GN31601-CRI1	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN31601-CCV1	Perchlorate	25.0	3.0	0.92	25	100.0	85-115
GN31601-CCVA1	Perchlorate	51.5	3.0	0.92	50	103.0	
GN31601-IPC2	Perchlorate	27.9	3.0	0.92	25	111.6	80-120
GN31601-CRI2	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31601-CCV2	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN31601-CCVA2	Perchlorate	54.6	3.0	0.92	50	109.2	
GN31601-CCV3	Perchlorate	27.1	3.0	0.92	25	108.4	85-115
GN31601-CCVA3	Perchlorate	54.8	3.0	0.92	50	109.6	

(!) Outside of QC limits

Technical Report for

TRC

SMC Perchlorate Off-Site Investigation, Newfield, NJ

51903-GWAT-02230 171441.000010.000000

Accutest Job Number: JA31195

Sampling Date: 10/23/09

Report to:

TRC Environmental Corporation

jmoss@trcsolutions.com

ATTN: John Moss

Total number of pages in report: **19**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

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: Marie Meidhof 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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Test results relate only to samples analyzed.

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Sample Summary

TRC

Job No: JA31195

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 51903-GWAT-02230 171441.000010.000000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JA31195-1	10/23/09	09:40	JDM	10/23/09	AQ	Field Blank Water	FB102309
JA31195-2	10/23/09	10:20	JDM	10/23/09	AQ	Ground Water	VP-13A(111-116')

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	TRC	**Job No**	JA31195
Site:	SMC Perchlorate Off-Site Investigation, Newfield, NJ	**Report Date**	11/10/2009 2:44:30 PM

On 10/23/2009, 1 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.6 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA31195 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 EPA 314

Matrix: AQ **Batch ID:** GP51300

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA31156-3MS, JA31156-3DUP were used as the QC samples for Perchlorate.
- RPD(s) for Duplicate for Perchlorate are outside control limits for sample GP51300-D1. RPD acceptable due to low duplicate and sample concentrations.

Wet Chemistry By Method SM19 2510B/SW 9050A

Matrix: AQ **Batch ID:** GN31590

- Sample(s) JA31156-3DUP were used as the QC samples for Specific Conductivity.

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

Client Sample ID:	FB102309		
Lab Sample ID:	JA31195-1	**Date Sampled:**	10/23/09
Matrix:	AQ - Field Blank Water	**Date Received:**	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/26/09 19:33	MS	EPA 314
Specific Conductivity	2.1	0.50		umhos/cm	1	10/27/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	VP-13A(111-116')		
Lab Sample ID:	JA31195-2	**Date Sampled:**	10/23/09
Matrix:	AQ - Ground Water	**Date Received:**	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.0	3.0	0.92	ug/l	1	10/26/09 19:50	MS	EPA 314
Specific Conductivity	42.8	0.50		umhos/cm	1	10/27/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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

ACCUTEST. Laboratories

FB SW

CHAIN OF CUSTODY

PAGE 1 OF 1

2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: JA31195

Client / Reporting Information

Company Name: TRC Environmental Corp.
Street Address: 21 Griffin Rd. North
City: Windsor State: CT Zip: 06095
Project Contact: Larry Butlien E-mail: lbutlien@trcsolutions.com
Phone #: 860-298-6225 Fax #:
Sampler(s) Name(s): John Moss Phone #:

Project Information

Project Name: SMC off-site vertical profiling
Street: 35 Sw Blvd.
City: Newfield State: NJ
Project #: 171441.000010.000000
Client Purchase Order #: 16372
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Perchlorate

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	EnCore	Perchlorate	LAB USE ONLY
1	FB102309		10/23/09	9:40	JOM	DI	1					1				X	
2	VP-13A (111-116')		10/23/09	10:20	JOM	GW	1					1				X	
																	UTC 1

Turnaround Time (Business days)

- [ ] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [x] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [x] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms TRCCTW2
- [x] EDD Format HAZSITE
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:
1	John Moss	10/23/09 17:00	1
2			2
3			3
4			4
5			5

Custody Seal #: [ ] Intact [ ] Not Intact
Preserved where applicable: [ ]
On Ice: X
Cooler Temp: 2.6 -C

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA31195 **Client:** **Immediate Client Services Action Required:** No

Date / Time Received: 10/23/2009 **Delivery Method:** **Client Service Action Required at Login:** No

Project: **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
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:	☐		☐	☑

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732.329.3499

Dayton, New Jersey
www/accutest.com

JA31195: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

TRC

Job No: JA31195

SMC Perchlorate Off-Site Investigation, Newfield, NJ
Project No: 51903-GWAT-02230 171441.000010.000000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JA31195-1 FB102309	Collected: 23-OCT-09 09:40 By: JDM		Received: 23-OCT-09 By: MPC			
JA31195-1	EPA 314	26-OCT-09 19:33	MS	26-OCT-09	MS	PERCHLT
JA31195-1	SM19 2510B/SW 9050A	27-OCT-09	ST			SCON
JA31195-2 VP-13A(111-116')	Collected: 23-OCT-09 10:20 By: JDM		Received: 23-OCT-09 By: MPC			
JA31195-2	EPA 314	26-OCT-09 19:50	MS	26-OCT-09	MS	PERCHLT
JA31195-2	SM19 2510B/SW 9050A	27-OCT-09	ST			SCON

Accutest Internal Chain of Custody

Job Number: JA31195
Account: TRCCTW TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ
Received: 10/23/09

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JA31195-1.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA31195-1.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA31195-1.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA31195-1.1	Secured Storage	Sarvadaman Tripathi	10/27/09 11:20	Retrieve from Storage
JA31195-1.1	Sarvadaman Tripathi	Jaclyn Kalieta	10/27/09 16:17	Custody Transfer
JA31195-1.1	Jaclyn Kalieta	Secured Storage	10/27/09 23:11	Return to Storage
JA31195-1.1	Dave Hunkele		12/08/09 10:58	Disposed
JA31195-2.1	Secured Storage	Adam Scott	10/26/09 09:00	Retrieve from Storage
JA31195-2.1	Adam Scott	Melissa Smith	10/26/09 09:01	Custody Transfer
JA31195-2.1	Melissa Smith	Secured Storage	10/26/09 17:02	Return to Storage
JA31195-2.1	Secured Storage	Sarvadaman Tripathi	10/27/09 11:20	Retrieve from Storage
JA31195-2.1	Sarvadaman Tripathi	Jaclyn Kalieta	10/27/09 16:17	Custody Transfer
JA31195-2.1	Jaclyn Kalieta	Secured Storage	10/27/09 23:11	Return to Storage
JA31195-2.1	Dave Hunkele		12/08/09 10:58	Disposed

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: JA31195
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Perchlorate	GP51300/GN31601	3.0	0.0	ug/l	25	25.2	100.8	85-115%
Perchlorate	GP51300/GN31601			ug/l	8	7.73	96.6	85-115%

Associated Samples:
Batch GP51300: JA31195-1, JA31195-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31195
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Perchlorate	GP51300/GN31601	JA31156-3	ug/l	3.4	4.2	21.1(a)	0-15%
Specific Conductivity	GN31590	JA31156-3	umhos/cm	127	135	6.1	0-10%

Associated Samples:
Batch GN31590: JA31195-1, JA31195-2
Batch GP51300: JA31195-1, JA31195-2
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JA31195
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Perchlorate	GP51300/GN31601	JA31156-3	ug/l	3.4	25	27.4	96.0	80-120%

Associated Samples:
Batch GP51300: JA31195-1, JA31195-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31195
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102603.TXT Date Analyzed: 10/26/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31601
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:02	GN31601-STD1	1		STDA
14:20	GN31601-STD2	1		STDB
14:54	GN31601-STD3	1		STDC
15:12	GN31601-STD4	1		STDD
15:29	GN31601-STD5	1		STDE
15:47	GN31601-STD6	1		STDF
16:04	GN31601-IPC1	1		scon=4290
16:22	GN31601-ICV1	1		
16:39	GP51300-MB1	1		
16:56	GN31601-CRI1	1		
17:14	GP51300-B1	1		
17:31	GN31601-CCV1	1		
17:49	GP51300-ICV1	1		
18:06	GP51300-S1	1		
18:23	GP51300-D1	1		
18:41	JA31156-3	1		(sample used for QC only; not part of login JA31195)
18:58	ZZZZZZ	1		
19:16	ZZZZZZ	1		
19:33	JA31195-1	1		scon
19:50	JA31195-2	1		scon
20:08	ZZZZZZ	1		
20:25	GN31601-CCVA1	1		
20:43	GN31601-IPC2	1		
21:00	ZZZZZZ	1		
21:17	GN31601-CRI2	1		
21:35	ZZZZZZ	1		
21:52	GN31601-CCV2	1		
22:10	GP51247-S1	10		
22:27	GP51247-D1	5		
22:44	JA31025-23	6		(sample used for QC only; not part of login JA31195)
23:02	GP51246-S1	5		
23:19	GP51246-D1	4		
23:37	JA31025-3	3		(sample used for QC only; not part of login JA31195)

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: JA31195
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102603.TXT Date Analyzed: 10/26/09 Methods: EPA 314, EPA 314 M
Analyst: MS Run ID: GN31601
Parameters: Perchlorate

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:54	ZZZZZZ	15		
00:11	ZZZZZZ	30		
00:29	ZZZZZZ	8		
00:46	ZZZZZZ	10		
01:04	GN31601-CCVA2	1		
01:21	ZZZZZZ	30		
01:38	ZZZZZZ	30		
01:56	ZZZZZZ	25		
02:13	ZZZZZZ	30		
02:31	ZZZZZZ	4		
02:48	ZZZZZZ	10		
03:06	ZZZZZZ	3		
03:23	ZZZZZZ	10		
03:40	ZZZZZZ	2		
03:58	ZZZZZZ	5		
04:15	GN31601-CCV3	1		
04:33	ZZZZZZ	3		
04:50	ZZZZZZ	4		
05:07	GN31601-CCVA3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: JA31195
Account: TRCCTW - TRC
Project: SMC Perchlorate Off-Site Investigation, Newfield, NJ

File ID: 409102603.TXT Date Analyzed: 10/26/09 Methods: EPA 314, EPA 314 M
Run ID: GN31601 Units: ug/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN31601-IPC1	Perchlorate	25.9	3.0	0.92	25	103.6	80-120
GN31601-ICV1	Perchlorate	25.3	3.0	0.92	25	101.2	90-110
GN31601-CRI1	Perchlorate	2.9	3.0	0.92	3	96.7	75-125
GN31601-CCV1	Perchlorate	25.0	3.0	0.92	25	100.0	85-115
GN31601-CCVA1	Perchlorate	51.5	3.0	0.92	50	103.0	
GN31601-IPC2	Perchlorate	27.9	3.0	0.92	25	111.6	80-120
GN31601-CRI2	Perchlorate	2.7	3.0	0.92	3	90.0	75-125
GN31601-CCV2	Perchlorate	26.4	3.0	0.92	25	105.6	85-115
GN31601-CCVA2	Perchlorate	54.6	3.0	0.92	50	109.2	
GN31601-CCV3	Perchlorate	27.1	3.0	0.92	25	108.4	85-115
GN31601-CCVA3	Perchlorate	54.8	3.0	0.92	50	109.6	

(!) Outside of QC limits

APPENDIX H

DATA VALIDATION REPORTS

TRC

Data Validation Memorandum

To: Larry Butlien

From: Elizabeth Denly

CC: John Moss

Date: January 7, 2010

Subject: Perchlorate Data Validation Review: Groundwater, Soil, Sediment, and Surface Water Samples: SMC/Newfield, NJ

SUMMARY

Full validation was performed on the data for 35 groundwater samples, 21 soil samples, six sediment samples, and six surface water samples collected at the SMC site in Newfield, New Jersey. The samples were collected from October 15, 2009 through November 19, 2009 and submitted to Accutest Laboratories in Dayton, New Jersey for analysis. The samples were analyzed for perchlorate using EPA Method 314.0. The laboratory reported the results under case numbers JA30457, JA30759, JA30998, JA31156, JA31353, JA31506, and JA33467.

The sample results were assessed using the *Region II Evaluation of Metals Data for the Contract Laboratory Program (CLP)*, Revision 13, SOP HW-2, September 2006; these data validation guidelines were modified to accommodate the method-specific criteria.

In general, the data are valid as reported and may be used for decision-making purposes with the following exceptions. Positive and nondetect results for perchlorate were qualified as estimated (J/UJ) in samples SED-2, SED-4, and SED-10 due to low percent solids. Select results were reported which were below the lowest calibration standard; these results were qualified as estimated (J). This issue has a minor impact on the data usability. All results are still usable for project objectives.

SAMPLES

Groundwater samples included in this review are listed below:

VP-13 (100-105')	VP-14 (80-85')	VP-14 (105-110')	VP-24 (105-110') (field duplicate of VP-14 [105-110'])	VP-14 (130-135')
VP-13A (62-67')	VP-13A (87-92')	SC22S	MWH-4	IWC-2
IWC-4	IWC-1	IWC-3	IWC-5	IWC-6 (field duplicate of IWC-5)
SC9S	SC33S (field duplicate of SC9S)	B	SC6S	RW6S
SC6D	RW6D	SC4S	SC18S	SC18D
SC1D	SC1S	SC3S	SC3D (R)	SC34D (field duplicate of SC3D [R])

R2-0002563

RIW2	IW2	SC33D	SC34D	SC37D (field duplicate of SC34D)
FB101909	FB102109	FB102209	FB111909	

Soil samples included in this review are listed below:

SS-1 (5-7')	SS-1 (12-14')	SS-2 (1-3')	SS-2 (14-16')	SS-3 (0-2')
SS-3 (13-15')	SS-4 (2-4')	SS-4 (14-16')	SS-5 (5-7')	SS-5 (13-15')
SS-6 (1-3')	SS-6 (14-16')	SS-7 (6-S')	SS-7 (13-15')	SS-S (3-4')
SS-S (12-14')	SS-9 (6-S')	SS-9 (12-14')	SS-10 (2-4')	SS-10 (4-6')
SS-27 (6-S') (field duplicate of SS-07 [6-S'])	FB102609 (1)	FB102609 (2)		

Sediment samples included in this review are listed below:

SED-1A	SED-1	SED-2	SED-3	SED-4
SED-10 (field duplicate of SED-4)	FB102S09			

Surface water samples included in this review are listed below:

SW-1A	SW-1	SW-2	SW-3	SW-4
SW-10 (field duplicate of SW-4)				

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody requests
- Data completeness
- Holding times and sample preservation
- Initial and continuing calibrations
- Reporting limit standards
- Instrument performance check standards
- Blanks
- Matrix spike (MS) results
- Laboratory duplicate results
- Laboratory control sample (LCS) results
- Field duplicate results
- Quantitation limits and sample results
- Target compound identification

DISCUSSION

Agreement of Analyses Conducted with Chain-of-Custody Requests

Sample reports were checked to verify that the results corresponded to analytical requests as designated on the chain-of-custody (COC). There were no discrepancies noted.

Data Completeness

The data packages were found to be complete as received from the laboratory with the following exception:

- The raw data associated with the sequence GN32151 on 11/10/09 from groundwater data package JA30998 were missing and submitted by the laboratory upon request during data validation.

Holding Times and Sample Preservation

All samples were analyzed within the method-specified holding time. The cooler temperatures upon sample receipt were within the acceptance criterion of 4± 2°C.

Initial and Continuing Calibrations

All initial calibration criteria were met. The percent recoveries of perchlorate were within the acceptance criteria in all initial calibration verification (ICV) and continuing calibration verification (CCV) standards. All ICV and CCV perchlorate standards were analyzed at the method-specified frequency. All calibration checks associated with the specific conductivity analyses were also within the acceptance criteria.

Reporting Limit Standards

The percent recoveries of perchlorate were within the acceptance criteria in all reporting limit standards. The reporting limit standards were analyzed at the method-specified frequency and at the reporting limit of 3 µg/L.

Instrument Performance Check Standards

The instrument performance checks were analyzed at the method-specified frequency and at the required conductivity. The percent recoveries of perchlorate were within the acceptance criteria in all instrument performance check standards. The percent differences of the area/height ratio of perchlorate in the instrument performance check standard compared to the area/height ratio of perchlorate in the laboratory control sample were within the acceptance criteria in all instrument performance check standards.

Blanks

Perchlorate was not detected in any of the laboratory method blanks or field blanks.

MS Results

MS analyses were performed on groundwater samples VP-13A (87-92'), VP-14 (105-110'), IWC-1, B, SC3S, and SC34D, soil sample SS-01 (5-7'), and surface water sample SW-1A. All criteria were met in the matrix spike analyses.

Laboratory Duplicate Results

Laboratory duplicate analyses for perchlorate and specific conductivity were performed on groundwater samples VP-13A (87-92'), VP-14 (105-110'), IWC-1, B, SC3S, and SC34D, soil sample SS-01 (5-7'), and surface water sample SW-1A. All criteria were met in the laboratory duplicate analyses.

LCS Results

The percent recoveries of perchlorate were within the acceptance criteria in all LCS analyses.

Field Duplicate Results

Samples SC9S/SC33S, IWC-5/IWC-6, VP-14 (105-110')/VP-24 (105-110'), SC3D(R)/SC34D, and SC34D/SC37D were submitted as the groundwater field duplicate pairs with this sample set. Samples SW-4 and SW-10 were submitted as the surface water field duplicate pair with this sample set. Samples SED-4 and SED-10 were submitted as the sediment field duplicate pair with this sample set. Samples SS-07/6-8' and SS-27/6-8' were submitted as the soil field duphcate pair with this sample set.

The following tables summarize the relative percent differences (RPDs) of perchlorate and specific conductivity in the field duphcate pairs. All RPDs were either within the acceptance criteria or not calculable (NC) due to a nondetect result in one of the two samples. Qualification of the data on the basis of the field duplicate results was not required.

Analyte	VP-24 (105-110')	VP-14 (105-110')	RPD (%)
Perchlorate (µg/L)	6.2	5.9	5.0
Specific Conductivity (phmos/cm)	334	327	2.1
Analyte	IWC-6	IWC-5	RPD (%)
Perchlorate (µg/L)	11.7	10.7	8.9
Specific Conductivity (µhmos/cm)	417	444	6.3
Analyte	SC33S	SC9S	RPD (%)
Perchlorate (µg/L)	8.2	8.0	2.5
Specific Conductivity (µhmos/cm)	445	449	0.90

TRC

Analyte	SC-3D (R0)	SC-4D	RPD (%)
Perchlorate (µg/L)	141	136	3.6
Specific Conductivity (µhmos/cm)	638	631	1.1
Analyte	SC-4D	SC-4D	RPD [redacted]
Perchlorate (pg/L)	152	150	1.3
Specific Conductivity (µhmos/cm)	1020	996	2.4

Analyte	SW-1	SW-10	RPD (%)
Perchlorate (µg/L)	ND	ND	NA
Specific Conductivity (phmos/cm)	127	128	0.78
ND = Not detected NA = Not applicable			

Analyte	SED-1	SED-10	RPD (%)
Perchlorate (µg/kg)	10.9 J	7.7 U	NC
Specific Conductivity (phmos/cm)	181	174	3.9

Analyte	SSS-6 (R0)	SSS-6	RPD (%)
Perchlorate (pg/kg)	ND	ND	NA
Specific Conductivity (phmos/cm)	105	96.8	8.1
ND = Not detected NA = Not applicable			

Quantitation Limits and Sample Results

Sample calculations were spot-checked; there were no errors noted.

Select results were reported which were below the lowest calibration standard level and quantitation limit (QL). These results were qualified by the laboratory with a "B"; the "B" was changed to a "J" during validation to indicate the value was estimated.

Three sediment samples exhibited percent solids content <50. The following samples were affected: SED-4 (21.9), SED-10 (21.5), and SED-2 (47.3). The positive and nondetect results for perchlorate in these samples were qualified as estimated (J/UJ).

It should be noted that the laboratory reported nondetect results down to the method detection limit (MDL) instead of the QL. The Form Is were manually changed during validation to reflect the QL instead of the MDL.

Samples SC3D (R) and SC34D were analyzed at 8-fold dilutions and samples SC34D and SC37D were analyzed at 6-fold dilutions due to the concentrations of perchlorate which exceeded the calibration range in the undiluted analysis.

None of the samples exhibited a specific conductivity above the laboratory's matrix conductivity threshold and therefore none of the samples required dilution or pretreatment due to conductivity.

Target Compound Identification

The following issues were noted in regards to the identification of perchlorate:

Sample SC18S: The chromatogram of the undiluted analysis of this sample exhibited a high level of interference and significant shift in the baseline at the time where perchlorate elutes. The laboratory stated that the absence of perchlorate in this undiluted analysis was confirmed by a 5-fold dilution of this sample. Upon request during vahdation, the laboratory submitted the raw data associated with the 5-fold dilution of this sample. The baseline shift was not evident in the 5-fold diluted analysis. It was the opinion of the validator that the nondetect result for perchlorate in this sample should therefore be reported from the 5-fold diluted analysis. The Form I for this sample was updated accordingly.

Samples SED-2 and SW-10 identified the presence of perchlorate at the incorrect retention time. Upon request, the laboratory was asked to verify the reported perchlorate results in these samples. The laboratory reported these results as nondetects upon verification and resubmitted the results.

Qualified Form Is

Ground Water

Report of Analysis

Client Sample ID:	VP-13(100-105')		
Lab Sample ID:	JA30457-1	Date Sampled:	10/15/09
Matrix:	AQ - Ground Water	Date Received:	10/15/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.6	3.0	0.92	ug/l	1	10/15/09 18:11	MS	EPA 314
Specific Conductivity	139	0.50		umhos/cm	1	10/16/09	ST	SM19 2510B/SW 90S0A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002571

Accutest Laboratories

Report of Analysis

Client Sample ID:	VP-14(80-85')		
Lab Sample ID:	JA30759-1	Date Sampled:	10/19/09
Matrix:	AQ - Ground Water	Date Received:	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.6 BJ	3.0	0.92	ug/l	1	10/20/09 17:32	MS	EPA 314
Specific Conductivity	332	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002572

Accutest Laboratories

Report of Analysis

3.2

Client Sample ID:	VP-14(105-110')		
Lab Sample ID:	JA30759-2	Date Sampled:	10/19/09
Matrix:	AQ - Ground Water	Date Received:	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.2	3.0	0.92	ug/l	1	10/20/09 17:15	MS	EPA 314
Specific Conductivity	334	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002573

Accutest Laboratories

Report of Analysis

Client Sample ID:	VP-24(105-110')		
Lab Sample ID:	JA30759-3	Date Sampled:	10/19/09
Matrix:	AQ - Ground Water	Date Received:	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	5.9	3.0	0.92	ug/l	1	10/20/09 17:49	MS	EPA 314
Specific Conductivity	327	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002574

Accutest Laboratories

Report of Analysis

Client Sample ID:	VP-14(130-135')		
Lab Sample ID:	JA30759-5	Date Sampled:	10/19/09
Matrix:	AQ - Ground Water	Date Received:	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	12.5	3.0	0.92	ug/l	1	10/20/09 18:24	MS	EPA 314
Specific Conductivity	77.2	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002575

Accutest Laboratories

Report of Analysis

Client Sample ID:	VP-13A(62-67')		
Lab Sample ID:	JA31156-1	Date Sampled:	10/22/09
Matrix:	AQ - Ground Water	Date Received:	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.3	3.0	0.92	ug/l	1	10/26/09 18:58	MS	EPA 314
Specific Conductivity	156	0.50		umhos/cm	1	10/27/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002576

Accutest Laboratories

Report of Analysis

Client Sample ID:	VP13A(87-92')		
Lab Sample ID:	JA31156-3	Date Sampled:	10/23/09
Matrix:	AQ - Ground Water	Date Received:	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.4	3.0	0.92	ug/l	1	10/26/09 18:41	MS	EPA 314
Specific Conductivity	127	0.50		umhos/cm	1	10/26/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002577

Accutest Laboratories

Report of Analysis

3.2

3

Chent Sample ID:	SC22S		
Lab Sample ID:	JA30998-2	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/10/09 12:08	BD	EPA 314
Specific Conductivity	376	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

ACCUTEST Laboratories

Accutest Laboratories

Report of Analysis

3.3 3

Client Sample ID:	MWH-4		
Lab Sample ID:	JA30998-3	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
	3.0							
Perchlorate	0.92 U	3.0	0.92	ug/l	1	11/10/09 12:25	BD	EPA 314
Specific Conductivity	307	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002579

Accutest Laboratories

Report of Analysis

Client Sample ID:	IWC-2		
Lab Sample ID:	JA30998-4	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.7	3.0	0.92	ug/l	1	11/11/09 10:38	MS	EPA 314
Specific Conductivity	688	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002580

Accutest Laboratories

Report of Analysis

Client Sample ID:	IWC-4		
Lab Sample ID:	JA30998-5	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.6	3.0	0.92	ug/l	1	11/10/09 13:00	BD	EPA 314
Specific Conductivity	251	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002581

Accutest Laboratories

Report of Analysis

Client Sample ID:	IWC-1		
Lab Sample ID:	JA30998-6	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Geaeral Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.3	3.0	0.92	ug/l	1	10/28/09 17:05	MS	EPA 314
Specific Conductivity	651	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	IWC-3		
Lab Sample ID:	JA30998-7	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Geoeral Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.5 B J	3.0	0.92	ug/l	1	11/10/09 13:17	BD	EPA 314
Specific Conductivity	224	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002583

Accutest Laboratories

Report of Analysis

3.8

3

Client Sample ID:	IWC-5		
Lab Sample ID:	JA30998-8	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	11.7	3.0	0.92	ug/l	1	11/11/09 10:56	MS	EPA 314
Specific Conductivity	417	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002584

Accutest Laboratories

Report of Analysis

Client Sample ID:	IWC-6		
Lab Sample ID:	JA30998-9	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.7	3.0	0.92	ug/l	1	11/11/09 11:13	MS	EPA 314
Specific Conductivity	444	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002585

Accutest Laboratories

Report of Analysis

3.10 3

Client Sample ID:	SC-9S		
Lab Sample ID:	JA30998-10	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Geaeral Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.2	3.0	0.92	ug/l	I	11/11/09 11:31	MS	EPA 314
Specific Conductivity	445	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002586

Accutest Laboratories

Report of Analysis

Client Sample ID:	SC33S		
Lab Sample ID:	JA30998-11	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.0	3.0	0.92	ug/l	1	11/11/09 11:48	MS	EPA 314
Specific Conductivity	449	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002587

Accutest Laboratories

Report of Analysis

3.12 3

Client Sample ID:	B		
Lab Sample ID:	JA30998-12	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.2 J	3.0	0.92	ug/l	1	11/10/09 10:58	BD	EPA 314
Specific Conductivity	741	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002588

Accutest Laboratories

Report of Analysis

Client Sample ID:	SC6S		
Lab Sample ID:	JA30998-13	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	6.4	3.0	0.92	ug/l	1	11/11/09 12:05	MS	EPA 314
Specific Conductivity	588	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 0050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002589

Accutest Laboratories

Report of Analysis

Client Sample ID:	RW6S		
Lab Sample ID:	JA30998-14	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	12.9	3.0	0.92	ug/l	1	11/11/09 12:23	MS	EPA 314
Specific Conductivity	730	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002590

Report of Analysis

Cheat Sample ID:	SC6D		
Lab Sample ID:	JA30998-15	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.8	3.0	0.92	ug/l	1	11/11/09 12:40	MS	EPA 314
Specific Conductivity	1070	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002591

Accutest Laboratories

Report of Analysis

Client Sample ID:	RW6D		
Lab Sample ID:	JA30998-16	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Geaeral Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	14.3	3.0	0.92	ug/l	1	11/11/09 15:48	MS	EPA 314
Specific Conductivity	937	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002592

Accutest Laboratories

Report of Analysis

Client Sample ID:	SC4S		
Lab Sample ID:	JA30998-17	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/11/09 13:32	MS	EPA 314
Specific Conductivity	200	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002593

Accutest Laboratories

Report of Analysis

3.18 3

Client Sample ID:	SC18S		
Lab Sample ID:	JA30998-18	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate [a]	15 ~~0.92~~ U	15 ~~1.0~~	0.92	ug/l	1	11/11/09 13:50	MS	EPA 314
Specific Conductivity	444	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

(a) Background indicates possible interference, but reported results confirmed with 1:5 dilution.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002594

Accutest Laboratories

Report of Analysis

Client Sample ID:	SC18D		
Lab Sample ID:	JA30998-19	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.8	3.0	0.92	ug/l	1	11/09/09 20:00	MS	EPA 314
Specific Conductivity	183	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002595

Accutest Laboratories

Report of Analysis

3.20
3

Client Sample ID:	SCID		
Lab Sample ID:	JA30998-20	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	46.3	3.0	0.92	ug/l	1	11/09/09 20:18	MS	EPA 314
Specific Conductivity	356	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002596

Accutest Laboratories

Report of Analysis

3.21

3

Client Sample ID:	SCIS		
Lab Sample ID:	JA30998-21	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 J	3.0	0.92	ug/l	1	11/09/09 20:35	MS	EPA 314
Specific Conductivity	235	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002597

Accutest Laboratories

Report of Analysis

3.22
3

Client Sample ID:	SC3S		
Lab Sample ID:	JA30998-22	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 J	3.0	0.92	ug/l	1	11/09/09 19:43	MS	EPA 314
Specific Conductivity	263	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002598

Accutest Laboratories

Report of Analysis

Client Sample ID:	SC3D(R)		
Lab Sample ID:	JA30998-23	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	141	24	7.4	ug/l	8	11/11/09 15:31	MS	EPA 314
Specific Conductivity	638	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002599

Accutest Laboratories

Report of Analysis

3.24
3

Client Sample ID:	SC34D Fieldduplicate of SC 30(R)		
Lab Sample ID:	JA30998-24	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	136	24	7.4	ug/l	8	11/11/09 14:39	MS	EPA 314
Specific Conductivity	631	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002600

Accutest Laboratories

Report of Analysis

Client Sample ID:	RIW2		
Lab Sample ID:	JA30998-25	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.1	3.0	0.92	ug/l	1	11/11/09 14:56	MS	EPA 314
Specific Conductivity	380	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002601

Accutest Laboratories

Report of Analysis

Client Sample ID:	IW2		
Lab Sample ID:	JA30998-26	Date Sampled:	10/21/09
Matrix:	AQ - Ground Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.7	3.0	0.92	ug/l	1	11/09/09 21:45	MS	EPA 314
Specific Conductivity	300	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002602

Report of Analysis

3.1
3

Clieat Sample ID:	SC33D		
Lab Sample ID:	JA33467-1	Date Sampled:	11/19/09
Matrix:	AQ - Ground Water	Date Received:	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 0.92 U	3.0	0.92	ug/l	1	12/02/09 15:07	MS	EPA 314
Specific Conductivity	204	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002603

Report of Analysis

Client Sample ID:	SC34D		
Lab Sample ID:	JA33467-2	Date Sampled:	11/19/09
Matrix:	AQ - Ground Water	Date Received:	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	152	18	5.5	ug/l	6	12/02/09 16:17	MS	EPA 314
Specific Conductivity	1020	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID:	SC37D		
Lab Sample ID:	JA33467-3	Date Sampled:	11/19/09
Matrix:	AQ - Ground Water	Date Received:	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	150	18	5.5	ug/l	6	12/02/09 16:52	MS	EPA 314
Specific Conductivity	996	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Accutest Laboratories

Report of Analysis

3.4
3

Client Sample ID:	FB101909		
Lab Sample ID:	JA30759-4	Date Sampled:	10/19/09
Matrix:	AQ - Field Blank Water	Date Received:	10/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
	3.0							
Perchlorate	0.92 U	3.0	0.92	ug/l	1	10/20/09 18:07	MS	EPA 314
Specific Conductivity	4.3	0.50		umhos/cm	1	10/21/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002606

Accutest Laboratories

Report of Analysis

3.1
3

Client Sample ID:	FB102109		
Lab Sample ID:	JA30998-1	Date Sampled:	10/21/09
Matrix:	AQ - Field Blank Water	Date Received:	10/21/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/10/09 11:50	BD	EPA 314
Speelfic Conductivity	2.6	0.50		umhos/cm	1	11/03/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002607

Accutest Laboratories

Report of Analysis

3.2
3

Client Sample ID:	FB102209		
Lab Sample ID:	JA31156-2	Date Sampled:	10/22/09
Matrix:	AQ - Field Blank Water	Date Received:	10/23/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Off-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.92~~ U	3.0	0.92	ug/l	1	10/26/09 19:16	MS	EPA 314
Specific Conductivity	3.7	0.50		umhos/cm	1	10/26/09	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

ACCUTEST Laboratories

R2-0002608

Report of Analysis

3.4 3

Client Sample ID:	FB111909		
Lab Sample ID:	JA33467-4	Date Sampled:	11/19/09
Matrix:	AQ - Field Blank Water	Date Received:	11/19/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 0.92 U	3.0	0.92	ug/l	1	12/02/09 13:58	MS	EPA 314
Specific Conductivity	3.0	0.50		umhos/cm	1	12/03/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002609

Soil

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-01(5-7')		
Lab Sample ID:	JA31353-1	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	93.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.6 ~~1.8~~ U	9.6	1.8	ug/kg	1	11/12/09 20:56	MS	EPA 314 M
Solids, Percent	93.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	16.8	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002611

Accutest Laboratories

Report of Analysis

3.2
3

Client Sample ID:	SS-01(12-14')		
Lab Sample ID:	JA31353-2	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Perceat Solids:	90.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
	10							
Perchlorate	~~1.6~~ U	10	1.8	ug/kg	I	11/12/09 21:14	MS	EPA 314 M
Solids, Percent	90.1			%	1	11/10/09	RI	SM18 2540G
Speelfic Conductivity	13.3	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002612

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-02(1-3')		
Lab Sample ID:	JA31353-3	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	91.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.1 B J	9.9	1.8	ug/kg	1	11/12/09 21:31	MS	EPA 314 M
Solids, Percent	91.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	195	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002613

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-02(14-16')		
Lab Sample ID:	JA31353-4	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	93.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~1.8~~ 9.7 U	9.7	1.8	ug/kg	1	11/12/09 21:49	MS	EPA 314 M
Solids, Percent	93.3			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	50.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002614

Accutest Laboratories

Report of Analysis

3.5 B

Client Sample ID:	SS-03(0-2')		
Lab Sample ID:	JA31353-5	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	84.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10 U	10	1.9	ug/kg	1	11/12/09 22:06	MS	EPA 314 M
Solids, Percent	84.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	1900	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002615

Accutest Laboratories

Report of Analysis

3.6 3

Client Sample ID:	SS-03(13-15')		
Lab Sample ID:	JA31353-6	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	94.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.6 B J	9.4	1.7	ug/kg	1	11/13/09 14:04	MS	EPA 314 M
Solids, Percent	94.6			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	48.5	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002616

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-04(2-4')		
Lab Sample ID:	JA31353-7	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	89.8
Project:	SMC Perchlorate On-Site Invesligation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	7.9 B J	9.9	1.8	ug/kg	1	11/13/09 14:22	MS	EPA 314 M
Solids, Percent	89.8			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	48.6	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002617

Accutest Laboratories

Report of Analysis

3.8 3

Client Sample ID:	SS-04(14-16')		
Lab Sample ID:	JA31353-8	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	89.2
Project:	SMC Perchlorate Oh-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.2 B J	10	1.9	ug/kg	1	11/13/09 14:39	MS	EPA 314 M
Solids, Percent	89.2			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	27.7	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002618

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-05(5-7')		
Lab Sample ID:	JA31353-9	Date Sampled:	10/26/09
Matrix:	SO - Soli	Date Received:	10/26/09
		Percent Solids:	92.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	58.3	9.6	1.8	ug/kg	1	11/12/09 23:33	MS	EPA 314 M
Solids, Percent	92.7			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	76.2	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a resuli > = MDL but < RL

R2-0002619

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-05(13-15')		
Lab Sample ID:	JA31353-10	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	92.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Geaeral Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	18.3	9.7	1.8	ug/kg	1	11/12/09 23:51	MS	EPA 314 M
Solids, Percent	92.1			%	1	11/10/09	RI	SM18 2S40G
Specific Conductivity	49.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a resdt > = MDL but < RL

R2-0002620

Accutest Laboratories

Report of Analysis

3.11

3

Client Sample ID:	SS-06(1-3')		
Lab Sample ID:	JA31353-11	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	88.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10 ~~1.9~~ U	10	1.9	ug/kg	1	11/13/09 00:08	MS	EPA 314 M
Solids, Percent	88.9			%	1	11/10/09	RI	SM18 2540G
Speelfic Conductivity	40.1	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002621

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-06(14-16')		
Lab Sample ID:	JA31353-12	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	92.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.9 B J	9.8	1.8	ug/kg	1	11/13/09 00:25	MS	EPA 314 M
Solids, Percent	92.7			%	1	11/10/09	RI	SM18 2540G
Speelfic Conductivity	20.4	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Delection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002622

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-07(6-8')		
Lab Sample ID:	JA31353-13	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	94.1
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.6 1.8 U	9.6	1.8	ug/kg	1	11/13/09 00:43	MS	EPA 314 M
Solids, Percent	94.1			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	105	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002623

Accutest Laboratories

Report of Analysis

3.14 3

Client Sample ID:	SS-07(13-15')		
Lab Sample ID:	JA31353-14	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	92.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 J	9.8	1.8	ug/kg	1	11/13/09 01:00	MS	EPA 314 M
Solids, Percent	92.3			%	1	11/10/09	RI	SM18 2540G
Specific Conductivity	23.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002624

Accutest Laboratories

Report of Analysis

3.15
3

Client Sample ID:	SS-08(3-4')		
Lab Sample ID:	JA31353-15	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	90.6
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.9 ~~1.8~~ U	9.9	1.8	ug/kg	1	11/13/09 01:18	MS	EPA 314 M
Solids, Percent	90.6			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	35.7	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002625

Accutest Laboratories

Report of Analysis

3.16

3

Client Sample ID:	SS-08(12-14')		
Lab Sample ID:	JA31353-16	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	93.4
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.6 ~~1.8~~ U	9.6	1.8	ug/kg	1	11/13/09 01:35	MS	EPA 314 M
Solids, Percent	93.4			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	21.8	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002626

Accutest Laboratories

Report of Analysis

Cbent Sample ID:	SS-09(6-8')		
Lab Sample ID:	JA31353-17	Date Sampled:	10/26/09
Matrix:	SO - Soli	Date Received:	10/26/09
		Percent Solids:	88.4
Project:	SMC Perchlorate On-Site Investigation, Newficld, NJ		

Geaeral Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Percldorate	~~1.8~~ 10 U	10	1.8	ug/kg	1	11/13/09 01:52	MS	EPA 314 M
Solids, Percent	88.4			%	I	11/10/09	DD	SM18 2540G
Specific Conductivity	47.9	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limli

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	SS-09(12-14')		
Lab Sample ID:	JA31353-18	Date Sampled:	10/26/09
Matrix:	SO - Soli	Date Received:	10/26/09
		Percent Solids:	90.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Geaeral Chemistry

Analyte	Resuli	RL	MDL	Umits	DF	Analyzed	By	Method
Perchlorate	10 ~~1.8~~ U	10	1.8	ug/kg	1	11/13/09 02:10	MS	EPA 314 M
Solids, Percent	90.2			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	33.0	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002628

Report of Analysis

Client Sample ID:	SS-10(2-4')		
Lab Sample ID:	JA31353-19	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	91.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.8 U	9.8	1.8	ug/kg	1	11/13/09 02:45	MS	EPA 314 M
Solids, Percent	91.3			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	35.9	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002629

Accutest Laboratories

Report of Analysis

3.20 B

Client Sample ID:	SS-10(4-6')		
Lab Sample ID:	JA3i353-20	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	96.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.4 ~~1.7~~ iJ	9.4	1.7	ug/kg	1	11/13/09 03:02	MS	EPA 314 M
Solids, Percent	96.5			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	17.4	0.50		umhos/cm	1	11/09/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002630

Accutest Laboratories

Report of Analysis

3.23

Client Sample ID:	SS-27(6-8')		
Lab Sample ID:	JA31353-23	Date Sampled:	10/26/09
Matrix:	SO - Soil	Date Received:	10/26/09
		Percent Solids:	94.2
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	9.6 ~~1.8~~ U	9.6	1.8	ug/kg	1	11/13/09 21:02	MS	EPA 314 M
Solids, Percent	94.2			%	1	11/10/09	DD	SM18 2540G
Specific Conductivity	96.8	0.50		umhos/cm	1	11/13/09	BD	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002631

Accutest Laboratories

Report of Analysis

3.21

3

Client Sample ID:	FBI02609(1)		
Lab Sample ID:	JA31353-21	Date Sampled:	10/26/09
Matrix:	AQ - Field Blank Soil	Date Received:	10/26/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/13/09 14:57	MS	EPA 314
Specific Conductivity	3.4	0.50		umhos/cm	1	11/06/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002632

Accutest Laboratories

Report of Analysis

3.22 3

Client Sample ID:	FB102609(2)		
Lab Sample ID:	JA31353-22	Date Sampled:	10/26/09
Matrix:	AQ - Field Blank Soil	Date Received:	10/26/09
		Percent Solids:	n/a
Project:	SMC Perchlorate Qn-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/13/09 12:55	MS	EPA 314
Specific Conductivity	3.0	0.50		umhos/cm	1	11/06/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002633

Sediment

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-IA		
Lab Sample ID:	JA31506-3	Date Sampled:	10/28/09
Matrix:	SO - Sediment	Date Received:	10/28/09
		Percent Solids:	73.0
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~2.8~~ 12 U	12	2.3	ug/kg	1	11/17/09 03:59	MS	EPA 314 M
Solids, Percent	73			%	1	11/11/09	DD	SM18 2S40G
Specific Conductivity	34.5	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002635

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-1		
Lab Sample ID:	JA31506-5	Date Sampled:	10/28/09
Matrix:	SO - Sediment	Date Received:	10/28/09
		Percent Solids:	51.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	18 ~~9.2~~ U	18	3.2	ug/kg	1	11/17/09 04:34	MS	EPA 314 M
Solids, Percent	51.5			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	73.5	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002636

Report of Analysis

Client Sample ID:	SED-2		
Lab Sample ID:	JA31506-7	Date Sampled:	10/28/09
Matrix:	SO - Sediment	Date Received:	10/28/09
		Percent Solids:	47.3
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	19 U 5	19	3.5	ug/kg	1	11/17/09 04:52	MS	EPA 314 M
Solids, Percent	47.3			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	140	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a resdt > = MDL but < RL

R2-0002637

Accutest Laboratories

Report of Analysis

3.6
3

Client Sample ID:	SED-3		
Lab Sample ID:	JA31506-9	Date Sampled:	10/28/09
Matrix:	SO - Sediment	Date Received:	10/28/09
		Percent Solids:	71.7
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	13 ~~2.3~~ U	13	2.3	ug/kg	1	11/18/09 23:33	MS	EPA 314 M
Solids, Percent	71.7			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	120	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002638

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-4		
Lab Sample ID:	JA31506-11	Date Sampled:	10/28/09
Matrix:	SO - Sediment	Date Received:	10/28/09
		Percent Solids:	21.9
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	10.9 J	41	7.6	ug/kg	1	11/17/09 05:27	MS	EPA 314 M
Solids, Percent	21.9			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	181	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002639

Accutest Laboratories

Report of Analysis

Client Sample ID:	SED-10		
Lab Sample ID:	JA31506-13	Date Sampled:	10/28/09
Matrix:	SO - Sediment	Date Received:	10/28/09
		Percent Solids:	21.5
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	42 U J	42	7.7	ug/kg	1	11/17/09 05:44	MS	EPA 314 M
Solids, Percent	21.5			%	1	11/11/09	DD	SM18 2540G
Specific Conductivity	174	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B M

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002640

Accutest Laboratories

Report of Analysis

Client Sample ID:	FB102809		
Lab Sample ID:	JA31506-1	Date Sampled:	10/28/09
Matrix:	AQ - Ficld Blank Soil	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/16/09 20:44	MS	EPA 314
Specific Conductivity	9.1	0.50		umhos/cm	1	11/16/09	RI	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002641

Surface Water

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-IA		
Lab Sample ID:	JA31506-2	Date Sampled:	10/28/09
Matrix:	AQ - Surface Water	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuli	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	1.8 B J	3.0	0.92	ug/l	1	11/16/09 20:27	MS	EPA 314
Speelfic Conductivity	167	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Lunit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002643

Accutest Laboratories

Report of Analysis

3.4 3

Client Sample ID:	SW-1		
Lab Sample ID:	JA31506-4	Date Sampled:	10/28/09
Matrix:	AQ - Surface Water	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.92~~ U	3.0	0.92	ug/l	1	11/16/09 21:19	MS	EPA 314
Speelfic Conductivity	111	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002644

Accutest Laboratories

Report of Analysis

3.6 3

Client Sample ID:	SW-2		
Lab Sample ID:	JA31506-6	Date Sampled:	10/28/09
Matrix:	AQ - Surface Water	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/18/09 23:50	MS	EPA 314
Specific Conductivity	141	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002645

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	JA31506-8	Date Sampled:	10/28/09
Matrix:	AQ - Suface Water	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 0.92 U	3.0	0.92	ug/l	1	11/16/09 21:54	MS	EPA 314
Speelfic Conductivity	127	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Metiiod Detection Limli

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002646

Accutest Laboratories

Report of Analysis

Client Sample ID:	SW-4		
Lab Sample ID:	JA31506-10	Date Sampled:	10/28/09
Matrix:	AQ - Surface Water	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	~~0.92~~ 3.0 U	3.0	0.92	ug/l	1	11/16/09 22:11	MS	EPA 314
Specific Conductivity	127	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002647

Accutest Laboratories

Report of Analysis

3.12 B

Chent Sample ID:	SW-10		
Lab Sample ID:	JA31506-12	Date Sampled:	10/28/09
Matrix:	AQ - Surface Water	Date Received:	10/28/09
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 U ~~0.03 B~~	3.0	0.92	ug/l	1	11/16/09 22:29	MS	EPA 314
Specific Conductivity	128	0.50		umhos/cm	1	11/17/09	BD	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002648

Data Validation Worksheets

Data Validation Worksheet Cover Page

Site Name: SMC
Project No. 163230/01000/01130

PERCHLORATE DATA VALIDATION

The following data package has been validated:

Lab Name: Accutest-NJ
Lab Project No.: JA30457, JA30759, JA30998, JA31156, JA31467, JA31506, JA31353
No. of Samples/Matrix: see next page

Method No: EPA 314.0 aqueous solid EPA 314.0, modified
Sampling Date(s): see next page
Shipping Date(s): —
Date Rec'd By Lab: —

Sample IDs. see next page

Equipment Blank ID. see next page
Field Duplicate IDs. see FD worksheet

The method requirements and the Region II *Evaluation of Metals Data for the Contract Laboratory Program (CLP)* (Revision 13, SOP HW-2, September 2006) were used to evaluate the data.

Full validation was performed.

The data were evaluated based upon the following parameters:

-Overall Evaluation of Data
-Data Completeness
-Preservation & Technical Holding Times
-RL Standard Analysis
-Initial & Continuing Calibrations
-Blanks
-Matrix Spike Results
-Laboratory Duplicate Results
-Field Duplicates
-Laboratory Control Spikes
-Sample Quantitation
-Instmment Performance Checks

Definitions and Qualifiers:
A – Acceptable Data
J – Numerical value associated with compound is an estimated quantity
R – The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U – Compound not detected at that numerical sample quantitation limit
UJ – The sample quantitation limit is an estimated quantity.

Validator's Name E. Denly Company Name TRC Phone Number 978-656-3577
Date Validation Started 12/29/09 Date Validation Completed 1/8/10

1.0

Package Completeness and Deliverables

Missing Information	Date Lab Contacted	Date Received
see e-mails	12/30/09	1/4/10

JA30457: GW: VP-13 (100-105'): collected 10/15/09
JA30759: GW: VP-14 (80-85'), VP-14 (105-110'), VP-24 (105-110'), VP-14 (130-135'), FB101909: collected 10/19/09
JA30998: GW: FB102109, SC22S, HWH-4, IWC-2, IWC-4, IWC-1, IWC-3, IWC-5, IWC-6, SC-9S, SC33S, B, SC6S, RW6S, SC6D, RW6D, SC4S, SC18S, SC18D, SC01D, SC1S, SC3S, SC3D(R), SC34D, RIW2, IW2: collected 10/21/09
JA31156: GW: VP-13A (60-63'), FB102209, VP13A (87-92'): collected 10/22 & 10/23/09
JA31467: GW: SC33D, SC34D, SC37D, FB111909: collected 11/19/09
JA31506: sediment: SED-1A, SED-1, SED-2, SED-3, SED-4, SED-10
SW: SW-1A, SW-1, SW-2, SW-3, SW-4, SW-10
FB102809
] collected 10/28/09
JA31353: soil: SS-1 (5-7'), SS-1 (12-14'), SS-2 (1-3'), SS-2 (14-16'), SS-3 (0-2'), SS-3 (13-15'), SS-4 (2-4'), SS-4 (14-16'), SS-5 (5-7'), SS-5 (13-15'), SS-6 (1-3'), SS-6 (14-16'), SS-7 (6-8'), SS-7 (13-15'), SS-8 (3-4'), SS-8 (12-14'), SS-9 (6-8'), SS-9 (12-14'), SS-10 (2-4'), SS-10 (4-6'), FB102609(1), FB102609(2), SS-27 (6-7')] collected 10/26/09

Denly, Elizabeth (Lowell,MA-US)

From: Marie Meidhof [mariem@accutest.com]
Sent: Monday, January 04, 2010 4:30 PM
To: Denly, Elizabeth (Lowell,MA-US)
Cc: Butlien, Larry (Windsor,CT-US); Moss, John (Windsor,CT-US)
Subject: RE: SMC Perchlorate Data Validation Questions: JA30998

Liz,

The way this sample was reported was a result of a judgement call in the lab. We do report from the dilutions if we think that the interferences are affecting the reported results. In the case of sample JA30998-18, there were no peaks present in any of the analyses, but there was a signifcant shift in the baseline in the analysis of the undiluted sample. It was our judgement that if there was a peak, it still would have shown on top of the shifting baselline.

Please let me know if you need any more information on this.

Thank you,
Marie

From: Denly, Elizabeth (Loweli,MA-US) [mailto:edenly@TRCSOLUTIONS.com]
Sent: Wednesday, December 30, 2009 8:47 AM
To: Marie Meidhof
Cc: Butlien, Larry (Windsor,CT-US); Moss, John (Windsor,CT-US)
Subject: SMC Perchlorate Data Validation Questions: JA30998

Hi Marie,

Please have the lab get back to me on the following questions/issues:

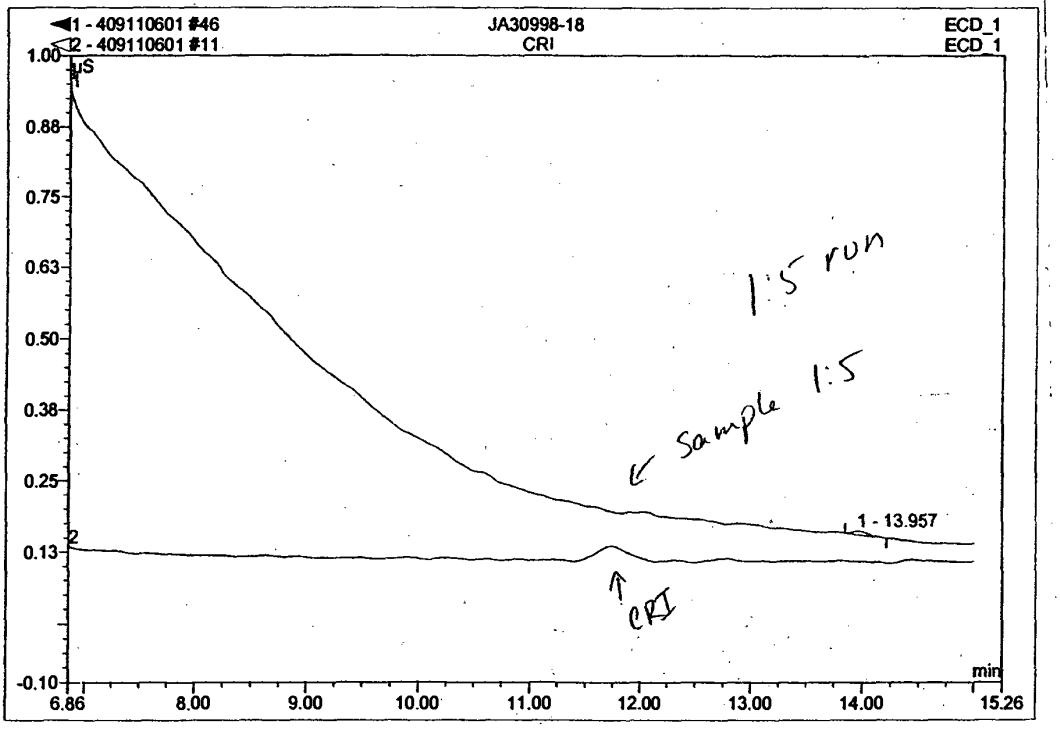
1. The raw data associated with run GN32151 on 11/10/09 were missing from the package. Please provide.
2. Sample SC18S (JA30998-18): There is a high level of interference present at the time perchlorate elutes. There is a note on the chromatogram stating that no perchlorate peak is indicated and this was confirmed by a 1:5 dilution.
    a. Please provide the raw data associated with the 1:5 dilution.
    b. Please explain how perchlorate can be reported as a nondetect from the undiluted run because it was confirmed at a 5-fold dilution. Shouldn't the nondetect result be reported from the 5-fold dilution where the absence of perchlorate is definitively determined?

Elizabeth Denly
Senior QA Chemist
TRC
PARTNER OF THE YEAR
650 Suffolk Street
Lowell, MA 01854
P: 978-656-3577
C: 978-328-2551
edenly@trcsolutions.com

R2-0002652

46 JA30998-18

Sample Name:	JA30998-18	*Injection Volume:*	1000.0
Vial Number:	38	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	System 4 Perchlorate	*Bandwidth:*	n.a.
Quantif. Method:	System 4 Perchlorate	*Dilution Factor:*	5.0000
Recording Time:	11/6/2009 22:57	*Sample Weight:*	1.0000
Run Time (min):	15.00	*Sample Amount:*	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	13.96	n.a.	0.006	0.001	100.00	n.a.	BMB
Total:			0.006	0.001	100.00	0.000	

Chromeleon (c) Dionex 1996-2001
Version 6.80 Build 2212

Denly, Elizabeth (Lowell,MA-US)

From: Marie Meidhof [mariem@accutest.com]
Sent: Monday, January 04, 2010 4:33 PM
To: Denly, Elizabeth (Lowell,MA-US)
Cc: Butlien, Larry (Windsor,CT-US); Moss, John (Windsor,CT-US)
Subject: RE: SMC Perchlorate Data Validation: Request #2: JA30998

Liz,

The lab provided the following in response to your question.

This data is correct as reported. If they look carefully at the peak for JA30998-12, you can see that the software is showing the retention time from the start of the peak instead of the middle of the peak. This happens with small peaks when there isn't a clear inflection point at the beginning of the peak. However, the center of the peak for JA30998-12 lines up with the center of the peak for the matrix spike on this sample.

Please let me know if you need any additional information.

Thank you,
Marie

From: Denly, Elizabeth (Lowell,MA-US) [mailto:edenly@TRCSOLUTIONS.com]
Sent: Wednesday, December 30, 2009 11:01 AM
To: Marie Meidhof
Cc: Butlien, Larry (Windsor,CT-US); Moss, John (Windsor,CT-US)
Subject: SMC Perchlorate Data Validation: Request #2: JA30998

Hi Marie,

Please have the lab respond to the following questions/issues:

1. Sample B (JA30998-12):
    a. Perchlorate was identified at an incorrect retention time. Please have the lab recheck the data for this sample.
    b. The above issue may also affect the matrix spike recovery reported.
    c. The lab duplicate performed on this sample also identified perchlorate at an incorrect retention time. Please have the lab recheck the data for this analysis.

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R2-0002654

Denly, Elizabeth (Lowell,MA-US)

From: Marie Meidhof [mariem@accutest.com]
Sent: Monday, January 04, 2010 4:35 PM
To: Denly, Elizabeth (Lowell,MA-US)
Cc: Butlien, Larry (Windsor,CT-US); Moss, John (Windsor,CT-US)
Subject: RE: SMC Perchlorate Data Validation: Request #3: JA31506
Attachments: gn32348_additional_data.pdf

Liz,

Both reported peaks were less than the RL and the retention times were within the retention time window. If you overlay the peaks with the CRI from the beginning of the run, the retention times line up. That being said, if you look at the CCV's and peaks later in the run, they have shifted out slightly. I requantitated the two samples using the CCV retention time and then both peaks are less than the MDL.

It is in the lab's judgement that none of the peaks are probably perchlorate. Both samples have significant baseline noise around the perchlorate retention time,

We will reissue this data with the < MDL results. Attached please find the chromatograms.

Please let me know if you have any additional questions.

Thank you,
Marie

From: Denly, Elizabeth (Lowell,MA-US) [mailto:edenly@TRCSOLUTIONS.com]
Sent: Wednesday, December 30, 2009 12:38 PM
To: Marie Meidhof
Cc: Butlien, Larry (Windsor,CT-US); Moss, John (Windsor,CT-US)
Subject: SMC Perchlorate Data Validation: Request #3: JA31506

Hi Marie,

Please have the lab respond to the following questions/issues:

Samples SED-2 (JA31S06-7) and SW-10 (JA31506-12): Perchlorate was identified at an incorrect retention time. Please have the lab recheck the data for these samples.

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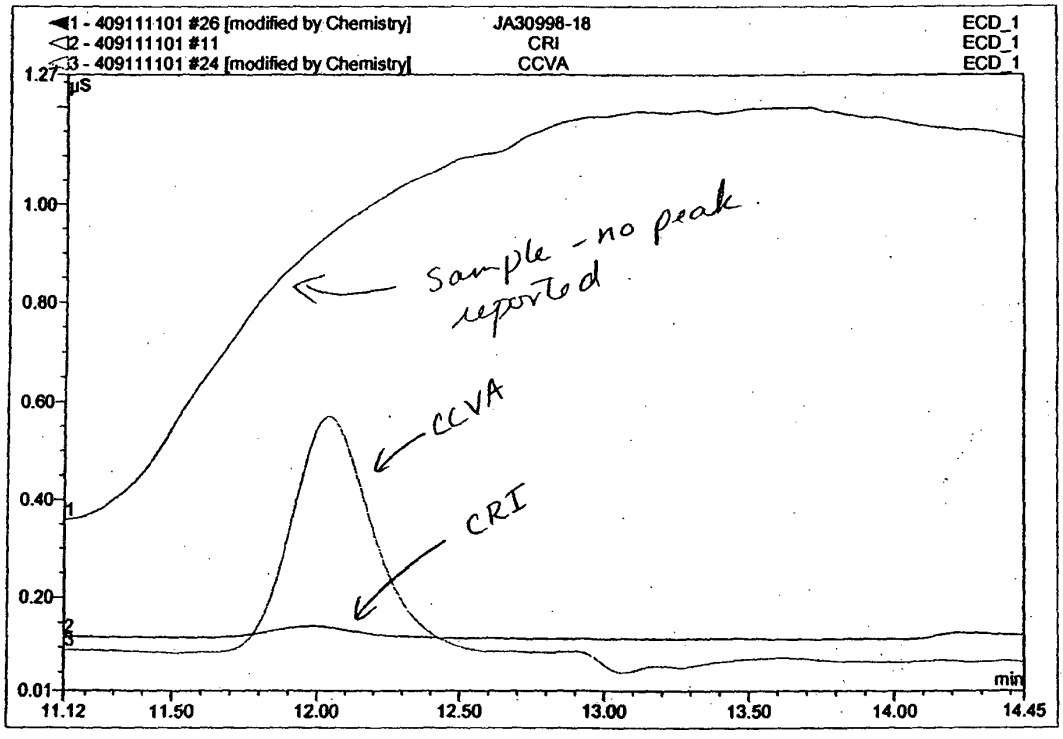
R2-0002655

26 JA30998-18

Sample Name:	JA30998-18	*Injection Volume:*	1000.0
Vial Number:	20	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	System 4 Perchlorate	*Bandwidth:*	n.a.
Quantif. Method:	System 4 Perchlorate	*Dilution Factor:*	1.0000
Recording Time:	11/11/2009 13:50	*Sample Weight:*	1.0000
Run Time (min):	15.00	*Sample Amount:*	1.0000

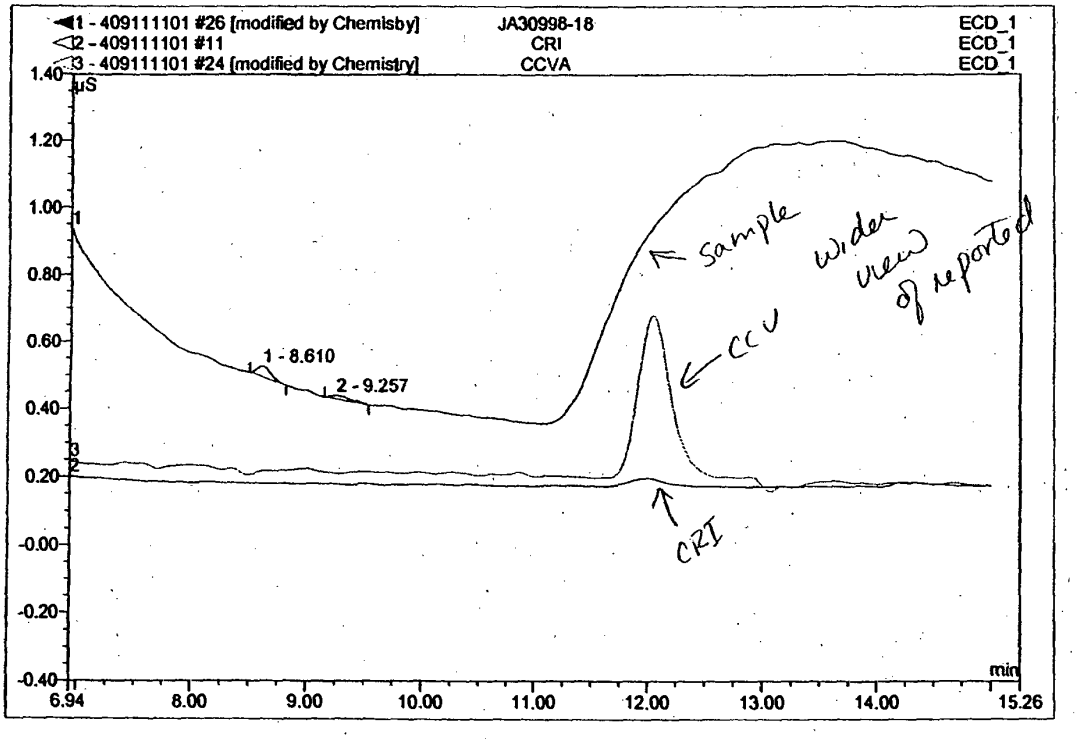


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	8.61	n.a.	0.031	0.004	66.32	n.a.	BMB
2	9.26	n.a.	0.010	0.002	33.68	n.a.	BMB
Total:			0.041	0.006	100.00	0.000	

R2-0002656

26 JA30998-18

Sample Name:	JA30998-18	*Injection Volume:*	1000.0
Vial Number:	20	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	System 4 Perchlorate	*Bandwidth:*	n.a.
Quantif. Method:	System 4 Perchlorate	*Dilution Factor:*	1.0000
Recording Time:	11/11/2009 13:50	*Sample Weight:*	1.0000
Run Time (min):	15.00	*Sample Amount:*	1.0000



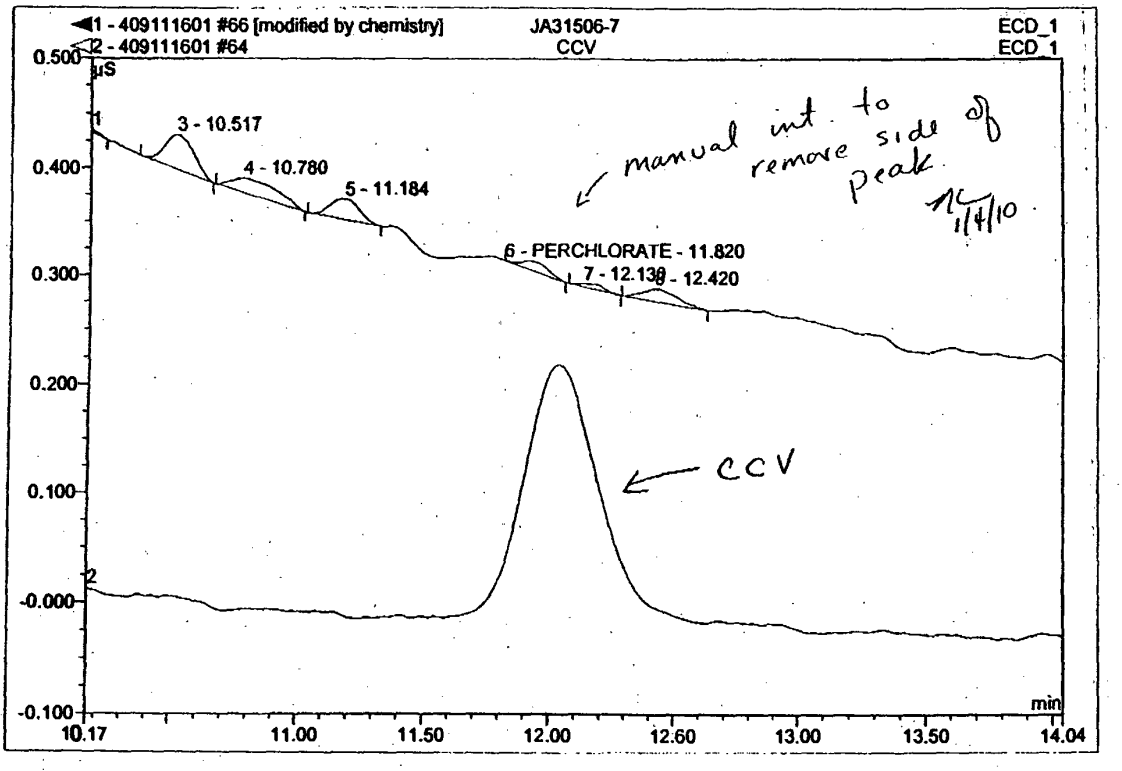
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	8.61	n.a.	0.031	0.004	66.32	n.a.	BMB
2	9.26	n.a.	0.010	0.002	33.68	n.a.	BMB
Total:			0.041	0.006	100.00	0.000	

12	14.83	n.a.	0.024	0.005	6.63	n.a.	BMB
Total:			0.258	0.068	100.00	0.457	

GN 323348 Additional data

66 JA31606-7

Sample Name:	JA31506-7	*Injection Volume:*	1000.0
Vial Number:	61	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	System 4 Perchlorate	*Bandwidth:*	n.a.
Quantif. Method:	System 4 Perchlorate	*Dilution Factor:*	1.0000
Recording Time:	11/17/2009 4:52	*Sample Weight:*	1.0000
Run Time (min):	15.00	*Sample Amount:*	1.0000

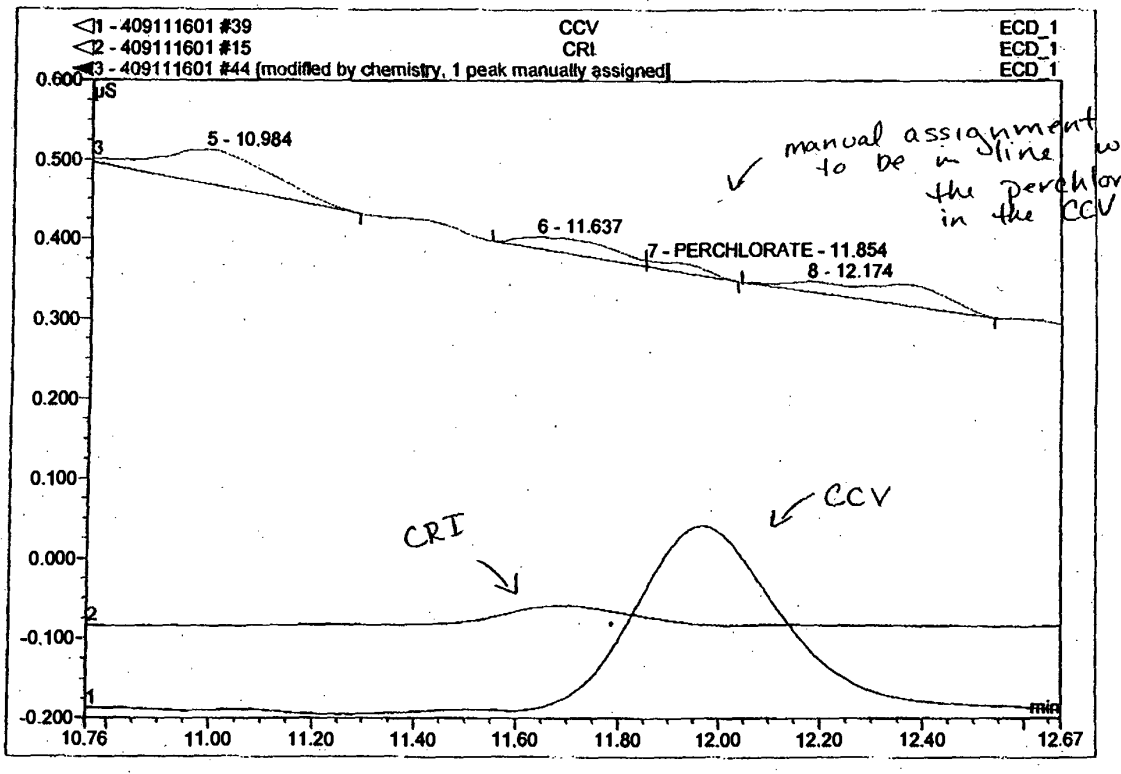


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	9.29	n.a.	0.011	0.003	10.29	n.a.	BMB
2	9.89	n.a.	0.033	0.009	30.95	n.a.	BMB
3	10.52	n.a.	0.032	0.004	15.12	n.a.	BMB
4	10.78	n.a.	0.014	0.003	11.33	n.a.	BMB
6	11.18	n.a.	0.020	0.003	9.33	n.a.	BMB
6	11.82	PERCHLORATE	0.000	0.001	4.05	0.380	BMB*
7	12.13	n.a.	0.003	0.001	1.83	n.a.	BMB*
8	12.42	n.a.	0.012	0.002	7.18	n.a.	BMB
9	14.73	n.a.	0.018	0.003	9.92	n.a.	BMB
Total:			0.144	0.028	100.00	0.380	

Chromeleon (c) Dionex 1996-2001
Version 6.80 Build 2212

44 JA31506-12

Sample Name:	JA31506-12	*Injection Volume:*	1000.0
Vial Number:	40	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	System 4 Perchlorate	*Bandwidth:*	n.a.
Quantif. Method:	System 4 Perchlorate	*Dilution Factor:*	1.0000
Recording Time:	11/16/2009 22:29	*Sample Weight:*	1.0000
Run Time (min):	15.00	*Sample Amount:*	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area uS*min	Rel.Area %	Amount	Type
1	8.92	n.a.	0.023	0.003	4.17	n.a.	BMB
2	9.09	n.a.	0.006	0.002	3.19	n.a.	BMB
3	9.67	n.a.	0.000	0.003	5.13	n.a.	BMB
4	10.42	n.a.	0.046	0.013	19.23	n.a.	BMB
5	10.98	n.a.	0.044	0.012	17.00	n.a.	BMB
6	11.64	n.a.	0.015	0.004	5.68	n.a.	BM *
7	11.85	PERCHLORATE	0.008	0.001	2.00	0.457	MB*^
8	12.17	n.a.	0.013	0.007	9.66	n.a.	BMB
9	12.86	n.a.	0.021	0.003	4.90	n.a.	BMB
10	13.81	n.a.	0.023	0.006	8.73	n.a.	BMB
11	14.32	n.a.	0.036	0.009	13.78	n.a.	BMB

R2-0002660

I. PRESERVATION AND HOLDING TIMES – Circle sample numbers with exceeded holding times or omitted preservation. Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: SA31353: 3.0°C

	Sample ID	Matrix	Date Sampled	Conductivity Analysis Date	Perchlorate Analysis Date	# Days from Sampling To Analysis	Actions		
SA31353 -1	SS-01(5-7')	Soil	10/26/09	11/9/09	11/12/09 2056		ND	16.8	
-2	SS-01(12-14')				11/12/09 2114		ND	13.5	
-3	SS-02(1-3')				11/12/09 2131		11.98	195.4	
-4	SS-02(14-16')				11/12/09 2149		~~11.21~~ ND	50	~~test~~
-5	SS-03(0-2')				11/12/09 2206		ND	1904	reported runs:
-6	SS-03(13-15')				11/12/09 2224		11.98	48.5	also run 11/13/09 1404
-7	SS-04(2-4')				11/12/09 2241		11.97	48.6	also run 11/13/09 1422
-8	SS-04(14-16')				11/12/09 2258		11.95	27.7	also run 11/13/09 1439
-9	SS-05(5-7')				11/12/09 2333		11.97	76.2	
-10	SS-05(13-15')				11/12/09 2351		11.96	49.0	
-11	SS-06(1-3')				11/13/09 0008		ND	40.1	
-12	SS-06(14-16')				11/13/09 0025		11.92	20.4	
-13	SS-07(6-8')				11/13/09 0043		ND	104.9	
-14	SS-07(13-15')				11/13/09 0100		11.93	23.0	
-15	SS-08(3-4')				11/13/09 0118		ND	35.7	
-16	SS-08(12-14')				11/13/09 0135		ND	21.8	
-17	SS-09(6-8')				11/13/09 0152		ND	47.9	
-18	SS-09(12-14')				11/13/09 0210		ND	33.0	
-19	SS-10(2-4')				11/13/09 0245		ND	35.9	

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold.
N/A

Were these samples diluted or pretreated?
N/A

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? N/A YES NO
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? YES NO

- all soils prepped 11/9/09 (1-20)
~~[illegible]~~ 23 prepped 11/11/09

Perchlorate Worksheets
EPA Method 314.0

TRC
December 2009
Revision 0

I. PRESERVATION AND HOLDING TIMES –

Circle sample numbers with exceeded holding times or omitted preservation.
Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: _____

	Sample ID	Matrix	Date Sampled	Conductivity Analysis Date	Perchlorate Analysis Date	# Days from Sampling To Analysis	Actions	
SA31353 -20	SS-10(4-6')	soil	10/26/09	11/9/09	11/13/09 0302		ND	17.4
-21	FB102609(1)	Aqueous	↓	11/6/09	11/13/09 1457		ND	3.4
-22	FB102609(2)	↓	↓	↓	11/12/09 1802		ND	3.0
-23	SS-27(6-8')	soil	↓	11/13/09	11/13/09 2102		~~11.99~~ ND	96.8

dilution @ 11/13/09 1255 ND
~~11/13/09 1574 ND~~

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold.
NA

Were these samples diluted or pretreated?
NA

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? NA YES NO
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? NA YES NO

R2-0002662

L PRESERVATION AND HOLDING TIMES – Circle sample numbers with exceeded holding times or omitted preservation. Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: SA33467: 3.4°C, SA31506: 3.0°C

	Sample ID	Matrix	Date Sampled	Conductivity Analysis Date	Perchlorate Analysis Date	# Days from Sampling To Analysis	Actions	Conductivity	
SA33467 -1	SC33D	GW	11/19/09	12/3/09	12/2/09 1117		ND	204	
-2	SC34D				12/2/09 1450 1x		1246	1021	-run @ 1:6 12/2/09 1617
-3	SC37D				12/2/09 1525 1x		1242	996	12/2/09 1652
-4	FB111909				12/2/09 1358		ND	3.0	
SA31506 -1	FB102809	Aq	10/28/09	11/16/09	11/16/09 2044		ND	9.1	
-2	SW-1A	SW		11/17/09	11/16/09 2027		11.89	167	
-3	SED-1A	SED		11/16/09	11/17/09 0359		ND	34.5	
-4	SW-1	SW		11/17/09	11/16/09 2119		ND	111	
-5	SED-1	SED		11/16/09	11/17/09 0434		ND	23.5	
-6	SW-2	SW		11/17/09	11/16/09 2137		ND	141	-rerun for confirmation on 11/18/09 2350
-7	SED-2	SED		11/16/09	11/17/09 0452		ND	140 (2)	
-8	SW-3	SW		11/17/09	11/16/09 2154		ND	127	
-9	SED-3	SED		11/16/09	11/17/09 0509		ND	119.7	-rerun for confirmation on 11/18/09 2333
-10	SW-4	SW		11/17/09	11/16/09 2211		ND	128	
-11	SED-4	SED		11/16/09	11/17/09 0527		~~ND~~ 11.85	180.6	
-12	SW-10	SW		11/17/09	11/16/09 2229		~~ND~~ 11.64	128 (1)	
-13	SED-10	SED		11/16/09	11/17/09 0544		ND	1402	

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold.
NA

Were these samples diluted or pretreated?
NA

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? NA YES NO
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? NA YES NO

Sediment: SA31506: ~33g used to 100mL DI water: prepped 11/13/09
(1) perchlorate ID'd at wrong RT
(2) report form for perchlorate shows "4.7 B" but should be ND per raw data → perchlorate ID'd at wrong RT

Perchlorate Worksheets
EPA Method 314.0

TRC
December 2009
Revision 0

I. PRESERVATION AND HOLDING TIMES – Circle sample numbers with exceeded holding times or omitted preservation. Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: JA30457: 3.2°C, JA30759: 2.4°C, JA30998: 3.4°C

	Sample ID	Matrix	Date Sampled	Conductivity Analysis Date	Perchlorate Analysis Date	# Days from Sampling To Analysis	Actions	Conductivity
JA30457-1	VP-13 (100-105')	GW	10/15/09	10/16/09 ✓	10/15/09 1811		12.16	139 uS/CM
JA30759-1	VP-14 (80-85')	GW	10/19/09	10/21/09	10/20/09 1732		11.79	332
-2	VP-14 (105-110')				10/20/09 1715		11.80	334
-3	VP-24 (105-110')				10/20/09 1749		11.82	327
-4	FB101909				10/20/09 1807		ND	4.3
-5	VP-14 (130-135')				10/20/09 1829		11.84	77
JA30998-1	FB102109	GW	10/21/09	11/3/09	11/10/09 1150		ND	2.6
-2	SC22S				11/10/09 1208		ND	376
-3	MWH-4				11/10/09 1225		ND	307
-4	IWC-2				11/11/09 1038		11.98	688
-5	IWC-4				11/10/09 ~~1243~~ 1300		11.92	251
-6	IWC-1			11/3/09	10/28/09 1705		11.92	651
-7	IWC-3				11/10/09 1317		11.88 (3)	224
-8	IWC-5 (1)				11/11/09 1056		11.96	417
-9	IWC-6 (1)				11/11/09 1113		11.95	444
-10	SC-9S				11/11/09 1131		11.97	445
-11	SC-33S				11/11/09 1148		11.95	449
-12	B			11/3/09	11/10/09 1058			740 (2)
-13	SC6S				11/11/09 1205		11.97	588

→ initially run on 11/10/09 1243 but interfering peak present; run on 11/11/09 reported

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold.
JA30457: none JA30759: none JA30998: none JA31156: none, JA33467: none, JA31353: none JA31506: none

Were these samples diluted or pretreated? NA

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? NA YES NO
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? NA YES NO

~~(3) RT seems off → double check~~

(1) not filtered due to colloidal fouling of filters
(2) peak [illegible] as perchlorate at wrong RT → double check; may need to recalculate MS also

R2-0002664

I. PRESERVATION AND HOLDING TIMES – Circle sample numbers with exceeded holding times or omitted preservation. Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: SA31156: 3.4°C

	Sample ID	Matrix	Date Sampled	Conductance Analysis Date	Perchlorate Analysis Date	Dil'n from Sampling Lab Analysis	Results	Actions
SA30998 -14	RW6S	GW	10/21/09	11/3/09	11/11/09 1223		11.98	730
-15	SC6D				11/11/09 1240		11.95	1071
-16	RW6D				11/11/09 1258	11/11/09 1814	11.97 12.00	937 → rerun due to spiking in initial run; confirms initial run
-17	SC4S				11/11/09 1312		ND	2000
-18	SC18S				11/11/09 1330		ND (4)	444
-19	SC18D				11/9/09 2000		11.94	183
-20	SC1D			↓	11/9/09 2018		11.93	356
-21	SC1S				11/9/09 2037		11.98	263
-22	SC3S				11/9/09 1943		11.92	259
-23	SC3D(R)				11/9/09 2053 (2)	11/11/09 1431 8x	11.93 12.01	638 → also run on 11/11/09 1531 @ 1:8 agrees w/ 1:5 run
-24	SC34D				11/9/09 2110 (2)	11/11/09 1454	11.93 12.00	631
-25	RIW2				11/9/09 2127 (3)	11/11/09 1446 5x	11.97 12.03	380
-26	IW2	↓	↓	↓	11/9/09 2145		11.98	307
SA31156 -1	VP-13A(62-67')		10/22/09	10/27/09	10/26/09 1858		11.97	156
-2	PB102209		↓	10/28/09	10/26/09 1916		ND	~~283~~ 3.7
↓ -3	VP-13A(87-92')	↓	10/23/09	10/26/09	10/26/09 1941		11.95	127

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold.

NA

Were these samples diluted or pretreated?

NA

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? NA YES NO
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? NA YES NO

(2) over calibration; ~~run~~ used; rerun on 11/11/09 @ 1:8
(3) potential carryover; lab reran on 11/11/09 @ dil'n initial run confirmed to be ok
(4) large hump at time perchlorate elutes; note on chromatogram says no perchlorate peak indicated; confirmed w/ 1:5 dilution on prior run: need to see diluted run → not sure this 1:1 run can be reported - how can perchlorate be confirmed ND @ 1:1 w/ @ 1:5 dilution?

II. INSTRUMENT CALIBRATION

Initial Calibration: 5 standards; %RSD <15 (must use peak areas)
Initial Calibration Verification: 90-110% (mid-point concentration; run after every ICAL)
Reporting Limit Standard: 75-125% (concentration at RL; run at beginning of every analysis batch)
Continuing Calibration Verification: 85-115% (concentration alternate between mid and high standards; run prior to samples, every 10 samples and at end of analysis)
List all standards which are outside of the acceptance criteria.

SA31353

SA31353

Date	ICAL/ICV/RL/CCV	Recovery	Samples Affected	Action
11/3/09: ICAL:	0, 3, 6, 10, 25, 50 ug/L: r=0.999; (y=0.0030x)			
ICV: 11/12/09	0920: 70 R OK	12.03		
RL std: 11/12/09	1013: 70 R OK	12.01		
CCV: 11/12/09	1047: 70 R OK	12.02 (25ug/L)		
CCV: 11/12/09	1601: 70 R OK	12.02 (25ug/L)		
CCVA: 11/12/09	1820: 70 R OK	12.10 (50ug/L)		
CCV: 11/12/09	1837: 70 R OK	12.04 (25ug/L)		
RL std: 11/12/09	1929: 70 R OK	12.03		
CCVA: 11/12/09	2004: 70 R OK	11.96 (50ug/L)		
CCV: 11/12/09	2316: 70 R OK	11.96 (25ug/L)		
CCVA: 11/13/09	0227: 70 R OK	11.96 (50ug/L)		
CCV: 11/13/09	0319: 70 R OK	12.00 (25ug/L)		
11/3/09: ICAL:	same as above			
ICV: 11/13/09	1018: 70 R OK	11.92		
RL std: 11/13/09	1053: 70 R OK	11.97		
CCV: 11/13/09	1128: 70 R OK	11.94 (25ug/L)		
CCVA: 11/13/09	1312: 70 R OK	11.92 (50ug/L)		
CCV: 11/13/09	1549: 70 R OK	11.90 (25ug/L)		
CCV: 11/13/09	1918: 70 R OK	11.96 (25ug/L)		
RL std: 11/13/09	2010: 70 R OK	11.96		
CCVA: 11/13/09	2045: 70 R OK	11.99 (50ug/L)		
CCV: 11/13/09	2356: 70 R OK	12.33 (25ug/L)		

Conductivity: Calibration check must be performed with each analysis batch using 1410 uS/cm standard. Conductivity reading must be between 1380 and 1440.

II. INSTRUMENT CALIBRATION

Initial Calibration: 5 standards; %RSD <15 (must use peak areas)
Initial Calibration Verification: 90-110% (mid-point concentration; run after every ICAL)
Reporting Limit Standard: 75-125% (concentration at RL; run at beginning of every analysis batch)
Continuing Calibration Verification: 85-115% (concentration alternate between mid and high standards; run prior to samples, every 10 samples and at end of analysis)
List all standards which are outside of the acceptance criteria.

	Date	IC/ICV/RL/CCV	Recovery	Samples Affected	Action
SA33467	ICAL: 12/1/09	0, 3, 6, 10, 25, 50 ug/L	r=0.999 (curve: y=0.0038x)	-all SA33467 samples	
	ICV: 12/2/09	1016: 70 R ok 12.56			
	RL std: 12/2/09	1121: 70 R ok 12.16			
	CCV: 12/2/09	1156: 70 R ok 12.53 (25 ug/L)			
	CCVA: 12/2/09	1323: 70 R ok 12.48 (50 ug/L)			
	CCV: 12/2/09	1634: 70 R ok 12.43 (25 ug/L)			
	CCVA: 12/2/09	1709: 70 R ok 12.43 (50 ug/L)			
SA31506	ICAL: 11/16/09	0, 3, 6, 10, 25, 50 ug/L	r=0.999 (curve: y=0.0030x)	-all SA31506 samples	
	ICV: 11/16/09	1314: 70 R ok 11.66			
	RL std: 11/16/09	1349: 70 R ok 11.69			
	CCV: 11/16/09	1424: 70 R ok 11.71 (25 ug/L)			
	CCVA: 11/16/09	1750: 70 R ok 11.86 (50 ug/L)			
	CCV: 11/16/09	2102: 70 R ok 11.97 (25 ug/L)			
	CCVA: 11/16/09	2321: 70 R ok 11.96 (50 ug/L)			
	CCV: 11/16/09	2338: 70 R ok 11.96 (25 ug/L)			
	RL std: 11/17/09	0031: 70 R ok 12.01			
	CCVA: 11/17/09	0105: 70 R ok (50 ug/L): 11.99			
	CCV: 11/17/09	0417: 70 R ok (25 ug/L): 12.03			
	CCVA: 11/17/09	0728: 70 R ok (50 ug/L): 11.99			
SA31506	ICAL: 11/18/09	0, 3, 6, 10, 25, 50 ug/L	r=0.999 (curve: y=0.0037x)	reruns of SW-2 & SED-3	
	ICV: 11/18/09	1652: 70 R ok 11.75			
	RL std: 11/18/09	1727: 70 R ok 11.82			

Conductivity: Calibration check must be performed with each analysis batch using 1410 uS/cm standard. Conductivity reading must be between 1380 and 1440.

CCV: 11/18/09 1802: 70 R ok 11.82 (25 ug/L)
CCVA: 11/18/09 2056: 70 R ok 11.86 (50 ug/L)
CCV: 11/19/09 0007: 70 R ok 11.84 (25 ug/L)

II. INSTRUMENT CALIBRATION

Initial Calibration: 5 standards; %RSD <15 (must use peak areas)
Initial Calibration Verification: 90-110% (mid-point concentration; run after every ICAL)
Reporting Limit Standard: 75-125% (concentration at RL; run at beginning of every analysis batch)
Continuing Calibration Verification: 85-115% (concentration alternate between mid and high standards; run prior to samples, every 10 samples and at end of analysis)
List all standards which are outside of the acceptance criteria.

	Cal. Ver./Std. Conc.	Recovery	Slope	Samples Affected	Action
SA30998	ICAL: 11/3/09 : 0, 3, 6, 10, 25, 50 ug/L: r=0.999 (y=0.0030x)			SC35 (-22), SC18DC-89, SCA10 (20), SCA15 (21) SC30 (R (23), SC34 (24), RIW2 (25), IW2 (26)	
	ICV: 11/9/09 1043 : 70 R or 11.57				
	CCV2: 11/9/09 1224 : 70 R or 11.78 (25 ug/L)				
	RLstd: 11/9/09 1246: 70 R or 11.85				
	CCVA: 11/9/09 1951 : 70 R or 11.85 (50 ug/L)				
	CCV: 11/9/09 2202: 70 R or 11.97 (25 ug/L)				
SA30998	ICAL: 11/3/09 : same as above			IWC-2, IWC-3, IWC-4, SC-9S, SC-33S, SC6S, RW6S, SC6A, RW6D, SC4S, SC18S	
	ICV: 11/11/09 0854 : 70 R or 11.99				
	RLstd: 11/11/09 0929 : 70 R or 11.98				
	CCV: 11/9/09 1004 : 70 R or 11.97 (25 ug/L)				
	CCVA: 11/11/09 1315 : 70 R or 12.04 (50 ug/L)				
	CCV: 11/11/09 1606: 70 R or 11.98 (25 ug/L)				
SA31176	ICAL: 10/26/09: 0, 3, 6, 10, 25, 50 ug/L: r=0.999 (y=0.0025x)			all samples in SA31176	
	ICV: 10/26/09 1622: 70 R or 11.83				
	RLstd: 10/26/09 1656 : 70 R or 11.87				
	CCV: 10/26/09 1731: 70 R or 11.88 (25 ug/L)				
	CCVA: 10/26/09 2025: 70 R or 11.97 (50 ug/L)				
SA30998	ICAL: 11/3/09: same as above			FB102109, SC22S, MW4-4, IWC-4, IWC-3, B	
	ICV: 11/10/09 0914: 70 R or 11.97				
	RLstd: 11/10/09 0949: 70 R or 11.90				
	CCV: 11/10/09 1023: 70 R or 11.93 (25 ug/L)				
	CCVA: 11/10/09 1735: 70 R or 11.86 (50 ug/L)				
	CCV: 11/10/09 2105: 70 R or 12.03 (25 ug/L)				

Conductivity: Calibration check must be performed with each analysis batch using 1410 uS/cm standard. Conductivity reading must be between 1380 and 1440.

CCVA: 11/11/09 0036: 70 R or 12.03 (50 ug/L)

-all raw data associated w/run GN33151 in SA30998 missing from package ~~~

II. INSTRUMENT CALIBRATION

Initial Calibration: 5 standards; %RSD <15 (must use peak areas)
Initial Calibration Verification: 90-110% (mid-point concentration; run after every ICAL)
Reporting Limit Standard: 75-125% (concentration at RL; run at beginning of every analysis batch)
Continuing Calibration Verification: 85-115% (concentration alternate between mid and high standards; run prior to samples, every 10 samples and at end of analysis)
List all standards which are outside of the acceptance criteria.

	Date	IC/ICV/RL/CCV	Recovery	Samples Affected	Action
SA30457	ICAL: 10/14/09: 0, 3, 6, 10, 25, 50 ug/L : r = 0.998 (y = 0.0028x)			all in SA30457	
	ICV: 10/15/09 0911 : % R ok 12.16				
	RL std: 10/15/09 0946 : % R ok 12.16				
	CCV: 10/15/09 1626 : % R ok 12.15 (25 ug/L)				
	CCVA: 10/15/09 1828 : % R ok 12.13 (50 ug/L)				
SA 30759	ICAL: 10/19/09: 0, 3, 6, 10, 25, 50 ug/L: r = 0.999 (y = 0.0028x)			all in SA30759	
	ICV: 10/20/09 1007 : % R ok 11.81				
	RL std: 10/20/09 1042 : % R ok 11.79				
	CCV: 10/20/09 1117 : % R ok 11.75 (25 ug/L)				
	CCVA: 10/20/09 1527 : % R ok 11.70 (10 ug/L)				
	~~ICV2: 10/20/09 1622~~				
	CCV: 10/20/09 1916 : % R ok (25 ug/L) 11.86				
SA 30998	ICAL: 10/27/09: 0, 3, 6, 10, 25, 50 ug/L: r = 0.999 (y = 0.0027x)			IWC-1 (-6)	
	ICV: 10/28/09 0930 : % R ok 11.93				
	CCVA: 10/28/09 1446 : % R ok 11.80 (50 ug/L)				
	RL std: 10/28/09 1538 : % R ok 11.90				
	CCV: 10/28/09 1613 : % R ok 11.90 (25 ug/L)				
	CCVA: 10/28/09 1925 : % R ok 11.99 (50 ug/L)				

Conductivity: Calibration check must be performed with each analysis batch using 1410 uS/cm standard. Conductivity reading must be between 1380 and 1440.

SA30457: √ ok 10/16/09
SA30759: √ ok 10/21/09
SA30998: √ ok 11/3/09
~~SA30998~~
SA31156: √ ok 10/26/09
√ ok 10/27/09
SA 31501P: √ ok 11/16/09
√ ok 11/17/09

SA 31353: √ ok 11/6/09
√ ok 11/9/09

III. BLANK ANALYSIS

List the blank contamination found above ½ the RL below.

1. Laboratory: Method and Instrument Blanks

Run ID	Date/Time Analyzed	Matrix	Blank ID	Concentration (units)	
GPS1074|GN31237	10/15/09 0928	Aqueous	GPS1074	ND	JA30457
GPS1193|GN31381	10/20/09 1024	Aqueous	GPS1193	ND	JA30759
GPS1310|GN31605	10/28/09 1521	Aqueous	GPS1310	ND	JA30998
GPSN409|GN32251	11/6/09 0931		GPSN409		
GPS1409|GN32289	11/11/09 0911		GPS1409		
GPSN498|GN32325	11/9/09 1759		GPSN498		
GPSN498|GN32209	11/11/09 0911		GPSN498		

1. Was pre-treatment required for any field samples? YES NO
2. If yes, was pre-treatment performed on a separate portion of the method blank? YES NO

Field: Equipment (Rinsate) Blanks

	Date/Time Analyzed	Matrix	Blank ID	Concentration (units)	
JA30457	10/20/09 1807	Aqueous	FB101909	ND	(1)
JA30998	11/10/09		FB102109	ND	(1)
JA31106	10/26/09		FB102209	ND	(1)
JA31467	12/2/09		FB111909	ND	(1)
JA31506	11/16/09		FB102809	ND	(1)
JA31353	11/13/09		FB102609 (1)		
			FB102609 (2)		

JA30457: No field blank

1) Lab reported ND down to MDL; will change to RL on Form I during DV

III. BLANK ANALYSIS

List the blank contamination found above ½ the RL below.

1. Laboratory: Method and Instrument Blanks

Run ID	Date / Time	Matrix	Blank ID	Concentration (units?)	
GP51301 GN31601	10/26/09 1634	Aqueous	GP51300	ND	SA 31156
GP51802 GN32834	12/2/09 1104	↓	GP51802	ND	SA 33467
GP51564 GN32348	11/16/09 1643	Solid	GP51564	ND	SA 31506
GP51565 GN32348	11/16/09 1900	Aqueous	GP51565		↓
GP51565 GN32349	11/18/09 1710	↓	GP51565	↓	
GP51496 GN32251	11/12/09 1912	Solid	GP51496	ND	SA 31353
GP51526 GN32290	11/13/09 1952	↓	GP51526	↓	↓

1. Was pre-treatment required for any field samples? YES NO

2. If yes, was pre-treatment performed on a separate portion of the method blank? YES NO

GP51549 GN32290 11/13/09 1035 Aqueous GP51549 ND SA 31353
GP51565 GN32290 GP51565 ↓ ↓

Field: Equipment (Rinsate) Blanks

~~Run ID~~	Date / Time	Matrix	Blank ID	Concentration (units)

2. Blank Actions – List the maximum concentrations of perchlorate detected.

Type of Blank	Date Blank Originated	Max Conc (units)	Action Level (units)	Analyte (units)	Samples Affected	Action
	none	detected				

IV. INSTRUMENT PERFORMANCE CHECK (IPC)

REQUIREMENTS:

IPC must be analyzed at the beginning of each run.
The percent difference of the area/height ratio of the IPC compared to the area/height ratio of the LCS must be <25.
The percent recovery of perchlorate must be 80-120%.
The retention time of perchlorate must not shift more than 5%.

What is the lab's Matrix Conductivity Threshold established during the IDC? ~~see~~ 4290

What was the conductance of the IPC? 4240 (SA30457) 4290 (SA30759) 4290 (SA30998: IWC-1) 4290 (SA30998-11/11/09) → 11/12/09
4290 (SA31353)
4160 (SA31506: 11/16/09)
4160 (SA31506: 11/18/09)
4160 (SA33467: 12/2/09)
~~4290 (SA31355~~
4290 (SA31156: 10/26/09)
4290 (SA31353: 11/13/09)

Is the conductance of the IPC confirmed prior to analysis? YES NO? SA30457, SA30457 ↓
Is the conductance within ±10% of the MCT? YES NO

List any IPC requirements that were not achieved.

	Date	%D/%R/RT	Associated Samples	Action
SA30457	10/15/09 0854	%R OK; %D OK	RT = 12.12 min	all samples in SA30457
SA30759	10/20/09 0950	%R OK; %D OK	RT = 11.81 min	all samples in SA30759
SA30998	10/28/09 0935	%R OK; %D OK	RT = 11.78 min	IWC-1 (-1a)
SA30998	11/9/09 1026	%R OK; %D OK	RT = 11.58 min	see 11/9/09 CCVs
↓	11/9/09 1741	%R OK; %D OK	RT = 11.75 min	↓
SA30998	11/11/09 0830	%R OK; %D OK	RT = 11.96 min	see 11/11/09 CCVs
SA31156	10/26/09 1604	%R OK; %D OK	RT = 11.75 min	all samples in SA31156
SA30998	11/10/09 0856	%R OK; %D OK	RT = 11.95 min	see 11/10/09 CCVs
SA33467	12/2/09 1009	%R OK; %D OK	RT = 12.53 min	all samples in SA33467
SA31506	11/16/09 1257	%R OK; %D OK	RT = 11.61 min	all samples in SA31506
↓	11/16/09 2252	%R OK; %D OK	RT = 11.92 min	↓
	11/18/09 1635	%R OK; %D OK	RT = 11.70 min	reruns of SW-2 & SED-3
SA31353	11/12/09 0902	%R OK; %D OK	RT = 12.00 min	
	11/12/09 1955	%R OK; %D OK	RT = 11.94 min	
	11/13/09 1001	%R OK; %D OK	RT = 11.87	
			RT = 11.92 min	

V. MATRIX SPIKE - List all matrix spike analytes that are outside method QC acceptance criteria.

Was a matrix spike analysis performed on all samples that were pretreated? YES NO NA
Were samples spiked prior to pretreatment? YES NO NA
List associated samples which were pretreated. NA

Sample ID VP13A (87-92') VP-14 (105-110') IWC-1, B, SC35 SC34D SW-1A SS-01 (5-7') Matrix GW GW GW GW SW SOIL

Criteria: For analyte levels <4x spike levels, acceptance limits are 80 – 120%

JA30457: none on project samples
-no project-specific MS for sediment in JA31506

	MS ID	MS % Recovery	Action
JA30759	VP-14 (105-110') 10/26/09 1640	70 R ok	11.75
JA30998	IWC-1 10/28/09 1631	↓	11.88
↓	B ~~11/9/09 1908~~ 11/10/09 1116	↓	~~11.89~~ 11.94
	SC35 11/9/09 1908	↓	11.89
JA31156	VP13A (87-92') 10/26/09 1806	↓	11.92
JA33467	SC34D 12/2/09 1415 1x 12/2/09 1542 10x	↓	12.42
JA31506	SW-1A 11/16/09 1952	↓	11.92
JA31353	SS-01 (5-7') 11/12/09 2022	↓	11.97

Validation Actions:

Aqueous:

If %R <30; Reject (R) associated results
If %R 30-74; Estimate (J/UJ) positive and nondetect results.
If %R 126-150; Estimate (J) positive results.
If %R >150%; Reject (R) positive results.

Soils:

If %R <10; Reject (R) all associated results.
If %R 10-74; Estimate (J/UJ) positive and nondetect results.
If %R 126-200; Estimate (J) positive results.
If %R >200%; Reject (R) positive results.

If concentration of analyte ≥ 4x spike added, disregard spike recoveries

SS-01(5-7')

VI. LABORATORY DUPLICATE RESULTS - List all laboratory duplicate analytes that are outside method QC acceptance criteria.

SW-1A
VP13A(87-92')

Sample ID VP-14(105-110') Matrix GW
IWC-1, B, SC35 GW
SC34D GW

Criteria: RPD ≤ 15

SA30457: none on project samples
-no project specific lab dup for sediment in SA31506

Lab Duplicate Sample ID	RL	Sample Concentration	Duplicate Concentration	RPD (%)	Action
VP-14(105-110') 10/29/09 1615	3 ug/L	6.2 ug/L	6.2 ug/L 11.98	0	Lab dup also done for conductivity: RPD ok
IWC-1 10/29/09 1648		7.3 ug/L	7.6 ug/L 11.90	4.0	
B 11/4/09 1034 11/10/09 1137		1.2 ug/L	1.1 ug/L 11.90	8.7 (1)	
SC35 11/9/09 1936 10/28/09 1715		1.8 ug/L	1.6 ug/L	11.8	
VP13A (87-92')		3.4 ug/L	4.2 ug/L 11.97	21.1	-ok since perchlorate < 5 x QL
SC34D 10/12/09 1600 6x		152 ug/L	148 ug/L 12.43	2.7	
SW-1A 11/16/09 0910		1.8 ug/L	2.0 ug/L 11.76	10.5	
SS-01(5-7') 11/3/09 2039		ND	ND		

SA30759
SA30998
SA31176
SA33467
SA31506
SA31353

Validation Actions:

Aqueous:

If the sample and duplicate are both ≥5x RL and RPD >50; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >50, and the difference between the results is >RL; Estimate (J) positive results.

Soils:

If the sample and duplicate are both ≥5x RL and RPD >100; Estimate (J) positive results.

If the sample and/or duplicate results <5xRL, RPD >100, and the difference between the results is >2x RL; Estimate (J) positive results.

(1) both original & dup: perchlorate ID'd at wrong RT → need lab to double check

VII. LABORATORY CONTROL SPIKES - List all LCS analytes that are outside method QC acceptance criteria.

Acceptance Limits:
85 – 115%

Was one LCS prepared and analyzed with each batch? YES NO
If field samples were pretreated, was a separate portion of the LCS also pretreated? NA YES NO

LCS ID / Date Prepped	% Recovery	Action
SA30457: GP51074 → 25 ug/L & 8 ug/L: both 70Rs ok 10/15/09 1003 12.14	10/15/09 1038 12.14	
SA30759: GP51193 → 25 ug/L & 8 ug/L: both 70Rs ok 10/20/09 1059 11.74	10/20/09 1622 11.75	
✓ SA30998: GP51310 → 25 ug/L & 8 ug/L: both 70Rs ok GN 31614 10/28/09 1556 11.88	10/28/09 1152 11.90	] affects ICW-1
✓ SA30998: GP51409 → 25 ug/L & 8 ug/L: both 70Rs ok GN 32151 11/10/09 1006 11.96	11/10/09 1041 11.930	] see 11/10/09 CCVs for affected samples
✓ SA30998: GP51409 → 25 ug/L & 8 ug/L: both 70Rs ok GN 32209 11/11/09 0946	11/11/09 1021	] see 11/11/09 CCVs for affected samples

✓ SA30998: GP51498 → 25 ug/L: 70R ok] see 11/9/09 CCV for affected samples
GN 32125 11/9/09 1833 11.85

✓ SA30998: GP51498 → 25 ug/L: 70R ok] see 11/11/09 CCVs for affected samples
GN 32209 11/11/09 0946

SA31156: GP51300 → 25 ug/L & 8 ug/L: both 70Rs ok] affects all samples in SA31156
10/16/09 1714 11.86 10/16/09 1749 11.90

SA33467: GP51802 → 25 ug/L: 70R ok & 8 ug/L: 70R ok
12/2/09 1138 12.53 12/2/09 1213 12.52

SA31506: GP51564 → 75.8 ug/kg: 70R ok → 11/16/09 1701 11.7094
GP51565 → 25 ug/L & 8 ug/L: both 70Rs ok
11/12/09 1947 11/16/09 1917 11.89 11/16/09 1441 11.72

SA31353: GP51486: 75.8 ug/kg: 70Rs ok 11.98
GP51526: 75.8 ug/kg: 11.92

GP51549: 25 ug/L: 70R ok 11.96 → 11/13/09 1110 8 ug/L: 11/13/09 1145: 70R ok 11.96
GP51567: 25 ug/L: ↓

R2-0002676

Perchlorate Worksheets
EPA Method 314.0

TRC
December 2009
Revision 0

VIII. FIELD DUPLICATE PRECISION

Sample ID VP-14 (105-110') Duplicate Sample ID VP-24 (105-110') Matrix GW

Criteria: RPD ≤ 30% for aqueous samples and ≤ 50% for solid samples

Field Duplicate Sample ID	RL	Sample Concentration	Duplicate Concentration	RPD (%)	Action
		VP-14 (105-110')	VP-24 (105-110')		
Perchlorate	3 ug/L	6.2 ug/L	5.9 ug/L	5.0	
Specific Conductivity		334 umhos/cm	327 umhos/cm	2.1	
		IWC-5	IWC-6		
Perchlorate	3 ug/L	11.7 ug/L	10.7 ug/L	8.9	
Specific Conductivity		417 umhos/cm	444 umhos/cm	6.3	
		SC95	SC335		
Perchlorate	3 ug/L	8.2 ug/L	8.0 ug/L	2.5	
Specific Conductivity		445 umhos/cm	449 umhos/cm	0.90	
		SC3D(R)	SC34D		
Perchlorate	24 ug/L	141 ug/L	136 ug/L	3.6	
Specific Conductivity		638 umhos/cm	631 umhos/cm	1.1	
		SC 34D	SC37D		
Perchlorate	18 ug/L	152 ug/L	150 ug/L	1.3	
Specific Conductivity		1020 umhos/cm	996 umhos/cm	2.4	
		SW4	SW-10 → both ND perchlorate		
Validation Actions: Spec. Conductivity		127 umhos/cm	128 umhos/cm	0.78%	

Validation Actions:

Aqueous:

If the sample and duplicate are both ≥ 5x RL and RPD >50; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >50 and the difference between the results is >RL; Estimate (J) positive results.

Soils:

If the sample and duplicate are both ≥ 5x RL and RPD >100; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >100 and the difference between the results is >2x RL; Estimate (J) positive results.

		SED-4	SED-10	
perchlorate	41 ug/kg	10.9 J ug/kg	7.7 U ug/kg	NC
specific conductivity		181 umhos/cm	174 umhos/cm	3.9
		SS-07 (6-8')	SS-27 (6-8'): ND for perchlorate	
specific conductivity		105 umhos/cm	96.8 umhos/cm	8.1

IX. SAMPLE QUANTITATION

Recalculate from the raw data, the concentrations for one positive detect and one reported quantitation limit for a nondetect in a diluted sample.

Sample ID: see below
Reported Value: J
Sample ID: _____
Reported Quantitation Limit: _____

-all final conc. slightly off due to rounding from lab

SA30457: area = 0.030 curve: y = 0.0028 x (VP-13 (100-105'):
0.030 = 0.0028(x) (x) = 10.71 ug/L (reported conc = 10.6 ug/L)

SA30759: VP-14 (105-110')
area = 0.017 curve: y = 0.0028x)
0.017 = 0.0028(x) (x) = 6.1 ug/L (reported conc = 6.2 ug/L)

SA30998: SC3D (R)
area = 0.052 curve: y = 0.0030(x)
0.052 = 0.0030(x) (x) = 17.33 x 8 (DF) = 139 ug/L (reported conc = 141 ug/L)

SA31156: VP-13A (62-67')
area = 0.011 curve: y = 0.0025(x)
0.011 = 0.0025(x) (x) = 4.4 ug/L (reported conc = 4.3 ug/L)

List soil/sediment samples with 10-50% solids: SA31506: SED-4 (21.9), SED-10 (21.5%), SED-2 (47.3%) SA31353: all ok
Positive and nondetect results for all samples with 10-50% solids must be qualified as estimated (J/UJ).
List sample numbers with <10% solids: NA
All results for samples with <10% solids must be rejected.

SA30457: NA
SA30759: NA
SA30998: NA
SA31156: NA
SA33467: NA

SA33467: SC3D
area = 0.094 y = 0.0038(x)
0.094 = 0.0038(x) (x) = 24.7 x 6 (DF) = 148 ug/L (reported conc = 150 ug/L)

SA31506: SED-4
area = 0.002 y = 0.0030(x)
0.002 = 0.0030(x) (x) = 0.667 ug/L x (5 g + 0.1 L) / 0.03317 kg x 1 / 0.219 = 9.2 ug/kg
(reported conc = 10.9 ug/kg)

SA31353: SS-05 (5-7')
area = 0.054 y = 0.0030x
0.054 = 0.0030(x)
(x) = 18 ug/L
18 ug/L x 0.1 L / 0.0355 x 1 / 0.927 = 57.9 ug/L (reported conc = 11)

SED-3: ND
3 ug/L x 0.1 L / 0.03314 x 1 / 0.717 = 12.6 = 13 ug/kg ✓

X. REPORTED QUANTITATION LIMITS

Did the laboratory achieve the required quantitation limits for each sample? (Yes) No
If no, discuss the reasons below.

Sample ID	QL Not Achieved	Reason
SA30457: ok; no dilutions		
SA30759: ok; no dilutions		
-① VA-14 (28-28'): 1.6 B reported for perchlorate: change "B" to "J"		
② FB101909: ND reported at MDL: change to RL of 3 ug/L		
SA30998:		
IWC-3, B, SC15, SC35: "B" values reported for perchlorate: change "B" to "J"		
SC45, SC185, ~~ND~~ FB102109, SC22, MW1-4: ND reported at MDL: change to RL of 3 ug/L		
SS30(R), SC34D: 8x dil to perchlorate overcal in 1x		
SA31156: FB102209: ND reported at MDL: change to RL of 3 ug/L		
-no dilutions		
SA31467: SS33D, FB111909: ND reported at MDL: change to RL of 3 ug/L		
-no dilutions		
SA31506: no dilutions ~~+~~		
-FB102809, SED-1A, SW-1, SED-1, SW-2, SW-3, SED-3, SW-4, SED-10, SW-10		: ND reported at MDL: change to RL
-SW-1A, SED-2, SED-4, SW-10		: "B" values reported for perchlorate: change "B" to "J"
SA31353: no dilutions:		
-SS-01(5-7'), SS-01(12-14'), SS-02(14-16'), SS-03(0-2'), SS-06(1-3'), SS-07(6-8'), SS-08(3-4'), SS-08(12-14'), SS-09(6-8'), SS-09(12-14'), SS-10(2-4'), SS-10(4-6'), FB102609, FB102609(2), SS-27(6-8')		"B" value reported: change "B" to "J"
-SS-02(1-3'), SS-03(13-15'), SS-04(2-4'), SS-04(14-16'), SS-06(14-16'), SS-07(13-15').		ND, reported at MDL; change to RL

TRC

Data Validation Memorandum

To: Larry Butlien

From: Elizabeth Denly

CC: John Moss

Date: October 11, 2010

Subject: Perchlorate Data Validation Review: Groundwater Samples: SMC/Newfield, NJ

SUMMARY

Full validation was performed on the data for 11 groundwater samples and one field blank collected at the SMC site in Newfield, New Jersey. The samples were collected on September 8, 2010 and submitted to Accutest Laboratories in Dayton, New Jersey for analysis. The samples were analyzed for perchlorate using EPA Method 314.0. The laboratory reported the results under case nmnber JA55820.

The sample results were assessed using the *Region II Evaluation of Metals Data for the Contract Laboratory Program (CLP)*, Revision 13, SOP HW-2, September 2006; these data validation guidelines were modified to accommodate the method-specific criteria.

In general, the data are valid as reported and may be used for decision-making purposes with the following exceptions. Select results were reported which were below the lowest calibration standard; these results were qualified as estimated (J). This issue has a minor impact on the data usabihty. All results are still usable for project objectives.

SAMPLES

Groundwater samples included in this review are listed below:

SC10S	SC10D	SC6S	SC18S	SC1D
SC1S	SC3S	SC3D(R)	SC21S	SC21D
SC24S	FB090810			

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody requests
- Data completeness
- Holding times and sample preservation
- Initial and continuing calibrations
- Reporting limit standards
- Instrument performance check standards
- Blanks

R2-0002680

- Matrix spike (MS) results
- Laboratory duplicate results
- Laboratory control sample (LCS) results
- Field duplicate results
- Quantitation limits and sample results
- Target compound identification

DISCUSSION

Agreement of Analyses Conducted with Chain-of-Custody Requests

Sample reports were checked to verify that the results corresponded to analytical requests as designated on the chain-of-custody (COC). There were no discrepancies noted.

Data Completeness

The data packages were found to be complete as received from the laboratory.

Holding Times and Sample Preservation

All samples were analyzed within the method-specified holding time. The cooler temperature upon sample receipt was within the acceptance criterion of 4± 2°C.

Initial and Continuing Calibrations

All initial calibration criteria were met. The percent recoveries of perchlorate were within the acceptance criteria in all initial calibration verification (ICV) and continuing calibration verification (CCV) standards. All ICV and CCV perchlorate standards were analyzed at the method-specified frequency. All calibration checks associated with the specific conductivity analyses were also within the acceptance criteria.

Reporting Limit Standards

The percent recoveries of perchlorate were within the acceptance criteria in the reporting limit standard. The reporting limit standard was analyzed at the method-specified frequency and at the reporting limit of 3 µg/L.

Instrument Performance Check Standards

The instrument performance check was analyzed at the method-specified frequency and at the required conductivity. The percent recovery of perchlorate was within the acceptance criteria in the instrument performance check standard. The percent difference of the area/height ratio of perchlorate in the instrument performance check standard compared to the area/height ratio of perchlorate in the laboratory control sample was within the acceptance criteria in the instrument performance check standard.

Blanks

Perchlorate was not detected in the laboratory method blank or field blank.

MS Results

MS analyses were performed on sample SC34D (from case number JA55826). All criteria were met.

Laboratory Duplicate Results

Laboratory duplicate analyses for perchlorate were performed on sample SC34D (from case number JA55826). Laboratory duplicate analyses for specific conductivity were performed on sample SC6S. All criteria were met in the laboratory duplicate analyses.

LCS Results

The percent recoveries of perchlorate were within the acceptance criteria in all LCS analyses.

Field Duplicate Results

There were no field duplicate pairs submitted with this sample set. No validation action was required on this basis.

Quantitation Limits and Sample Results

Sample calculations were spot-checked; there were no errors noted.

Select results were reported which were below the lowest calibration standard level and quantitation limit (QL). These results were qualified by the laboratory with a "B"; the "B" was changed to a "J" during validation to indicate the value was estimated.

It should be noted that the laboratory reported nondetect results down to the method detection limit (MDL) instead of the QL. The Form Is were manually changed during validation to reflect the QL instead of the MDL.

Sample SC3D(R) was analyzed at a 6-fold dilution due to the concentration of perchlorate which would have exceeded the calibration range if not diluted.

None of the samples exhibited a specific conductivity above the laboratory's matrix conductivity threshold and therefore none of the samples required dilution or pretreatment due to conductivity.

Target Compound Identification

All criteria were met.

Qualified Form Is

Report of Analysis

Client Sample ID:	FB090810		
Lab Sample ID:	JA55820-1	Date Sampled:	09/08/10
Matrix:	AQ - Field Blank Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.58~~ U	3.0	0.58	ug/l	1	09/10/10 13:26	MS	EPA 314
Specific Conductivity	2.6	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

3.2
3

Client Sample ID:	SC10S		
Lab Sample ID:	JA55820-2	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.58~~ U	3.0	0.58	ug/l	1	09/10/10 14:01	MS	EPA 314
Specific Conductivity	472	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002685

Report of Analysis

Client Sample ID:	SCI0D		
Lab Sample ID:	JA55820-3	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	8.5	3.0	0.58	ug/l	1	09/10/10 14:18	MS	EPA 314
Specific Conductivity	772	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002686

Report of Analysis

3.4 (3)

Client Sample ID:	SC6S		
Lab Sample ID:	JA55820-4	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	19.6	3.0	0.58	ug/l	1	09/10/10 14:35	MS	EPA 314
Specific Conductivity	514	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002687

Report of Analysis

3.5

Client Sample ID:	SC18S		
Lab Sample ID:	JA55820-5	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.58~~ U	3.0	0.58	ug/l	1	09/10/10 14:53	MS	EPA 314
Specific Conductivity	285	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002688

Report of Analysis

Client Sample ID:	SC1D		
Lab Sample ID:	JA55820-6	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	44.5	3.0	0.58	ug/l	1	09/10/10 15:10	MS	EPA 314
Specific Conductivity	393	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002689

Report of Analysis

3.7

Client Sample ID:	SCIS		
Lab Sample ID:	JA55820-7	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Resuh	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	0.69 B J	3.0	0.58	ug/l	1	09/10/10 15:27	MS	EPA 314
Specific Conductivity	168	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002690

Report of Analysis

Client Sample ID:	SC3S		
Lab Sample ID:	JA55820-8	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	13.0	3.0	0.58	ug/l	1	09/10/10 15:45	MS	EPA 314
Specific Conductivity	402	0.50		umhos/cm	I	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

3.9

Client Sample ID:	SC3D(R)		
Lab Sample ID:	JA55820-9	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	143	18	3.5	ug/l	6	09/10/10 16:02	MS	EPA 314
Specific Conductivity	581	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = indicates a result > = MDL but < RL

R2-0002692

Report of Analysis

3.10 B

Client Sample ID:	SC21S		
Lab Sample ID:	JA55820-10	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.58~~ U	3.0	0.58	ug/l	1	09/10/10 16:19	MS	EPA 314
Specific Conductivity	171	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Report of Analysis

3.11

Client Sample ID:	SC21D		
Lab Sample ID:	JA55820-11	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	32.8	3.0	0.58	ug/l	1	09/10/10 16:37	MS	EPA 314
Specific Conductivity	228	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002694

Report of Analysis

3.12 S1

Client Sample ID:	SC24S		
Lab Sample ID:	JA55820-12	Date Sampled:	09/08/10
Matrix:	AQ - Ground Water	Date Received:	09/08/10
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	2.1 B J	3.0	0.58	ug/l	1	09/10/10 17:11	MS	EPA 314
Specific Conductivity	640	0.50		umhos/cm	1	09/22/10	ST	SM19 2510B/SW 9050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002695

Data Validation Worksheets

Perchlorate Worksheets
EPA Method 314.0

TRC
December 2009
Revision 0

Data Validation Worksheet Cover Page

Site Name: SMC
Project No. 177208.00002

PERCHLORATE DATA VALIDATION

The following data package has been validated:

Lab Name: Accutest-NJ
Lab Project No.: SA55820

No. of Samples/Matrix: 12/Aqueous

Method No: EPA 314
Sampling Date(s): 9/8/10
Shipping Date(s): N/A; courier service used
Date Rec'd By Lab: 9/8/10

Sample IDs. F SC10S, SC10D, SC6S, SC18S, SC1D, SC1S, SC3S, SC30(R), SC21S, SC21D, SC24S

Equipment Blank ID. FB090810
Field Duplicate IDs. —

The method requirements and the Region II *Evaluation of Metals Data for the Contract Laboratory Program (CLP)* (Revision 13, SOP HW-2, September 2006) were used to evaluate the data.

Full validation was performed.

The data were evaluated based upon the following parameters:

-Overall Evaluation of Data
-Data Completeness
-Preservation & Technical Holding Times
-RL Standard Analysis
-Initial & Continuing Calibrations
-Blanks
-Matrix Spike Resuhs
-Laboratory Duplicate Results
-Field Duplicates
-Laboratory Control Spikes
-Sample Quantitation
-Instrument Performance Checks

Definitions and Qualifiers:
A – Acceptable Data
J – Numerical value associated with compound is an estimated quantity
R – The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U – Compound not detected at that numerical sample quantitation limit
UJ – The sample quantitation limit is an estimated quantity.

Validator's Name E. Derby Company Name TRC Phone Number 978-656-3527
Date Validation Started 10/9/10 Date Validation Completed 10/11/10

Package Completeness and Deliverables

Missing Information	Date Lab Contacted	Date Received

I. PRESERVATION AND HOLDING TIMES – Circle sample numbers with exceeded holding times or omitted preservation. Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: 2.2°C

Sample ID	Matrix	Date Sampled	Conductivity Analysis Date	Perchlorate Analysis Date	# Days from Sampling To Analysis		Actions
FB090810	AQ	9/p/10	9/22/10	9/10/10 1326	[illegible] 14	PC 2	✓
SC10S	GW			9/10/10 1401			✓
SC10D				9/10/10 1418			✓
SC6S				9/10/10 1435			✓
SC18S				9/10/10 1453			✓
SC1D				9/10/10 1510			✓
SC1S				9/10/10 1527			✓
SC3S				9/10/10 1545			✓
SC3D(R)				9/10/10 1602			6x ✓
SC21S				9/10/10 1619			✓
SC21D				9/10/10 1637			✓
SC24S				9/10/10 1711			✓

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold. NA

Were these samples diluted or pretreated? NA

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? NA YES NO
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? NA YES NO

II. INSTRUMENT CALIBRATION

Initial Calibration: 5 standards; %RSD <15 (must use peak areas)
ICV Initial Calibration Verification: 90-110% (mid-point concentration; run after every ICAL)
CRL Reporting Limit Standard: 75-125% (concentration at RL; run at beginning of every analysis batch)
CCV Continuing Calibration Verification: 85-115% (concentration alternate between mid and high standards; run prior to samples, every 10 samples and at end of analysis)
List all standards which are outside of the acceptance criteria.

Date	IC/ICV/RL/CCV	Recovery	Samples Affected	Action
9/10/10 0924	GN42159-ICV1	% R OK	✓	
0959	GN42159-CRL1	% R OK	✓	
1033	GN42159-CCV1		✓	
1344	GN42159-CCVA1		✓	
1654	GN42159-CCV2		✓	
1728	GN42159-CCVA2		✓	
ICAL: 9/3/10	perchlorate			
sp. cmd. CCV: OK -pre sample			9/22/10	
CCV: OK -post sample				

✓ Conductivity: Calibration check must be performed with each analysis batch using 1410 uS/cm standard. Conductivity reading must be between 1380 and 1440.

ICAL: 3 ppb, 6 ppb, 10 ppb, 25 ppb, 50 ppb

9/3/10 1123 : 3 ppb 11.918
9/3/10 1140 : 6 ppb 11.914
9/3/10 1157 : 10 ppb 11.891
9/3/10 1214 : 25 ppb 11.854
9/3/10 1232 : 50 ppb 11.814

r = 0.999346
Area vs. conc

y = 0.0031x

- recalculated slope = 0.003093 ✓

III. BLANK ANALYSIS

List the blank contamination found above ½ the RL below.

1. Laboratory: Method and Instrument Blanks

Date Analyzed	Matrix	Blank ID	Concentration (units)
9/10/10 0941	Aqueous	GP55431/GN42159	ND

1. Was pre-treatment required for any field samples? YES NO
2. If yes, was pre-treatment performed on a separate portion of the method blank? YES NO

Field: Equipment (Rinsate) Blanks

Date Analyzed	Matrix	Blank ID	Concentration (units)
9/10/10 1326	Aqueous	FB090810	ND

2. **Blank Actions – List the maximum concentrations of perchlorate detected.**

Type of Blank	Date Blank Originated	Max. Conc. (units)	Action Level (units)	Analyte QL (units)	Samples Affected	Action

IV. INSTRUMENT PERFORMANCE CHECK (IPC)

REQUIREMENTS:

✓ IPC must be analyzed at the beginning of each run.
✓ The percent difference of the area/height ratio of the IPC compared to the area/height ratio of the LCS must be <25.
✓ The percent recovery of perchlorate must be 80-120%. true value = 25 ug/L
✓ The retention time of perchlorate must not shift more than 5%.

What is the lab's Matrix Conductivity Threshold established during the IDC? ~~4360~~ 4290

What was the conductance of the IPC? 4360 umhos/cm
Is the conductance of the IPC confirmed prior to analysis? (YES) NO
Is the conductance within ±10% of the MCT? (YES) NO

List any IPC requirements that were not achieved:

Date	%D/%R/RT	Associated Samples	Action
GN42159-IPC1 9/10/10 0907	%R ok		
Area: 0.076 / Slope 0.0031 = 24.57 ug/L (lab's value: 24.82 ug/L) ✓ ok			
RT perch = 11.851 min ✓ w/in 5% of ICAL RTs			
area IPC / height =	0.076 / 0.220 = 0.345		
area LCS / height =	0.074 / 0.238 = 0.311	(0.345 − 0.311) / 0.311 × 100 = 10.9% → %D	

V. MATRIX SPIKE - List all matrix spike analytes that are outside method QC acceptance criteria.

Was a matrix spike analysis performed on all samples that were pretreated? YES NO
Were samples spiked prior to pretreatment? YES NO
List associated samples which were pretreated.

Sample ID SC340 (from JA55826) Matrix GW

Criteria: For analyte levels <4x spike levels, acceptance limits are 80 – 120%

MS ID	MS % Recovery	Action
JA55826-4	%R OK	

Validation Actions:

Aqueous:

If %R <30; Reject (R) associated results
If %R 30-74; Estimate (J/UJ) positive and nondetect results.
If %R 126-150; Estimate (J) positive results.
If %R >150%; Reject (R) positive results.

Soils:

If %R <10; Reject (R) all associated results.
If %R 10-74; Estimate (J/UJ) positive and nondetect results.
If %R 126-200; Estimate (J) positive results.
If %R >200%; Reject (R) positive results.

If concentration of analyte ≥ 4x spike added, disregard spike recoveries

VI. LABORATORY DUPLICATE RESULTS - List all laboratory duplicate analytes that are outside method QC acceptance criteria.

Sample ID SC340 (from JA55826) Matrix GW

Criteria: RPD ≤ 15

Lab Duplicate Sample ID	RL 1108	Sample Concentration	Duplicate Concentration	RPD (%)	Action
perchlorate JA55826-4	4.0	158 ug/L	155 ug/L	1.9 ✓	project sample
sp. cond. SC6S		514 umhos/cm	509 umhos/cm	1.0	

Validation Actions:

Aqueous:

If the sample and duplicate are both ≥5x RL and RPD >50; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >50, and the difference between the results is >RL; Estimate (J) positive results.

Soils:

If the sample and duplicate are both ≥5x RL and RPD >100; Estimate (J) positive results.

If the sample and/or duplicate results <5xRL, RPD >100, and the difference between the results is >2x RL; Estimate (J) positive results.

VII. LABORATORY CONTROL SPIKES - List all LCS analytes that are outside method QC acceptance criteria.

Acceptance Limits:
85 – 115%

Was one LCS prepared and analyzed with each batch? YES NO
If field samples were pretreated, was a separate portion of the LCS also pretreated? YES NO

LCS ID Date Prepped	% Recovery	Action
GP55431 / GN42159 9/10/10 1016 25ug/L	70 Rch ✓	
9/10/10 1050 8ug/L	↓ ✓	

VIII. FIELD DUPLICATE PRECISION

Sample ID _____ Duplicate Sample ID _____ Matrix_____

Criteria: RPD ≤ 30% for aqueous samples and ≤ 50% for solid samples

Field Duplicate Sample IDs	RL	Sample Concentration	Duplicate Concentration	RPD	Action
	none of this set				

Validation Actions:

Aqueous:

If the sample and duplicate are both ≥ 5x RL and RPD >50; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >50 and the difference between the results is >RL; Estimate (J) positive results.

Soils:

If the sample and duplicate are both ≥ 5x RL and RPD >100; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >100 and the difference between the results is >2x RL; Estimate (J) positive results.

IX. SAMPLE QUANTITATION

Recalculate from the raw data, the concentrations for one positive detect and one reported quantitation limit for a nondetect in a diluted sample.

Sample ID: SC30(R)
Reported Value: 143 ug/L
Sample ID: SC18S
Reported Quantitation Limit: 3.0 ug/L

-all final conc. slightly off from lab due to rounding

SC30(R) curve: $y = 0.003093x$

$$Area = \frac{0.073}{0.003093} = 23.602 \frac{ug}{L} \times DF\ 6 = 141.6 = 142\ ug/L$$ ✓ok

SC18S

low std = 3 ug/L = QL

List soil/sediment samples with 10-50% solids: NA
Positive and nondetect results for all samples with 10-50% solids must be qualified as estimated (J/UJ).
List sample numbers with <10% solids: NA
All results for samples with <10% solids must be rejected.

X. REPORTED QUANTITATION LIMITS

Did the laboratory achieve the required quantitation limits for each sample? (Yes) No
If no, discuss the reasons below.

Sample ID	QLs Not Achieved	Reason
-all NDs reported down to MDL → Change to RL of 3µg/L → FB090810, SC105, SC185, SC215		
-all "B" values changed to "J" → SC15, SC245		

Data Validation Memorandum

To: Larry Butlien

From: Elizabeth Denly

CC:

Date: June 6, 2011

Subject: Perchlorate Data Validation Review: Groundwater Samples: SMC/Newfield, NJ

SUMMARY

Full validation was performed on the data for two groundwater samples and one field blank collected at the SMC site in Newfield, New Jersey. The samples were collected on April 29, 2011 and submitted to Accutest Laboratories in Dayton, New Jersey for analysis. The samples were analyzed for perchlorate using EPA Method 314.0. The laboratory reported the results under case number JA74509.

The sample results were assessed using the *Region II Evaluation of Metals Data for the Contract Laboratory Program (CLP)*, Revision 13, SOP HW-2, September 2006; these data vahdation guidelines were modified to accommodate the method-specific criteria.

In general, the data are valid as reported and may be used for decision-making purposes and project objectives. Qualification of the data was not required.

SAMPLES

Samples included in this review are listed below:

SC40D	SC49D	FB042911

REVIEW ELEMENTS

Sample data were reviewed for the followihg parameters:

- Agreement of analyses conducted with chain-of-custody requests
- Data completeness
- Holding times and sample preservation
- Initial and continuing calibrations
- Reporting limit standards
- Instrument performance check standards
- Blanks
- Matrix spike (MS) results
- Laboratory duplicate results
- Laboratory control sample (LCS) results
- Field duplicate results
- Quantitation limits and sample results

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- Target compound identification

DISCUSSION

Agreement of Analyses Conducted with Chain-of-Custody Requests

Sample reports were checked to verify that the results corresponded to analytical requests as designated on the chain-of-custody (COC). There were no discrepancies noted.

Data Completeness

The data package was found to be complete as received from the laboratory.

Holding Times and Sample Preservation

All samples were analyzed within the method-specified holding time. The cooler temperature upon sample receipt was within the acceptance criterion of 4± 2°C.

Initial and Continuing Calibrations

All initial calibration criteria were met. The percent recoveries of perchlorate were within the acceptance criteria in all initial calibration verification (ICV) standards. The percent recoveries (128/123) of perchlorate in the ending higher concentration continuing cahbration verification (CCV) standards were above the acceptance criteria. Since the percent recoveries were within the acceptance criteria in the ending lower concentration CCVs and the concentrations in the associated samples were at the lower end of the curve, validation action was not required.

All ICV and CCV perchlorate standards were analyzed at the method-specified frequency. All calibration checks associated with the specific conductivity analyses were within the acceptance criteria.

Reporting Limit Standards

The percent recoveries of perchlorate were within the acceptance criteria in the reporting limit standards. The reporting limit standards were analyzed at the method-specified frequency and at the reporting limit of 3 µg/L.

Instrument Performance Check Standards

The instrument performance checks were analyzed at the method-specified frequency and at the required conductivity. The percent recovery of perchlorate was within the acceptance criteria in the instrument performance check standards. The percent difference of the area/height ratio of perchlorate in the instrument performance check standards compared to the area/height ratio of perchlorate in the laboratory control samples was within the acceptance criteria in the instrument performance check standards.

Blanks

Perchlorate was not detected in the laboratory method blank or field blank.

MS Results

MS analysis was performed on sample SC40D. All criteria were met.

Laboratory Duplicate Results

Laboratory duplicate analyses for perchlorate and specific conductivity were performed on sample SC40D. All criteria were met.

LCS Results

The percent recoveries of perchlorate were within the acceptance criteria in all LCS analyses.

Field Duplicate Results

Samples SC40D and SC49D were submitted as the field duplicate pair with this sample set. The following tables summarize the relative percent differences (RPDs) of perchlorate and specific conductivity in the field duplicate pair.

Analyte	SC40D	SC49D	RPD (%)
Perchlorate (µg/L)	4.0	3.9	2.5
Specific Conductivity (µhmos/cm)	364	358	1.7

Quantitation Limits and Sample Results

Sample calculations were spot-checked; there were no errors noted.

It should be noted that the laboratory reported nondetect results dovm to the method detection limit (MDL) instead of the quantitation limit (QL). The Form Is were manually changed during validation to reflect the QL instead of the MDL.

None of the samples exhibited a specific conductivity above the laboratory's matrix conductivity threshold and therefore none of the samples required dilution or pretreatment due to conductivity.

Target Compound Identification

All criteria were met.

Qualified Form Is

Report of Analysis

Client Sample ID:	FB042911		
Lab Sample ID:	JA74509-1	Date Sampled:	04/29/11
Matrbc	AQ - Field Blank Water	Date Received:	04/29/11
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

Gmeral Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.0 ~~0.78~~ U	3.0	0.73	ug/l	1	05/05/11 13:02	MS	EPA 314
Specific Conductivity	12.6	0.50		umhos/cm	1	05/13/11	SA	SM19 2S10B/SW S0S0A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002714

Report of Analysis

Client Sample ID:	SC40D		
Lab Sample ID:	JA74509-2	Date Sampled:	04/29/11
Matrix:	AQ - Ground Water	Date Received:	04/29/11
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	4.0	3.0	0.73	ug/l	1	05/05/11 12:45	MS	EPA 314
Specific Conductivity	364	0.50		umhos/cm	1	05/13/11	SA	SM19 2S10B/SW S0S0A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

R2-0002715

Report of Analysis

Client Sample ID:	SC49D		
Lab Sample ID:	JA74509-3	Date Sampled:	04/29/11
Matrix:	AQ - Ground Water	Date Received:	04/29/11
		Percent Solids:	n/a
Project:	SMC Perchlorate On-Site Investigation, Newfield, NJ		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Perchlorate	3.9	3.0	0.73	ug/l	1	05/10/11 14:00	AE	EPA 314
Specific Conductivity	358	0.50		umhos/cm	1	05/13/11	SA	SM1S 2S10B/SW S050A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

R2-0002716

Data Validation Worksheets

Perchlorate Worksheets
EPA Method 314.0

TRC
December 2009
Revision 0

Data Validation Worksheet Cover Page

Site Name: SMS
Project No. 177208.000040

PERCHLORATE DATA VALIDATION

The following data package has been validated:

Lab Name: Accutest-NJ
Lab Project No.: SA74509
No. of Samples/Matrix: 3/Aqueous

Method No: EPA 314
Sampling Date(s): 4/29/11
Shipping Date(s): N/A, Courier used
Date Rec'd By Lab: 4/29/11

Sample IDs. FB042911, SC40D, SC49D

Equipment Blank ID. FB042911
Field Duplicate IDs. None

The method requirements and the Region II *Evaluation of Metals Data for the Contract Laboratory Program (CLP)* (Revision 13, SOP HW-2, September 2006) were used to evaluate the data.

Full validation was performed.

The data were evaluated based upon the following parameters:

-Overall Evaluation of Data
-Data Completeness
-Preservation & Technical Holding Times
-RL Standard Analysis
-Initial & Continuing Calibrations
-Blanks
-Matrix Spike Results
-Laboratory Duplicate Results
-Field Duplicates
-Laboratory Control Spikes
-Sample Quantitation
-Instrument Performance Checks

Definitions and Qualifiers:
A – Acceptable Data
J – Numerical value associated with compound is an estimated quantity
R – The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U – Compound not detected at that numerical sample quantitation limit
UJ – The sample quantitation limit is an estimated quantity.

Validator's Name E. Denly Company Name TRC Phone Number 978-656-3572
Date Validation Started 6/4/11 Date Validation Completed 6/4/11

Package Completeness and Deliverables

Missing Information	Date Lab Contacted	Date Received
-none		

Perchlorate Worksheets
EPA Method 314.0

TRC
December 2009
Revision 0

L **PRESERVATION AND HOLDING TIMES –** Circle sample numbers with exceeded holding times or omitted preservation. Circle all exceeded holding times.

List temperature(s) of coolers upon receipt at the laboratory: 1.2°C

Sample ID	Matrix	Date Sampled	Conductivity Analysis Date	Perchlorate Analysis Date	# Days from Sampling To Analysis	Actions
FB04291I	AQ	4/29/11	5/13/11	5/5/11 1303	6	
SC40D	GW	↓	5/13/11	5/5/11 1245	6	
SC49D	GW	↓	5/13/11	5/10/11 1400	11	

Required Preservation: Cool, 4 degrees
Holding Time Criteria: 28 days from date sampled to date analyzed

List field samples which exhibited a conductance greater than the lab's matrix conductivity threshold.
none

Were these samples diluted or pretreated?
NA

If dilutions were performed due to conductance, was the dilution factor estimated by dividing measured conductance by MCT? YES NO NA
If samples were pretreated, was conductance measured after pretreatment to ensure it is below MCT? YES NO

II. INSTRUMENT CALIBRATION

Initial Calibration: 5 standards; %RSD <15 (must use peak areas) ✔
Initial Calibration Verification: 90-110% (mid-point concentratian; run after every ICAL) ✔
Reporting Limit Standard: 75-125% (concentration at RL; run at beginning of every analysis batch) ✔
Continuing Calibration Verification: 85-115% (concentration alternate between mid and high standards; rim prior to samples, every 10 samples and at end of analysis) ✔
List all standards which are outside of the acceptance criteria.

Date	IC/ICV/RL/CCV	Recovery	Samples Affected	Action	
GN50477					0.058/0.002366 = 24.51 = 98% R
5/5/11	ICV - 25ug/L	% R ok	PB042911, SC40D		
	CRL1 - 3ug/L	↓			
	CCV1 - 25ug/L	↓			0.127/0.002366 = 53.7 = 107% R
	CCVA1 - 50ug/L	↓			0.065/0.002366 = 27.5 = 110% R
	CCV 2 - 25ug/L	↓			
	CCVA2 - 50ug/L	128%		none; conc. in SC40D 4ug/L → closer to 25ug/L which was ok	0.150/0.002366 = 63.4 = 127% R
GN50648					
5/10/11	ICV - 25ug/L	% R ok	SC49D		0.061/0.002421 = 25.2 = 101%
	CRL1 - 3ug/L	↓			
	CCV1 - 25ug/L	↓			
	CCVA1 - 50ug/L	↓			0.133/0.002421 = 54.9 = 110%
	CCV2 - 25ug/L	↓			
	CCVA2 - 50ug/L	123%		none; does not bracket project sample	0.148/0.002421 = 61.1 = 122%

Conductivity: Calibration check must be performed with each analysis batch using 1410 uS/cm standard. Conductivity reading must be between 1380 and 1440.

GN50477 : STD1 → 6 : 5/4/11 : 0, 3, 6, 10, 25, 50 ppb : r = 0.999
GN50648 : STD1 → 6 : 5/10/11 : ↓ : r = 0.999

5/5/11 : GN50477 : cmd. check ok
5/10/11

III. BLANK ANALYSIS

List the blank contamination found above ½ the RL below.

1. Laboratory: Method and Instrument Blanks

Date Analyzed	Matrix	Blank ID	Concentration (units)
5/5/11 1136	AQ	GN50477	none detected
5/10/11 1254	↓	GN50648	↓

1. Was pre-treatment required for any field samples? YES NO
2. If yes, was pre-treatment performed on a separate portion of the method blank? YES NO

Field: Equipment (Rinsate) Blanks

Date Analyzed	Matrix	Blank ID	Concentration (units)
5/5/11	AQ	FB042911	none detected

2. **Blank Actions** – List the maximum concentrations of perchlorate detected.

Type of Blank	Date Blank Originated	Max. Conc. (units)	Action Level (units)	Analyte QL (units)	Samples Affected	Action
		none	detected			

J

IV. INSTRUMENT PERFORMANCE CHECK (IPC)

REQUIREMENTS:

IPC must be analyzed at the beginning of each run. 25ug/L

✓ The percent difference of the area/height ratio of the IPC compared to the area/height ratio of the LCS must be <25.
✓ The percent recovery of perchlorate must be 80-120%.
✓ The retention time of perchlorate must not shift more than 5%.

What is the lab's Matrix Conductivity Threshold established during the IDC? 4290

What was the conductance of the IPC? 4030 umhos/cm

Is the conductance of the IPC confirmed prior to analysis? (YES) NO

Is the conductance within ±10% of the MCT? (YES) NO

List any IPC requirements that were not achieved.

Date	%D/%R/RT	Associated Samples	Action
GN50477 5/5/11	%R ok	FB042911, SC400	
GN50648 5/10/11	↓	SC490	
GN50477: RT perchlorate = 11.694 min >within 5% of ICAL RT,			
GN50648: RT perchlorate = 11.404 min			

y = 0.002366x

Area = 0.055
0.055 = 0.002366x x = 23.24 ppb
= 93%R
(lab reported 23.353 ppb and 93.6%R)

Area = 0.057 / 0.002421 = 23.54 ppb = 94%

GN50477: Area/Height IPC 0.055/0.160 = 0.344 %D = 2.1%
Area/Height BS 0.060/0.178 = 0.337

GN50648: Area/Height IPC 0.057/0.168 = 0.339 %D = 1.7%
Area/Height BS 0.060/0.180 = 0.333

V. MATRIX SPIKE - List all matrix spike analytes that are outside method QC acceptance criteria.

Was a matrix spike analysis performed on all samples that were pretreated? YES NO (NA)
Were samples spiked prior to pretreatment? YES NO (NA)
List associated samples which were pretreated. none

Sample ID SC40D Matrix GW

Criteria: For analyte levels <4x spike levels, acceptance limits are 80 – 120%

MS ID	MS %Recovery	Action
SC40D	ok	

0.073/0.002366 = 30.854
30.854 - 4 = 26.85 / 25 = 1072
(126 reported 1087)

Validation Actions:

Aqueous:

If %R <30; Reject (R) associated results
If %R 30-74; Estimate (J/UJ) positive and nondetect results.
If %R 126-150; Estimate (J) positive results.
If %R >150%; Reject (R) positive results.

Soils:

If %R <10; Reject (R) all associated results.
If %R 10-74; Estimate (J/UJ) positive and nondetect results.
If %R 126-200; Estimate (J) positive results.
If %R >200%; Reject (R) positive results.

If concentration of analyte ≥ 4x spike added, disregard spike recoveries

✓

VI. LABORATORY DUPLICATE RESULTS - List all laboratory duplicate analytes that are outside method QC acceptance criteria.

Sample ID SC40D Matrix GW

Criteria: RPD ≤ 15

Lab Duplicate Sample ID	RL	Sample Concentration	Duplicate Concentration	RPD (%)	Action
perchlorate SC40D	3.0 ug/L	4.0 ug/L	5.3 ug/L	28.0	J since results <5xRL
cp. cmd. ↓		361 umhos/cm	377 umhos/cm	3.5	

Validation Actions:

Aqueous:

If the sample and duplicate are both ≥5x RL and RPD >50; Estimate (J) positive results.

If the sample and/or duplicate results <5x RL, RPD >50, and the difference between the results is >RL; Estimate (J) positive results.

Soils:

If the sample and duplicate are both ≥5x RL and RPD >100; Estimate (J) positive results.

If the sample and/or duplicate results <5xRL, RPD >100, and the difference between the results is >2x RL; Estimate (J) positive results.

J

VII. LABORATORY CONTROL SPIKES - List all LCS analytes that are outside method QC acceptance criteria.

Acceptance Limits:
85 – 115%

Was one LCS prepared and analyzed with each batch? YES NO
If field samples were pretreated, was a separate portion of the LCS also pretreated? YES NO N/A

LCS ID Date Prepped	% Recovery	Action
GN50477 - 8 ug/L - 25 ug/L	% R ok in each	
GN50648 - 8 ug/L - 25 ug/L	↓	

0.060/0.002366 = 25.36 = 101%
0.060/0.002421 = 24.78 = 99%

VIII. FIELD DUPLICATE PRECISION none submitted

Sample ID _____ Duplicate Sample ID _____ Matrix_____

Criteria: RPD ≤ 30% for aqueous samples and ≤ 50% for solid samples

Field Duplicate Sample IDs	RL	Sample Concentration	Duplicnte Concentration	RPD	Action

Validation Actions:
Aqueous:
If the sample and duplicate are both ≥ 5x RL and RPD >50; Estimate (J) positive results.
If the sample and/or duplicate results <5x RL, RPD >50 and the difference between the results is >RL; Estimate (J) positive results.
Soils:
If the sample and duplicate are both ≥ 5x RL and RPD >100; Estimate (J) positive results.
If the sample and/or duplicate results <5x RL, RPD >100 and the difference between the results is >2x RL; Estimate (J) positive results.

IX. SAMPLE QUANTITATION

Recalculate from the raw data, the concentrations for one positive detect and one reported quantitation limit for a nondetect in a diluted sample.

Sample ID: SC40D
Reported Value: 4.0 ug/L
Sample ID: FBU42911
Reported Quantitation Limit: 3.0 ug/L

SC40D: $\frac{\text{area: } 0.009}{\text{slope: } 0.002366} = 3.8$ ug/L (ok; most likely due to area/slope rounding)

FBU42911:

lowest = 3 ug/L = QL

List soil/sediment samples with 10-50% solids: NA
Positive and nondetect results for all samples with 10-50% solids must be qualified as estimated (J/UJ).
List sample numbers with <10% solids: NA
All results for samples with <10% solids must be rejected.

X. REPORTED QUANTITATION LIMITS

Did the laboratory achieve the required quantitation limits for each sample? (Yes) No
If no, discuss the reasons below.

Sample ID	QLs Not Achieved	Reason
-no dilutions performed		
-NDs reported down to MDL → changed to reflect RL of 3µg/L → only affects FB042911		

APPENDIX I

HAZSITE LABORATORY RESULTS (CD ONLY IN NJDEP COPIES)

EQuIS USEPA REGION II LABORATORY RESULTS (CD ONLY IN USEPA COPIES)

FB120406	E314.0	12/7/2006 11:22 T
VP-3(25-30)	E314.0	12/6/2006 3:55 T
FB120406	E314.0	12/7/2006 11:22 T
VP-3(25-30)	E314.0	12/6/2006 3:55 T
FB120506	E314.0	12/7/2006 11:38 T
VP-3(45-50)	E314.0	12/7/2006 11:55 T
VP-30(45-50)	E314.0	12/7/2006 12:11 T
FB120506	E314.0	12/7/2006 11:38 T
VP-3(45-50)	E314.0	12/7/2006 11:55 T
VP-30(45-50)	E314.0	12/7/2006 12:11 T
VP-3(70-75)	E314.0	12/7/2006 14:39 T
VP-3(70-75)	E314.0	12/7/2006 14:39 T
FB120606	E314.0	12/8/2006 11:56 T
VP-3(115-120)	E314.0	12/8/2006 12:13 T
VP-3(95-100)	E314.0	12/8/2006 11:40 T
FB120606	E314.0	12/8/2006 11:56 T
VP-3(115-120)	E314.0	12/8/2006 12:13 T
VP-3(95-100)	E314.0	12/8/2006 11:40 T
FB121106	E314.0	12/12/2006 23:57 T
VP-4(30-35)	E314.0	12/12/2006 23:41 T
VP-4(50-55)	E314.0	12/13/2006 0:13 T
VP-4(75-80)	E314.0	12/13/2006 0:30 T
VP-40(75-80)	E314.0	12/13/2006 0:46 T
FB121106	E314.0	12/12/2006 23:57 T
VP-4(30-35)	E314.0	12/12/2006 23:41 T
VP-4(50-55)	E314.0	12/13/2006 0:13 T
VP-4(75-80)	E314.0	12/13/2006 0:30 T
VP-40(75-80)	E314.0	12/13/2006 0:46 T
FB121506	E314.0	12/18/2006 19:48 T
VP-10(20-25)	E314.0	12/18/2006 20:05 T
VP-10(35-40)	E314.0	12/18/2006 20:21 T
FB121506	E314.0	12/18/2006 19:48 T
VP-10(20-25)	E314.0	12/18/2006 20:05 T
VP-10(35-40)	E314.0	12/18/2006 20:21 T
FB121806	E314.0	12/19/2006 19:31 T
VP-10(109-114)	E314.0	12/19/2006 20:21 T
VP-10(60-65)	E314.0	12/20/2006 12:56 T
VP-10(85-90)	E314.0	12/19/2006 19:48 T
VP-100(60-65)	E314.0	12/20/2006 13:12 T
FB121806	E314.0	12/19/2006 19:31 T
VP-10(109-114)	E314.0	12/19/2006 20:21 T
VP-10(60-65)	E314.0	12/20/2006 12:56 T
VP-10(85-90)	E314.0	12/19/2006 19:48 T
VP-100(60-65)	E314.0	12/20/2006 13:12 T
FB112806	E314.0	12/5/2006 22:27 T
VP-1(15-20)	E314.0	12/5/2006 23:00 T
VP-1(35-40)	E314.0	12/5/2006 23:16 T
FB112806	E314.0	12/5/2006 22:27 T
VP-1(15-20)	E314.0	12/5/2006 23:00 T
VP-1(35-40)	E314.0	12/5/2006 23:16 T
FB112906	E314.0	12/5/2006 23:33 T
VP-1(60-65)	E314.0	12/5/2006 23:49 T

VP-1(85-90)	E314.0	12/6/2006 0:05 T
FB112906	E314.0	12/5/2006 23:33 T
VP-1(60-65)	E314.0	12/5/2006 23:49 T
VP-1(85-90)	E314.0	12/6/2006 0:05 T
VP-1(105-110)	E314.0	12/6/2006 0:22 T
VP-1(105-110)	E314.0	12/6/2006 0:22 T
FB113006	E314.0	12/5/2006 20:49 T
VP-2(15-20)	E314.0	12/5/2006 20:32 T
FB113006	E314.0	12/5/2006 20:49 T
VP-2(15-20)	E314.0	12/5/2006 20:32 T
FB120106	E314.0	12/5/2006 21:05 T
VP-2(110-115)	E314.0	12/5/2006 22:11 T
VP-2(35-40)	E314.0	12/5/2006 21:21 T
VP-2(60-65)	E314.0	12/5/2006 21:38 T
VP-2(85-90)	E314.0	12/5/2006 21:54 T
FB120106	E314.0	12/5/2006 21:05 T
VP-2(110-115)	E314.0	12/5/2006 22:11 T
VP-2(35-40)	E314.0	12/5/2006 21:21 T
VP-2(60-65)	E314.0	12/5/2006 21:38 T
VP-2(85-90)	E314.0	12/5/2006 21:54 T
VP-4(100-105)	E314.0	12/13/2006 1:03 T
VP-4(121-126)	E314.0	12/13/2006 1:19 T
VP-4(100-105)	E314.0	12/13/2006 1:03 T
VP-4(121-126)	E314.0	12/13/2006 1:19 T

initial	Analysis	GN98102
initial	Analysis	GN98027
initial	Prep	GP36673
initial	Prep	GP36673
initial	Analysis	GN98102
initial	Analysis	GN98102
initial	Analysis	GN98102
initial	Prep	GP36673
initial	Prep	GP36673
initial	Prep	GP36673
initial	Analysis	GN98102
initial	Prep	GP36719
initial	Analysis	GN98140
initial	Analysis	GN98140
initial	Analysis	GN98140
initial	Prep	GP36730
initial	Prep	GP36730
initial	Prep	GP36730
initial	Analysis	GN98254
initial	Analysis	GN98254
initial	Analysis	GN98254
initial	Analysis	GN98254
initial	Analysis	GN98254
initial	Prep	GP36771
initial	Prep	GP36771
initial	Prep	GP36771
initial	Prep	GP36771
initial	Prep	GP36771
initial	Analysis	GN98480
initial	Analysis	GN98480
initial	Analysis	GN98480
initial	Prep	GP36880
initial	Prep	GP36880
initial	Prep	GP36880
initial	Analysis	GN98516
initial	Analysis	GN98516
initial	Analysis	GN98572
initial	Analysis	GN98516
initial	Analysis	GN98572
initial	Prep	GP36881
initial	Prep	GP36881
initial	Prep	GP36881
initial	Prep	GP36881
initial	Prep	GP36881
initial	Analysis	GN98027
initial	Analysis	GN98027
initial	Analysis	GN98027
initial	Prep	GP36674
initial	Prep	GP36674
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initial	Prep	GP36674
initial	Prep	GP36674
initial	Prep	GP36674
initial	Prep	GP36674
initial	Prep	GP36674
initial	Analysis	GN98254
initial	Analysis	GN98254
initial	Prep	GP36771
initial	Prep	GP36771

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	VP-1	VP-1(15-20)	TEMP		
TRC-CT	VP-1	VP-1(15-20)	pH		
TRC-CT	VP-1	VP-1(15-20)	SC		
TRC-CT	VP-1	VP-1(15-20)	DIS_OXYGEN		
TRC-CT	VP-1	VP-1(15-20)	TURB		
TRC-CT	VP-1	VP-1(15-20)	ORP		
TRC-CT	VP-1	VP-1(15-20)	TDS		
TRC-CT	VP-1	VP-1(35-40)	TEMP		
TRC-CT	VP-1	VP-1(35-40)	pH		
TRC-CT	VP-1	VP-1(35-40)	SC		
TRC-CT	VP-1	VP-1(35-40)	DIS_OXYGEN		
TRC-CT	VP-1	VP-1(35-40)	TURB		
TRC-CT	VP-1	VP-1(35-40)	ORP		
TRC-CT	VP-1	VP-1(35-40)	TDS		
TRC-CT	VP-1	VP-1(60-65)	TEMP		
TRC-CT	VP-1	VP-1(60-65)	pH		
TRC-CT	VP-1	VP-1(60-65)	SC		
TRC-CT	VP-1	VP-1(60-65)	DIS_OXYGEN		
TRC-CT	VP-1	VP-1(60-65)	TURB		
TRC-CT	VP-1	VP-1(60-65)	ORP		
TRC-CT	VP-1	VP-1(60-65)	TDS		
TRC-CT	VP-1	VP-1(85-90)	TEMP		
TRC-CT	VP-1	VP-1(85-90)	pH		
TRC-CT	VP-1	VP-1(85-90)	SC		
TRC-CT	VP-1	VP-1(85-90)	DIS_OXYGEN		
TRC-CT	VP-1	VP-1(85-90)	TURB		
TRC-CT	VP-1	VP-1(85-90)	ORP		
TRC-CT	VP-1	VP-1(85-90)	TDS		
TRC-CT	VP-1	VP-1(105-110)	TEMP		
TRC-CT	VP-1	VP-1(105-110)	pH		
TRC-CT	VP-1	VP-1(105-110)	SC		
TRC-CT	VP-1	VP-1(105-110)	DIS_OXYGEN		
TRC-CT	VP-1	VP-1(105-110)	TURB		
TRC-CT	VP-1	VP-1(105-110)	ORP		
TRC-CT	VP-1	VP-1(105-110)	TDS		
TRC-CT	VP-2	VP-2(15-20)	TEMP		
TRC-CT	VP-2	VP-2(15-20)	pH		
TRC-CT	VP-2	VP-2(15-20)	SC		
TRC-CT	VP-2	VP-2(15-20)	DIS_OXYGEN		
TRC-CT	VP-2	VP-2(15-20)	TURB		
TRC-CT	VP-2	VP-2(15-20)	ORP		
TRC-CT	VP-2	VP-2(15-20)	TDS		
TRC-CT	VP-2	VP-2(35-40)	TEMP		
TRC-CT	VP-2	VP-2(35-40)	pH		
TRC-CT	VP-2	VP-2(35-40)	SC		
TRC-CT	VP-2	VP-2(35-40)	DIS_OXYGEN		
TRC-CT	VP-2	VP-2(35-40)	TURB		
TRC-CT	VP-2	VP-2(35-40)	ORP		

TRC-CT	VP-2	VP-2(35-40)	TDS
TRC-CT	VP-2	VP-2(60-65)	TEMP
TRC-CT	VP-2	VP-2(60-65)	pH
TRC-CT	VP-2	VP-2(60-65)	SC
TRC-CT	VP-2	VP-2(60-65)	DIS_OXYGEN
TRC-CT	VP-2	VP-2(60-65)	TURB
TRC-CT	VP-2	VP-2(60-65)	ORP
TRC-CT	VP-2	VP-2(60-65)	TDS
TRC-CT	VP-2	VP-2(85-90)	TEMP
TRC-CT	VP-2	VP-2(85-90)	pH
TRC-CT	VP-2	VP-2(85-90)	SC
TRC-CT	VP-2	VP-2(85-90)	DIS_OXYGEN
TRC-CT	VP-2	VP-2(85-90)	TURB
TRC-CT	VP-2	VP-2(85-90)	ORP
TRC-CT	VP-2	VP-2(85-90)	TDS
TRC-CT	VP-2	VP-2(110-115)	TEMP
TRC-CT	VP-2	VP-2(110-115)	pH
TRC-CT	VP-2	VP-2(110-115)	SC
TRC-CT	VP-2	VP-2(110-115)	DIS_OXYGEN
TRC-CT	VP-2	VP-2(110-115)	TURB
TRC-CT	VP-2	VP-2(110-115)	ORP
TRC-CT	VP-2	VP-2(110-115)	TDS
TRC-CT	VP-3	VP-3(25-30)	TEMP
TRC-CT	VP-3	VP-3(25-30)	pH
TRC-CT	VP-3	VP-3(25-30)	SC
TRC-CT	VP-3	VP-3(25-30)	DIS_OXYGEN
TRC-CT	VP-3	VP-3(25-30)	TURB
TRC-CT	VP-3	VP-3(25-30)	ORP
TRC-CT	VP-3	VP-3(25-30)	TDS
TRC-CT	VP-3	VP-3(45-50)	TEMP
TRC-CT	VP-3	VP-3(45-50)	pH
TRC-CT	VP-3	VP-3(45-50)	SC
TRC-CT	VP-3	VP-3(45-50)	DIS_OXYGEN
TRC-CT	VP-3	VP-3(45-50)	TURB
TRC-CT	VP-3	VP-3(45-50)	ORP
TRC-CT	VP-3	VP-3(45-50)	TDS
TRC-CT	VP-3	VP-3(70-75)	TEMP
TRC-CT	VP-3	VP-3(70-75)	pH
TRC-CT	VP-3	VP-3(70-75)	SC
TRC-CT	VP-3	VP-3(70-75)	DIS_OXYGEN
TRC-CT	VP-3	VP-3(70-75)	TURB
TRC-CT	VP-3	VP-3(70-75)	ORP
TRC-CT	VP-3	VP-3(70-75)	TDS
TRC-CT	VP-3	VP-3(95-100)	TEMP
TRC-CT	VP-3	VP-3(95-100)	pH
TRC-CT	VP-3	VP-3(95-100)	SC
TRC-CT	VP-3	VP-3(95-100)	DIS_OXYGEN
TRC-CT	VP-3	VP-3(95-100)	TURB
TRC-CT	VP-3	VP-3(95-100)	ORP

TRC-CT	VP-3	VP-3(95-100)	TDS
TRC-CT	VP-3	VP-3(115-120)	TEMP
TRC-CT	VP-3	VP-3(115-120)	pH
TRC-CT	VP-3	VP-3(115-120)	SC
TRC-CT	VP-3	VP-3(115-120)	DIS_OXYGEN
TRC-CT	VP-3	VP-3(115-120)	TURB
TRC-CT	VP-3	VP-3(115-120)	ORP
TRC-CT	VP-3	VP-3(115-120)	TDS
TRC-CT	VP-4	VP-4(30-35)	TEMP
TRC-CT	VP-4	VP-4(30-35)	pH
TRC-CT	VP-4	VP-4(30-35)	SC
TRC-CT	VP-4	VP-4(30-35)	DIS_OXYGEN
TRC-CT	VP-4	VP-4(30-35)	TURB
TRC-CT	VP-4	VP-4(30-35)	ORP
TRC-CT	VP-4	VP-4(30-35)	TDS
TRC-CT	VP-4	VP-4(50-55)	TEMP
TRC-CT	VP-4	VP-4(50-55)	pH
TRC-CT	VP-4	VP-4(50-55)	SC
TRC-CT	VP-4	VP-4(50-55)	DIS_OXYGEN
TRC-CT	VP-4	VP-4(50-55)	TURB
TRC-CT	VP-4	VP-4(50-55)	ORP
TRC-CT	VP-4	VP-4(50-55)	TDS
TRC-CT	VP-4	VP-4(75-80)	TEMP
TRC-CT	VP-4	VP-4(75-80)	pH
TRC-CT	VP-4	VP-4(75-80)	SC
TRC-CT	VP-4	VP-4(75-80)	DIS_OXYGEN
TRC-CT	VP-4	VP-4(75-80)	TURB
TRC-CT	VP-4	VP-4(75-80)	ORP
TRC-CT	VP-4	VP-4(75-80)	TDS
TRC-CT	VP-4	VP-4(100-105)	TEMP
TRC-CT	VP-4	VP-4(100-105)	pH
TRC-CT	VP-4	VP-4(100-105)	SC
TRC-CT	VP-4	VP-4(100-105)	DIS_OXYGEN
TRC-CT	VP-4	VP-4(100-105)	TURB
TRC-CT	VP-4	VP-4(100-105)	ORP
TRC-CT	VP-4	VP-4(100-105)	TDS
TRC-CT	VP-4	VP-4(121-126)	TEMP
TRC-CT	VP-4	VP-4(121-126)	pH
TRC-CT	VP-4	VP-4(121-126)	SC
TRC-CT	VP-4	VP-4(121-126)	DIS_OXYGEN
TRC-CT	VP-4	VP-4(121-126)	TURB
TRC-CT	VP-4	VP-4(121-126)	ORP
TRC-CT	VP-4	VP-4(121-126)	TDS
TRC-CT	VP-10	VP-10(20-25)	TEMP
TRC-CT	VP-10	VP-10(20-25)	pH
TRC-CT	VP-10	VP-10(20-25)	SC
TRC-CT	VP-10	VP-10(20-25)	DIS_OXYGEN
TRC-CT	VP-10	VP-10(20-25)	TURB
TRC-CT	VP-10	VP-10(20-25)	ORP

TRC-CT	VP-10	VP-10(20-25)	TDS
TRC-CT	VP-10	VP-10(35-40)	TEMP
TRC-CT	VP-10	VP-10(35-40)	pH
TRC-CT	VP-10	VP-10(35-40)	SC
TRC-CT	VP-10	VP-10(35-40)	DIS_OXYGEN
TRC-CT	VP-10	VP-10(35-40)	TURB
TRC-CT	VP-10	VP-10(35-40)	ORP
TRC-CT	VP-10	VP-10(35-40)	TDS
TRC-CT	VP-10	VP-10(60-65)	TEMP
TRC-CT	VP-10	VP-10(60-65)	pH
TRC-CT	VP-10	VP-10(60-65)	SC
TRC-CT	VP-10	VP-10(60-65)	DIS_OXYGEN
TRC-CT	VP-10	VP-10(60-65)	TURB
TRC-CT	VP-10	VP-10(60-65)	ORP
TRC-CT	VP-10	VP-10(60-65)	TDS
TRC-CT	VP-10	VP-10(85-90)	TEMP
TRC-CT	VP-10	VP-10(85-90)	pH
TRC-CT	VP-10	VP-10(85-90)	SC
TRC-CT	VP-10	VP-10(85-90)	DIS_OXYGEN
TRC-CT	VP-10	VP-10(85-90)	TURB
TRC-CT	VP-10	VP-10(85-90)	ORP
TRC-CT	VP-10	VP-10(85-90)	TDS
TRC-CT	VP-10	VP-10(109-114)	TEMP
TRC-CT	VP-10	VP-10(109-114)	pH
TRC-CT	VP-10	VP-10(109-114)	SC
TRC-CT	VP-10	VP-10(109-114)	DIS_OXYGEN
TRC-CT	VP-10	VP-10(109-114)	TURB
TRC-CT	VP-10	VP-10(109-114)	ORP
TRC-CT	VP-10	VP-10(109-114)	TDS

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	11/29/2006 00:00:00	00:00:00	21.90	deg c		
	11/29/2006 00:00:00	00:00:00	5.36	ph units		
	11/29/2006 00:00:00	00:00:00	0.165	ms/cm		
	11/29/2006 00:00:00	00:00:00	2.64	mg/l		
	11/29/2006 00:00:00	00:00:00	62.2	ntu		
	11/29/2006 00:00:00	00:00:00	163	millivolts		
	11/29/2006 00:00:00	00:00:00	0.11	g/l		
	11/28/2006 00:00:00	00:00:00	19.40	deg c		
	11/28/2006 00:00:00	00:00:00	5.54	ph units		
	11/28/2006 00:00:00	00:00:00	0.081	ms/cm		
	11/28/2006 00:00:00	00:00:00	4.82	mg/l		
	11/28/2006 00:00:00	00:00:00	192	ntu		
	11/28/2006 00:00:00	00:00:00	142	millivolts		
	11/28/2006 00:00:00	00:00:00	0.05	g/l		
	11/29/2006 00:00:00	00:00:00	16.40	deg c		
	11/29/2006 00:00:00	00:00:00	5.38	ph units		
	11/29/2006 00:00:00	00:00:00	0.107	ms/cm		
	11/29/2006 00:00:00	00:00:00	5.00	mg/l		
	11/29/2006 00:00:00	00:00:00	501	ntu		
	11/29/2006 00:00:00	00:00:00	179	millivolts		
	11/29/2006 00:00:00	00:00:00	0.07	g/l		
	11/29/2006 00:00:00	00:00:00	15.20	deg c		
	11/29/2006 00:00:00	00:00:00	5.25	ph units		
	11/29/2006 00:00:00	00:00:00	0.051	ms/cm		
	11/29/2006 00:00:00	00:00:00	8.28	mg/l		
	11/29/2006 00:00:00	00:00:00	91	ntu		
	11/29/2006 00:00:00	00:00:00	225	millivolts		
	11/29/2006 00:00:00	00:00:00	0.03	g/l		
	11/29/2006 00:00:00	00:00:00	15.60	deg c		
	11/29/2006 00:00:00	00:00:00	5.27	ph units		
	11/29/2006 00:00:00	00:00:00	0.038	ms/cm		
	11/29/2006 00:00:00	00:00:00	4.28	mg/l		
	11/29/2006 00:00:00	00:00:00	37.8	ntu		
	11/29/2006 00:00:00	00:00:00	183	millivolts		
	11/29/2006 00:00:00	00:00:00	0.02	g/l		
	11/30/2006 00:00:00	00:00:00	7.14	deg c		
	11/30/2006 00:00:00	00:00:00	6.09	ph units		
	11/30/2006 00:00:00	00:00:00	0.145	ms/cm		
	11/30/2006 00:00:00	00:00:00	7.14	mg/l		
	11/30/2006 00:00:00	00:00:00	189	ntu		
	11/30/2006 00:00:00	00:00:00	168	millivolts		
	11/30/2006 00:00:00	00:00:00	0.09	g/l		
	12/04/2006 00:00:00	00:00:00	15.50	deg c		
	12/04/2006 00:00:00	00:00:00	5.46	ph units		
	12/04/2006 00:00:00	00:00:00	0.115	ms/cm		
	12/04/2006 00:00:00	00:00:00	1.00	mg/l		
	12/04/2006 00:00:00	00:00:00	57.7	ntu		
	12/04/2006 00:00:00	00:00:00	190	millivolts		

12/04/2006 00:00:00	00:00:00	0.07	g/l
12/01/2006 00:00:00	00:00:00	15.30	deg c
12/01/2006 00:00:00	00:00:00	5.78	ph units
12/01/2006 00:00:00	00:00:00	0.290	ms/cm
12/01/2006 00:00:00	00:00:00	2.02	mg/l
12/01/2006 00:00:00	00:00:00	42.3	ntu
12/01/2006 00:00:00	00:00:00	146	millivolts
12/01/2006 00:00:00	00:00:00	0.19	g/l
12/01/2006 00:00:00	00:00:00	15.70	deg c
12/01/2006 00:00:00	00:00:00	5.45	ph units
12/01/2006 00:00:00	00:00:00	0.181	ms/cm
12/01/2006 00:00:00	00:00:00	2.31	mg/l
12/01/2006 00:00:00	00:00:00	67.4	ntu
12/01/2006 00:00:00	00:00:00	164	millivolts
12/01/2006 00:00:00	00:00:00	0.12	g/l
12/04/2006 00:00:00	00:00:00	17.00	deg c
12/04/2006 00:00:00	00:00:00	6.08	ph units
12/04/2006 00:00:00	00:00:00	0.097	ms/cm
12/04/2006 00:00:00	00:00:00	10.64	mg/l
12/04/2006 00:00:00	00:00:00	889	ntu
12/04/2006 00:00:00	00:00:00	64	millivolts
12/04/2006 00:00:00	00:00:00	0.06	g/l
12/04/2006 00:00:00	00:00:00	13.10	deg c
12/04/2006 00:00:00	00:00:00	3.27	ph units
12/04/2006 00:00:00	00:00:00	0.124	ms/cm
12/04/2006 00:00:00	00:00:00	11.12	mg/l
12/04/2006 00:00:00	00:00:00	453	ntu
12/04/2006 00:00:00	00:00:00	188	millivolts
12/04/2006 00:00:00	00:00:00	0.08	g/l
12/05/2006 00:00:00	00:00:00	16.29	deg c
12/05/2006 00:00:00	00:00:00	4.55	ph units
12/05/2006 00:00:00	00:00:00	0.591	ms/cm
12/05/2006 00:00:00	00:00:00	4.87	mg/l
12/05/2006 00:00:00	00:00:00	188	ntu
12/05/2006 00:00:00	00:00:00	166	millivolts
12/05/2006 00:00:00	00:00:00	0.38	g/l
12/06/2006 00:00:00	00:00:00	14.83	deg c
12/06/2006 00:00:00	00:00:00	4.37	ph units
12/06/2006 00:00:00	00:00:00	0.461	ms/cm
12/06/2006 00:00:00	00:00:00	3.88	mg/l
12/06/2006 00:00:00	00:00:00	184	ntu
12/06/2006 00:00:00	00:00:00	95	millivolts
12/06/2006 00:00:00	00:00:00	0.30	g/l
12/06/2006 00:00:00	00:00:00	16.31	deg c
12/06/2006 00:00:00	00:00:00	4.56	ph units
12/06/2006 00:00:00	00:00:00	0.398	ms/cm
12/06/2006 00:00:00	00:00:00	4.09	mg/l
12/06/2006 00:00:00	00:00:00	88.6	ntu
12/06/2006 00:00:00	00:00:00	82	millivolts

12/06/2006 00:00:00	00:00:00	0.33	g/l
12/06/2006 00:00:00	00:00:00	12.44	deg c
12/06/2006 00:00:00	00:00:00	4.31	ph units
12/06/2006 00:00:00	00:00:00	0.509	ms/cm
12/06/2006 00:00:00	00:00:00	4.25	mg/l
12/06/2006 00:00:00	00:00:00	58	ntu
12/06/2006 00:00:00	00:00:00	96	millivolts
12/06/2006 00:00:00	00:00:00	0.33	g/l
12/11/2006 00:00:00	00:00:00	17.10	deg c
12/11/2006 00:00:00	00:00:00	4.84	ph units
12/11/2006 00:00:00	00:00:00	0.306	ms/cm
12/11/2006 00:00:00	00:00:00	4.50	mg/l
12/11/2006 00:00:00	00:00:00	121	ntu
12/11/2006 00:00:00	00:00:00	247	millivolts
12/11/2006 00:00:00	00:00:00	0.20	g/l
12/11/2006 00:00:00	00:00:00	16.20	deg c
12/11/2006 00:00:00	00:00:00	5.11	ph units
12/11/2006 00:00:00	00:00:00	0.260	ms/cm
12/11/2006 00:00:00	00:00:00	9.20	mg/l
12/11/2006 00:00:00	00:00:00	239	ntu
12/11/2006 00:00:00	00:00:00	230	millivolts
12/11/2006 00:00:00	00:00:00	0.17	g/l
12/11/2006 00:00:00	00:00:00	15.90	deg c
12/11/2006 00:00:00	00:00:00	5.47	ph units
12/11/2006 00:00:00	00:00:00	0.138	ms/cm
12/11/2006 00:00:00	00:00:00	5.33	mg/l
12/11/2006 00:00:00	00:00:00	17.4	ntu
12/11/2006 00:00:00	00:00:00	186	millivolts
12/11/2006 00:00:00	00:00:00	0.09	g/l
12/11/2006 00:00:00	00:00:00	15.60	deg c
12/11/2006 00:00:00	00:00:00	5.83	ph units
12/11/2006 00:00:00	00:00:00	0.100	ms/cm
12/11/2006 00:00:00	00:00:00	5.44	mg/l
12/11/2006 00:00:00	00:00:00	272	ntu
12/11/2006 00:00:00	00:00:00	141	millivolts
12/11/2006 00:00:00	00:00:00	0.06	g/l
12/11/2006 00:00:00	00:00:00	15.40	deg c
12/11/2006 00:00:00	00:00:00	5.63	ph units
12/11/2006 00:00:00	00:00:00	0.132	ms/cm
12/11/2006 00:00:00	00:00:00	6.03	mg/l
12/11/2006 00:00:00	00:00:00	46.8	ntu
12/11/2006 00:00:00	00:00:00	158	millivolts
12/11/2006 00:00:00	00:00:00	0.09	g/l
12/15/2006 00:00:00	00:00:00	20.30	deg c
12/15/2006 00:00:00	00:00:00	4.71	ph units
12/15/2006 00:00:00	00:00:00	0.481	ms/cm
12/15/2006 00:00:00	00:00:00	7.88	mg/l
12/15/2006 00:00:00	00:00:00	148	ntu
12/15/2006 00:00:00	00:00:00	261	millivolts

12/15/2006 00:00:00	00:00:00	0.31	g/l
12/15/2006 00:00:00	00:00:00	18.20	deg c
12/15/2006 00:00:00	00:00:00	4.85	ph units
12/15/2006 00:00:00	00:00:00	0.360	ms/cm
12/15/2006 00:00:00	00:00:00	4.92	mg/l
12/15/2006 00:00:00	00:00:00	178	ntu
12/15/2006 00:00:00	00:00:00	245	millivolts
12/15/2006 00:00:00	00:00:00	0.23	g/l
12/18/2006 00:00:00	00:00:00	16.90	deg c
12/18/2006 00:00:00	00:00:00	5.33	ph units
12/18/2006 00:00:00	00:00:00	0.091	ms/cm
12/18/2006 00:00:00	00:00:00	2.30	mg/l
12/18/2006 00:00:00	00:00:00	740	ntu
12/18/2006 00:00:00	00:00:00	173	millivolts
12/18/2006 00:00:00	00:00:00	0.06	g/l
12/18/2006 00:00:00	00:00:00	16.20	deg c
12/18/2006 00:00:00	00:00:00	5.12	ph units
12/18/2006 00:00:00	00:00:00	0.115	ms/cm
12/18/2006 00:00:00	00:00:00	4.49	mg/l
12/18/2006 00:00:00	00:00:00	0	ntu
12/18/2006 00:00:00	00:00:00	214	millivolts
12/18/2006 00:00:00	00:00:00	0.07	g/l
12/18/2006 00:00:00	00:00:00	15.90	deg c
12/18/2006 00:00:00	00:00:00	4.99	ph units
12/18/2006 00:00:00	00:00:00	0.044	ms/cm
12/18/2006 00:00:00	00:00:00	2.93	mg/l
12/18/2006 00:00:00	00:00:00	0	ntu
12/18/2006 00:00:00	00:00:00	217	millivolts
12/18/2006 00:00:00	00:00:00	0.03	g/l

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
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reportable_result	value_type	remark
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#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	FB112806		WQ
TRC-CT	VP-1(15-20)		WG
TRC-CT	VP-1(15-20)MS		WG
TRC-CT	VP-1(35-40)		WG
TRC-CT	FB112906		WQ
TRC-CT	VP-1(60-65)		WG
TRC-CT	VP-1(85-90)		WG
TRC-CT	VP-1(85-90)MS		WG
TRC-CT	VP-1(105-110)		WW
TRC-CT	VP-1(105-110)MS		WW
TRC-CT	FB113006		WQ
TRC-CT	VP-2(15-20)		WW
TRC-CT	VP-2(15-20)MS		WW
TRC-CT	FB120106		WQ
TRC-CT	VP-2(35-40)		WG
TRC-CT	VP-2(60-65)		WG
TRC-CT	VP-2(60-65)MS		WG
TRC-CT	VP-2(85-90)		WG
TRC-CT	VP-2(110-115)		WG
TRC-CT	FB120406		WQ
TRC-CT	VP-3(25-30)		WG
TRC-CT	FB120506		WQ
TRC-CT	VP-3(45-50)		WG
TRC-CT	VP-30(45-50)		WG
TRC-CT	VP-3(70-75)		WG
TRC-CT	VP-3(95-100)		WG
TRC-CT	VP-3(95-100)MS		WG
TRC-CT	FB120606		WQ
TRC-CT	VP-3(115-120)		WG
TRC-CT	VP-4(30-35)		WG
TRC-CT	FB121106		WQ
TRC-CT	VP-4(50-55)		WG
TRC-CT	VP-4(75-80)		WG
TRC-CT	VP-40(75-80)		WG
TRC-CT	VP-4(100-105)		WG
TRC-CT	VP-4(121-126)		WG
TRC-CT	VP-4(121-126)MS		WG
TRC-CT	FB121506		WQ
TRC-CT	VP-10(20-25)		WG
TRC-CT	VP-10(35-40)		WG
TRC-CT	VP-10(60-65)		WG
TRC-CT	VP-100(60-65)		WG
TRC-CT	FB121806		WQ
TRC-CT	VP-10(85-90)		WG
TRC-CT	VP-10(109-114)		WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
AB	Field			11/28/2006 12:00
N	Field			11/28/2006 15:15
MS	Lab	VP-1(15-20)		11/28/2006 15:15
N	Field			11/28/2006 17:15
AB	Field			11/29/2006 9:15
N	Field			11/29/2006 11:30
N	Field			11/29/2006 13:10
MS	Lab	VP-1(85-90)		11/29/2006 13:10
N	Field			11/29/2006 16:20
MS	Lab	VP-1(105-110)		11/29/2006 16:20
AB	Field			11/30/2006 15:35
N	Field			11/30/2006 16:50
MS	Lab	VP-2(15-20)		11/30/2006 16:50
AB	Field			12/1/2006 0:00
N	Field			12/1/2006 9:20
N	Field			12/1/2006 10:30
MS	Lab	VP-2(60-65)		12/1/2006 10:30
N	Field			12/1/2006 12:10
N	Field			12/1/2006 15:15
AB	Field			12/4/2006 15:00
N	Field			12/4/2006 15:15
AB	Field			12/5/2006 8:45
N	Field			12/5/2006 12:45
FD	Field	VP-3(45-50)		12/5/2006 13:30
N	Field			12/6/2006 12:40
N	Field			12/6/2006 14:40
MS	Lab	VP-3(95-100)		12/6/2006 14:40
AB	Field			12/6/2006 15:10
N	Field			12/6/2006 16:00
N	Field			12/11/2006 9:50
AB	Field			12/11/2006 10:15
N	Field			12/11/2006 11:05
N	Field			12/11/2006 12:05
FD	Field	VP-4(75-80)		12/11/2006 12:30
N	Field			12/11/2006 14:40
N	Field			12/11/2006 16:00
MS	Lab	VP-4(121-126)		12/11/2006 16:00
AB	Field			12/15/2006 9:15
N	Field			12/15/2006 10:50
N	Field			12/15/2006 11:45
N	Field			12/18/2006 9:00
FD	Field	VP-10(60-65)		12/18/2006 9:20
AB	Field			12/18/2006 10:00
N	Field			12/18/2006 11:00
N	Field			12/18/2006 12:15

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
					11/28/2006
VP-1					11/28/2006
VP-1					11/28/2006
VP-1					11/28/2006
					11/29/2006
VP-1					11/29/2006
VP-1					11/29/2006
VP-1					11/29/2006
VP-1					11/29/2006
VP-1					11/29/2006
					11/30/2006
VP-2					11/30/2006
VP-2					11/30/2006
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VP-2					12/1/2006
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VP-2					12/1/2006
VP-2					12/1/2006
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VP-3					12/4/2006
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VP-3					12/5/2006
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VP-4					12/11/2006
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VP-10					12/15/2006
VP-10					12/15/2006
VP-10					12/18/2006
VP-10					12/18/2006
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VP-10					12/18/2006
VP-10					12/18/2006

sample_receipt_date	sampler	sampling_company_code	sampling_reason	sampling_technique
11/29/2006	JS	TRCCTW		
11/29/2006	JS	TRCCTW		
11/29/2006		TRCCTW		
11/29/2006	JS	TRCCTW		
11/29/2006	JS	TRCCTW		
11/29/2006	JS	TRCCTW		
11/29/2006	JS	TRCCTW		
11/29/2006		TRCCTW		
11/30/2006	JS	TRCCTW		
11/30/2006		TRCCTW		
12/1/2006	JS	TRCCTW		
12/1/2006	JS	TRCCTW		
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12/1/2006	JS	TRCCTW		
12/1/2006	JS	TRCCTW		
12/1/2006	JS	TRCCTW		
12/1/2006		TRCCTW		
12/1/2006	JS	TRCCTW		
12/1/2006	JS	TRCCTW		
12/5/2006	VM	TRCCTW		
12/5/2006	VM	TRCCTW		
12/5/2006	JS	TRCCTW		
12/5/2006	JS	TRCCTW		
12/5/2006	JS	TRCCTW		
12/6/2006	VM	TRCCTW		
12/7/2006	VM	TRCCTW		
12/7/2006		TRCCTW		
12/7/2006	VM	TRCCTW		
12/7/2006	VM	TRCCTW		
12/11/2006	JS	TRCCTW		
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12/12/2006	JS	TRCCTW		
12/12/2006	JS	TRCCTW		
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12/15/2006	JS	TRCCTW		
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12/15/2006	JS	TRCCTW		
12/18/2006	JS	TRCCTW		
12/18/2006	JS	TRCCTW		
12/18/2006	JS	TRCCTW		
12/18/2006	JS	TRCCTW		
12/18/2006	JS	TRCCTW		

task_code	collection_quarter	**composite_yn**	composite_desc	sample_class	custom_field_1
		N			
		N			
		N			
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		N			
		N			
		N			
		N			

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
FB121806	E314.0	12/19/2006 19:31	T
VP-10(109-114)	E314.0	12/19/2006 20:21	T
VP-10(60-65)	E314.0	12/20/2006 12:56	T
VP-10(85-90)	E314.0	12/19/2006 19:48	T
VP-100(60-65)	E314.0	12/20/2006 13:12	T
FB120606	E314.0	12/8/2006 11:56	T
VP-3(115-120)	E314.0	12/8/2006 12:13	T
VP-3(95-100)	E314.0	12/8/2006 11:40	T
FB121106	E314.0	12/12/2006 23:57	T
VP-4(30-35)	E314.0	12/12/2006 23:41	T
VP-4(50-55)	E314.0	12/13/2006 0:13	T
VP-4(75-80)	E314.0	12/13/2006 0:30	T
VP-40(75-80)	E314.0	12/13/2006 0:46	T
VP-3(70-75)	E314.0	12/7/2006 14:39	T
FB120506	E314.0	12/7/2006 11:38	T
VP-3(45-50)	E314.0	12/7/2006 11:55	T
VP-30(45-50)	E314.0	12/7/2006 12:11	T
FB120406	E314.0	12/7/2006 11:22	T
VP-3(25-30)	E314.0	12/6/2006 3:55	T
FB121506	E314.0	12/18/2006 19:48	T
VP-10(20-25)	E314.0	12/18/2006 20:05	T
VP-10(35-40)	E314.0	12/18/2006 20:21	T
VP-4(100-105)	E314.0	12/13/2006 1:03	T
VP-4(121-126)	E314.0	12/13/2006 1:19	T
FB113006	E314.0	12/5/2006 20:49	T
VP-2(15-20)	E314.0	12/5/2006 20:32	T
VP-1(105-110)	E314.0	12/6/2006 0:22	T
FB112906	E314.0	12/5/2006 23:33	T
VP-1(60-65)	E314.0	12/5/2006 23:49	T
VP-1(85-90)	E314.0	12/6/2006 0:05	T
FB112806	E314.0	12/5/2006 22:27	T
VP-1(15-20)	E314.0	12/5/2006 23:00	T
VP-1(35-40)	E314.0	12/5/2006 23:16	T
FB120106	E314.0	12/5/2006 21:05	T
VP-2(110-115)	E314.0	12/5/2006 22:11	T
VP-2(35-40)	E314.0	12/5/2006 21:21	T
VP-2(60-65)	E314.0	12/5/2006 21:38	T
VP-2(85-90)	E314.0	12/5/2006 21:54	T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
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	initial	WG	LB	NA		1
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	initial	WG	LB	NA		1
	initial	WG	LB	NA		1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
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	12/19/2006 23:59			ACTD	quant
	12/20/2006 23:59			ACTD	quant
	12/19/2006 23:59			ACTD	quant
	12/20/2006 23:59			ACTD	quant
	12/8/2006 23:59			ACTD	quant
	12/8/2006 23:59			ACTD	quant
	12/8/2006 23:59			ACTD	quant
	12/12/2006 23:59			ACTD	quant
	12/12/2006 23:59			ACTD	quant
	12/12/2006 23:59			ACTD	quant
	12/12/2006 23:59			ACTD	quant
	12/12/2006 23:59			ACTD	quant
	12/7/2006 23:59			ACTD	quant
	12/7/2006 23:59			ACTD	quant
	12/7/2006 23:59			ACTD	quant
	12/7/2006 23:59			ACTD	quant
	12/7/2006 23:59			ACTD	quant
	12/6/2006 23:59			ACTD	quant
	12/18/2006 23:59			ACTD	quant
	12/18/2006 23:59			ACTD	quant
	12/18/2006 23:59			ACTD	quant
	12/13/2006 23:59			ACTD	quant
	12/13/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
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	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant
	12/5/2006 23:59			ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
J49612-3		25	ml	JASMINEH
J49612-5		25	ml	JASMINEH
J49612-1		25	ml	JASMINEH
J49612-4		25	ml	JASMINEH
J49612-2		25	ml	JASMINEH
J48376-1		25	ml	JASMINEH
J48376-3		25	ml	JASMINEH
J48376-2		25	ml	JASMINEH
J48880-2		25	ml	JASMINEH
J48880-1		25	ml	JASMINEH
J48880-3		25	ml	JASMINEH
J48880-4		25	ml	JASMINEH
J48880-5		25	ml	JASMINEH
J48330-1		25	ml	JASMINEH
J48202-1		25	ml	JASMINEH
J48202-2		25	ml	JASMINEH
J48202-3		25	ml	JASMINEH
J48139-1		25	ml	JASMINEH
J48139-2		25	ml	JASMINEH
J49392-1		25	ml	JASMINEH
J49392-2		25	ml	JASMINEH
J49392-3		25	ml	JASMINEH
J48906-3		25	ml	JASMINEH
J48906-4		25	ml	JASMINEH
J47762-2B		25	ml	JASMINEH
J47762-3B		25	ml	JASMINEH
J47664-1A		25	ml	JASMINEH
J47589-2A		25	ml	JASMINEH
J47589-3A		25	ml	JASMINEH
J47589-4A		25	ml	JASMINEH
J47511-1A		25	ml	JASMINEH
J47511-3A		25	ml	JASMINEH
J47511-4A		25	ml	JASMINEH
J47829-2B		25	ml	JASMINEH
J47829-6B		25	ml	JASMINEH
J47829-3B		25	ml	JASMINEH
J47829-4B		25	ml	JASMINEH
J47829-5B		25	ml	JASMINEH

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate

R2-0002768

result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers
		TRG	Yes	N	U
6.7		TRG	Yes	Y	
3.4		TRG	Yes	Y	
17.4		TRG	Yes	Y	
3.4		TRG	Yes	Y	
		TRG	Yes	N	U
28.3		TRG	Yes	Y	
34		TRG	Yes	Y	
		TRG	Yes	N	U
1.3		TRG	Yes	Y	B
1.3		TRG	Yes	Y	B
3.3		TRG	Yes	Y	
3.1		TRG	Yes	Y	
7.9		TRG	Yes	Y	
		TRG	Yes	N	U
1.4		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
0.47		TRG	Yes	Y	B
2.4		TRG	Yes	Y	B
		TRG	Yes	N	U
2.3		TRG	Yes	Y	B
6.8		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
3		TRG	Yes	Y	
		TRG	Yes	N	U
2.1		TRG	Yes	Y	B
5.6		TRG	Yes	Y	
		TRG	Yes	N	U
0.68		TRG	Yes	Y	B
2.1		TRG	Yes	Y	B
		TRG	Yes	N	U
9.4		TRG	Yes	Y	
4.2		TRG	Yes	Y	
9.6		TRG	Yes	Y	
49.9		TRG	Yes	Y	

validator_qualifiers	interpreted_qualifiers	organic_yn	method_detection_limit
	U	N	0.4
		N	0.4
		N	0.4
		N	0.4
		N	0.4
	U	N	0.4
		N	0.4
		N	0.4
	U	N	0.4
	B	N	0.4
	B	N	0.4
		N	0.4
		N	0.4
		N	0.4
	U	N	0.4
	B	N	0.4
	U	N	0.4
	U	N	0.4
	U	N	0.4
	B	N	0.4
	B	N	0.4
	U	N	0.4
	B	N	0.4
		N	0.4
	U	N	0.4
	U	N	0.4
		N	0.4
	U	N	0.4
	B	N	0.4
		N	0.4
	U	N	0.4
	B	N	0.4
	B	N	0.4
	U	N	0.4
		N	0.4
		N	0.4
		N	0.4
		N	0.4

reporting_detection_limit	quantitation_limit	**result_unit**	**detection_limit_unit**	tic_retention_time
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

A_102109	E314.0	11/10/2009 0:39 T
A_102109	E314.0	11/10/2009 0:39 T
B_102109	E314.0	11/10/2009 10:58 T
B_102109	E314.0	11/10/2009 10:58 T
FB102009A	E314.0	10/28/2009 17:23 T
FB102009A	E314.0	10/28/2009 17:23 T
FB102109	E314.0	11/10/2009 11:50 T
FB102109	E314.0	11/10/2009 11:50 T
FB102209	E314.0	11/10/2009 1:31 T
FB102209	E314.0	11/10/2009 1:31 T
IW1_102109	E314.0	11/9/2009 23:29 T
IW1_102109	E314.0	11/9/2009 23:29 T
IW2_102109	E314.0	11/9/2009 21:45 T
IW2_102109	E314.0	11/9/2009 21:45 T
IWC-1_102109	E314.0	10/28/2009 17:05 T
IWC-1_102109	E314.0	10/28/2009 17:05 T
IWC-2_102109	E314.0	11/11/2009 10:38 T
IWC-2_102109	E314.0	11/11/2009 10:38 T
IWC-3_102109	E314.0	11/10/2009 13:17 T
IWC-3_102109	E314.0	11/10/2009 13:17 T
IWC-4_102109	E314.0	11/10/2009 13:00 T
IWC-4_102109	E314.0	11/10/2009 13:00 T
IWC-5_102109	E314.0	11/11/2009 10:56 T
IWC-5_102109	E314.0	11/11/2009 10:56 T
IWC-6_102109	E314.0	11/11/2009 11:13 T
IWC-6_102109	E314.0	11/11/2009 11:13 T
K_102209	E314.0	11/11/2009 22:29 T
K_102209	E314.0	11/11/2009 22:29 T
L_102209	E314.0	11/10/2009 0:56 T
L_102209	E314.0	11/10/2009 0:56 T
MWH-4_102109	E314.0	11/10/2009 12:25 T
MWH-4_102109	E314.0	11/10/2009 12:25 T
OBS-2A_102009	E314.0	11/5/2009 20:00 T
OBS-2A_102009	E314.0	11/5/2009 20:00 T
RIW2_102109	E314.0	11/11/2009 14:56 T
RIW2_102109	E314.0	11/11/2009 14:56 T
RW6D_102109	E314.0	11/11/2009 15:48 T
RW6D_102109	E314.0	11/11/2009 15:48 T
RW6S_102109	E314.0	11/11/2009 12:23 T
RW6S_102109	E314.0	11/11/2009 12:23 T
SC10D_102009	E314.0	11/5/2009 19:42 T
SC10D_102009	E314.0	11/5/2009 19:42 T
SC10S_102009	E314.0	10/28/2009 22:19 T
SC10S_102009	E314.0	10/28/2009 22:19 T
SC11S(R)_102009	E314.0	10/28/2009 18:50 T
SC11S(R)_102009	E314.0	10/28/2009 18:50 T
SC12D_102009	E314.0	10/28/2009 20:17 T
SC12D_102009	E314.0	10/28/2009 20:17 T
SC12S_102009	E314.0	10/28/2009 19:59 T
SC12S_102009	E314.0	10/28/2009 19:59 T
SC13D_102009	E314.0	11/5/2009 19:25 T
SC13D_102009	E314.0	11/5/2009 19:25 T

SC13S(R)_102009	E314.0	10/28/2009 20:34 T
SC13S(R)_102009	E314.0	10/28/2009 20:34 T
SC14S_102009	E314.0	10/28/2009 18:15 T
SC14S_102009	E314.0	10/28/2009 18:15 T
SC15S_102009	E314.0	10/28/2009 21:09 T
SC15S_102009	E314.0	10/28/2009 21:09 T
SC16S_102009	E314.0	10/28/2009 21:26 T
SC16S_102009	E314.0	10/28/2009 21:26 T
SC17D_102209	E314.0	11/11/2009 21:02 T
SC17D_102209	E314.0	11/11/2009 21:02 T
SC17S_102209	E314.0	11/11/2009 20:27 T
SC17S_102209	E314.0	11/11/2009 20:27 T
SC18D_102109	E314.0	11/9/2009 20:00 T
SC18D_102109	E314.0	11/9/2009 20:00 T
SC18S_102109	E314.0	11/11/2009 13:50 T
SC18S_102109	E314.0	11/11/2009 13:50 T
SC19D_102109	E314.0	11/9/2009 23:47 T
SC19D_102109	E314.0	11/9/2009 23:47 T
SC19S_102109	E314.0	11/9/2009 22:54 T
SC19S_102109	E314.0	11/9/2009 22:54 T
SC1D_102109	E314.0	11/9/2009 20:18 T
SC1D_102109	E314.0	11/9/2009 20:18 T
SC1S_102109	E314.0	11/9/2009 20:35 T
SC1S_102109	E314.0	11/9/2009 20:35 T
SC20D_102209	E314.0	11/12/2009 11:22 T
SC20D_102209	E314.0	11/12/2009 11:22 T
SC20S_102209	E314.0	11/11/2009 21:36 T
SC20S_102209	E314.0	11/11/2009 21:36 T
SC21D_102109	E314.0	11/10/2009 0:21 T
SC21D_102109	E314.0	11/10/2009 0:21 T
SC21S_102109	E314.0	11/10/2009 0:04 T
SC21S_102109	E314.0	11/10/2009 0:04 T
SC22S_102109	E314.0	11/10/2009 12:08 T
SC22S_102109	E314.0	11/10/2009 12:08 T
SC23S_102209	E314.0	11/10/2009 1:48 T
SC23S_102209	E314.0	11/10/2009 1:48 T
SC24D_102209	E314.0	11/12/2009 12:14 T
SC24D_102209	E314.0	11/12/2009 12:14 T
SC24S_102209	E314.0	11/13/2009 12:02 T
SC24S_102209	E314.0	11/13/2009 12:02 T
SC25S_102009	E314.0	10/28/2009 17:40 T
SC25S_102009	E314.0	10/28/2009 17:40 T
SC26D_102009	E314.0	10/28/2009 19:07 T
SC26D_102009	E314.0	10/28/2009 19:07 T
SC27S_102209	E314.0	11/11/2009 21:19 T
SC27S_102209	E314.0	11/11/2009 21:19 T
SC28D_102009	E314.0	10/28/2009 21:44 T
SC28D_102009	E314.0	10/28/2009 21:44 T
SC2D(R)_102109	E314.0	11/9/2009 23:12 T
SC2D(R)_102109	E314.0	11/9/2009 23:12 T
SC30D_102009	E314.0	10/28/2009 22:01 T
SC30D_102009	E314.0	10/28/2009 22:01 T

SC31D_102209	E314.0	11/12/2009 12:32 T
SC31D_102209	E314.0	11/12/2009 12:32 T
SC32D_102209	E314.0	11/12/2009 11:57 T
SC32D_102209	E314.0	11/12/2009 11:57 T
SC33S_102109	E314.0	11/11/2009 11:48 T
SC33S_102109	E314.0	11/11/2009 11:48 T
SC34D_102109	E314.0	11/11/2009 14:39 T
SC34D_102109	E314.0	11/11/2009 14:39 T
SC35D_102209	E314.0	11/12/2009 11:40 T
SC35D_102209	E314.0	11/12/2009 11:40 T
SC3D(R)_102109	E314.0	11/11/2009 15:31 T
SC3D(R)_102109	E314.0	11/11/2009 15:31 T
SC3S_102109	E314.0	11/9/2009 19:43 T
SC3S_102109	E314.0	11/9/2009 19:43 T
SC4S_102109	E314.0	11/11/2009 13:32 T
SC4S_102109	E314.0	11/11/2009 13:32 T
SC5D_102209	E314.0	11/13/2009 12:20 T
SC5D_102209	E314.0	11/13/2009 12:20 T
SC5S_102209	E314.0	11/11/2009 18:25 T
SC5S_102209	E314.0	11/11/2009 18:25 T
SC6D_102109	E314.0	11/11/2009 12:40 T
SC6D_102109	E314.0	11/11/2009 12:40 T
SC6S_102109	E314.0	11/11/2009 12:05 T
SC6S_102109	E314.0	11/11/2009 12:05 T
SC9S_102109	E314.0	11/11/2009 11:31 T
SC9S_102109	E314.0	11/11/2009 11:31 T
W2(R)_102009	E314.0	10/28/2009 17:58 T
W2(R)_102009	E314.0	10/28/2009 17:58 T
W3D_102009	E314.0	10/28/2009 18:32 T
W3D_102009	E314.0	10/28/2009 18:32 T
W4_102209	E314.0	11/11/2009 22:11 T
W4_102209	E314.0	11/11/2009 22:11 T

initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32151
initial	Prep	GP51409
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32151
initial	Prep	GP51409
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32151
initial	Prep	GP51409
initial	Analysis	GN32151
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51509
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32151
initial	Prep	GP51409
initial	Analysis	GN32028
initial	Prep	GP51310
initial	Analysis	GN32209
initial	Prep	GP51498
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32028
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32028
initial	Prep	GP51310

initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32209
initial	Prep	GP51509
initial	Analysis	GN32209
initial	Prep	GP51509
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32251
initial	Prep	GP51509
initial	Analysis	GN32209
initial	Prep	GP51509
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32151
initial	Prep	GP51409
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32251
initial	Prep	GP51509
initial	Analysis	GN32290
initial	Prep	GP51509
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32209
initial	Prep	GP51509
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN31654
initial	Prep	GP51310

initial	Analysis	GN32251
initial	Prep	GP51509
initial	Analysis	GN32251
initial	Prep	GP51509
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51498
initial	Analysis	GN32251
initial	Prep	GP51509
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initial	Prep	GP51498
initial	Analysis	GN32125
initial	Prep	GP51498
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32290
initial	Prep	GP51509
initial	Analysis	GN32209
initial	Prep	GP51509
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN32209
initial	Prep	GP51409
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN31654
initial	Prep	GP51310
initial	Analysis	GN32209
initial	Prep	GP51509

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#sys_loc_(	measurement_date	historical_	water_leve	water_leve	corrected_	corrected_	measured_	depth_unit
A	10/19/2009 16:00	94.82	5.47	89.35				ft btoc
B	10/19/2009 16:00	94.33	4.75	89.58				ft btoc
IW1	10/19/2009 16:00	90.33	5.23	85.1				ft btoc
IW2	10/19/2009 16:00	91.05	7.91	83.14				ft btoc
IWC-1	10/19/2009 16:00	98.13	7.7	90.43				ft btoc
IWC-2	10/19/2009 16:00	98.51	8.11	90.4				ft btoc
IWC-3	10/19/2009 16:00	97.83	7.41	90.42				ft btoc
IWC-4	10/19/2009 16:00	98.61	8.18	90.43				ft btoc
IWC-5	10/19/2009 16:00	98.03	7.64	90.39				ft btoc
K	10/19/2009 16:00	99.18	9.69	89.49				ft btoc
L	10/19/2009 16:00	103.51	11.87	91.64				ft btoc
MWH-4	10/19/2009 16:00	99.44	9.06	90.38				ft btoc
SC10D	10/19/2009 16:00	95.72	7.39	88.33				ft btoc
SC10S	10/19/2009 16:00	95.38	7.08	88.3				ft btoc
SC11S(R)	10/19/2009 16:00	108.12	15.67	92.45				ft btoc
SC12D	10/19/2009 16:00	103.19	11.59	91.6				ft btoc
SC12S	10/19/2009 16:00	104.76	12.63	92.13				ft btoc
SC13D	10/19/2009 16:00	101.99	10.66	91.33				ft btoc
SC13S(R)	10/19/2009 16:00	101.41	8.69	92.72				ft btoc
SC14S	10/19/2009 16:00	108.38	16.07	92.31				ft btoc
SC15S	10/19/2009 16:00	108.32	14.83	93.49				ft btoc
SC16S	10/19/2009 16:00	108.05	18.05	90				ft btoc
SC17D	10/19/2009 16:00	108.07	19.05	89.02				ft btoc
SC17S	10/19/2009 16:00	109.26	20.19	89.07				ft btoc
SC18D	10/19/2009 16:00	96.01	9.56	86.45				ft btoc
SC18S	10/19/2009 16:00	95.72	9.26	86.46				ft btoc
SC19D	10/19/2009 16:00	92.03	5.31	86.72				ft btoc
SC19S	10/19/2009 16:00	92.98	5.99	86.99				ft btoc
SC1D	10/19/2009 16:00	90.9	8.27	82.63				ft btoc
SC1S	10/19/2009 16:00	87.26	3.73	83.53				ft btoc
SC20D	10/19/2009 16:00	104.53	13.76	90.77				ft btoc
SC21D	10/19/2009 16:00	91.65	5.81	85.84				ft btoc
SC21S	10/19/2009 16:00	92.64	6.41	86.23				ft btoc
SC22S	10/19/2009 16:00	99.65	8.83	90.82				ft btoc
SC23S	10/19/2009 16:00	102.21	11.46	90.75				ft btoc
SC24D	10/19/2009 16:00	93.52	10.23	83.29				ft btoc
SC24S	10/19/2009 16:00	93.57	9.9	83.67				ft btoc
SC25S	10/19/2009 16:00	102.27	9.76	92.51				ft btoc
SC26D	10/19/2009 16:00	100.45	10.55	89.9				ft btoc
SC27S	10/19/2009 16:00	100.54	9.11	91.43				ft btoc
SC28D	10/19/2009 16:00	106.87	18.96	87.91				ft btoc
SC2D(R)	10/19/2009 16:00	92.7	7.84	84.86				ft btoc
SC30D	10/19/2009 16:00	115.58	27.36	88.22				ft btoc
SC31D	10/19/2009 16:00	102.61	19.05	83.56				ft btoc
SC32D	10/19/2009 16:00	90	11.06	78.94				ft btoc
SC3D(R)	10/19/2009 16:00	91.06	7.11	83.95				ft btoc
SC3S	10/19/2009 16:00	90.32	6.32	84				ft btoc
SC4S	10/19/2009 16:00	93.65	6.77	86.88				ft btoc
SC5D	10/19/2009 16:00	97	12.39	84.61				ft btoc
SC5S	10/19/2009 16:00	96.55	11.85	84.7				ft btoc
SC6D	10/19/2009 16:00	94.38	6.55	87.83				ft btoc

SC6S	10/19/2009 16:00	94.62	5.55	89.07	ft btoc
SC9S	10/19/2009 16:00	96.23	6.56	89.67	ft btoc
W2(R)	10/19/2009 16:00	97.96	5.44	92.52	ft btoc
W3D	10/19/2009 16:00	108.37	15.94	92.43	ft btoc
W4	10/19/2009 16:00	104.58	14.03	90.55	ft btoc
SC1D	11/18/2009 14:35	90.9	7.18	83.72	ft btoc
SC10S	11/18/2009 15:35	95.38	6.44	88.94	ft btoc
SC10D	11/18/2009 16:20	95.72	6.82	88.9	ft btoc
SC1S	11/18/2009 17:00	87.26	2.17	85.09	ft btoc
SC3S	11/19/2009 8:25	90.32	4.76	85.56	ft btoc
SC3D(R)	11/19/2009 8:45	91.06	5.53	85.53	ft btoc
SC25S	11/19/2009 9:35	102.27	8.04	94.23	ft btoc
IW1	11/19/2009 10:35	90.33	3.76	86.57	ft btoc
SC2D(R)	11/19/2009 11:10	92.7	6.36	86.34	ft btoc
IW2	11/19/2009 11:25	91.05	6.43	84.62	ft btoc
SC5S	11/19/2009 11:40	96.55	10.31	86.24	ft btoc
SC5D	11/19/2009 11:45	97	10.89	86.11	ft btoc
SC24S	11/19/2009 12:05	93.57	8.1	85.47	ft btoc
SC24D	11/19/2009 12:25	93.52	8.56	84.96	ft btoc
SC26D	11/19/2009 13:55	100.45	8.96	91.49	ft btoc
SC33D	11/19/2009 15:20	108.08	19.32	88.76	ft btoc
SC34D	11/19/2009 17:30	103.82	16.84	86.98	ft btoc
SC35D	12/7/2009 11:58	81.24	14.77	66.47	ft btoc
SC36D	12/7/2009 13:45	91.8	7.95	83.85	ft btoc
SC26D	12/7/2009 16:05	100.45	9.71	90.74	ft btoc
SC10D	12/7/2009 17:09	95.72	6.83	88.89	ft btoc
SC10S	12/7/2009 17:20	95.38	6.56	88.82	ft btoc
SC25S	12/8/2009 9:06	102.27	8.46	93.81	ft btoc
B	12/8/2009 10:00	94.33	4.19	90.14	ft btoc
A	12/8/2009 10:10	94.82	6.82	88	ft btoc
SC6D	12/8/2009 10:40	94.38	9.81	84.57	ft btoc
SC1D	12/8/2009 11:06	90.9	7.27	83.63	ft btoc
SC1S	12/8/2009 11:22	87.26	2.82	84.44	ft btoc
SC3S	12/8/2009 11:51	90.32	5.55	84.77	ft btoc
SC3D(R)	12/8/2009 11:47	91.06	6.31	84.75	ft btoc
SC2D(R)	12/8/2009 12:53	92.7	7.21	85.49	ft btoc
IW2	12/8/2009 13:10	91.05	7.24	83.81	ft btoc
IW1	12/8/2009 12:41	90.33	4.6	85.73	ft btoc
SC5S	12/8/2009 13:53	96.55	11.1	85.45	ft btoc
SC5D	12/8/2009 14:09	97	11.63	85.37	ft btoc
SC24S	12/8/2009 14:53	93.57	8.7	84.87	ft btoc
SC24D	12/8/2009 14:41	93.52	9.35	84.17	ft btoc
A	1/19/2010 14:56	94.82	4.92	89.9	ft btoc
IWC-3	1/19/2010 14:36	97.83	4.82	93.01	ft btoc
IWC-4	1/19/2010 14:44	98.61	5.58	93.03	ft btoc
IWC-5	1/19/2010 14:34	98.03	5.13	92.9	ft btoc
W3D	1/19/2010 13:40	108.37	12.78	95.59	ft btoc
W4	1/19/2010 15:31	104.58	12.37	92.21	ft btoc
MWH-4	1/19/2010 14:06	99.37	7	92.37	ft btoc
SC12D	1/19/2010 13:41	103.19	8.4	94.79	ft btoc
SC13D	1/19/2010 13:59	101.99	7.57	94.42	ft btoc
SC20D	1/19/2010 15:26	104.53	11.05	93.48	ft btoc

SC22D	1/19/2010 14:03	98.65	5.67	92.98	ft btoc
SC1D	1/19/2010 16:10	90.9	6.11	84.79	ft btoc
SC2D(R)	1/19/2010 16:22	92.53	6.29	86.24	ft btoc
SC3D(R)	1/19/2010 16:14	91.06	5.29	85.77	ft btoc
SC5D	1/19/2010 16:32	97	10.68	86.32	ft btoc
SC6D	1/19/2010 15:55	94.38	4.75	89.63	ft btoc
SC10D	1/19/2010 15:50	95.72	5.64	90.08	ft btoc
SC17D	1/19/2010 16:00	108.07	17.06	91.01	ft btoc
SC18D	1/19/2010 16:02	96.01	7.71	88.3	ft btoc
SC19D	1/19/2010 17:00	92.03	3.62	88.41	ft btoc
SC21D	1/19/2010 16:53	91.65	4.15	87.5	ft btoc
SC24D	1/19/2010 16:38	93.52	8.12	85.4	ft btoc
SC26D	1/19/2010 15:40	100.45	7.91	92.54	ft btoc
IW2	1/19/2010 16:20	92.05	6.37	85.68	ft btoc
SC28D	1/19/2010 15:45	106.87	16.77	90.1	ft btoc
SC30D	1/19/2010 15:42	115.58	24.2	91.38	ft btoc
SC31D	1/19/2010 16:35	102.61	16.93	85.68	ft btoc
SC32D	1/19/2010 16:45	91.62	8.35	83.27	ft btoc
SC33D	1/19/2010 0:00	108.08	17.78	90.3	ft btoc
SC34D	1/19/2010 0:00	103.82	16.14	87.68	ft btoc
SC35D	1/19/2010 0:00	81.24	13.34	67.9	ft btoc
SC36D	1/19/2010 0:00	91.8	7.01	84.79	ft btoc
B	1/19/2010 14:53	94.33	2.77	91.56	ft btoc
K	1/19/2010 15:30	99.18	7.57	91.61	ft btoc
L	1/19/2010 15:16	103.51	9.12	94.39	ft btoc
IWC-2	1/19/2010 14:43	98.51	5.51	93	ft btoc
W2(R)	1/19/2010 13:09	97.96	3.12	94.84	ft btoc
SC9S	1/19/2010 14:59	96.23	4.62	91.61	ft btoc
SC11S(R)	1/19/2010 13:40	108.12	12.34	95.78	ft btoc
SC12S	1/19/2010 13:42	104.76	9.38	95.38	ft btoc
SC13S(R)	1/19/2010 13:58	101.1	5.57	95.53	ft btoc
SC14S	1/19/2010 13:35	108.38	12.82	95.56	ft btoc
SC15S	1/19/2010 15:15	108.32	11.98	96.34	ft btoc
SC16S	1/19/2010 15:35	108.05	15.34	92.71	ft btoc
SC20S	1/19/2010 15:25	104.45	10.62	93.83	ft btoc
SC22S	1/19/2010 14:04	99.65	6.31	93.34	ft btoc
SC23S	1/19/2010 15:21	102.21	5.63	96.58	ft btoc
SC25S	1/19/2010 13:00	102.27	6.34	95.93	ft btoc
SC27S	1/19/2010 15:30	100.54	6.17	94.37	ft btoc
SC1S	1/19/2010 16:12	87.26	1.76	85.5	ft btoc
SC3S	1/19/2010 16:15	90.32	4.71	85.61	ft btoc
SC4S	1/19/2010 16:00	93.65	5.19	88.46	ft btoc
SC5S	1/19/2010 16:33	96.55	10.05	86.5	ft btoc
SC6S	1/19/2010 15:57	94.62	3.98	90.64	ft btoc
SC10S	1/19/2010 15:51	95.38	5.48	89.9	ft btoc
SC17S	1/19/2010 15:55	109.26	17.96	91.3	ft btoc
SC18S	1/19/2010 16:03	95.72	7.39	88.33	ft btoc
SC19S	1/19/2010 17:02	92.98	5.12	87.86	ft btoc
SC21S	1/19/2010 16:54	92.64	4.78	87.86	ft btoc
SC24S	1/19/2010 16:37	93.57	7.67	85.9	ft btoc
IW1	1/19/2010 16:24	90.33	4.84	85.49	ft btoc
SC26D	9/8/2010 9:24	100.45	10.82	89.63	ft btoc

SC28D	9/8/2010 11:06	103.82	19.47	84.35	ft btoc
SC34D	9/8/2010 13:36	103.82	19.11	84.71	ft btoc
SC33D	9/8/2010 12:59	108.08	21.21	86.87	ft btoc
SC36D	9/8/2010 15:09	91.8	9.39	82.41	ft btoc
SC35D	9/8/2010 14:38	81.24	17.08	64.16	ft btoc
SC30D	9/8/2010 16:27	115.58	27.45	88.13	ft btoc
W2(R)	9/8/2010 17:31	97.96	6.02	91.94	ft btoc
SC22S	9/9/2010 9:08	99.65	9.32	90.33	ft btoc
IWC-4	9/9/2010 9:39	98.61	8.62	89.99	ft btoc
SC20D	9/9/2010 10:05	104.53	14.28	90.25	ft btoc
SC14S	9/9/2010 8:57	108.38	16.44	91.94	ft btoc
W3D	9/9/2010 9:12	108.37	16.24	92.13	ft btoc
SC11S(R)	9/9/2010 9:33	108.12	15.81	92.31	ft btoc
SC12D	9/9/2010 9:40	103.19	11.81	91.38	ft btoc
SC16S	9/9/2010 10:40	108.05	18.69	89.36	ft btoc
W4	9/9/2010 11:02	104.58	15.55	89.03	ft btoc
K	9/9/2010 11:20	99.18	10.54	88.64	ft btoc
SC10S	9/8/2010 9:00	95.38	7.88	87.5	ft btoc
SC10D	9/8/2010 9:12	95.72	8.24	87.48	ft btoc
SC6S	9/8/2010 9:55	94.62	8.29	86.33	ft btoc
SC18S	9/8/2010 10:05	95.72	9.98	85.74	ft btoc
SC1D	9/8/2010 10:26	90.9	9.02	81.88	ft btoc
SC1S	9/8/2010 10:48	87.26	4.46	82.8	ft btoc
SC3S	9/8/2010 11:09	90.32	6.97	83.35	ft btoc
SC3D(R)	9/8/2010 11:19	91.06	7.73	83.33	ft btoc
SC2D(R)	9/8/2010 14:34	92.53	8.44	84.09	ft btoc
SC21S	9/8/2010 11:58	92.64	7.12	85.52	ft btoc
SC21D	9/8/2010 12:28	91.65	6.41	85.24	ft btoc
SC24S	9/8/2010 13:15	93.57	10.74	82.83	ft btoc
SC17S	9/8/2010 15:41	109.26	20.92	88.34	ft btoc
SC17D	9/8/2010 15:52	108.07	19.92	88.15	ft btoc
SC32D	9/8/2010 14:15	91.62	11.79	79.83	ft btoc
SC25S	9/8/2010 17:29	102.27	9.57	92.7	ft btoc

technician	dry_indica	measurem	batch_num	dip_or_ele	remark	Lnapl_cas	Lnapl_dep	Dnapl_cas	Dnapl_dep

Task_code

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	A	A_102109	TEMP		
TRC-CT	A	A_102109	SC		
TRC-CT	A	A_102109	pH		
TRC-CT	A	A_102109	TURB		
TRC-CT	IWC-5	IWC-5_102109	TEMP		
TRC-CT	IWC-5	IWC-5_102109	SC		
TRC-CT	IWC-5	IWC-5_102109	pH		
TRC-CT	IWC-5	IWC-5_102109	TURB		
TRC-CT	W3D	W3D_102009	TEMP		
TRC-CT	W3D	W3D_102009	SC		
TRC-CT	W3D	W3D_102009	pH		
TRC-CT	W3D	W3D_102009	TURB		
TRC-CT	W4	W4_102209	TEMP		
TRC-CT	W4	W4_102209	SC		
TRC-CT	W4	W4_102209	pH		
TRC-CT	W4	W4_102209	TURB		
TRC-CT	MWH-4	MWH-4_102109	TEMP		
TRC-CT	MWH-4	MWH-4_102109	SC		
TRC-CT	MWH-4	MWH-4_102109	pH		
TRC-CT	MWH-4	MWH-4_102109	TURB		
TRC-CT	SC12D	SC12D_102009	TEMP		
TRC-CT	SC12D	SC12D_102009	SC		
TRC-CT	SC12D	SC12D_102009	pH		
TRC-CT	SC12D	SC12D_102009	TURB		
TRC-CT	SC13D	SC13D_102009	TEMP		
TRC-CT	SC13D	SC13D_102009	SC		
TRC-CT	SC13D	SC13D_102009	pH		
TRC-CT	SC13D	SC13D_102009	TURB		
TRC-CT	SC1D	SC1D_102109	TEMP		
TRC-CT	SC1D	SC1D_102109	SC		
TRC-CT	SC1D	SC1D_102109	pH		
TRC-CT	SC1D	SC1D_102109	TURB		
TRC-CT	SC2D(R)	SC2D(R)_102109	TEMP		
TRC-CT	SC2D(R)	SC2D(R)_102109	SC		
TRC-CT	SC2D(R)	SC2D(R)_102109	pH		
TRC-CT	SC2D(R)	SC2D(R)_102109	TURB		
TRC-CT	SC3D(R)	SC3D(R)_102109	TEMP		
TRC-CT	SC3D(R)	SC3D(R)_102109	SC		
TRC-CT	SC3D(R)	SC3D(R)_102109	pH		
TRC-CT	SC3D(R)	SC3D(R)_102109	TURB		
TRC-CT	SC5D	SC5D_102209	TEMP		
TRC-CT	SC5D	SC5D_102209	SC		
TRC-CT	SC5D	SC5D_102209	pH		
TRC-CT	SC5D	SC5D_102209	TURB		
TRC-CT	SC6D	SC6D_102109	TEMP		
TRC-CT	SC6D	SC6D_102109	SC		
TRC-CT	SC6D	SC6D_102109	pH		
TRC-CT	SC6D	SC6D_102109	TURB		

TRC-CT	SC10D	SC10D_102009	TEMP
TRC-CT	SC10D	SC10D_102009	SC
TRC-CT	SC10D	SC10D_102009	pH
TRC-CT	SC10D	SC10D_102009	TURB
TRC-CT	SC19D	SC19D_102109	TEMP
TRC-CT	SC19D	SC19D_102109	SC
TRC-CT	SC19D	SC19D_102109	pH
TRC-CT	SC19D	SC19D_102109	TURB
TRC-CT	SC21D	SC21D_102109	TEMP
TRC-CT	SC21D	SC21D_102109	SC
TRC-CT	SC21D	SC21D_102109	pH
TRC-CT	SC21D	SC21D_102109	TURB
TRC-CT	SC24D	SC24D_102209	TEMP
TRC-CT	SC24D	SC24D_102209	SC
TRC-CT	SC24D	SC24D_102209	pH
TRC-CT	SC24D	SC24D_102209	TURB
TRC-CT	SC26D	SC26D_102009	TEMP
TRC-CT	SC26D	SC26D_102009	SC
TRC-CT	SC26D	SC26D_102009	pH
TRC-CT	SC26D	SC26D_102009	TURB
TRC-CT	IW2	IW2_102109	TEMP
TRC-CT	IW2	IW2_102109	SC
TRC-CT	IW2	IW2_102109	pH
TRC-CT	IW2	IW2_102109	TURB
TRC-CT	SC28D	SC28D_102009	TEMP
TRC-CT	SC28D	SC28D_102009	SC
TRC-CT	SC28D	SC28D_102009	TURB
TRC-CT	SC30D	SC30D_102009	TEMP
TRC-CT	SC30D	SC30D_102009	SC
TRC-CT	SC30D	SC30D_102009	TURB
TRC-CT	SC31D	SC31D_102209	TEMP
TRC-CT	SC31D	SC31D_102209	SC
TRC-CT	SC31D	SC31D_102209	pH
TRC-CT	SC31D	SC31D_102209	TURB
TRC-CT	SC32D	SC32D_102209	TEMP
TRC-CT	SC32D	SC32D_102209	SC
TRC-CT	SC32D	SC32D_102209	pH
TRC-CT	SC32D	SC32D_102209	TURB
TRC-CT	OBS-2A	OBS-2A_102009	TEMP
TRC-CT	OBS-2A	OBS-2A_102009	SC
TRC-CT	OBS-2A	OBS-2A_102009	pH
TRC-CT	OBS-2A	OBS-2A_102009	TURB
TRC-CT	B	B_102109	TEMP
TRC-CT	B	B_102109	SC
TRC-CT	B	B_102109	pH
TRC-CT	B	B_102109	TURB
TRC-CT	K	K_102009	TEMP
TRC-CT	K	K_102009	SC
TRC-CT	K	K_102009	pH

TRC-CT	K	K_102009	TURB
TRC-CT	L	L_102209	TEMP
TRC-CT	L	L_102209	SC
TRC-CT	L	L_102209	pH
TRC-CT	L	L_102209	TURB
TRC-CT	IWC-1	IWC-1_102109	TEMP
TRC-CT	IWC-1	IWC-1_102109	SC
TRC-CT	IWC-1	IWC-1_102109	pH
TRC-CT	IWC-1	IWC-1_102109	TURB
TRC-CT	IWC-3	IWC-3_102109	TEMP
TRC-CT	IWC-3	IWC-3_102109	SC
TRC-CT	IWC-3	IWC-3_102109	pH
TRC-CT	IWC-3	IWC-3_102109	TURB
TRC-CT	IWC-4	IWC-4_102109	TEMP
TRC-CT	IWC-4	IWC-4_102109	SC
TRC-CT	IWC-4	IWC-4_102109	pH
TRC-CT	IWC-4	IWC-4_102109	TURB
TRC-CT	IWC-2	IWC-2_102109	TEMP
TRC-CT	IWC-2	IWC-2_102109	SC
TRC-CT	IWC-2	IWC-2_102109	pH
TRC-CT	IWC-2	IWC-2_102109	TURB
TRC-CT	W2(R)	W2(R)_102009	TEMP
TRC-CT	W2(R)	W2(R)_102009	SC
TRC-CT	W2(R)	W2(R)_102009	pH
TRC-CT	W2(R)	W2(R)_102009	TURB
TRC-CT	SC9S	SC9S_102109	TEMP
TRC-CT	SC9S	SC9S_102109	SC
TRC-CT	SC9S	SC9S_102109	pH
TRC-CT	SC9S	SC9S_102109	TURB
TRC-CT	SC11S(R)	SC11S(R)_102009	TEMP
TRC-CT	SC11S(R)	SC11S(R)_102009	SC
TRC-CT	SC11S(R)	SC11S(R)_102009	pH
TRC-CT	SC11S(R)	SC11S(R)_102009	TURB
TRC-CT	SC12S	SC12S_102009	TEMP
TRC-CT	SC12S	SC12S_102009	SC
TRC-CT	SC12S	SC12S_102009	pH
TRC-CT	SC13S(R)	SC13S(R)_102009	TEMP
TRC-CT	SC13S(R)	SC13S(R)_102009	SC
TRC-CT	SC13S(R)	SC13S(R)_102009	pH
TRC-CT	SC13S(R)	SC13S(R)_102009	TURB
TRC-CT	SC14S	SC14S_102009	TEMP
TRC-CT	SC14S	SC14S_102009	SC
TRC-CT	SC14S	SC14S_102009	pH
TRC-CT	SC14S	SC14S_102009	TURB
TRC-CT	SC15S	SC15S_102009	TEMP
TRC-CT	SC15S	SC15S_102009	SC
TRC-CT	SC15S	SC15S_102009	pH
TRC-CT	SC15S	SC15S_102009	TURB
TRC-CT	SC16S	SC16S_102009	TEMP

TRC-CT	SC16S	SC16S_102009	SC
TRC-CT	SC16S	SC16S_102009	pH
TRC-CT	SC16S	SC16S_102009	TURB
TRC-CT	SC18S	SC18S_102109	TEMP
TRC-CT	SC18S	SC18S_102109	SC
TRC-CT	SC18S	SC18S_102109	pH
TRC-CT	SC18S	SC18S_102109	TURB
TRC-CT	SC18D	SC18D_102109	TEMP
TRC-CT	SC18D	SC18D_102109	SC
TRC-CT	SC18D	SC18D_102109	pH
TRC-CT	SC18D	SC18D_102109	TURB
TRC-CT	SC20S	SC20S_102209	TEMP
TRC-CT	SC20S	SC20S_102209	SC
TRC-CT	SC20S	SC20S_102209	pH
TRC-CT	SC20S	SC20S_102209	TURB
TRC-CT	SC22S	SC22S_102109	TEMP
TRC-CT	SC22S	SC22S_102109	SC
TRC-CT	SC22S	SC22S_102109	pH
TRC-CT	SC22S	SC22S_102109	TURB
TRC-CT	SC23S	SC23S_102209	TEMP
TRC-CT	SC23S	SC23S_102209	SC
TRC-CT	SC23S	SC23S_102209	pH
TRC-CT	SC23S	SC23S_102209	TURB
TRC-CT	SC25S	SC25S_102009	TEMP
TRC-CT	SC25S	SC25S_102009	SC
TRC-CT	SC25S	SC25S_102009	pH
TRC-CT	SC25S	SC25S_102009	TURB
TRC-CT	SC27S	SC27S_102209	TEMP
TRC-CT	SC27S	SC27S_102209	SC
TRC-CT	SC27S	SC27S_102209	pH
TRC-CT	SC27S	SC27S_102209	TURB
TRC-CT	SC1S	SC1S_102109	TEMP
TRC-CT	SC1S	SC1S_102109	SC
TRC-CT	SC1S	SC1S_102109	pH
TRC-CT	SC1S	SC1S_102109	TURB
TRC-CT	SC3S	SC3S_102109	TEMP
TRC-CT	SC3S	SC3S_102109	SC
TRC-CT	SC3S	SC3S_102109	pH
TRC-CT	SC3S	SC3S_102109	TURB
TRC-CT	SC4S	SC4S_102109	TEMP
TRC-CT	SC4S	SC4S_102109	SC
TRC-CT	SC4S	SC4S_102109	pH
TRC-CT	SC4S	SC4S_102109	TURB
TRC-CT	SC5S	SC5S_102209	TEMP
TRC-CT	SC5S	SC5S_102209	SC
TRC-CT	SC5S	SC5S_102209	pH
TRC-CT	SC5S	SC5S_102209	TURB
TRC-CT	SC6S	SC6S_102109	TEMP
TRC-CT	SC6S	SC6S_102109	SC

TRC-CT	SC6S	SC6S_102109	pH
TRC-CT	SC6S	SC6S_102109	TURB
TRC-CT	SC10S	SC10S_102009	TEMP
TRC-CT	SC10S	SC10S_102009	SC
TRC-CT	SC10S	SC10S_102009	pH
TRC-CT	SC10S	SC10S_102009	TURB
TRC-CT	SC17S	SC17S_102209	TEMP
TRC-CT	SC17S	SC17S_102209	SC
TRC-CT	SC17S	SC17S_102209	pH
TRC-CT	SC17S	SC17S_102209	TURB
TRC-CT	SC17D	SC17D_102209	TEMP
TRC-CT	SC17D	SC17D_102209	SC
TRC-CT	SC17D	SC17D_102209	pH
TRC-CT	SC17D	SC17D_102209	TURB
TRC-CT	SC19S	SC19S_102109	TEMP
TRC-CT	SC19S	SC19S_102109	SC
TRC-CT	SC19S	SC19S_102109	pH
TRC-CT	SC19S	SC19S_102109	TURB
TRC-CT	SC21S	SC21S_102109	TEMP
TRC-CT	SC21S	SC21S_102109	SC
TRC-CT	SC21S	SC21S_102109	pH
TRC-CT	SC21S	SC21S_102109	TURB
TRC-CT	SC24S	SC24S_102209	TEMP
TRC-CT	SC24S	SC24S_102209	SC
TRC-CT	SC24S	SC24S_102209	pH
TRC-CT	SC24S	SC24S_102209	TURB
TRC-CT	IW1	IW1_102109	TEMP
TRC-CT	IW1	IW1_102109	SC
TRC-CT	IW1	IW1_102109	pH
TRC-CT	IW1	IW1_102109	TURB
TRC-CT	RIW2	RIW2_102109	TEMP
TRC-CT	RIW2	RIW2_102109	SC
TRC-CT	RIW2	RIW2_102109	pH
TRC-CT	RIW2	RIW2_102109	TURB
TRC-CT	RW6S	RW6S_102109	TEMP
TRC-CT	RW6S	RW6S_102109	SC
TRC-CT	RW6S	RW6S_102109	pH
TRC-CT	RW6S	RW6S_102109	TURB
TRC-CT	RW6D	RW6D_102109	TEMP
TRC-CT	RW6D	RW6D_102109	SC
TRC-CT	RW6D	RW6D_102109	pH
TRC-CT	RW6D	RW6D_102109	TURB

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	10/21/2009 16:45:00	16:45:00	18.2	deg c		
	10/21/2009 16:45:00	16:45:00	168.4	ms/cm		
	10/21/2009 16:45:00	16:45:00	8.47	ph units		
	10/21/2009 16:45:00	16:45:00	48.5	ntu		
	10/21/2009 12:58:00	12:58:00	21.1	deg c		
	10/21/2009 12:58:00	12:58:00	456.0	ms/cm		
	10/21/2009 12:58:00	12:58:00	9.37	ph units		
	10/21/2009 12:58:00	12:58:00	108.6	ntu		
	10/20/2009 12:43:00	12:43:00	18.0	deg c		
	10/20/2009 12:43:00	12:43:00	1062	ms/cm		
	10/20/2009 12:43:00	12:43:00	4.94	ph units		
	10/20/2009 12:43:00	12:43:00	0.28	ntu		
	10/22/2009 11:17:00	11:17:00	17.3	deg c		
	10/22/2009 11:17:00	11:17:00	138.8	ms/cm		
	10/22/2009 11:17:00	11:17:00	5.00	ph units		
	10/22/2009 11:17:00	11:17:00	0.07	ntu		
	10/21/2009 10:25:00	10:25:00	16.7	deg c		
	10/21/2009 10:25:00	10:25:00	338.5	ms/cm		
	10/21/2009 10:25:00	10:25:00	7.46	ph units		
	10/21/2009 10:25:00	10:25:00	20.0	ntu		
	10/20/2009 16:02:00	16:02:00	17.8	deg c		
	10/20/2009 16:02:00	16:02:00	413	ms/cm		
	10/20/2009 16:02:00	16:02:00	5.00	ph units		
	10/20/2009 16:02:00	16:02:00	0.0	ntu		
	10/20/2009 17:54:00	17:54:00	15.1	deg c		
	10/20/2009 17:54:00	10:27:51	50.9	ms/cm		
	10/20/2009 17:54:00	10:27:51	4.79	ph units		
	10/20/2009 17:54:00	10:27:51	0.0	ntu		
	10/21/2009 11:09:00	11:09:00	16.4	deg c		
	10/21/2009 11:09:00	11:09:00	406.6	ms/cm		
	10/21/2009 11:09:00	11:09:00	5.20	ph units		
	10/21/2009 11:09:00	11:09:00	0.0	ntu		
	10/21/2009 14:50:00	14:50:00	17.1	deg c		
	10/21/2009 14:50:00	14:50:00	249.4	ms/cm		
	10/21/2009 14:50:00	14:50:00	5.64	ph units		
	10/21/2009 14:50:00	14:50:00	4.10	ntu		
	10/21/2009 12:19:00	12:19:00	16.3	deg c		
	10/21/2009 12:19:00	12:19:00	540	ms/cm		
	10/21/2009 12:19:00	12:19:00	4.48	ph units		
	10/21/2009 12:19:00	12:19:00	0.0	ntu		
	10/22/2009 08:48:00	08:48:00	13.6	deg c		
	10/22/2009 08:48:00	08:48:00	149.1	ms/cm		
	10/22/2009 08:48:00	08:48:00	5.43	ph units		
	10/22/2009 08:48:00	08:48:00	0.40	ntu		
	10/21/2009 09:07:00	09:07:00	13.4	deg c		
	10/21/2009 09:07:00	09:07:00	808	ms/cm		
	10/21/2009 09:07:00	09:07:00	7.42	ph units		
	10/21/2009 09:07:00	09:07:00	3.90	ntu		

10/20/2009 18:06:00	18:06:00	13.82	deg c
10/20/2009 18:06:00	18:06:00	1.488	ms/cm
10/20/2009 18:06:00	18:06:00	9.49	ph units
10/20/2009 18:06:00	18:06:00	8.0	ntu
10/21/2009 16:54:00	16:54:00	15.8	deg c
10/21/2009 16:54:00	16:54:00	209.3	ms/cm
10/21/2009 16:54:00	16:54:00	4.39	ph units
10/21/2009 16:54:00	16:54:00	0.43	ntu
10/21/2009 18:18:00	18:18:00	15.2	deg c
10/21/2009 18:18:00	18:18:00	160.8	ms/cm
10/21/2009 18:18:00	18:18:00	4.55	ph units
10/21/2009 18:18:00	18:18:00	0.0	ntu
10/22/2009 10:25:00	10:25:00	17.2	deg c
10/22/2009 10:25:00	10:25:00	0.2	ms/cm
10/22/2009 10:25:00	10:25:00	4.97	ph units
10/22/2009 10:25:00	10:25:00	0.20	ntu
10/20/2009 12:51:00	12:51:00	16.4	deg c
10/20/2009 12:51:00	12:51:00	545	ms/cm
10/20/2009 12:51:00	12:51:00	6.31	ph units
10/20/2009 12:51:00	12:51:00	10.64	ntu
10/21/2009 14:05:00	14:05:00	17.9	deg c
10/21/2009 14:05:00	14:05:00	292.4	ms/cm
10/21/2009 14:05:00	14:05:00	5.89	ph units
10/21/2009 14:05:00	14:05:00	0.10	ntu
10/20/2009 15:35:00	15:35:00	16.7	deg c
10/20/2009 15:35:00	15:35:00	972	ms/cm
10/20/2009 15:35:00	15:35:00	1.09	ntu
10/20/2009 16:50:00	16:50:00	16.4	deg c
10/20/2009 16:50:00	16:50:00	80.6	ms/cm
10/20/2009 16:50:00	16:50:00	4.16	ntu
10/22/2009 09:35:00	09:35:00	15.6	deg c
10/22/2009 09:35:00	09:35:00	172.8	ms/cm
10/22/2009 09:35:00	09:35:00	5.07	ph units
10/22/2009 09:35:00	09:35:00	0.20	ntu
10/22/2009 10:44:00	10:44:00	15.8	deg c
10/22/2009 10:44:00	10:44:00	0.1	ms/cm
10/22/2009 10:44:00	10:44:00	4.45	ph units
10/22/2009 10:44:00	10:44:00	0.25	ntu
10/20/2009 10:37:00	10:37:00	15.5	deg c
10/20/2009 10:37:00	10:37:00	77.0	ms/cm
10/20/2009 10:37:00	10:37:00	6.31	ph units
10/20/2009 10:37:00	10:37:00	72.5	ntu
10/21/2009 14:39:00	14:39:00	18.50	deg c
10/21/2009 14:39:00	14:39:00	750	ms/cm
10/21/2009 14:39:00	14:39:00	7.32	ph units
10/21/2009 14:39:00	14:39:00	82.8	ntu
10/20/2009 11:32:00	11:32:00	16.9	deg c
10/20/2009 11:32:00	11:32:00	516	ms/cm
10/20/2009 11:32:00	11:32:00	5.86	ph units

10/20/2009 11:32:00	11:32:00	8.61	ntu
10/22/2009 08:08:00	08:08:00	16.3	deg c
10/22/2009 08:08:00	08:08:00	173.4	ms/cm
10/22/2009 08:08:00	08:08:00	6.95	ph units
10/22/2009 08:08:00	08:08:00	32.9	ntu
10/21/2009 12:16:00	12:16:00	21.0	deg c
10/21/2009 12:16:00	12:16:00	732	ms/cm
10/21/2009 12:16:00	12:16:00	6.20	ph units
10/21/2009 12:16:00	12:16:00	1.48	ntu
10/21/2009 12:47:00	12:47:00	21.1	deg c
10/21/2009 12:47:00	12:47:00	264.9	ms/cm
10/21/2009 12:47:00	12:47:00	6.38	ph units
10/21/2009 12:47:00	12:47:00	2.89	ntu
10/21/2009 12:09:00	12:09:00	22.7	deg c
10/21/2009 12:09:00	12:09:00	285.2	ms/cm
10/21/2009 12:09:00	12:09:00	7.76	ph units
10/21/2009 12:09:00	12:09:00	2.29	ntu
10/21/2009 11:58:00	11:58:00	22.8	deg c
10/21/2009 11:58:00	11:58:00	706	ms/cm
10/21/2009 11:58:00	11:58:00	6.87	ph units
10/21/2009 11:58:00	11:58:00	0.94	ntu
10/20/2009 11:05:00	11:05:00	16.3	deg c
10/20/2009 11:05:00	11:05:00	132.7	ms/cm
10/20/2009 11:05:00	11:05:00	6.91	ph units
10/20/2009 11:05:00	11:05:00	15.1	ntu
10/21/2009 14:31:00	14:31:00	19.1	deg c
10/21/2009 14:31:00	14:31:00	486.4	ms/cm
10/21/2009 14:31:00	14:31:00	8.70	ph units
10/21/2009 14:31:00	14:31:00	3.23	ntu
10/20/2009 13:51:00	13:51:00	19.2	deg c
10/20/2009 13:51:00	13:51:00	151.8	ms/cm
10/20/2009 13:51:00	13:51:00	4.64	ph units
10/20/2009 13:51:00	13:51:00	8.69	ntu
10/20/2009 15:30:00	15:30:00	20.2	deg c
10/20/2009 15:30:00	15:30:00	47.8	ms/cm
10/20/2009 15:30:00	15:30:00	5.82	ph units
10/20/2009 16:41:00	16:41:00	17.4	deg c
10/20/2009 16:41:00	16:41:00	710	ms/cm
10/20/2009 16:41:00	16:41:00	6.06	ph units
10/20/2009 16:41:00	16:41:00	24.2	ntu
10/20/2009 11:46:00	11:46:00	18.4	deg c
10/20/2009 11:46:00	11:46:00	100.7	ms/cm
10/20/2009 11:46:00	11:46:00	5.27	ph units
10/20/2009 11:46:00	11:46:00	0.56	ntu
10/20/2009 18:00:00	18:00:00	16.7	deg c
10/20/2009 18:00:00	18:00:00	191.9	ms/cm
10/20/2009 18:00:00	18:00:00	5.06	ph units
10/20/2009 18:00:00	18:00:00	15.4	ntu
10/20/2009 18:22:00	18:22:00	15.6	deg c

10/20/2009 18:22:00	18:22:00	220.4	ms/cm
10/20/2009 18:22:00	18:22:00	4.99	ph units
10/20/2009 18:22:00	18:22:00	9.57	ntu
10/21/2009 10:10:00	10:10:00	17.3	deg c
10/21/2009 10:10:00	10:10:00	397.2	ms/cm
10/21/2009 10:10:00	10:10:00	6.04	ph units
10/21/2009 10:10:00	10:10:00	6.51	ntu
10/21/2009 10:53:00	10:53:00	18.8	deg c
10/21/2009 10:53:00	10:53:00	212.2	ms/cm
10/21/2009 10:53:00	10:53:00	6.16	ph units
10/21/2009 10:53:00	10:53:00	4.65	ntu
10/22/2009 09:50:00	09:50:00	18.1	deg c
10/22/2009 09:50:00	09:50:00	588	ms/cm
10/22/2009 09:50:00	09:50:00	5.51	ph units
10/22/2009 09:50:00	09:50:00	6.56	ntu
10/21/2009 09:02:00	09:02:00	15.2	deg c
10/21/2009 09:02:00	09:02:00	336.5	ms/cm
10/21/2009 09:02:00	09:02:00	6.31	ph units
10/21/2009 09:02:00	09:02:00	10.82	ntu
10/22/2009 08:28:00	08:28:00	16.5	deg c
10/22/2009 08:28:00	08:28:00	340.9	ms/cm
10/22/2009 08:28:00	08:28:00	5.33	ph units
10/22/2009 08:28:00	08:28:00	12.4	ntu
10/20/2009 09:57:00	09:57:00	14.7	deg c
10/20/2009 09:57:00	09:57:00	245.8	ms/cm
10/20/2009 09:57:00	09:57:00	6.25	ph units
10/20/2009 09:57:00	09:57:00	5.57	ntu
10/22/2009 09:33:00	09:33:00	17.0	deg c
10/22/2009 09:33:00	09:33:00	390.4	ms/cm
10/22/2009 09:33:00	09:33:00	5.58	ph units
10/22/2009 09:33:00	09:33:00	13.7	ntu
10/21/2009 11:33:00	11:33:00	15.9	deg c
10/21/2009 11:33:00	11:33:00	210.9	ms/cm
10/21/2009 11:33:00	11:33:00	5.45	ph units
10/21/2009 11:33:00	11:33:00	0.0	ntu
10/21/2009 12:02:00	12:02:00	16.0	deg c
10/21/2009 12:02:00	12:02:00	378.5	ms/cm
10/21/2009 12:02:00	12:02:00	5.29	ph units
10/21/2009 12:02:00	12:02:00	0.0	ntu
10/21/2009 09:41:00	09:41:00	14.4	deg c
10/21/2009 09:41:00	09:41:00	171.9	ms/cm
10/21/2009 09:41:00	09:41:00	6.55	ph units
10/21/2009 09:41:00	09:41:00	16.8	ntu
10/22/2009 08:32:00	08:32:00	13.5	deg c
10/22/2009 08:32:00	08:32:00	197.6	ms/cm
10/22/2009 08:32:00	08:32:00	4.67	ph units
10/22/2009 08:32:00	08:32:00	0.55	ntu
10/21/2009 08:39:00	08:39:00	13.4	deg c
10/21/2009 08:39:00	08:39:00	509	ms/cm

10/21/2009 08:39:00	08:39:00	9.01	ph units
10/21/2009 08:39:00	08:39:00	6.75	ntu
10/20/2009 17:45:00	17:45:00	14.74	deg c
10/20/2009 17:45:00	17:45:00	0.461	ms/cm
10/20/2009 17:45:00	17:45:00	6.34	ph units
10/20/2009 17:45:00	17:45:00	13.9	ntu
10/22/2009 11:24:00	11:24:00	18.0	deg c
10/22/2009 11:24:00	11:24:00	0.3	ms/cm
10/22/2009 11:24:00	11:24:00	4.68	ph units
10/22/2009 11:24:00	11:24:00	0.45	ntu
10/22/2009 12:08:00	12:08:00	16.0	deg c
10/22/2009 12:08:00	12:08:00	0.1	ms/cm
10/22/2009 12:08:00	12:08:00	4.28	ph units
10/22/2009 12:08:00	12:08:00	0.15	ntu
10/21/2009 16:05:00	16:05:00	18.1	deg c
10/21/2009 16:05:00	16:05:00	158.2	ms/cm
10/21/2009 16:05:00	16:05:00	5.73	ph units
10/21/2009 16:05:00	16:05:00	226	ntu
10/21/2009 17:18:00	17:18:00	17.2	deg c
10/21/2009 17:18:00	17:18:00	51.2	ms/cm
10/21/2009 17:18:00	17:18:00	4.76	ph units
10/21/2009 17:18:00	17:18:00	400	ntu
10/22/2009 10:01:00	10:01:00	16.8	deg c
10/22/2009 10:01:00	10:01:00	0.4	ms/cm
10/22/2009 10:01:00	10:01:00	3.88	ph units
10/22/2009 10:01:00	10:01:00	0.20	ntu
10/21/2009 15:30:00	15:30:00	16.8	deg c
10/21/2009 15:30:00	15:30:00	209.1	ms/cm
10/21/2009 15:30:00	15:30:00	6.11	ph units
10/21/2009 15:30:00	15:30:00	43.2	ntu
10/21/2009 14:00:00	14:00:00	17.4	deg c
10/21/2009 14:00:00	14:00:00	354.8	ms/cm
10/21/2009 14:00:00	14:00:00	5.76	ph units
10/21/2009 14:00:00	14:00:00	0.0	ntu
10/21/2009 09:05:00	09:05:00	13.8	deg c
10/21/2009 09:05:00	09:05:00	588	ms/cm
10/21/2009 09:05:00	09:05:00	7.79	ph units
10/21/2009 09:05:00	09:05:00	2.03	ntu
10/21/2009 09:20:00	09:20:00	13.4	deg c
10/21/2009 09:20:00	09:20:00	740	ms/cm
10/21/2009 09:20:00	09:20:00	6.88	ph units
10/21/2009 09:20:00	09:20:00	8.59	ntu

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
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R2-0002811

reportable_result	value_type	remark
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R2-0002814

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#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	A_102109		WG
TRC-CT	B_102109		WG
TRC-CT	FB102009A		WQ
TRC-CT	FB102109		WQ
TRC-CT	FB102209		WQ
TRC-CT	IW1_102109		WG
TRC-CT	IW2_102109		WG
TRC-CT	IWC-1_102109		WG
TRC-CT	IWC-2_102109		WG
TRC-CT	IWC-3_102109		WG
TRC-CT	IWC-4_102109		WG
TRC-CT	IWC-5_102109		WG
TRC-CT	IWC-6_102109		WG
TRC-CT	K_102209		WG
TRC-CT	L_102209		WG
TRC-CT	MWH-4_102109		WG
TRC-CT	OBS-2A_102009		WG
TRC-CT	RIW2_102109		WG
TRC-CT	RW6D_102109		WG
TRC-CT	RW6S_102109		WG
TRC-CT	SC10D_102009		WG
TRC-CT	SC10S_102009		WG
TRC-CT	SC11S(R)_102009		WG
TRC-CT	SC12D_102009		WG
TRC-CT	SC12S_102009		WG
TRC-CT	SC13D_102009		WG
TRC-CT	SC13S(R)_102009		WG
TRC-CT	SC14S_102009		WG
TRC-CT	SC15S_102009		WG
TRC-CT	SC16S_102009		WG
TRC-CT	SC17D_102209		WG
TRC-CT	SC17S_102209		WG
TRC-CT	SC18D_102109		WG
TRC-CT	SC18S_102109		WG
TRC-CT	SC19D_102109		WG
TRC-CT	SC19S_102109		WG
TRC-CT	SC1D_102109		WG
TRC-CT	SC1S_102109		WG
TRC-CT	SC20D_102209		WG
TRC-CT	SC20S_102209		WG
TRC-CT	SC21D_102109		WG
TRC-CT	SC21S_102109		WG
TRC-CT	SC22S_102109		WG
TRC-CT	SC23S_102209		WG
TRC-CT	SC24D_102209		WG
TRC-CT	SC24S_102209		WG
TRC-CT	SC25S_102009		WG
TRC-CT	SC26D_102009		WG

TRC-CT	SC27S_102209	WG
TRC-CT	SC28D_102009	WG
TRC-CT	SC2D(R)_102109	WG
TRC-CT	SC30D_102009	WG
TRC-CT	SC31D_102209	WG
TRC-CT	SC32D_102209	WG
TRC-CT	SC33S_102109	WG
TRC-CT	SC34D_102109	WG
TRC-CT	SC35D_102209	WG
TRC-CT	SC3D(R)_102109	WG
TRC-CT	SC3S_102109	WG
TRC-CT	SC4S_102109	WG
TRC-CT	SC5D_102209	WG
TRC-CT	SC5S_102209	WG
TRC-CT	SC6D_102109	WG
TRC-CT	SC6S_102109	WG
TRC-CT	SC9S_102109	WG
TRC-CT	W2(R)_102009	WG
TRC-CT	W3D_102009	WG
TRC-CT	W4_102209	WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
N	Field			10/21/2009 17:00
N	Field			10/21/2009 14:40
AB	Field			10/20/2009 7:40
AB	Field			10/21/2009 7:30
AB	Field			10/22/2009 7:40
N	Field			10/21/2009 15:35
N	Field			10/21/2009 14:10
N	Field			10/21/2009 12:50
N	Field			10/21/2009 12:05
N	Field			10/21/2009 13:10
N	Field			10/21/2009 12:40
N	Field			10/21/2009 13:15
FD	Field	IWC-5_102109		10/21/2009 13:30
N	Field			10/22/2009 11:35
N	Field			10/22/2009 8:10
N	Field			10/21/2009 10:30
N	Field			10/20/2009 11:00
N	Field			10/21/2009 14:00
N	Field			10/21/2009 9:20
N	Field			10/21/2009 9:05
N	Field			10/20/2009 18:10
N	Field			10/20/2009 17:45
N	Field			10/20/2009 13:55
N	Field			10/20/2009 16:05
N	Field			10/20/2009 15:35
N	Field			10/20/2009 17:35
N	Field			10/20/2009 16:45
N	Field			10/20/2009 11:50
N	Field			10/20/2009 18:00
N	Field			10/20/2009 18:25
N	Field			10/22/2009 12:10
N	Field			10/22/2009 11:30
N	Field			10/21/2009 10:55
N	Field			10/21/2009 10:12
N	Field			10/21/2009 17:00
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N	Field			10/22/2009 8:30
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N	Field			10/22/2009 10:05
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N	Field		10/20/2009 15:35
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N	Field		10/20/2009 16:50
N	Field		10/22/2009 9:40
N	Field		10/22/2009 10:45
FD	Field	SC9S_102109	10/21/2009 14:50
FD	Field	SC3D(R)_102109	10/21/2009 13:00
FD	Field	SC32D_102209	10/22/2009 11:00
N	Field		10/21/2009 12:20
N	Field		10/21/2009 12:05
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N	Field		10/21/2009 14:35
N	Field		10/20/2009 11:10
N	Field		10/20/2009 12:45
N	Field		10/22/2009 11:20

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
A					10/21/2009
B					10/21/2009
					10/20/2009
					10/21/2009
					10/22/2009
IW1					10/21/2009
IW2					10/21/2009
IWC-1					10/21/2009
IWC-2					10/21/2009
IWC-3					10/21/2009
IWC-4					10/21/2009
IWC-5					10/21/2009
IWC-5					10/21/2009
K					10/22/2009
L					10/22/2009
MWH-4					10/21/2009
OBS-2A					10/20/2009
RIW2					10/21/2009
RW6D					10/21/2009
RW6S					10/21/2009
SC10D					10/20/2009
SC10S					10/20/2009
SC11S(R)					10/20/2009
SC12D					10/20/2009
SC12S					10/20/2009
SC13D					10/20/2009
SC13S(R)					10/20/2009
SC14S					10/20/2009
SC15S					10/20/2009
SC16S					10/20/2009
SC17D					10/22/2009
SC17S					10/22/2009
SC18D					10/21/2009
SC18S					10/21/2009
SC19D					10/21/2009
SC19S					10/21/2009
SC1D					10/21/2009
SC1S					10/21/2009
SC20D					10/22/2009
SC20S					10/22/2009
SC21D					10/21/2009
SC21S					10/21/2009
SC22S					10/21/2009
SC23S					10/22/2009
SC24D					10/22/2009
SC24S					10/22/2009
SC25S					10/20/2009
SC26D					10/20/2009

SC27S	10/22/2009
SC28D	10/20/2009
SC2D(R)	10/21/2009
SC30D	10/20/2009
SC31D	10/22/2009
SC32D	10/22/2009
SC9S	10/21/2009
SC3D(R)	10/21/2009
SC32D	10/22/2009
SC3D(R)	10/21/2009
SC3S	10/21/2009
SC4S	10/21/2009
SC5D	10/22/2009
SC5S	10/22/2009
SC6D	10/21/2009
SC6S	10/21/2009
SC9S	10/21/2009
W2(R)	10/20/2009
W3D	10/20/2009
W4	10/22/2009

sample_receipt_date	sampler	sampling_company_code	sampling_reason	sampling_technique
10/22/2009	KS	TRCCTW		
10/21/2009	CC	TRCCTW		
10/20/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/22/2009	KS	TRCCTW		
10/22/2009	KS	TRCCTW		
10/21/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/21/2009	CC	TRCCTW		
10/22/2009	KS	TRCCTW		
10/22/2009	KS	TRCCTW		
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10/22/2009	KS	TRCCTW		
10/22/2009	KS	TRCCTW		
10/21/2009	CC	TRCCTW		
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10/22/2009	KS	TRCCTW		
10/22/2009	KS	TRCCTW		
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10/20/2009	CC	TRCCTW
10/20/2009	CC	TRCCTW
10/22/2009	KS	TRCCTW

task_code	collection_quarter	**composite_yn**	composite_desc	sample_class	custom_field_1
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custom_field_2 custom_field_3 comment

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FB102009A	E314.0	10/28/2009 17:23	T
OBS-2A_102009	E314.0	11/5/2009 20:00	T
SC11S(R)_102009	E314.0	10/28/2009 18:50	T
SC14S_102009	E314.0	10/28/2009 18:15	T
SC25S_102009	E314.0	10/28/2009 17:40	T
SC26D_102009	E314.0	10/28/2009 19:07	T
W2(R)_102009	E314.0	10/28/2009 17:58	T
W3D_102009	E314.0	10/28/2009 18:32	T
K_102209	E314.0	11/11/2009 22:29	T
SC17D_102209	E314.0	11/11/2009 21:02	T
SC17S_102209	E314.0	11/11/2009 20:27	T
SC20D_102209	E314.0	11/12/2009 11:22	T
SC20S_102209	E314.0	11/11/2009 21:36	T
SC24D_102209	E314.0	11/12/2009 12:14	T
SC24S_102209	E314.0	11/13/2009 12:02	T
SC27S_102209	E314.0	11/11/2009 21:19	T
SC31D_102209	E314.0	11/12/2009 12:32	T
SC32D_102209	E314.0	11/12/2009 11:57	T
SC35D_102209	E314.0	11/12/2009 11:40	T
SC5D_102209	E314.0	11/13/2009 12:20	T
SC5S_102209	E314.0	11/11/2009 18:25	T
W4_102209	E314.0	11/11/2009 22:11	T
A_102109	E314.0	11/10/2009 0:39	T
FB102209	E314.0	11/10/2009 1:31	T
IW1_102109	E314.0	11/9/2009 23:29	T
L_102209	E314.0	11/10/2009 0:56	T
SC19D_102109	E314.0	11/9/2009 23:47	T
SC19S_102109	E314.0	11/9/2009 22:54	T
SC21D_102109	E314.0	11/10/2009 0:21	T
SC21S_102109	E314.0	11/10/2009 0:04	T
SC23S_102209	E314.0	11/10/2009 1:48	T
SC2D(R)_102109	E314.0	11/9/2009 23:12	T
B_102109	E314.0	11/10/2009 10:58	T
FB102109	E314.0	11/10/2009 11:50	T
IW2_102109	E314.0	11/9/2009 21:45	T
IWC-1_102109	E314.0	10/28/2009 17:05	T
IWC-2_102109	E314.0	11/11/2009 10:38	T
IWC-3_102109	E314.0	11/10/2009 13:17	T
IWC-4_102109	E314.0	11/10/2009 13:00	T
IWC-5_102109	E314.0	11/11/2009 10:56	T
IWC-6_102109	E314.0	11/11/2009 11:13	T
MWH-4_102109	E314.0	11/10/2009 12:25	T
RIW2_102109	E314.0	11/11/2009 14:56	T
RW6D_102109	E314.0	11/11/2009 15:48	T
RW6S_102109	E314.0	11/11/2009 12:23	T
SC9S_102109	E314.0	11/11/2009 11:31	T
SC18D_102109	E314.0	11/9/2009 20:00	T
SC18S_102109	E314.0	11/11/2009 13:50	T

SC1D_102109	E314.0	11/9/2009 20:18 T
SC1S_102109	E314.0	11/9/2009 20:35 T
SC22S_102109	E314.0	11/10/2009 12:08 T
SC33S_102109	E314.0	11/11/2009 11:48 T
SC34D_102109	E314.0	11/11/2009 14:39 T
SC3D(R)_102109	E314.0	11/11/2009 15:31 T
SC3S_102109	E314.0	11/9/2009 19:43 T
SC4S_102109	E314.0	11/11/2009 13:32 T
SC6D_102109	E314.0	11/11/2009 12:40 T
SC6S_102109	E314.0	11/11/2009 12:05 T
SC10D_102009	E314.0	11/5/2009 19:42 T
SC10S_102009	E314.0	10/28/2009 22:19 T
SC12D_102009	E314.0	10/28/2009 20:17 T
SC12S_102009	E314.0	10/28/2009 19:59 T
SC13D_102009	E314.0	11/5/2009 19:25 T
SC13S(R)_102009	E314.0	10/28/2009 20:34 T
SC15S_102009	E314.0	10/28/2009 21:09 T
SC16S_102009	E314.0	10/28/2009 21:26 T
SC28D_102009	E314.0	10/28/2009 21:44 T
SC30D_102009	E314.0	10/28/2009 22:01 T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		2
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		4
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1

initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	8
initial	WG	LB	NA	8
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	2
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	2
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1
initial	WG	LB	NA	1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	10/28/2009 0:00			ACTD	quant
	11/5/2009 0:00			ACTD	quant
	10/28/2009 0:00			ACTD	quant
	10/28/2009 0:00			ACTD	quant
	10/28/2009 0:00			ACTD	quant
	10/28/2009 0:00			ACTD	quant
	10/28/2009 0:00			ACTD	quant
	10/28/2009 0:00			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/12/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/12/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/12/2009 23:59			ACTD	quant
	11/12/2009 23:59			ACTD	quant
	11/12/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/10/2009 23:59			ACTD	quant
	11/10/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	10/28/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/10/2009 23:59			ACTD	quant
	11/10/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/10/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant
	11/9/2009 23:59			ACTD	quant
	11/11/2009 23:59			ACTD	quant

11/9/2009 23:59	ACTD	quant
11/9/2009 23:59	ACTD	quant
11/10/2009 23:59	ACTD	quant
11/11/2009 23:59	ACTD	quant
11/11/2009 23:59	ACTD	quant
11/11/2009 23:59	ACTD	quant
11/9/2009 23:59	ACTD	quant
11/11/2009 23:59	ACTD	quant
11/11/2009 23:59	ACTD	quant
11/11/2009 23:59	ACTD	quant
11/5/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
11/5/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant
10/28/2009 23:59	ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA30839-1		25	ml	MELISSAS
JA30839-8		25	ml	MELISSAS
JA30839-6		25	ml	MELISSAS
JA30839-4		25	ml	MELISSAS
JA30839-2		25	ml	MELISSAS
JA30839-7		25	ml	MELISSAS
JA30839-3		25	ml	MELISSAS
JA30839-5		25	ml	MELISSAS
JA31115-14		25	ml	MELISSAS
JA31115-9		25	ml	MELISSAS
JA31115-8		25	ml	MELISSAS
JA31115-12		25	ml	MELISSAS
JA31115-11		25	ml	MELISSAS
JA31115-4		25	ml	MELISSAS
JA31115-5		25	ml	MELISSAS
JA31115-10		25	ml	MELISSAS
JA31115-3		25	ml	MELISSAS
JA31115-6		25	ml	MELISSAS
JA31115-7		25	ml	MELISSAS
JA31115-2		25	ml	MELISSAS
JA31115-1		25	ml	MELISSAS
JA31115-13		25	ml	MELISSAS
JA31107-7		25	ml	MELISSAS
JA31107-9		25	ml	MELISSAS
JA31107-2		25	ml	MELISSAS
JA31107-8		25	ml	MELISSAS
JA31107-4		25	ml	MELISSAS
JA31107-3		25	ml	MELISSAS
JA31107-6		25	ml	MELISSAS
JA31107-5		25	ml	MELISSAS
JA31107-10		25	ml	MELISSAS
JA31107-1		25	ml	MELISSAS
JA30998-12		25	ml	BARBARAD
JA30998-1		25	ml	BARBARAD
JA30998-26		25	ml	MELISSAS
JA30998-6		25	ml	MELISSAS
JA30998-4		25	ml	MELISSAS
JA30998-7		25	ml	BARBARAD
JA30998-5		25	ml	BARBARAD
JA30998-8		25	ml	MELISSAS
JA30998-9		25	ml	MELISSAS
JA30998-3		25	ml	BARBARAD
JA30998-25		25	ml	MELISSAS
JA30998-16		25	ml	MELISSAS
JA30998-14		25	ml	MELISSAS
JA30998-10		25	ml	MELISSAS
JA30998-19		25	ml	MELISSAS
JA30998-18		25	ml	MELISSAS

JA30998-20	25 ml	MELISSAS
JA30998-21	25 ml	MELISSAS
JA30998-2	25 ml	BARBARAD
JA30998-11	25 ml	MELISSAS
JA30998-24	25 ml	MELISSAS
JA30998-23	25 ml	MELISSAS
JA30998-22	25 ml	MELISSAS
JA30998-17	25 ml	MELISSAS
JA30998-15	25 ml	MELISSAS
JA30998-13	25 ml	MELISSAS
JA30944-10	25 ml	MELISSAS
JA30944-9	25 ml	MELISSAS
JA30944-2	25 ml	MELISSAS
JA30944-1	25 ml	MELISSAS
JA30944-4	25 ml	MELISSAS
JA30944-3	25 ml	MELISSAS
JA30944-5	25 ml	MELISSAS
JA30944-6	25 ml	MELISSAS
JA30944-7	25 ml	MELISSAS
JA30944-8	25 ml	MELISSAS

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
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IONC4	25 ml	14797-73-0	Perchlorate
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IONC4	25 ml	14797-73-0	Perchlorate
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IONC4	25 ml	14797-73-0	Perchlorate
IONC4	25 ml	14797-73-0	Perchlorate
IONC4	25 ml	14797-73-0	Perchlorate
IONC4	25 ml	14797-73-0	Perchlorate
IONC4	25 ml	14797-73-0	Perchlorate
IONC4	25 ml	14797-73-0	Perchlorate

result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers
		TRG	Yes	N	U
4.8		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
11		TRG	Yes	Y	
0.94		TRG	Yes	Y	B
8.6		TRG	Yes	Y	
90.5		TRG	Yes	Y	
6.3		TRG	Yes	Y	
		TRG	Yes	N	U
7		TRG	Yes	Y	
		TRG	Yes	N	U
3		TRG	Yes	Y	
0.99		TRG	Yes	Y	B
		TRG	Yes	N	U
6.6		TRG	Yes	Y	
3.2		TRG	Yes	Y	
3.3		TRG	Yes	Y	
1.2		TRG	Yes	Y	B
1.4		TRG	Yes	Y	B
1.2		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
1.1		TRG	Yes	Y	B
		TRG	Yes	N	U
14.3		TRG	Yes	Y	
		TRG	Yes	N	U
29.1		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
7		TRG	Yes	Y	
1.2		TRG	Yes	Y	B
		TRG	Yes	N	U
3.7		TRG	Yes	Y	
7.3		TRG	Yes	Y	
7.7		TRG	Yes	Y	
2.5		TRG	Yes	Y	B
4.6		TRG	Yes	Y	
11.7		TRG	Yes	Y	
10.7		TRG	Yes	Y	
		TRG	Yes	N	U
4.1		TRG	Yes	Y	
14.3		TRG	Yes	Y	
12.9		TRG	Yes	Y	
8.2		TRG	Yes	Y	
3.8		TRG	Yes	Y	
		TRG	Yes	N	U

46.3	TRG	Yes	Y	
1.8	TRG	Yes	Y	B
	TRG	Yes	N	U
8	TRG	Yes	Y	
136	TRG	Yes	Y	
141	TRG	Yes	Y	
1.8	TRG	Yes	Y	B
	TRG	Yes	N	U
9.8	TRG	Yes	Y	
6.4	TRG	Yes	Y	
19.5	TRG	Yes	Y	
1.7	TRG	Yes	Y	B
	TRG	Yes	N	U
	TRG	Yes	N	U
2.2	TRG	Yes	Y	B
	TRG	Yes	N	U
	TRG	Yes	N	U
	TRG	Yes	N	U
49	TRG	Yes	Y	
2.6	TRG	Yes	Y	B

validator_qualifiers	interpreted_qualifiers	organic_yn	method_detection_limit
	U	N	0.92
	B	N	1.8
	U	N	0.92
	U	N	0.92
	U	N	0.92
		N	0.92
	B	N	0.92
		N	0.92
		N	3.7
		N	0.92
	U	N	0.92
		N	0.92
	U	N	0.92
		N	0.92
	B	N	0.92
	U	N	0.92
		N	0.92
		N	0.92
		N	0.92
	B	N	0.92
	B	N	0.92
	B	N	0.92
	U	N	0.92
	U	N	0.92
	B	N	0.92
	U	N	0.92
		N	0.92
	U	N	0.92
		N	0.92
	U	N	0.92
	U	N	0.92
		N	0.92
	B	N	0.92
	U	N	0.92
		N	0.92
		N	0.92
		N	0.92
	B	N	0.92
		N	0.92
		N	0.92
		N	0.92
	U	N	0.92
		N	0.92
		N	0.92
		N	0.92
		N	0.92
		N	0.92
	U	N	0.92

	N	0.92
B	N	0.92
U	N	0.92
	N	0.92
	N	7.4
	N	7.4
B	N	0.92
U	N	0.92
	N	0.92
	N	0.92
	N	1.8
B	N	0.92
U	N	0.92
U	N	0.92
B	N	1.8
U	N	0.92
U	N	0.92
U	N	0.92
	N	0.92
B	N	0.92

reporting_detection_limit	quantitation_limit	**result_unit**	**detection_limit_unit**	tic_retention_time
3	3	ug/l	ug/l	
6	6	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
12	12	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
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3	3	ug/l	ug/l	
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3	3	ug/l	ug/l	
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3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	

R2-0002842

3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
24	24 ug/l	ug/l
24	24 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
6	6 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
6	6 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l
3	3 ug/l	ug/l

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

FB111909	E314.0	12/2/2009 13:58 T
FB111909	E314.0	12/2/2009 13:58 T
SC33D_111909	E314.0	12/2/2009 15:07 T
SC33D_111909	E314.0	12/2/2009 15:07 T
SC34D_111909	E314.0	12/2/2009 16:17 T
SC34D_111909	E314.0	12/2/2009 16:17 T
SC37D_111909	E314.0	12/2/2009 16:52 T
SC37D_111909	E314.0	12/2/2009 16:52 T

initial	Analysis	GN32834
initial	Prep	GP51802
initial	Analysis	GN32834
initial	Prep	GP51802
initial	Analysis	GN32834
initial	Prep	GP51802
initial	Analysis	GN32834
initial	Prep	GP51802

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#sys_loc_(	measurement_date	historical_	water_leve	water_leve	corrected_	corrected_	measured_	depth_unit
A	10/19/2009 16:00	94.82	5.47	89.35				ft btoc
B	10/19/2009 16:00	94.33	4.75	89.58				ft btoc
IW1	10/19/2009 16:00	90.33	5.23	85.1				ft btoc
IW2	10/19/2009 16:00	91.05	7.91	83.14				ft btoc
IWC-1	10/19/2009 16:00	98.13	7.7	90.43				ft btoc
IWC-2	10/19/2009 16:00	98.51	8.11	90.4				ft btoc
IWC-3	10/19/2009 16:00	97.83	7.41	90.42				ft btoc
IWC-4	10/19/2009 16:00	98.61	8.18	90.43				ft btoc
IWC-5	10/19/2009 16:00	98.03	7.64	90.39				ft btoc
K	10/19/2009 16:00	99.18	9.69	89.49				ft btoc
L	10/19/2009 16:00	103.51	11.87	91.64				ft btoc
MWH-4	10/19/2009 16:00	99.44	9.06	90.38				ft btoc
SC10D	10/19/2009 16:00	95.72	7.39	88.33				ft btoc
SC10S	10/19/2009 16:00	95.38	7.08	88.3				ft btoc
SC11S(R)	10/19/2009 16:00	108.12	15.67	92.45				ft btoc
SC12D	10/19/2009 16:00	103.19	11.59	91.6				ft btoc
SC12S	10/19/2009 16:00	104.76	12.63	92.13				ft btoc
SC13D	10/19/2009 16:00	101.99	10.66	91.33				ft btoc
SC13S(R)	10/19/2009 16:00	101.41	8.69	92.72				ft btoc
SC14S	10/19/2009 16:00	108.38	16.07	92.31				ft btoc
SC15S	10/19/2009 16:00	108.32	14.83	93.49				ft btoc
SC16S	10/19/2009 16:00	108.05	18.05	90				ft btoc
SC17D	10/19/2009 16:00	108.07	19.05	89.02				ft btoc
SC17S	10/19/2009 16:00	109.26	20.19	89.07				ft btoc
SC18D	10/19/2009 16:00	96.01	9.56	86.45				ft btoc
SC18S	10/19/2009 16:00	95.72	9.26	86.46				ft btoc
SC19D	10/19/2009 16:00	92.03	5.31	86.72				ft btoc
SC19S	10/19/2009 16:00	92.98	5.99	86.99				ft btoc
SC1D	10/19/2009 16:00	90.9	8.27	82.63				ft btoc
SC1S	10/19/2009 16:00	87.26	3.73	83.53				ft btoc
SC20D	10/19/2009 16:00	104.53	13.76	90.77				ft btoc
SC21D	10/19/2009 16:00	91.65	5.81	85.84				ft btoc
SC21S	10/19/2009 16:00	92.64	6.41	86.23				ft btoc
SC22S	10/19/2009 16:00	99.65	8.83	90.82				ft btoc
SC23S	10/19/2009 16:00	102.21	11.46	90.75				ft btoc
SC24D	10/19/2009 16:00	93.52	10.23	83.29				ft btoc
SC24S	10/19/2009 16:00	93.57	9.9	83.67				ft btoc
SC25S	10/19/2009 16:00	102.27	9.76	92.51				ft btoc
SC26D	10/19/2009 16:00	100.45	10.55	89.9				ft btoc
SC27S	10/19/2009 16:00	100.54	9.11	91.43				ft btoc
SC28D	10/19/2009 16:00	106.87	18.96	87.91				ft btoc
SC2D(R)	10/19/2009 16:00	92.7	7.84	84.86				ft btoc
SC30D	10/19/2009 16:00	115.58	27.36	88.22				ft btoc
SC31D	10/19/2009 16:00	102.61	19.05	83.56				ft btoc
SC32D	10/19/2009 16:00	90	11.06	78.94				ft btoc
SC3D(R)	10/19/2009 16:00	91.06	7.11	83.95				ft btoc
SC3S	10/19/2009 16:00	90.32	6.32	84				ft btoc
SC4S	10/19/2009 16:00	93.65	6.77	86.88				ft btoc
SC5D	10/19/2009 16:00	97	12.39	84.61				ft btoc
SC5S	10/19/2009 16:00	96.55	11.85	84.7				ft btoc
SC6D	10/19/2009 16:00	94.38	6.55	87.83				ft btoc

SC6S	10/19/2009 16:00	94.62	5.55	89.07	ft btoc
SC9S	10/19/2009 16:00	96.23	6.56	89.67	ft btoc
W2(R)	10/19/2009 16:00	97.96	5.44	92.52	ft btoc
W3D	10/19/2009 16:00	108.37	15.94	92.43	ft btoc
W4	10/19/2009 16:00	104.58	14.03	90.55	ft btoc
SC1D	11/18/2009 14:35	90.9	7.18	83.72	ft btoc
SC10S	11/18/2009 15:35	95.38	6.44	88.94	ft btoc
SC10D	11/18/2009 16:20	95.72	6.82	88.9	ft btoc
SC1S	11/18/2009 17:00	87.26	2.17	85.09	ft btoc
SC3S	11/19/2009 8:25	90.32	4.76	85.56	ft btoc
SC3D(R)	11/19/2009 8:45	91.06	5.53	85.53	ft btoc
SC25S	11/19/2009 9:35	102.27	8.04	94.23	ft btoc
IW1	11/19/2009 10:35	90.33	3.76	86.57	ft btoc
SC2D(R)	11/19/2009 11:10	92.7	6.36	86.34	ft btoc
IW2	11/19/2009 11:25	91.05	6.43	84.62	ft btoc
SC5S	11/19/2009 11:40	96.55	10.31	86.24	ft btoc
SC5D	11/19/2009 11:45	97	10.89	86.11	ft btoc
SC24S	11/19/2009 12:05	93.57	8.1	85.47	ft btoc
SC24D	11/19/2009 12:25	93.52	8.56	84.96	ft btoc
SC26D	11/19/2009 13:55	100.45	8.96	91.49	ft btoc
SC33D	11/19/2009 15:20	108.08	19.32	88.76	ft btoc
SC34D	11/19/2009 17:30	103.82	16.84	86.98	ft btoc
SC35D	12/7/2009 11:58	81.24	14.77	66.47	ft btoc
SC36D	12/7/2009 13:45	91.8	7.95	83.85	ft btoc
SC26D	12/7/2009 16:05	100.45	9.71	90.74	ft btoc
SC10D	12/7/2009 17:09	95.72	6.83	88.89	ft btoc
SC10S	12/7/2009 17:20	95.38	6.56	88.82	ft btoc
SC25S	12/8/2009 9:06	102.27	8.46	93.81	ft btoc
B	12/8/2009 10:00	94.33	4.19	90.14	ft btoc
A	12/8/2009 10:10	94.82	6.82	88	ft btoc
SC6D	12/8/2009 10:40	94.38	9.81	84.57	ft btoc
SC1D	12/8/2009 11:06	90.9	7.27	83.63	ft btoc
SC1S	12/8/2009 11:22	87.26	2.82	84.44	ft btoc
SC3S	12/8/2009 11:51	90.32	5.55	84.77	ft btoc
SC3D(R)	12/8/2009 11:47	91.06	6.31	84.75	ft btoc
SC2D(R)	12/8/2009 12:53	92.7	7.21	85.49	ft btoc
IW2	12/8/2009 13:10	91.05	7.24	83.81	ft btoc
IW1	12/8/2009 12:41	90.33	4.6	85.73	ft btoc
SC5S	12/8/2009 13:53	96.55	11.1	85.45	ft btoc
SC5D	12/8/2009 14:09	97	11.63	85.37	ft btoc
SC24S	12/8/2009 14:53	93.57	8.7	84.87	ft btoc
SC24D	12/8/2009 14:41	93.52	9.35	84.17	ft btoc
A	1/19/2010 14:56	94.82	4.92	89.9	ft btoc
IWC-3	1/19/2010 14:36	97.83	4.82	93.01	ft btoc
IWC-4	1/19/2010 14:44	98.61	5.58	93.03	ft btoc
IWC-5	1/19/2010 14:34	98.03	5.13	92.9	ft btoc
W3D	1/19/2010 13:40	108.37	12.78	95.59	ft btoc
W4	1/19/2010 15:31	104.58	12.37	92.21	ft btoc
MWH-4	1/19/2010 14:06	99.37	7	92.37	ft btoc
SC12D	1/19/2010 13:41	103.19	8.4	94.79	ft btoc
SC13D	1/19/2010 13:59	101.99	7.57	94.42	ft btoc
SC20D	1/19/2010 15:26	104.53	11.05	93.48	ft btoc

SC22D	1/19/2010 14:03	98.65	5.67	92.98	ft btoc
SC1D	1/19/2010 16:10	90.9	6.11	84.79	ft btoc
SC2D(R)	1/19/2010 16:22	92.53	6.29	86.24	ft btoc
SC3D(R)	1/19/2010 16:14	91.06	5.29	85.77	ft btoc
SC5D	1/19/2010 16:32	97	10.68	86.32	ft btoc
SC6D	1/19/2010 15:55	94.38	4.75	89.63	ft btoc
SC10D	1/19/2010 15:50	95.72	5.64	90.08	ft btoc
SC17D	1/19/2010 16:00	108.07	17.06	91.01	ft btoc
SC18D	1/19/2010 16:02	96.01	7.71	88.3	ft btoc
SC19D	1/19/2010 17:00	92.03	3.62	88.41	ft btoc
SC21D	1/19/2010 16:53	91.65	4.15	87.5	ft btoc
SC24D	1/19/2010 16:38	93.52	8.12	85.4	ft btoc
SC26D	1/19/2010 15:40	100.45	7.91	92.54	ft btoc
IW2	1/19/2010 16:20	92.05	6.37	85.68	ft btoc
SC28D	1/19/2010 15:45	106.87	16.77	90.1	ft btoc
SC30D	1/19/2010 15:42	115.58	24.2	91.38	ft btoc
SC31D	1/19/2010 16:35	102.61	16.93	85.68	ft btoc
SC32D	1/19/2010 16:45	91.62	8.35	83.27	ft btoc
SC33D	1/19/2010 0:00	108.08	17.78	90.3	ft btoc
SC34D	1/19/2010 0:00	103.82	16.14	87.68	ft btoc
SC35D	1/19/2010 0:00	81.24	13.34	67.9	ft btoc
SC36D	1/19/2010 0:00	91.8	7.01	84.79	ft btoc
B	1/19/2010 14:53	94.33	2.77	91.56	ft btoc
K	1/19/2010 15:30	99.18	7.57	91.61	ft btoc
L	1/19/2010 15:16	103.51	9.12	94.39	ft btoc
IWC-2	1/19/2010 14:43	98.51	5.51	93	ft btoc
W2(R)	1/19/2010 13:09	97.96	3.12	94.84	ft btoc
SC9S	1/19/2010 14:59	96.23	4.62	91.61	ft btoc
SC11S(R)	1/19/2010 13:40	108.12	12.34	95.78	ft btoc
SC12S	1/19/2010 13:42	104.76	9.38	95.38	ft btoc
SC13S(R)	1/19/2010 13:58	101.1	5.57	95.53	ft btoc
SC14S	1/19/2010 13:35	108.38	12.82	95.56	ft btoc
SC15S	1/19/2010 15:15	108.32	11.98	96.34	ft btoc
SC16S	1/19/2010 15:35	108.05	15.34	92.71	ft btoc
SC20S	1/19/2010 15:25	104.45	10.62	93.83	ft btoc
SC22S	1/19/2010 14:04	99.65	6.31	93.34	ft btoc
SC23S	1/19/2010 15:21	102.21	5.63	96.58	ft btoc
SC25S	1/19/2010 13:00	102.27	6.34	95.93	ft btoc
SC27S	1/19/2010 15:30	100.54	6.17	94.37	ft btoc
SC1S	1/19/2010 16:12	87.26	1.76	85.5	ft btoc
SC3S	1/19/2010 16:15	90.32	4.71	85.61	ft btoc
SC4S	1/19/2010 16:00	93.65	5.19	88.46	ft btoc
SC5S	1/19/2010 16:33	96.55	10.05	86.5	ft btoc
SC6S	1/19/2010 15:57	94.62	3.98	90.64	ft btoc
SC10S	1/19/2010 15:51	95.38	5.48	89.9	ft btoc
SC17S	1/19/2010 15:55	109.26	17.96	91.3	ft btoc
SC18S	1/19/2010 16:03	95.72	7.39	88.33	ft btoc
SC19S	1/19/2010 17:02	92.98	5.12	87.86	ft btoc
SC21S	1/19/2010 16:54	92.64	4.78	87.86	ft btoc
SC24S	1/19/2010 16:37	93.57	7.67	85.9	ft btoc
IW1	1/19/2010 16:24	90.33	4.84	85.49	ft btoc
SC26D	9/8/2010 9:24	100.45	10.82	89.63	ft btoc

SC28D	9/8/2010 11:06	103.82	19.47	84.35	ft btoc
SC34D	9/8/2010 13:36	103.82	19.11	84.71	ft btoc
SC33D	9/8/2010 12:59	108.08	21.21	86.87	ft btoc
SC36D	9/8/2010 15:09	91.8	9.39	82.41	ft btoc
SC35D	9/8/2010 14:38	81.24	17.08	64.16	ft btoc
SC30D	9/8/2010 16:27	115.58	27.45	88.13	ft btoc
W2(R)	9/8/2010 17:31	97.96	6.02	91.94	ft btoc
SC22S	9/9/2010 9:08	99.65	9.32	90.33	ft btoc
IWC-4	9/9/2010 9:39	98.61	8.62	89.99	ft btoc
SC20D	9/9/2010 10:05	104.53	14.28	90.25	ft btoc
SC14S	9/9/2010 8:57	108.38	16.44	91.94	ft btoc
W3D	9/9/2010 9:12	108.37	16.24	92.13	ft btoc
SC11S(R)	9/9/2010 9:33	108.12	15.81	92.31	ft btoc
SC12D	9/9/2010 9:40	103.19	11.81	91.38	ft btoc
SC16S	9/9/2010 10:40	108.05	18.69	89.36	ft btoc
W4	9/9/2010 11:02	104.58	15.55	89.03	ft btoc
K	9/9/2010 11:20	99.18	10.54	88.64	ft btoc
SC10S	9/8/2010 9:00	95.38	7.88	87.5	ft btoc
SC10D	9/8/2010 9:12	95.72	8.24	87.48	ft btoc
SC6S	9/8/2010 9:55	94.62	8.29	86.33	ft btoc
SC18S	9/8/2010 10:05	95.72	9.98	85.74	ft btoc
SC1D	9/8/2010 10:26	90.9	9.02	81.88	ft btoc
SC1S	9/8/2010 10:48	87.26	4.46	82.8	ft btoc
SC3S	9/8/2010 11:09	90.32	6.97	83.35	ft btoc
SC3D(R)	9/8/2010 11:19	91.06	7.73	83.33	ft btoc
SC2D(R)	9/8/2010 14:34	92.53	8.44	84.09	ft btoc
SC21S	9/8/2010 11:58	92.64	7.12	85.52	ft btoc
SC21D	9/8/2010 12:28	91.65	6.41	85.24	ft btoc
SC24S	9/8/2010 13:15	93.57	10.74	82.83	ft btoc
SC17S	9/8/2010 15:41	109.26	20.92	88.34	ft btoc
SC17D	9/8/2010 15:52	108.07	19.92	88.15	ft btoc
SC32D	9/8/2010 14:15	91.62	11.79	79.83	ft btoc
SC25S	9/8/2010 17:29	102.27	9.57	92.7	ft btoc

technician	dry_indica	measurem	batch_num	dip_or_ele	remark	Lnapl_cas	Lnapl_dep	Dnapl_cas	Dnapl_dep

Task_code

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	SC33D	SC33D_111909	TEMP		
TRC-CT	SC33D	SC33D_111909	SC		
TRC-CT	SC33D	SC33D_111909	DIS_OXYGEN		
TRC-CT	SC33D	SC33D_111909	pH		
TRC-CT	SC33D	SC33D_111909	ORP		
TRC-CT	SC33D	SC33D_111909	TURB		
TRC-CT	SC34D	SC34D_111909	TEMP		
TRC-CT	SC34D	SC34D_111909	SC		
TRC-CT	SC34D	SC34D_111909	DIS_OXYGEN		
TRC-CT	SC34D	SC34D_111909	pH		
TRC-CT	SC34D	SC34D_111909	ORP		
TRC-CT	SC34D	SC34D_111909	TURB		
TRC-CT	SC26D	SC26D_111909	TEMP		
TRC-CT	SC26D	SC26D_111909	SC		
TRC-CT	SC26D	SC26D_111909	DIS_OXYGEN		
TRC-CT	SC26D	SC26D_111909	pH		
TRC-CT	SC26D	SC26D_111909	ORP		
TRC-CT	SC26D	SC26D_111909	TURB		
TRC-CT	SC10D	SC10D_111809	TEMP		
TRC-CT	SC10D	SC10D_111809	SC		
TRC-CT	SC10D	SC10D_111809	DIS_OXYGEN		
TRC-CT	SC10D	SC10D_111809	pH		
TRC-CT	SC10D	SC10D_111809	ORP		
TRC-CT	SC10D	SC10D_111809	TURB		
TRC-CT	SC10S	SC10S_111809	TEMP		
TRC-CT	SC10S	SC10S_111809	SC		
TRC-CT	SC10S	SC10S_111809	DIS_OXYGEN		
TRC-CT	SC10S	SC10S_111809	pH		
TRC-CT	SC10S	SC10S_111809	ORP		
TRC-CT	SC10S	SC10S_111809	TURB		
TRC-CT	SC25S	SC25S_111909	TEMP		
TRC-CT	SC25S	SC25S_111909	SC		
TRC-CT	SC25S	SC25S_111909	DIS_OXYGEN		
TRC-CT	SC25S	SC25S_111909	pH		
TRC-CT	SC25S	SC25S_111909	ORP		
TRC-CT	SC25S	SC25S_111909	TURB		
TRC-CT	SC1D	SC1D_111809	TEMP		
TRC-CT	SC1D	SC1D_111809	SC		
TRC-CT	SC1D	SC1D_111809	DIS_OXYGEN		
TRC-CT	SC1D	SC1D_111809	pH		
TRC-CT	SC1D	SC1D_111809	ORP		
TRC-CT	SC1D	SC1D_111809	TURB		
TRC-CT	SC1S	SC1S_111809	TEMP		
TRC-CT	SC1S	SC1S_111809	SC		
TRC-CT	SC1S	SC1S_111809	DIS_OXYGEN		
TRC-CT	SC1S	SC1S_111809	pH		
TRC-CT	SC1S	SC1S_111809	ORP		
TRC-CT	SC1S	SC1S_111809	TURB		

TRC-CT	SC3S	SC3S_111909	TEMP
TRC-CT	SC3S	SC3S_111909	SC
TRC-CT	SC3S	SC3S_111909	DIS_OXYGEN
TRC-CT	SC3S	SC3S_111909	pH
TRC-CT	SC3S	SC3S_111909	ORP
TRC-CT	SC3S	SC3S_111909	TURB
TRC-CT	SC3D(R)	SC3D(R)_111909	TEMP
TRC-CT	SC3D(R)	SC3D(R)_111909	SC
TRC-CT	SC3D(R)	SC3D(R)_111909	DIS_OXYGEN
TRC-CT	SC3D(R)	SC3D(R)_111909	pH
TRC-CT	SC3D(R)	SC3D(R)_111909	ORP
TRC-CT	SC3D(R)	SC3D(R)_111909	TURB
TRC-CT	SC2D(R)	SC2D(R)_111909	TEMP
TRC-CT	SC2D(R)	SC2D(R)_111909	SC
TRC-CT	SC2D(R)	SC2D(R)_111909	DIS_OXYGEN
TRC-CT	SC2D(R)	SC2D(R)_111909	pH
TRC-CT	SC2D(R)	SC2D(R)_111909	ORP
TRC-CT	SC2D(R)	SC2D(R)_111909	TURB
TRC-CT	IW1	IW1_111909	TEMP
TRC-CT	IW1	IW1_111909	SC
TRC-CT	IW1	IW1_111909	DIS_OXYGEN
TRC-CT	IW1	IW1_111909	pH
TRC-CT	IW1	IW1_111909	ORP
TRC-CT	IW1	IW1_111909	TURB
TRC-CT	SC5S	SC5S_111909	TEMP
TRC-CT	SC5S	SC5S_111909	SC
TRC-CT	SC5S	SC5S_111909	DIS_OXYGEN
TRC-CT	SC5S	SC5S_111909	pH
TRC-CT	SC5S	SC5S_111909	ORP
TRC-CT	SC5S	SC5S_111909	TURB
TRC-CT	SC5D	SC5D_111909	TEMP
TRC-CT	SC5D	SC5D_111909	SC
TRC-CT	SC5D	SC5D_111909	DIS_OXYGEN
TRC-CT	SC5D	SC5D_111909	pH
TRC-CT	SC5D	SC5D_111909	ORP
TRC-CT	SC5D	SC5D_111909	TURB
TRC-CT	SC24S	SC24S_111909	TEMP
TRC-CT	SC24S	SC24S_111909	SC
TRC-CT	SC24S	SC24S_111909	DIS_OXYGEN
TRC-CT	SC24S	SC24S_111909	pH
TRC-CT	SC24S	SC24S_111909	ORP
TRC-CT	SC24S	SC24S_111909	TURB
TRC-CT	SC24D	SC24D_111909	TEMP
TRC-CT	SC24D	SC24D_111909	SC
TRC-CT	SC24D	SC24D_111909	DIS_OXYGEN
TRC-CT	SC24D	SC24D_111909	pH
TRC-CT	SC24D	SC24D_111909	ORP
TRC-CT	SC24D	SC24D_111909	TURB
TRC-CT	RW6S	RW6S_111809	TEMP

TRC-CT	RW6S	RW6S_111809	SC
TRC-CT	RW6S	RW6S_111809	DIS_OXYGEN
TRC-CT	RW6S	RW6S_111809	pH
TRC-CT	RW6S	RW6S_111809	ORP
TRC-CT	RW6S	RW6S_111809	TURB
TRC-CT	RW6D	RW6D_111809	TEMP
TRC-CT	RW6D	RW6D_111809	SC
TRC-CT	RW6D	RW6D_111809	DIS_OXYGEN
TRC-CT	RW6D	RW6D_111809	pH
TRC-CT	RW6D	RW6D_111809	ORP
TRC-CT	RW6D	RW6D_111809	TURB
TRC-CT	RIW2	RIW2_111909	TEMP
TRC-CT	RIW2	RIW2_111909	SC
TRC-CT	RIW2	RIW2_111909	DIS_OXYGEN
TRC-CT	RIW2	RIW2_111909	pH
TRC-CT	RIW2	RIW2_111909	ORP
TRC-CT	RIW2	RIW2_111909	TURB

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	11/19/2009 14:56:12	14:56:12	13.44	deg c		
	11/19/2009 14:56:12	14:56:12	0.216	ms/cm		
	11/19/2009 14:56:12	14:56:12	5.73	mg/l		
	11/19/2009 14:56:12	14:56:12	9.75	ph units		
	11/19/2009 14:56:12	14:56:12	8	millivolts		
	11/19/2009 14:56:12	14:56:12	12.8	ntu		
	11/19/2009 15:55:19	15:55:19	13.02	deg c		
	11/19/2009 15:55:19	15:55:19	0.882	ms/cm		
	11/19/2009 15:55:19	15:55:19	0.92	mg/l		
	11/19/2009 15:55:19	15:55:19	6.65	ph units		
	11/19/2009 15:55:19	15:55:19	129	millivolts		
	11/19/2009 15:55:19	15:55:19	9.83	ntu		
	11/19/2009 12:54:26	12:54:26	13.09	deg c		
	11/19/2009 12:54:26	12:54:26	0.056	ms/cm		
	11/19/2009 12:54:26	12:54:26	2.48	mg/l		
	11/19/2009 12:54:26	12:54:26	6.29	ph units		
	11/19/2009 12:54:26	12:54:26	90	millivolts		
	11/19/2009 12:54:26	12:54:26	5.61	ntu		
	11/18/2009 15:20:42	15:20:42	14.21	deg c		
	11/18/2009 15:20:42	15:20:42	0.872	ms/cm		
	11/18/2009 15:20:42	15:20:42	8.16	mg/l		
	11/18/2009 15:20:42	15:20:42	7.80	ph units		
	11/18/2009 15:20:42	15:20:42	88	millivolts		
	11/18/2009 15:20:42	15:20:42	207	ntu		
	11/18/2009 15:18:57	15:18:57	14.11	deg c		
	11/18/2009 15:18:57	15:18:57	0.753	ms/cm		
	11/18/2009 15:18:57	15:18:57	9.13	mg/l		
	11/18/2009 15:18:57	15:18:57	7.97	ph units		
	11/18/2009 15:18:57	15:18:57	89	millivolts		
	11/18/2009 15:18:57	15:18:57	0.0	ntu		
	11/19/2009 09:18:46	09:18:46	15.21	deg c		
	11/19/2009 09:18:46	09:18:46	0.215	ms/cm		
	11/19/2009 09:18:46	09:18:46	2.08	mg/l		
	11/19/2009 09:18:46	09:18:46	5.99	ph units		
	11/19/2009 09:18:46	09:18:46	117	millivolts		
	11/19/2009 09:18:46	09:18:46	2.59	ntu		
	11/18/2009 14:16:43	14:16:43	12.89	deg c		
	11/18/2009 14:16:43	14:16:43	0.438	ms/cm		
	11/18/2009 14:16:43	14:16:43	1.02	mg/l		
	11/18/2009 14:16:43	14:16:43	6.31	ph units		
	11/18/2009 14:16:43	14:16:43	68	millivolts		
	11/18/2009 14:16:43	14:16:43	1.87	ntu		
	11/18/2009 16:36:01	16:36:01	12.96	deg c		
	11/18/2009 16:36:01	16:36:01	0.155	ms/cm		
	11/18/2009 16:36:01	16:36:01	6.85	mg/l		
	11/18/2009 16:36:01	16:36:01	6.39	ph units		
	11/18/2009 16:36:01	16:36:01	102	millivolts		
	11/18/2009 16:36:01	16:36:01	0.0	ntu		

11/19/2009 08:07:35	08:07:35	13.14	deg c
11/19/2009 08:07:35	08:07:35	0.234	ms/cm
11/19/2009 08:07:35	08:07:35	5.91	mg/l
11/19/2009 08:07:35	08:07:35	6.35	ph units
11/19/2009 08:07:35	08:07:35	58	millivolts
11/19/2009 08:07:35	08:07:35	0.62	ntu
11/19/2009 08:10:41	08:10:41	13.21	deg c
11/19/2009 08:10:41	08:10:41	0.636	ms/cm
11/19/2009 08:10:41	08:10:41	0.54	mg/l
11/19/2009 08:10:41	08:10:41	4.97	ph units
11/19/2009 08:10:41	08:10:41	118	millivolts
11/19/2009 08:10:41	08:10:41	0.2	ntu
11/19/2009 10:40:10	10:40:10	14.16	deg c
11/19/2009 10:40:10	10:40:10	0.281	ms/cm
11/19/2009 10:40:10	10:40:10	5.31	mg/l
11/19/2009 10:40:10	10:40:10	6.06	ph units
11/19/2009 10:40:10	10:40:10	115	millivolts
11/19/2009 10:40:10	10:40:10	5.5	ntu
11/19/2009 10:05:06	10:05:06	13.29	deg c
11/19/2009 10:05:06	10:05:06	0.201	ms/cm
11/19/2009 10:05:06	10:05:06	3.49	mg/l
11/19/2009 10:05:06	10:05:06	6.35	ph units
11/19/2009 10:05:06	10:05:06	89	millivolts
11/19/2009 10:05:06	10:05:06	69.7	ntu
11/19/2009 11:18:50	11:18:50	14.61	deg c
11/19/2009 11:18:50	11:18:50	0.172	ms/cm
11/19/2009 11:18:50	11:18:50	4.63	mg/l
11/19/2009 11:18:50	11:18:50	5.62	ph units
11/19/2009 11:18:50	11:18:50	124	millivolts
11/19/2009 11:18:50	11:18:50	2.87	ntu
11/19/2009 11:23:57	11:23:57	14.07	deg c
11/19/2009 11:23:57	11:23:57	0.179	ms/cm
11/19/2009 11:23:57	11:23:57	0.96	mg/l
11/19/2009 11:23:57	11:23:57	5.60	ph units
11/19/2009 11:23:57	11:23:57	125	millivolts
11/19/2009 11:23:57	11:23:57	0.70	ntu
11/19/2009 11:37:51	11:37:51	15.61	deg c
11/19/2009 11:37:51	11:37:51	0.148	ms/cm
11/19/2009 11:37:51	11:37:51	7.10	mg/l
11/19/2009 11:37:51	11:37:51	4.85	ph units
11/19/2009 11:37:51	11:37:51	177	millivolts
11/19/2009 11:37:51	11:37:51	1.81	ntu
11/19/2009 11:43:30	11:43:30	13.79	deg c
11/19/2009 11:43:30	11:43:30	0.320	ms/cm
11/19/2009 11:43:30	11:43:30	4.18	mg/l
11/19/2009 11:43:30	11:43:30	4.91	ph units
11/19/2009 11:43:30	11:43:30	169	millivolts
11/19/2009 11:43:30	11:43:30	1.22	ntu
11/18/2009 15:09:58	15:09:58	13.95	deg c

11/18/2009 15:09:58	15:09:58	0.597	ms/cm
11/18/2009 15:09:58	15:09:58	0.81	mg/l
11/18/2009 15:09:58	15:09:58	6.51	ph units
11/18/2009 15:09:58	15:09:58	106	millivolts
11/18/2009 15:09:58	15:09:58	0.42	ntu
11/18/2009 15:12:34	15:12:34	14.29	deg c
11/18/2009 15:12:34	15:12:34	1.473	ms/cm
11/18/2009 15:12:34	15:12:34	0.96	mg/l
11/18/2009 15:12:34	15:12:34	7.90	ph units
11/18/2009 15:12:34	15:12:34	94	millivolts
11/18/2009 15:12:34	15:12:34	10.89	ntu
11/19/2009 11:02:37	11:02:37	14.32	deg c
11/19/2009 11:02:37	11:02:37	0.383	ms/cm
11/19/2009 11:02:37	11:02:37	9.69	mg/l
11/19/2009 11:02:37	11:02:37	6.19	ph units
11/19/2009 11:02:37	11:02:37	152	millivolts
11/19/2009 11:02:37	11:02:37	8.18	ntu

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
WG				
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reportable_result	value_type	remark
Yes	ACTUAL	
Yes	ACTUAL	
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Yes	ACTUAL

#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	FB111909		WQ
TRC-CT	SC33D_111909		WG
TRC-CT	SC34D_111909		WG
TRC-CT	SC37D_111909		WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
AB	Field			11/19/2009 14:20
N	Field			11/19/2009 15:20
N	Field			11/19/2009 17:30
FD	Field	SC34D_111909		11/19/2009 18:00

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
					11/19/2009
SC33D					11/19/2009
SC34D					11/19/2009
SC34D					11/19/2009

sample_receipt_date	sampler	**sampling_company_code**	sampling_reason	sampling_technique
11/19/2009	KS	TRCCTW		
11/19/2009	KS	TRCCTW		
11/19/2009	KS	TRCCTW		
11/19/2009	KS	TRCCTW		

task_code	collection_quarter	composite_yn	composite_desc	sample_class	custom_field_1
		N			
		N			
		N			
		N			

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
FB111909	E314.0	12/2/2009 13:58	T
SC33D_111909	E314.0	12/2/2009 15:07	T
SC34D_111909	E314.0	12/2/2009 16:17	T
SC37D_111909	E314.0	12/2/2009 16:52	T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		6
	initial	WG	LB	NA		6

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	12/2/2009 23:59			ACTD	quant
	12/2/2009 23:59			ACTD	quant
	12/2/2009 23:59			ACTD	quant
	12/2/2009 23:59			ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA33467-4		25	ml	MELISSAS
JA33467-1		25	ml	MELISSAS
JA33467-2		25	ml	MELISSAS
JA33467-3		25	ml	MELISSAS

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate

result_value	result_error_delta	**result_type_code**	**reportable_result**	**detect_flag**	lab_qualifiers
		TRG	Yes	N	U
		TRG	Yes	N	U
152		TRG	Yes	Y	
150		TRG	Yes	Y	

validator_qualifiers	**interpreted_qualifiers**	**organic_yn**	method_detection_limit
	U	N	0.92
	U	N	0.92
		N	5.5
		N	5.5

reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
18	18	ug/l	ug/l	
18	18	ug/l	ug/l	

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

SC35D_120709	E314.0	12/14/2009 12:43 T
SC36D_120709	E314.0	12/14/2009 13:58 T

initial	Analysis	GN33183
initial	Prep	GP51950

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#sys_loc_(	measurement_date	historical_	water_leve	water_leve	corrected_	corrected_	measured_	depth_unit
A	10/19/2009 16:00	94.82	5.47	89.35				ft btoc
B	10/19/2009 16:00	94.33	4.75	89.58				ft btoc
IW1	10/19/2009 16:00	90.33	5.23	85.1				ft btoc
IW2	10/19/2009 16:00	91.05	7.91	83.14				ft btoc
IWC-1	10/19/2009 16:00	98.13	7.7	90.43				ft btoc
IWC-2	10/19/2009 16:00	98.51	8.11	90.4				ft btoc
IWC-3	10/19/2009 16:00	97.83	7.41	90.42				ft btoc
IWC-4	10/19/2009 16:00	98.61	8.18	90.43				ft btoc
IWC-5	10/19/2009 16:00	98.03	7.64	90.39				ft btoc
K	10/19/2009 16:00	99.18	9.69	89.49				ft btoc
L	10/19/2009 16:00	103.51	11.87	91.64				ft btoc
MWH-4	10/19/2009 16:00	99.44	9.06	90.38				ft btoc
SC10D	10/19/2009 16:00	95.72	7.39	88.33				ft btoc
SC10S	10/19/2009 16:00	95.38	7.08	88.3				ft btoc
SC11S(R)	10/19/2009 16:00	108.12	15.67	92.45				ft btoc
SC12D	10/19/2009 16:00	103.19	11.59	91.6				ft btoc
SC12S	10/19/2009 16:00	104.76	12.63	92.13				ft btoc
SC13D	10/19/2009 16:00	101.99	10.66	91.33				ft btoc
SC13S(R)	10/19/2009 16:00	101.41	8.69	92.72				ft btoc
SC14S	10/19/2009 16:00	108.38	16.07	92.31				ft btoc
SC15S	10/19/2009 16:00	108.32	14.83	93.49				ft btoc
SC16S	10/19/2009 16:00	108.05	18.05	90				ft btoc
SC17D	10/19/2009 16:00	108.07	19.05	89.02				ft btoc
SC17S	10/19/2009 16:00	109.26	20.19	89.07				ft btoc
SC18D	10/19/2009 16:00	96.01	9.56	86.45				ft btoc
SC18S	10/19/2009 16:00	95.72	9.26	86.46				ft btoc
SC19D	10/19/2009 16:00	92.03	5.31	86.72				ft btoc
SC19S	10/19/2009 16:00	92.98	5.99	86.99				ft btoc
SC1D	10/19/2009 16:00	90.9	8.27	82.63				ft btoc
SC1S	10/19/2009 16:00	87.26	3.73	83.53				ft btoc
SC20D	10/19/2009 16:00	104.53	13.76	90.77				ft btoc
SC21D	10/19/2009 16:00	91.65	5.81	85.84				ft btoc
SC21S	10/19/2009 16:00	92.64	6.41	86.23				ft btoc
SC22S	10/19/2009 16:00	99.65	8.83	90.82				ft btoc
SC23S	10/19/2009 16:00	102.21	11.46	90.75				ft btoc
SC24D	10/19/2009 16:00	93.52	10.23	83.29				ft btoc
SC24S	10/19/2009 16:00	93.57	9.9	83.67				ft btoc
SC25S	10/19/2009 16:00	102.27	9.76	92.51				ft btoc
SC26D	10/19/2009 16:00	100.45	10.55	89.9				ft btoc
SC27S	10/19/2009 16:00	100.54	9.11	91.43				ft btoc
SC28D	10/19/2009 16:00	106.87	18.96	87.91				ft btoc
SC2D(R)	10/19/2009 16:00	92.7	7.84	84.86				ft btoc
SC30D	10/19/2009 16:00	115.58	27.36	88.22				ft btoc
SC31D	10/19/2009 16:00	102.61	19.05	83.56				ft btoc
SC32D	10/19/2009 16:00	90	11.06	78.94				ft btoc
SC3D(R)	10/19/2009 16:00	91.06	7.11	83.95				ft btoc
SC3S	10/19/2009 16:00	90.32	6.32	84				ft btoc
SC4S	10/19/2009 16:00	93.65	6.77	86.88				ft btoc
SC5D	10/19/2009 16:00	97	12.39	84.61				ft btoc
SC5S	10/19/2009 16:00	96.55	11.85	84.7				ft btoc
SC6D	10/19/2009 16:00	94.38	6.55	87.83				ft btoc

SC6S	10/19/2009 16:00	94.62	5.55	89.07	ft btoc
SC9S	10/19/2009 16:00	96.23	6.56	89.67	ft btoc
W2(R)	10/19/2009 16:00	97.96	5.44	92.52	ft btoc
W3D	10/19/2009 16:00	108.37	15.94	92.43	ft btoc
W4	10/19/2009 16:00	104.58	14.03	90.55	ft btoc
SC1D	11/18/2009 14:35	90.9	7.18	83.72	ft btoc
SC10S	11/18/2009 15:35	95.38	6.44	88.94	ft btoc
SC10D	11/18/2009 16:20	95.72	6.82	88.9	ft btoc
SC1S	11/18/2009 17:00	87.26	2.17	85.09	ft btoc
SC3S	11/19/2009 8:25	90.32	4.76	85.56	ft btoc
SC3D(R)	11/19/2009 8:45	91.06	5.53	85.53	ft btoc
SC25S	11/19/2009 9:35	102.27	8.04	94.23	ft btoc
IW1	11/19/2009 10:35	90.33	3.76	86.57	ft btoc
SC2D(R)	11/19/2009 11:10	92.7	6.36	86.34	ft btoc
IW2	11/19/2009 11:25	91.05	6.43	84.62	ft btoc
SC5S	11/19/2009 11:40	96.55	10.31	86.24	ft btoc
SC5D	11/19/2009 11:45	97	10.89	86.11	ft btoc
SC24S	11/19/2009 12:05	93.57	8.1	85.47	ft btoc
SC24D	11/19/2009 12:25	93.52	8.56	84.96	ft btoc
SC26D	11/19/2009 13:55	100.45	8.96	91.49	ft btoc
SC33D	11/19/2009 15:20	108.08	19.32	88.76	ft btoc
SC34D	11/19/2009 17:30	103.82	16.84	86.98	ft btoc
SC35D	12/7/2009 11:58	81.24	14.77	66.47	ft btoc
SC36D	12/7/2009 13:45	91.8	7.95	83.85	ft btoc
SC26D	12/7/2009 16:05	100.45	9.71	90.74	ft btoc
SC10D	12/7/2009 17:09	95.72	6.83	88.89	ft btoc
SC10S	12/7/2009 17:20	95.38	6.56	88.82	ft btoc
SC25S	12/8/2009 9:06	102.27	8.46	93.81	ft btoc
B	12/8/2009 10:00	94.33	4.19	90.14	ft btoc
A	12/8/2009 10:10	94.82	6.82	88	ft btoc
SC6D	12/8/2009 10:40	94.38	9.81	84.57	ft btoc
SC1D	12/8/2009 11:06	90.9	7.27	83.63	ft btoc
SC1S	12/8/2009 11:22	87.26	2.82	84.44	ft btoc
SC3S	12/8/2009 11:51	90.32	5.55	84.77	ft btoc
SC3D(R)	12/8/2009 11:47	91.06	6.31	84.75	ft btoc
SC2D(R)	12/8/2009 12:53	92.7	7.21	85.49	ft btoc
IW2	12/8/2009 13:10	91.05	7.24	83.81	ft btoc
IW1	12/8/2009 12:41	90.33	4.6	85.73	ft btoc
SC5S	12/8/2009 13:53	96.55	11.1	85.45	ft btoc
SC5D	12/8/2009 14:09	97	11.63	85.37	ft btoc
SC24S	12/8/2009 14:53	93.57	8.7	84.87	ft btoc
SC24D	12/8/2009 14:41	93.52	9.35	84.17	ft btoc
A	1/19/2010 14:56	94.82	4.92	89.9	ft btoc
IWC-3	1/19/2010 14:36	97.83	4.82	93.01	ft btoc
IWC-4	1/19/2010 14:44	98.61	5.58	93.03	ft btoc
IWC-5	1/19/2010 14:34	98.03	5.13	92.9	ft btoc
W3D	1/19/2010 13:40	108.37	12.78	95.59	ft btoc
W4	1/19/2010 15:31	104.58	12.37	92.21	ft btoc
MWH-4	1/19/2010 14:06	99.37	7	92.37	ft btoc
SC12D	1/19/2010 13:41	103.19	8.4	94.79	ft btoc
SC13D	1/19/2010 13:59	101.99	7.57	94.42	ft btoc
SC20D	1/19/2010 15:26	104.53	11.05	93.48	ft btoc

SC22D	1/19/2010 14:03	98.65	5.67	92.98	ft btoc
SC1D	1/19/2010 16:10	90.9	6.11	84.79	ft btoc
SC2D(R)	1/19/2010 16:22	92.53	6.29	86.24	ft btoc
SC3D(R)	1/19/2010 16:14	91.06	5.29	85.77	ft btoc
SC5D	1/19/2010 16:32	97	10.68	86.32	ft btoc
SC6D	1/19/2010 15:55	94.38	4.75	89.63	ft btoc
SC10D	1/19/2010 15:50	95.72	5.64	90.08	ft btoc
SC17D	1/19/2010 16:00	108.07	17.06	91.01	ft btoc
SC18D	1/19/2010 16:02	96.01	7.71	88.3	ft btoc
SC19D	1/19/2010 17:00	92.03	3.62	88.41	ft btoc
SC21D	1/19/2010 16:53	91.65	4.15	87.5	ft btoc
SC24D	1/19/2010 16:38	93.52	8.12	85.4	ft btoc
SC26D	1/19/2010 15:40	100.45	7.91	92.54	ft btoc
IW2	1/19/2010 16:20	92.05	6.37	85.68	ft btoc
SC28D	1/19/2010 15:45	106.87	16.77	90.1	ft btoc
SC30D	1/19/2010 15:42	115.58	24.2	91.38	ft btoc
SC31D	1/19/2010 16:35	102.61	16.93	85.68	ft btoc
SC32D	1/19/2010 16:45	91.62	8.35	83.27	ft btoc
SC33D	1/19/2010 0:00	108.08	17.78	90.3	ft btoc
SC34D	1/19/2010 0:00	103.82	16.14	87.68	ft btoc
SC35D	1/19/2010 0:00	81.24	13.34	67.9	ft btoc
SC36D	1/19/2010 0:00	91.8	7.01	84.79	ft btoc
B	1/19/2010 14:53	94.33	2.77	91.56	ft btoc
K	1/19/2010 15:30	99.18	7.57	91.61	ft btoc
L	1/19/2010 15:16	103.51	9.12	94.39	ft btoc
IWC-2	1/19/2010 14:43	98.51	5.51	93	ft btoc
W2(R)	1/19/2010 13:09	97.96	3.12	94.84	ft btoc
SC9S	1/19/2010 14:59	96.23	4.62	91.61	ft btoc
SC11S(R)	1/19/2010 13:40	108.12	12.34	95.78	ft btoc
SC12S	1/19/2010 13:42	104.76	9.38	95.38	ft btoc
SC13S(R)	1/19/2010 13:58	101.1	5.57	95.53	ft btoc
SC14S	1/19/2010 13:35	108.38	12.82	95.56	ft btoc
SC15S	1/19/2010 15:15	108.32	11.98	96.34	ft btoc
SC16S	1/19/2010 15:35	108.05	15.34	92.71	ft btoc
SC20S	1/19/2010 15:25	104.45	10.62	93.83	ft btoc
SC22S	1/19/2010 14:04	99.65	6.31	93.34	ft btoc
SC23S	1/19/2010 15:21	102.21	5.63	96.58	ft btoc
SC25S	1/19/2010 13:00	102.27	6.34	95.93	ft btoc
SC27S	1/19/2010 15:30	100.54	6.17	94.37	ft btoc
SC1S	1/19/2010 16:12	87.26	1.76	85.5	ft btoc
SC3S	1/19/2010 16:15	90.32	4.71	85.61	ft btoc
SC4S	1/19/2010 16:00	93.65	5.19	88.46	ft btoc
SC5S	1/19/2010 16:33	96.55	10.05	86.5	ft btoc
SC6S	1/19/2010 15:57	94.62	3.98	90.64	ft btoc
SC10S	1/19/2010 15:51	95.38	5.48	89.9	ft btoc
SC17S	1/19/2010 15:55	109.26	17.96	91.3	ft btoc
SC18S	1/19/2010 16:03	95.72	7.39	88.33	ft btoc
SC19S	1/19/2010 17:02	92.98	5.12	87.86	ft btoc
SC21S	1/19/2010 16:54	92.64	4.78	87.86	ft btoc
SC24S	1/19/2010 16:37	93.57	7.67	85.9	ft btoc
IW1	1/19/2010 16:24	90.33	4.84	85.49	ft btoc
SC26D	9/8/2010 9:24	100.45	10.82	89.63	ft btoc

SC28D	9/8/2010 11:06	103.82	19.47	84.35	ft btoc
SC34D	9/8/2010 13:36	103.82	19.11	84.71	ft btoc
SC33D	9/8/2010 12:59	108.08	21.21	86.87	ft btoc
SC36D	9/8/2010 15:09	91.8	9.39	82.41	ft btoc
SC35D	9/8/2010 14:38	81.24	17.08	64.16	ft btoc
SC30D	9/8/2010 16:27	115.58	27.45	88.13	ft btoc
W2(R)	9/8/2010 17:31	97.96	6.02	91.94	ft btoc
SC22S	9/9/2010 9:08	99.65	9.32	90.33	ft btoc
IWC-4	9/9/2010 9:39	98.61	8.62	89.99	ft btoc
SC20D	9/9/2010 10:05	104.53	14.28	90.25	ft btoc
SC14S	9/9/2010 8:57	108.38	16.44	91.94	ft btoc
W3D	9/9/2010 9:12	108.37	16.24	92.13	ft btoc
SC11S(R)	9/9/2010 9:33	108.12	15.81	92.31	ft btoc
SC12D	9/9/2010 9:40	103.19	11.81	91.38	ft btoc
SC16S	9/9/2010 10:40	108.05	18.69	89.36	ft btoc
W4	9/9/2010 11:02	104.58	15.55	89.03	ft btoc
K	9/9/2010 11:20	99.18	10.54	88.64	ft btoc
SC10S	9/8/2010 9:00	95.38	7.88	87.5	ft btoc
SC10D	9/8/2010 9:12	95.72	8.24	87.48	ft btoc
SC6S	9/8/2010 9:55	94.62	8.29	86.33	ft btoc
SC18S	9/8/2010 10:05	95.72	9.98	85.74	ft btoc
SC1D	9/8/2010 10:26	90.9	9.02	81.88	ft btoc
SC1S	9/8/2010 10:48	87.26	4.46	82.8	ft btoc
SC3S	9/8/2010 11:09	90.32	6.97	83.35	ft btoc
SC3D(R)	9/8/2010 11:19	91.06	7.73	83.33	ft btoc
SC2D(R)	9/8/2010 14:34	92.53	8.44	84.09	ft btoc
SC21S	9/8/2010 11:58	92.64	7.12	85.52	ft btoc
SC21D	9/8/2010 12:28	91.65	6.41	85.24	ft btoc
SC24S	9/8/2010 13:15	93.57	10.74	82.83	ft btoc
SC17S	9/8/2010 15:41	109.26	20.92	88.34	ft btoc
SC17D	9/8/2010 15:52	108.07	19.92	88.15	ft btoc
SC32D	9/8/2010 14:15	91.62	11.79	79.83	ft btoc
SC25S	9/8/2010 17:29	102.27	9.57	92.7	ft btoc

technician	dry_indica	measurem	batch_num	dip_or_ele	remark	Lnapl_cas	Lnapl_dep	Dnapl_cas	Dnapl_dep

Task_code

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	SC35D	SC35D_120709	TEMP		
TRC-CT	SC35D	SC35D_120709	SC		
TRC-CT	SC35D	SC35D_120709	DIS_OXYGEN		
TRC-CT	SC35D	SC35D_120709	pH		
TRC-CT	SC35D	SC35D_120709	ORP		
TRC-CT	SC35D	SC35D_120709	TURB		
TRC-CT	SC36D	SC36D_120709	TEMP		
TRC-CT	SC36D	SC36D_120709	SC		
TRC-CT	SC36D	SC36D_120709	DIS_OXYGEN		
TRC-CT	SC36D	SC36D_120709	pH		
TRC-CT	SC36D	SC36D_120709	ORP		
TRC-CT	SC36D	SC36D_120709	TURB		
TRC-CT	SC26D	SC26D_120709	TEMP		
TRC-CT	SC26D	SC26D_120709	SC		
TRC-CT	SC26D	SC26D_120709	DIS_OXYGEN		
TRC-CT	SC26D	SC26D_120709	pH		
TRC-CT	SC26D	SC26D_120709	ORP		
TRC-CT	SC10D	SC10D_120709	TEMP		
TRC-CT	SC10D	SC10D_120709	SC		
TRC-CT	SC10D	SC10D_120709	DIS_OXYGEN		
TRC-CT	SC10D	SC10D_120709	pH		
TRC-CT	SC10D	SC10D_120709	ORP		
TRC-CT	SC10D	SC10D_120709	TURB		
TRC-CT	SC10S	SC10S_120709	TEMP		
TRC-CT	SC10S	SC10S_120709	SC		
TRC-CT	SC10S	SC10S_120709	DIS_OXYGEN		
TRC-CT	SC10S	SC10S_120709	pH		
TRC-CT	SC10S	SC10S_120709	ORP		
TRC-CT	SC10S	SC10S_120709	TURB		
TRC-CT	SC25S	SC25S_120809	TEMP		
TRC-CT	SC25S	SC25S_120809	SC		
TRC-CT	SC25S	SC25S_120809	DIS_OXYGEN		
TRC-CT	SC25S	SC25S_120809	pH		
TRC-CT	SC25S	SC25S_120809	ORP		
TRC-CT	SC25S	SC25S_120809	TURB		
TRC-CT	SC1D	SC1D_120809	TEMP		
TRC-CT	SC1D	SC1D_120809	SC		
TRC-CT	SC1D	SC1D_120809	DIS_OXYGEN		
TRC-CT	SC1D	SC1D_120809	pH		
TRC-CT	SC1D	SC1D_120809	ORP		
TRC-CT	SC1D	SC1D_120809	TURB		
TRC-CT	SC1S	SC1S_120809	TEMP		
TRC-CT	SC1S	SC1S_120809	SC		
TRC-CT	SC1S	SC1S_120809	DIS_OXYGEN		
TRC-CT	SC1S	SC1S_120809	pH		
TRC-CT	SC1S	SC1S_120809	ORP		
TRC-CT	SC1S	SC1S_120809	TURB		
TRC-CT	SC3S	SC3S_120809	TEMP		

TRC-CT	SC3S	SC3S_120809	SC
TRC-CT	SC3S	SC3S_120809	DIS_OXYGEN
TRC-CT	SC3S	SC3S_120809	pH
TRC-CT	SC3S	SC3S_120809	ORP
TRC-CT	SC3S	SC3S_120809	TURB
TRC-CT	SC3D(R)	SC3D(R)_120809	TEMP
TRC-CT	SC3D(R)	SC3D(R)_120809	SC
TRC-CT	SC3D(R)	SC3D(R)_120809	DIS_OXYGEN
TRC-CT	SC3D(R)	SC3D(R)_120809	pH
TRC-CT	SC3D(R)	SC3D(R)_120809	ORP
TRC-CT	SC3D(R)	SC3D(R)_120809	TURB
TRC-CT	SC2D(R)	SC2D(R)_120809	TEMP
TRC-CT	SC2D(R)	SC2D(R)_120809	SC
TRC-CT	SC2D(R)	SC2D(R)_120809	DIS_OXYGEN
TRC-CT	SC2D(R)	SC2D(R)_120809	pH
TRC-CT	SC2D(R)	SC2D(R)_120809	ORP
TRC-CT	SC2D(R)	SC2D(R)_120809	TURB
TRC-CT	IW1	IW1_120809	TEMP
TRC-CT	IW1	IW1_120809	SC
TRC-CT	IW1	IW1_120809	DIS_OXYGEN
TRC-CT	IW1	IW1_120809	pH
TRC-CT	IW1	IW1_120809	ORP
TRC-CT	IW1	IW1_120809	TURB
TRC-CT	SC5S	SC5S_120809	TEMP
TRC-CT	SC5S	SC5S_120809	SC
TRC-CT	SC5S	SC5S_120809	DIS_OXYGEN
TRC-CT	SC5S	SC5S_120809	pH
TRC-CT	SC5S	SC5S_120809	ORP
TRC-CT	SC5S	SC5S_120809	TURB
TRC-CT	SC5D	SC5D_120809	TEMP
TRC-CT	SC5D	SC5D_120809	SC
TRC-CT	SC5D	SC5D_120809	DIS_OXYGEN
TRC-CT	SC5D	SC5D_120809	pH
TRC-CT	SC5D	SC5D_120809	ORP
TRC-CT	SC5D	SC5D_120809	TURB
TRC-CT	SC24S	SC24S_120809	TEMP
TRC-CT	SC24S	SC24S_120809	SC
TRC-CT	SC24S	SC24S_120809	DIS_OXYGEN
TRC-CT	SC24S	SC24S_120809	pH
TRC-CT	SC24S	SC24S_120809	ORP
TRC-CT	SC24S	SC24S_120809	TURB
TRC-CT	SC24D	SC24D_120809	TEMP
TRC-CT	SC24D	SC24D_120809	SC
TRC-CT	SC24D	SC24D_120809	DIS_OXYGEN
TRC-CT	SC24D	SC24D_120809	pH
TRC-CT	SC24D	SC24D_120809	ORP
TRC-CT	SC24D	SC24D_120809	TURB
TRC-CT	Layne	Layne_120809	TEMP
TRC-CT	Layne	Layne_120809	SC

TRC-CT	Layne	Layne_120809	DIS_OXYGEN
TRC-CT	Layne	Layne_120809	pH
TRC-CT	Layne	Layne_120809	ORP
TRC-CT	Layne	Layne_120809	TURB
TRC-CT	RW6D	RW6D_120809	TEMP
TRC-CT	RW6D	RW6D_120809	SC
TRC-CT	RW6D	RW6D_120809	DIS_OXYGEN
TRC-CT	RW6D	RW6D_120809	pH
TRC-CT	RW6D	RW6D_120809	ORP
TRC-CT	RW6D	RW6D_120809	TURB
TRC-CT	RIW2	RIW2_120809	TEMP
TRC-CT	RIW2	RIW2_120809	SC
TRC-CT	RIW2	RIW2_120809	DIS_OXYGEN
TRC-CT	RIW2	RIW2_120809	pH
TRC-CT	RIW2	RIW2_120809	ORP
TRC-CT	RIW2	RIW2_120809	TURB

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	12/07/2009 11:38:33	11:38:33	12.96	deg c		
	12/07/2009 11:38:33	11:38:33	0.087	ms/cm		
	12/07/2009 11:38:33	11:38:33	2.98	mg/l		
	12/07/2009 11:38:33	11:38:33	8.23	ph units		
	12/07/2009 11:38:33	11:38:33	89	millivolts		
	12/07/2009 11:38:33	11:38:33	11.4	ntu		
	12/07/2009 13:32:44	13:32:44	12.98	deg c		
	12/07/2009 13:32:44	13:32:44	0.069	ms/cm		
	12/07/2009 13:32:44	13:32:44	7.06	mg/l		
	12/07/2009 13:32:44	13:32:44	6.28	ph units		
	12/07/2009 13:32:44	13:32:44	119	millivolts		
	12/07/2009 13:32:44	13:32:44	14.1	ntu		
	12/07/2009 16:01:21	16:01:21	12.24	deg c		
	12/07/2009 16:01:21	16:01:21	0.041	ms/cm		
	12/07/2009 16:01:21	16:01:21	8.34	mg/l		
	12/07/2009 16:01:21	16:01:21	7.94	ph units		
	12/07/2009 16:01:21	16:01:21	97	millivolts		
	12/07/2009 17:04:57	17:04:57	13.60	deg c		
	12/07/2009 17:04:57	17:04:57	1.476	ms/cm		
	12/07/2009 17:04:57	17:04:57	0.73	mg/l		
	12/07/2009 17:04:57	17:04:57	7.11	ph units		
	12/07/2009 17:04:57	17:04:57	37	millivolts		
	12/07/2009 17:04:57	17:04:57	5.75	ntu		
	12/07/2009 17:14:43	17:14:43	13.56	deg c		
	12/07/2009 17:14:43	17:14:43	0.608	ms/cm		
	12/07/2009 17:14:43	17:14:43	0.40	mg/l		
	12/07/2009 17:14:43	17:14:43	7.11	ph units		
	12/07/2009 17:14:43	17:14:43	87	millivolts		
	12/07/2009 17:14:43	17:14:43	1.36	ntu		
	12/08/2009 09:01:32	09:01:32	13.44	deg c		
	12/08/2009 09:01:32	09:01:32	0.224	ms/cm		
	12/08/2009 09:01:32	09:01:32	3.40	mg/l		
	12/08/2009 09:01:32	09:01:32	6.38	ph units		
	12/08/2009 09:01:32	09:01:32	127	millivolts		
	12/08/2009 09:01:32	09:01:32	1.45	ntu		
	12/08/2009 10:59:02	10:59:02	12.54	deg c		
	12/08/2009 10:59:02	10:59:02	0.396	ms/cm		
	12/08/2009 10:59:02	10:59:02	5.87	mg/l		
	12/08/2009 10:59:02	10:59:02	6.24	ph units		
	12/08/2009 10:59:02	10:59:02	123	millivolts		
	12/08/2009 10:59:02	10:59:02	0.59	ntu		
	12/08/2009 11:14:20	11:14:20	13.62	deg c		
	12/08/2009 11:14:20	11:14:20	0.124	ms/cm		
	12/08/2009 11:14:20	11:14:20	6.77	mg/l		
	12/08/2009 11:14:20	11:14:20	5.70	ph units		
	12/08/2009 11:14:20	11:14:20	169	millivolts		
	12/08/2009 11:14:20	11:14:20	0.16	ntu		
	12/08/2009 11:48:54	11:48:54	13.61	deg c		

12/08/2009 11:48:54	11:48:54	0.294	ms/cm
12/08/2009 11:48:54	11:48:54	5.06	mg/l
12/08/2009 11:48:54	11:48:54	5.62	ph units
12/08/2009 11:48:54	11:48:54	218	millivolts
12/08/2009 11:48:54	11:48:54	0.78	ntu
12/08/2009 11:43:22	11:43:22	13.16	deg c
12/08/2009 11:43:22	11:43:22	0.637	ms/cm
12/08/2009 11:43:22	11:43:22	0.29	mg/l
12/08/2009 11:43:22	11:43:22	4.68	ph units
12/08/2009 11:43:22	11:43:22	263	millivolts
12/08/2009 11:43:22	11:43:22	0.0	ntu
12/08/2009 12:48:47	12:48:47	14.19	deg c
12/08/2009 12:48:47	12:48:47	0.278	ms/cm
12/08/2009 12:48:47	12:48:47	4.45	mg/l
12/08/2009 12:48:47	12:48:47	5.95	ph units
12/08/2009 12:48:47	12:48:47	197	millivolts
12/08/2009 12:48:47	12:48:47	3.38	ntu
12/08/2009 12:38:06	12:38:06	13.30	deg c
12/08/2009 12:38:06	12:38:06	0.356	ms/cm
12/08/2009 12:38:06	12:38:06	3.07	mg/l
12/08/2009 12:38:06	12:38:06	6.34	ph units
12/08/2009 12:38:06	12:38:06	191	millivolts
12/08/2009 12:38:06	12:38:06	1.72	ntu
12/08/2009 13:39:25	13:39:25	14.12	deg c
12/08/2009 13:39:25	13:39:25	0.168	ms/cm
12/08/2009 13:39:25	13:39:25	4.05	mg/l
12/08/2009 13:39:25	13:39:25	5.41	ph units
12/08/2009 13:39:25	13:39:25	177	millivolts
12/08/2009 13:39:25	13:39:25	33	ntu
12/08/2009 13:47:31	13:47:31	14.08	deg c
12/08/2009 13:47:31	13:47:31	0.177	ms/cm
12/08/2009 13:47:31	13:47:31	0.90	mg/l
12/08/2009 13:47:31	13:47:31	5.63	ph units
12/08/2009 13:47:31	13:47:31	188	millivolts
12/08/2009 13:47:31	13:47:31	0.0	ntu
12/08/2009 14:48:11	14:48:11	14.74	deg c
12/08/2009 14:48:11	14:48:11	0.173	ms/cm
12/08/2009 14:48:11	14:48:11	5.77	mg/l
12/08/2009 14:48:11	14:48:11	4.69	ph units
12/08/2009 14:48:11	14:48:11	316	millivolts
12/08/2009 14:48:11	14:48:11	3.81	ntu
12/08/2009 14:37:54	14:37:54	13.79	deg c
12/08/2009 14:37:54	14:37:54	0.257	ms/cm
12/08/2009 14:37:54	14:37:54	4.20	mg/l
12/08/2009 14:37:54	14:37:54	5.12	ph units
12/08/2009 14:37:54	14:37:54	246	millivolts
12/08/2009 14:37:54	14:37:54	0.18	ntu
12/08/2009 09:50:00	09:50:00	13.18	deg c
12/08/2009 09:50:00	09:50:00	0.864	ms/cm

12/08/2009 09:50:00	09:50:00	10.95	mg/l
12/08/2009 09:50:00	09:50:00	5.95	ph units
12/08/2009 09:50:00	09:50:00	90.3	millivolts
12/08/2009 09:50:00	09:50:00	2.27	ntu
12/08/2009 10:20:00	10:20:00	13.17	deg c
12/08/2009 10:20:00	10:20:00	0.879	ms/cm
12/08/2009 10:20:00	10:20:00	4.34	mg/l
12/08/2009 10:20:00	10:20:00	7.02	ph units
12/08/2009 10:20:00	10:20:00	105.8	millivolts
12/08/2009 10:20:00	10:20:00	0.91	ntu
12/08/2009 12:20:00	12:20:00	12.98	deg c
12/08/2009 12:20:00	12:20:00	0.388	ms/cm
12/08/2009 12:20:00	12:20:00	8.84	mg/l
12/08/2009 12:20:00	12:20:00	6.12	ph units
12/08/2009 12:20:00	12:20:00	197.5	millivolts
12/08/2009 12:20:00	12:20:00	0.0	ntu

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
WG				
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reportable_result	value_type	remark
Yes	ACTUAL	
Yes	ACTUAL	
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#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	SC35D_120709		WG
TRC-CT	SC36D_120709		WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
N	Field			12/7/2009 12:30
N	Field			12/7/2009 14:25

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
SC35D					12/7/2009
SC36D					12/7/2009

sample_receipt_date	sampler	**sampling_company_code**	sampling_reason	sampling_technique
12/7/2009	CC	TRCCTW		
12/7/2009	CC	TRCCTW		

task_code	collection_quarter	**composite_yn**	composite_desc	sample_class	custom_field_1
		N			
		N			

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
SC35D_120709	E314.0	12/14/2009 12:43	T
SC36D_120709	E314.0	12/14/2009 13:58	T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	12/14/2009 23:59			ACTD	quant
	12/14/2009 23:59			ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA34587-1		25	ml	MELISSAS
JA34587-2		25	ml	MELISSAS

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate

result_value	result_error_delta	**result_type_code**	**reportable_result**	**detect_flag**	lab_qualifiers
2		TRG	Yes	Y	B
5.3		TRG	Yes	Y	

validator_qualifiers	**interpreted_qualifiers**	**organic_yn**	method_detection_limit
	B	N	0.92
		N	0.92

reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	A	A_012110	TEMP		
TRC-CT	A	A_012110	SC		
TRC-CT	A	A_012110	DIS_OXYGEN		
TRC-CT	A	A_012110	pH		
TRC-CT	A	A_012110	ORP		
TRC-CT	A	A_012110	TURB		
TRC-CT	IWC-5	IWC-5_011910	TEMP		
TRC-CT	IWC-5	IWC-5_011910	SC		
TRC-CT	IWC-5	IWC-5_011910	DIS_OXYGEN		
TRC-CT	IWC-5	IWC-5_011910	pH		
TRC-CT	IWC-5	IWC-5_011910	ORP		
TRC-CT	IWC-5	IWC-5_011910	TURB		
TRC-CT	W3D	W3D_012010	TEMP		
TRC-CT	W3D	W3D_012010	SC		
TRC-CT	W3D	W3D_012010	DIS_OXYGEN		
TRC-CT	W3D	W3D_012010	pH		
TRC-CT	W3D	W3D_012010	ORP		
TRC-CT	W3D	W3D_012010	TURB		
TRC-CT	MWH-4	MWH-4_011910	TEMP		
TRC-CT	MWH-4	MWH-4_011910	SC		
TRC-CT	MWH-4	MWH-4_011910	DIS_OXYGEN		
TRC-CT	MWH-4	MWH-4_011910	pH		
TRC-CT	MWH-4	MWH-4_011910	ORP		
TRC-CT	MWH-4	MWH-4_011910	TURB		
TRC-CT	SC12D	SC12D_012010	TEMP		
TRC-CT	SC12D	SC12D_012010	SC		
TRC-CT	SC12D	SC12D_012010	DIS_OXYGEN		
TRC-CT	SC12D	SC12D_012010	pH		
TRC-CT	SC12D	SC12D_012010	ORP		
TRC-CT	SC12D	SC12D_012010	TURB		
TRC-CT	SC13D	SC13D_012110	TEMP		
TRC-CT	SC13D	SC13D_012110	SC		
TRC-CT	SC13D	SC13D_012110	DIS_OXYGEN		
TRC-CT	SC13D	SC13D_012110	pH		
TRC-CT	SC13D	SC13D_012110	ORP		
TRC-CT	SC13D	SC13D_012110	TURB		
TRC-CT	SC1D	SC1D_012110	TEMP		
TRC-CT	SC1D	SC1D_012110	SC		
TRC-CT	SC1D	SC1D_012110	DIS_OXYGEN		
TRC-CT	SC1D	SC1D_012110	pH		
TRC-CT	SC1D	SC1D_012110	ORP		
TRC-CT	SC1D	SC1D_012110	TURB		
TRC-CT	SC2D(R)	SC2D(R)_012110	TEMP		
TRC-CT	SC2D(R)	SC2D(R)_012110	SC		
TRC-CT	SC2D(R)	SC2D(R)_012110	DIS_OXYGEN		
TRC-CT	SC2D(R)	SC2D(R)_012110	pH		
TRC-CT	SC2D(R)	SC2D(R)_012110	ORP		
TRC-CT	SC2D(R)	SC2D(R)_012110	TURB		

TRC-CT	SC3D(R)	SC3D(R)_012110	TEMP
TRC-CT	SC3D(R)	SC3D(R)_012110	SC
TRC-CT	SC3D(R)	SC3D(R)_012110	DIS_OXYGEN
TRC-CT	SC3D(R)	SC3D(R)_012110	pH
TRC-CT	SC3D(R)	SC3D(R)_012110	ORP
TRC-CT	SC3D(R)	SC3D(R)_012110	TURB
TRC-CT	SC5D	SC5D_012110	TEMP
TRC-CT	SC5D	SC5D_012110	SC
TRC-CT	SC5D	SC5D_012110	DIS_OXYGEN
TRC-CT	SC5D	SC5D_012110	pH
TRC-CT	SC5D	SC5D_012110	ORP
TRC-CT	SC5D	SC5D_012110	TURB
TRC-CT	SC6D	SC6D_012210	TEMP
TRC-CT	SC6D	SC6D_012210	SC
TRC-CT	SC6D	SC6D_012210	DIS_OXYGEN
TRC-CT	SC6D	SC6D_012210	pH
TRC-CT	SC6D	SC6D_012210	ORP
TRC-CT	SC6D	SC6D_012210	TURB
TRC-CT	SC10D	SC10D_012210	TEMP
TRC-CT	SC10D	SC10D_012210	SC
TRC-CT	SC10D	SC10D_012210	DIS_OXYGEN
TRC-CT	SC10D	SC10D_012210	pH
TRC-CT	SC10D	SC10D_012210	ORP
TRC-CT	SC10D	SC10D_012210	TURB
TRC-CT	SC19D	SC19D_012110	TEMP
TRC-CT	SC19D	SC19D_012110	SC
TRC-CT	SC19D	SC19D_012110	DIS_OXYGEN
TRC-CT	SC19D	SC19D_012110	pH
TRC-CT	SC19D	SC19D_012110	ORP
TRC-CT	SC19D	SC19D_012110	TURB
TRC-CT	SC21D	SC21D_012110	TEMP
TRC-CT	SC21D	SC21D_012110	SC
TRC-CT	SC21D	SC21D_012110	DIS_OXYGEN
TRC-CT	SC21D	SC21D_012110	pH
TRC-CT	SC21D	SC21D_012110	ORP
TRC-CT	SC21D	SC21D_012110	TURB
TRC-CT	SC24D	SC24D_012210	TEMP
TRC-CT	SC24D	SC24D_012210	SC
TRC-CT	SC24D	SC24D_012210	DIS_OXYGEN
TRC-CT	SC24D	SC24D_012210	pH
TRC-CT	SC24D	SC24D_012210	ORP
TRC-CT	SC24D	SC24D_012210	TURB
TRC-CT	SC26D	SC26D_012110	TEMP
TRC-CT	SC26D	SC26D_012110	SC
TRC-CT	SC26D	SC26D_012110	DIS_OXYGEN
TRC-CT	SC26D	SC26D_012110	pH
TRC-CT	SC26D	SC26D_012110	ORP
TRC-CT	SC26D	SC26D_012110	TURB
TRC-CT	IW2	IW2_012110	TEMP

TRC-CT	IW2	IW2_012110	SC
TRC-CT	IW2	IW2_012110	DIS_OXYGEN
TRC-CT	IW2	IW2_012110	pH
TRC-CT	IW2	IW2_012110	ORP
TRC-CT	IW2	IW2_012110	TURB
TRC-CT	SC28D	SC28D_012010	TEMP
TRC-CT	SC28D	SC28D_012010	SC
TRC-CT	SC28D	SC28D_012010	DIS_OXYGEN
TRC-CT	SC28D	SC28D_012010	pH
TRC-CT	SC28D	SC28D_012010	ORP
TRC-CT	SC28D	SC28D_012010	TURB
TRC-CT	SC30D	SC30D_012010	TEMP
TRC-CT	SC30D	SC30D_012010	SC
TRC-CT	SC30D	SC30D_012010	DIS_OXYGEN
TRC-CT	SC30D	SC30D_012010	pH
TRC-CT	SC30D	SC30D_012010	ORP
TRC-CT	SC30D	SC30D_012010	TURB
TRC-CT	SC31D	SC31D_012110	TEMP
TRC-CT	SC31D	SC31D_012110	SC
TRC-CT	SC31D	SC31D_012110	DIS_OXYGEN
TRC-CT	SC31D	SC31D_012110	pH
TRC-CT	SC31D	SC31D_012110	ORP
TRC-CT	SC31D	SC31D_012110	TURB
TRC-CT	SC32D	SC32D_012210	TEMP
TRC-CT	SC32D	SC32D_012210	SC
TRC-CT	SC32D	SC32D_012210	DIS_OXYGEN
TRC-CT	SC32D	SC32D_012210	pH
TRC-CT	SC32D	SC32D_012210	ORP
TRC-CT	SC32D	SC32D_012210	TURB
TRC-CT	SC33D	SC33D_012010	TEMP
TRC-CT	SC33D	SC33D_012010	SC
TRC-CT	SC33D	SC33D_012010	DIS_OXYGEN
TRC-CT	SC33D	SC33D_012010	pH
TRC-CT	SC33D	SC33D_012010	ORP
TRC-CT	SC33D	SC33D_012010	TURB
TRC-CT	SC34D	SC34D_012010	TEMP
TRC-CT	SC34D	SC34D_012010	SC
TRC-CT	SC34D	SC34D_012010	DIS_OXYGEN
TRC-CT	SC34D	SC34D_012010	pH
TRC-CT	SC34D	SC34D_012010	ORP
TRC-CT	SC34D	SC34D_012010	TURB
TRC-CT	SC35D	SC35D_012010	TEMP
TRC-CT	SC35D	SC35D_012010	SC
TRC-CT	SC35D	SC35D_012010	DIS_OXYGEN
TRC-CT	SC35D	SC35D_012010	pH
TRC-CT	SC35D	SC35D_012010	ORP
TRC-CT	SC35D	SC35D_012010	TURB
TRC-CT	SC36D	SC36D_012010	TEMP
TRC-CT	SC36D	SC36D_012010	SC

TRC-CT	SC36D	SC36D_012010	DIS_OXYGEN
TRC-CT	SC36D	SC36D_012010	pH
TRC-CT	SC36D	SC36D_012010	ORP
TRC-CT	SC36D	SC36D_012010	TURB
TRC-CT	B	B_012010	TEMP
TRC-CT	B	B_012010	SC
TRC-CT	B	B_012010	DIS_OXYGEN
TRC-CT	B	B_012010	pH
TRC-CT	B	B_012010	ORP
TRC-CT	B	B_012010	TURB
TRC-CT	K	K_012110	TEMP
TRC-CT	K	K_012110	SC
TRC-CT	K	K_012110	DIS_OXYGEN
TRC-CT	K	K_012110	pH
TRC-CT	K	K_012110	ORP
TRC-CT	K	K_012110	TURB
TRC-CT	L	L_012010	TEMP
TRC-CT	L	L_012010	SC
TRC-CT	L	L_012010	DIS_OXYGEN
TRC-CT	L	L_012010	pH
TRC-CT	L	L_012010	ORP
TRC-CT	L	L_012010	TURB
TRC-CT	IWC-2	IWC-2_011910	TEMP
TRC-CT	IWC-2	IWC-2_011910	SC
TRC-CT	IWC-2	IWC-2_011910	DIS_OXYGEN
TRC-CT	IWC-2	IWC-2_011910	pH
TRC-CT	IWC-2	IWC-2_011910	ORP
TRC-CT	IWC-2	IWC-2_011910	TURB
TRC-CT	W2(R)	W2(R)_012010	TEMP
TRC-CT	W2(R)	W2(R)_012010	SC
TRC-CT	W2(R)	W2(R)_012010	DIS_OXYGEN
TRC-CT	W2(R)	W2(R)_012010	pH
TRC-CT	W2(R)	W2(R)_012010	ORP
TRC-CT	W2(R)	W2(R)_012010	TURB
TRC-CT	SC9S	SC9S_012010	TEMP
TRC-CT	SC9S	SC9S_012010	SC
TRC-CT	SC9S	SC9S_012010	DIS_OXYGEN
TRC-CT	SC9S	SC9S_012010	pH
TRC-CT	SC9S	SC9S_012010	ORP
TRC-CT	SC9S	SC9S_012010	TURB
TRC-CT	SC11S(R)	SC11S(R)_012010	TEMP
TRC-CT	SC11S(R)	SC11S(R)_012010	SC
TRC-CT	SC11S(R)	SC11S(R)_012010	DIS_OXYGEN
TRC-CT	SC11S(R)	SC11S(R)_012010	pH
TRC-CT	SC11S(R)	SC11S(R)_012010	ORP
TRC-CT	SC11S(R)	SC11S(R)_012010	TURB
TRC-CT	SC12S	SC12S_012010	TEMP
TRC-CT	SC12S	SC12S_012010	SC
TRC-CT	SC12S	SC12S_012010	DIS_OXYGEN

TRC-CT	SC12S	SC12S_012010	pH
TRC-CT	SC12S	SC12S_012010	ORP
TRC-CT	SC12S	SC12S_012010	TURB
TRC-CT	SC13S(R)	SC13S(R)_012110	TEMP
TRC-CT	SC13S(R)	SC13S(R)_012110	SC
TRC-CT	SC13S(R)	SC13S(R)_012110	DIS_OXYGEN
TRC-CT	SC13S(R)	SC13S(R)_012110	pH
TRC-CT	SC13S(R)	SC13S(R)_012110	ORP
TRC-CT	SC13S(R)	SC13S(R)_012110	TURB
TRC-CT	SC14S	SC14S_011910	TEMP
TRC-CT	SC14S	SC14S_011910	SC
TRC-CT	SC14S	SC14S_011910	DIS_OXYGEN
TRC-CT	SC14S	SC14S_011910	pH
TRC-CT	SC14S	SC14S_011910	ORP
TRC-CT	SC14S	SC14S_011910	TURB
TRC-CT	SC22S	SC22S_011910	TEMP
TRC-CT	SC22S	SC22S_011910	SC
TRC-CT	SC22S	SC22S_011910	DIS_OXYGEN
TRC-CT	SC22S	SC22S_011910	pH
TRC-CT	SC22S	SC22S_011910	ORP
TRC-CT	SC22S	SC22S_011910	TURB
TRC-CT	SC23S	SC23S_012010	TEMP
TRC-CT	SC23S	SC23S_012010	SC
TRC-CT	SC23S	SC23S_012010	DIS_OXYGEN
TRC-CT	SC23S	SC23S_012010	pH
TRC-CT	SC23S	SC23S_012010	ORP
TRC-CT	SC23S	SC23S_012010	TURB
TRC-CT	SC25S	SC25S_012010	TEMP
TRC-CT	SC25S	SC25S_012010	SC
TRC-CT	SC25S	SC25S_012010	DIS_OXYGEN
TRC-CT	SC25S	SC25S_012010	pH
TRC-CT	SC25S	SC25S_012010	ORP
TRC-CT	SC25S	SC25S_012010	TURB
TRC-CT	SC1S	SC1S_012110	TEMP
TRC-CT	SC1S	SC1S_012110	SC
TRC-CT	SC1S	SC1S_012110	DIS_OXYGEN
TRC-CT	SC1S	SC1S_012110	pH
TRC-CT	SC1S	SC1S_012110	ORP
TRC-CT	SC1S	SC1S_012110	TURB
TRC-CT	SC3S	SC3S_012110	TEMP
TRC-CT	SC3S	SC3S_012110	SC
TRC-CT	SC3S	SC3S_012110	DIS_OXYGEN
TRC-CT	SC3S	SC3S_012110	pH
TRC-CT	SC3S	SC3S_012110	ORP
TRC-CT	SC3S	SC3S_012110	TURB
TRC-CT	SC5S	SC5S_012110	TEMP
TRC-CT	SC5S	SC5S_012110	SC
TRC-CT	SC5S	SC5S_012110	DIS_OXYGEN
TRC-CT	SC5S	SC5S_012110	pH

TRC-CT	SC5S	SC5S_012110	ORP
TRC-CT	SC5S	SC5S_012110	TURB
TRC-CT	SC6S	SC6S_012210	TEMP
TRC-CT	SC6S	SC6S_012210	SC
TRC-CT	SC6S	SC6S_012210	DIS_OXYGEN
TRC-CT	SC6S	SC6S_012210	pH
TRC-CT	SC6S	SC6S_012210	ORP
TRC-CT	SC6S	SC6S_012210	TURB
TRC-CT	SC10S	SC10S_012210	TEMP
TRC-CT	SC10S	SC10S_012210	SC
TRC-CT	SC10S	SC10S_012210	DIS_OXYGEN
TRC-CT	SC10S	SC10S_012210	pH
TRC-CT	SC10S	SC10S_012210	ORP
TRC-CT	SC10S	SC10S_012210	TURB
TRC-CT	SC19S	SC19S_012110	TEMP
TRC-CT	SC19S	SC19S_012110	SC
TRC-CT	SC19S	SC19S_012110	DIS_OXYGEN
TRC-CT	SC19S	SC19S_012110	pH
TRC-CT	SC19S	SC19S_012110	ORP
TRC-CT	SC19S	SC19S_012110	TURB
TRC-CT	SC21S	SC21S_012110	TEMP
TRC-CT	SC21S	SC21S_012110	SC
TRC-CT	SC21S	SC21S_012110	DIS_OXYGEN
TRC-CT	SC21S	SC21S_012110	pH
TRC-CT	SC21S	SC21S_012110	ORP
TRC-CT	SC21S	SC21S_012110	TURB
TRC-CT	SC24S	SC24S_012210	TEMP
TRC-CT	SC24S	SC24S_012210	SC
TRC-CT	SC24S	SC24S_012210	DIS_OXYGEN
TRC-CT	SC24S	SC24S_012210	pH
TRC-CT	SC24S	SC24S_012210	ORP
TRC-CT	SC24S	SC24S_012210	TURB
TRC-CT	IW1	IW1_012110	TEMP
TRC-CT	IW1	IW1_012110	SC
TRC-CT	IW1	IW1_012110	DIS_OXYGEN
TRC-CT	IW1	IW1_012110	pH
TRC-CT	IW1	IW1_012110	ORP
TRC-CT	IW1	IW1_012110	TURB
TRC-CT	Layne	Layne_012110	TEMP
TRC-CT	Layne	Layne_012110	SC
TRC-CT	Layne	Layne_012110	DIS_OXYGEN
TRC-CT	Layne	Layne_012110	pH
TRC-CT	Layne	Layne_012110	ORP
TRC-CT	Layne	Layne_012110	TURB
TRC-CT	W9	W9_012010	TEMP
TRC-CT	W9	W9_012010	SC
TRC-CT	W9	W9_012010	DIS_OXYGEN
TRC-CT	W9	W9_012010	pH
TRC-CT	W9	W9_012010	ORP

TRC-CT	W9	W9_012010	TURB

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	01/21/2010 08:51:22	08:51:22	13.69	deg c		
	01/21/2010 08:51:22	08:51:22	0.129	ms/cm		
	01/21/2010 08:51:22	08:51:22	0.60	mg/l		
	01/21/2010 08:51:22	08:51:22	8.61	ph units		
	01/21/2010 08:51:22	08:51:22	-184	millivolts		
	01/21/2010 08:51:22	08:51:22	74.2	ntu		
	01/19/2010 14:34:53	14:34:53	13.77	deg c		
	01/19/2010 14:34:53	14:34:53	0.464	ms/cm		
	01/19/2010 14:34:53	14:34:53	0.24	mg/l		
	01/19/2010 14:34:53	14:34:53	11.22	ph units		
	01/19/2010 14:34:53	14:34:53	17	millivolts		
	01/19/2010 14:34:53	14:34:53	116	ntu		
	01/20/2010 15:45:01	15:45:01	12.69	deg c		
	01/20/2010 15:45:01	15:45:01	0.114	ms/cm		
	01/20/2010 15:45:01	15:45:01	7.95	mg/l		
	01/20/2010 15:45:01	15:45:01	5.51	ph units		
	01/20/2010 15:45:01	15:45:01	276	millivolts		
	01/20/2010 15:45:01	15:45:01	2.81	ntu		
	01/19/2010 14:18:08	14:18:08	13.38	deg c		
	01/19/2010 14:18:08	14:18:08	2.210	ms/cm		
	01/19/2010 14:18:08	14:18:08	0.16	mg/l		
	01/19/2010 14:18:08	14:18:08	11.5	ph units		
	01/19/2010 14:18:08	14:18:08	-61	millivolts		
	01/19/2010 14:18:08	14:18:08	22.2	ntu		
	01/20/2010 16:42:14	16:42:14	13.31	deg c		
	01/20/2010 16:42:14	16:42:14	0.041	ms/cm		
	01/20/2010 16:42:14	16:42:14	5.44	mg/l		
	01/20/2010 16:42:14	16:42:14	4.75	ph units		
	01/20/2010 16:42:14	16:42:14	331	millivolts		
	01/20/2010 16:42:14	16:42:14	0.99	ntu		
	01/21/2010 10:27:51	10:27:51	11.62	deg c		
	01/21/2010 10:27:51	10:27:51	0.068	ms/cm		
	01/21/2010 10:27:51	10:27:51	7.41	mg/l		
	01/21/2010 10:27:51	10:27:51	4.39	ph units		
	01/21/2010 10:27:51	10:27:51	342	millivolts		
	01/21/2010 10:27:51	10:27:51	1.29	ntu		
	01/21/2010 12:05:49	12:05:49	13.16	deg c		
	01/21/2010 12:05:49	12:05:49	0.882	ms/cm		
	01/21/2010 12:05:49	12:05:49	0.80	mg/l		
	01/21/2010 12:05:49	12:05:49	5.66	ph units		
	01/21/2010 12:05:49	12:05:49	164	millivolts		
	01/21/2010 12:05:49	12:05:49	8.89	ntu		
	01/21/2010 14:10:35	14:10:35	13.34	deg c		
	01/21/2010 14:10:35	14:10:35	0.281	ms/cm		
	01/21/2010 14:10:35	14:10:35	6.20	mg/l		
	01/21/2010 14:10:35	14:10:35	6.08	ph units		
	01/21/2010 14:10:35	14:10:35	194	millivolts		
	01/21/2010 14:10:35	14:10:35	1.91	ntu		

01/21/2010 13:04:50	13:04:50	13.21	deg c
01/21/2010 13:04:50	13:04:50	0.641	ms/cm
01/21/2010 13:04:50	13:04:50	0.57	mg/l
01/21/2010 13:04:50	13:04:50	4.56	ph units
01/21/2010 13:04:50	13:04:50	229	millivolts
01/21/2010 13:04:50	13:04:50	5.02	ntu
01/21/2010 15:45:41	15:45:41	13.07	deg c
01/21/2010 15:45:41	15:45:41	0.176	ms/cm
01/21/2010 15:45:41	15:45:41	4.88	mg/l
01/21/2010 15:45:41	15:45:41	5.80	ph units
01/21/2010 15:45:41	15:45:41	215	millivolts
01/21/2010 15:45:41	15:45:41	0.0	ntu
01/22/2010 07:46:01	07:46:01	13.65	deg c
01/22/2010 07:46:01	07:46:01	0.380	ms/cm
01/22/2010 07:46:01	07:46:01	4.33	mg/l
01/22/2010 07:46:01	07:46:01	5.00	ph units
01/22/2010 07:46:01	07:46:01	304	millivolts
01/22/2010 07:46:01	07:46:01	14.4	ntu
01/22/2010 07:27:09	07:27:09	13.73	deg c
01/22/2010 07:27:09	07:27:09	1.307	ms/cm
01/22/2010 07:27:09	07:27:09	0.95	mg/l
01/22/2010 07:27:09	07:27:09	7.65	ph units
01/22/2010 07:27:09	07:27:09	126	millivolts
01/22/2010 07:27:09	07:27:09	4.3	ntu
01/21/2010 15:16:07	15:16:07	12.76	deg c
01/21/2010 15:16:07	15:16:07	0.188	ms/cm
01/21/2010 15:16:07	15:16:07	8.99	mg/l
01/21/2010 15:16:07	15:16:07	4.66	ph units
01/21/2010 15:16:07	15:16:07	341	millivolts
01/21/2010 15:16:07	15:16:07	2.28	ntu
01/21/2010 14:41:50	14:41:50	12.83	deg c
01/21/2010 14:41:50	14:41:50	0.191	ms/cm
01/21/2010 14:41:50	14:41:50	7.94	mg/l
01/21/2010 14:41:50	14:41:50	5.1	ph units
01/21/2010 14:41:50	14:41:50	310	millivolts
01/21/2010 14:41:50	14:41:50	0.0	ntu
01/22/2010 08:28:16	08:28:16	13.64	deg c
01/22/2010 08:28:16	08:28:16	0.374	ms/cm
01/22/2010 08:28:16	08:28:16	5.43	mg/l
01/22/2010 08:28:16	08:28:16	5.17	ph units
01/22/2010 08:28:16	08:28:16	306	millivolts
01/22/2010 08:28:16	08:28:16	1.34	ntu
01/21/2010 08:25:50	08:25:50	13.15	deg c
01/21/2010 08:25:50	08:25:50	1.627	ms/cm
01/21/2010 08:25:50	08:25:50	2.28	mg/l
01/21/2010 08:25:50	08:25:50	8.48	ph units
01/21/2010 08:25:50	08:25:50	96	millivolts
01/21/2010 08:25:50	08:25:50	10.85	ntu
01/21/2010 15:51:05	15:51:05	13.28	deg c

01/21/2010 15:51:05	15:51:05	0.469	ms/cm
01/21/2010 15:51:05	15:51:05	1.48	mg/l
01/21/2010 15:51:05	15:51:05	6.64	ph units
01/21/2010 15:51:05	15:51:05	196	millivolts
01/21/2010 15:51:05	15:51:05	6.08	ntu
01/20/2010 10:39:46	10:39:46	12.91	deg c
01/20/2010 10:39:46	10:39:46	1.068	ms/cm
01/20/2010 10:39:46	10:39:46	0.87	mg/l
01/20/2010 10:39:46	10:39:46	6.85	ph units
01/20/2010 10:39:46	10:39:46	148	millivolts
01/20/2010 10:39:46	10:39:46	1.09	ntu
01/20/2010 11:14:17	11:14:17	12.84	deg c
01/20/2010 11:14:17	11:14:17	0.069	ms/cm
01/20/2010 11:14:17	11:14:17	8	mg/l
01/20/2010 11:14:17	11:14:17	5.12	ph units
01/20/2010 11:14:17	11:14:17	229	millivolts
01/20/2010 11:14:17	11:14:17	3.80	ntu
01/21/2010 16:28:34	16:28:34	13.61	deg c
01/21/2010 16:28:34	16:28:34	0.202	ms/cm
01/21/2010 16:28:34	16:28:34	5.28	mg/l
01/21/2010 16:28:34	16:28:34	5.42	ph units
01/21/2010 16:28:34	16:28:34	284	millivolts
01/21/2010 16:28:34	16:28:34	9.2	ntu
01/22/2010 09:08:43	09:08:43	14.97	deg c
01/22/2010 09:08:43	09:08:43	0.125	ms/cm
01/22/2010 09:08:43	09:08:43	8.37	mg/l
01/22/2010 09:08:43	09:08:43	5.1	ph units
01/22/2010 09:08:43	09:08:43	321	millivolts
01/22/2010 09:08:43	09:08:43	0.53	ntu
01/20/2010 12:16:30	12:16:30	13.31	deg c
01/20/2010 12:16:30	12:16:30	0.073	ms/cm
01/20/2010 12:16:30	12:16:30	8.04	mg/l
01/20/2010 12:16:30	12:16:30	6.95	ph units
01/20/2010 12:16:30	12:16:30	129	millivolts
01/20/2010 12:16:30	12:16:30	0.88	ntu
01/20/2010 16:55:37	16:55:37	13.02	deg c
01/20/2010 16:55:37	16:55:37	0.935	ms/cm
01/20/2010 16:55:37	16:55:37	0.81	mg/l
01/20/2010 16:55:37	16:55:37	5.12	ph units
01/20/2010 16:55:37	16:55:37	158	millivolts
01/20/2010 16:55:37	16:55:37	0.9	ntu
01/20/2010 15:48:14	15:48:14	13.27	deg c
01/20/2010 15:48:14	15:48:14	0.068	ms/cm
01/20/2010 15:48:14	15:48:14	6.88	mg/l
01/20/2010 15:48:14	15:48:14	5.49	ph units
01/20/2010 15:48:14	15:48:14	209	millivolts
01/20/2010 15:48:14	15:48:14	5.8	ntu
01/20/2010 13:42:13	13:42:13	13.48	deg c
01/20/2010 13:42:13	13:42:13	0.050	ms/cm

01/20/2010 13:42:13	13:42:13	8.88	mg/l
01/20/2010 13:42:13	13:42:13	5.32	ph units
01/20/2010 13:42:13	13:42:13	206	millivolts
01/20/2010 13:42:13	13:42:13	4.72	ntu
01/20/2010 17:43:28	17:43:28	13.43	deg c
01/20/2010 17:43:28	17:43:28	0.712	ms/cm
01/20/2010 17:43:28	17:43:28	0.75	mg/l
01/20/2010 17:43:28	17:43:28	8.14	ph units
01/20/2010 17:43:28	17:43:28	-212	millivolts
01/20/2010 17:43:28	17:43:28	63.6	ntu
01/21/2010 08:13:27	08:13:27	8.95	deg c
01/21/2010 08:13:27	08:13:27	0.609	ms/cm
01/21/2010 08:13:27	08:13:27	1.63	mg/l
01/21/2010 08:13:27	08:13:27	8.83	ph units
01/21/2010 08:13:27	08:13:27	155	millivolts
01/21/2010 08:13:27	08:13:27	30.5	ntu
01/20/2010 10:17:12	10:17:12	15.59	deg c
01/20/2010 10:17:12	10:17:12	0.161	ms/cm
01/20/2010 10:17:12	10:17:12	0.67	mg/l
01/20/2010 10:17:12	10:17:12	7.05	ph units
01/20/2010 10:17:12	10:17:12	-159	millivolts
01/20/2010 10:17:12	10:17:12	117	ntu
01/19/2010 14:44:46	14:44:46	14.92	deg c
01/19/2010 14:44:46	14:44:46	0.680	ms/cm
01/19/2010 14:44:46	14:44:46	1	mg/l
01/19/2010 14:44:46	14:44:46	8.29	ph units
01/19/2010 14:44:46	14:44:46	94	millivolts
01/19/2010 14:44:46	14:44:46	2.56	ntu
01/20/2010 09:37:46	09:37:46	8.23	deg c
01/20/2010 09:37:46	09:37:46	0.097	ms/cm
01/20/2010 09:37:46	09:37:46	11.53	mg/l
01/20/2010 09:37:46	09:37:46	7.44	ph units
01/20/2010 09:37:46	09:37:46	186	millivolts
01/20/2010 09:37:46	09:37:46	29.1	ntu
01/20/2010 17:38:02	17:38:02	13.57	deg c
01/20/2010 17:38:02	17:38:02	0.437	ms/cm
01/20/2010 17:38:02	17:38:02	0.85	mg/l
01/20/2010 17:38:02	17:38:02	6.8	ph units
01/20/2010 17:38:02	17:38:02	223	millivolts
01/20/2010 17:38:02	17:38:02	2.10	ntu
01/20/2010 16:13:58	16:13:58	13.18	deg c
01/20/2010 16:13:58	16:13:58	0.218	ms/cm
01/20/2010 16:13:58	16:13:58	6.15	mg/l
01/20/2010 16:13:58	16:13:58	6.21	ph units
01/20/2010 16:13:58	16:13:58	227	millivolts
01/20/2010 16:13:58	16:13:58	7.41	ntu
01/20/2010 16:31:34	16:31:34	10.64	deg c
01/20/2010 16:31:34	16:31:34	0.515	ms/cm
01/20/2010 16:31:34	16:31:34	4.04	mg/l

01/20/2010 16:31:34	16:31:34	6.64	ph units
01/20/2010 16:31:34	16:31:34	234	millivolts
01/20/2010 16:31:34	16:31:34	8.34	ntu
01/21/2010 10:23:13	10:23:13	9.18	deg c
01/21/2010 10:23:13	10:23:13	0.283	ms/cm
01/21/2010 10:23:13	10:23:13	1.77	mg/l
01/21/2010 10:23:13	10:23:13	6.74	ph units
01/21/2010 10:23:13	10:23:13	123	millivolts
01/21/2010 10:23:13	10:23:13	168	ntu
01/19/2010 13:36:20	13:36:20	13.15	deg c
01/19/2010 13:36:20	13:36:20	0.099	ms/cm
01/19/2010 13:36:20	13:36:20	7.15	mg/l
01/19/2010 13:36:20	13:36:20	6.12	ph units
01/19/2010 13:36:20	13:36:20	122	millivolts
01/19/2010 13:36:20	13:36:20	2.58	ntu
01/19/2010 14:10:26	14:10:26	11.49	deg c
01/19/2010 14:10:26	14:10:26	0.206	ms/cm
01/19/2010 14:10:26	14:10:26	8.24	mg/l
01/19/2010 14:10:26	14:10:26	8.48	ph units
01/19/2010 14:10:26	14:10:26	149	millivolts
01/19/2010 14:10:26	14:10:26	46	ntu
01/20/2010 14:48:05	14:48:05	13.50	deg c
01/20/2010 14:48:05	14:48:05	0.200	ms/cm
01/20/2010 14:48:05	14:48:05	6.45	mg/l
01/20/2010 14:48:05	14:48:05	5.68	ph units
01/20/2010 14:48:05	14:48:05	255	millivolts
01/20/2010 14:48:05	14:48:05	7.65	ntu
01/20/2010 09:01:41	09:01:41	10.20	deg c
01/20/2010 09:01:41	09:01:41	0.195	ms/cm
01/20/2010 09:01:41	09:01:41	0.91	mg/l
01/20/2010 09:01:41	09:01:41	6.15	ph units
01/20/2010 09:01:41	09:01:41	171	millivolts
01/20/2010 09:01:41	09:01:41	9.25	ntu
01/21/2010 12:26:03	12:26:03	12.71	deg c
01/21/2010 12:26:03	12:26:03	0.187	ms/cm
01/21/2010 12:26:03	12:26:03	8.44	mg/l
01/21/2010 12:26:03	12:26:03	5.87	ph units
01/21/2010 12:26:03	12:26:03	166	millivolts
01/21/2010 12:26:03	12:26:03	0.0	ntu
01/21/2010 12:55:21	12:55:21	12.59	deg c
01/21/2010 12:55:21	12:55:21	0.674	ms/cm
01/21/2010 12:55:21	12:55:21	2.06	mg/l
01/21/2010 12:55:21	12:55:21	5.49	ph units
01/21/2010 12:55:21	12:55:21	183	millivolts
01/21/2010 12:55:21	12:55:21	0.19	ntu
01/21/2010 12:55:21	12:55:21	12.59	deg c
01/21/2010 12:55:21	12:55:21	0.674	ms/cm
01/21/2010 12:55:21	12:55:21	2.06	mg/l
01/21/2010 12:55:21	12:55:21	5.49	ph units

01/21/2010 12:55:21	12:55:21	183	millivolts
01/21/2010 12:55:21	12:55:21	14.9	ntu
01/22/2010 07:41:35	07:41:35	12.02	deg c
01/22/2010 07:41:35	07:41:35	0.547	ms/cm
01/22/2010 07:41:35	07:41:35	3.35	mg/l
01/22/2010 07:41:35	07:41:35	7.17	ph units
01/22/2010 07:41:35	07:41:35	161	millivolts
01/22/2010 07:41:35	07:41:35	1.92	ntu
01/22/2010 07:29:42	07:29:42	13.82	deg c
01/22/2010 07:29:42	07:29:42	0.586	ms/cm
01/22/2010 07:29:42	07:29:42	3.51	mg/l
01/22/2010 07:29:42	07:29:42	7.17	ph units
01/22/2010 07:29:42	07:29:42	147	millivolts
01/22/2010 07:29:42	07:29:42	0.32	ntu
01/21/2010 15:21:15	15:21:15	11.57	deg c
01/21/2010 15:21:15	15:21:15	0.128	ms/cm
01/21/2010 15:21:15	15:21:15	8.06	mg/l
01/21/2010 15:21:15	15:21:15	5.36	ph units
01/21/2010 15:21:15	15:21:15	304	millivolts
01/21/2010 15:21:15	15:21:15	1.37	ntu
01/21/2010 14:46:45	14:46:45	8.39	deg c
01/21/2010 14:46:45	14:46:45	0.046	ms/cm
01/21/2010 14:46:45	14:46:45	6.96	mg/l
01/21/2010 14:46:45	14:46:45	5.35	ph units
01/21/2010 14:46:45	14:46:45	305	millivolts
01/21/2010 14:46:45	14:46:45	200	ntu
01/22/2010 08:36:14	08:36:14	12.83	deg c
01/22/2010 08:36:14	08:36:14	0.226	ms/cm
01/22/2010 08:36:14	08:36:14	5.41	mg/l
01/22/2010 08:36:14	08:36:14	4.79	ph units
01/22/2010 08:36:14	08:36:14	366	millivolts
01/22/2010 08:36:14	08:36:14	4.23	ntu
01/21/2010 14:03:17	14:03:17	12.53	deg c
01/21/2010 14:03:17	14:03:17	0.117	ms/cm
01/21/2010 14:03:17	14:03:17	5.55	mg/l
01/21/2010 14:03:17	14:03:17	6.29	ph units
01/21/2010 14:03:17	14:03:17	202	millivolts
01/21/2010 14:03:17	14:03:17	43.3	ntu
01/21/2010 08:40:00	08:40:00	11.38	deg c
01/21/2010 08:40:00	08:40:00	0.804	ms/cm
01/21/2010 08:40:00	08:40:00	10.50	mg/l
01/21/2010 08:40:00	08:40:00	7.44	ph units
01/21/2010 08:40:00	08:40:00	83.5	millivolts
01/21/2010 08:40:00	08:40:00	0.93	ntu
01/20/2010 08:50:00	08:50:00	11.65	deg c
01/20/2010 08:50:00	08:50:00	0.628	ms/cm
01/20/2010 08:50:00	08:50:00	7.56	mg/l
01/20/2010 08:50:00	08:50:00	9.20	ph units
01/20/2010 08:50:00	08:50:00	-23.0	millivolts

01/20/2010 08:50:00	08:50:00	11.2	ntu

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
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reportable_result	value_type	remark
Yes	ACTUAL	
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#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#sys_loc_(	measurement_date	historical_	water_leve	water_leve	corrected_	corrected_	measured_	depth_unit
A	10/19/2009 16:00	94.82	5.47	89.35				ft btoc
B	10/19/2009 16:00	94.33	4.75	89.58				ft btoc
IW1	10/19/2009 16:00	90.33	5.23	85.1				ft btoc
IW2	10/19/2009 16:00	91.05	7.91	83.14				ft btoc
IWC-1	10/19/2009 16:00	98.13	7.7	90.43				ft btoc
IWC-2	10/19/2009 16:00	98.51	8.11	90.4				ft btoc
IWC-3	10/19/2009 16:00	97.83	7.41	90.42				ft btoc
IWC-4	10/19/2009 16:00	98.61	8.18	90.43				ft btoc
IWC-5	10/19/2009 16:00	98.03	7.64	90.39				ft btoc
K	10/19/2009 16:00	99.18	9.69	89.49				ft btoc
L	10/19/2009 16:00	103.51	11.87	91.64				ft btoc
MWH-4	10/19/2009 16:00	99.44	9.06	90.38				ft btoc
SC10D	10/19/2009 16:00	95.72	7.39	88.33				ft btoc
SC10S	10/19/2009 16:00	95.38	7.08	88.3				ft btoc
SC11S(R)	10/19/2009 16:00	108.12	15.67	92.45				ft btoc
SC12D	10/19/2009 16:00	103.19	11.59	91.6				ft btoc
SC12S	10/19/2009 16:00	104.76	12.63	92.13				ft btoc
SC13D	10/19/2009 16:00	101.99	10.66	91.33				ft btoc
SC13S(R)	10/19/2009 16:00	101.41	8.69	92.72				ft btoc
SC14S	10/19/2009 16:00	108.38	16.07	92.31				ft btoc
SC15S	10/19/2009 16:00	108.32	14.83	93.49				ft btoc
SC16S	10/19/2009 16:00	108.05	18.05	90				ft btoc
SC17D	10/19/2009 16:00	108.07	19.05	89.02				ft btoc
SC17S	10/19/2009 16:00	109.26	20.19	89.07				ft btoc
SC18D	10/19/2009 16:00	96.01	9.56	86.45				ft btoc
SC18S	10/19/2009 16:00	95.72	9.26	86.46				ft btoc
SC19D	10/19/2009 16:00	92.03	5.31	86.72				ft btoc
SC19S	10/19/2009 16:00	92.98	5.99	86.99				ft btoc
SC1D	10/19/2009 16:00	90.9	8.27	82.63				ft btoc
SC1S	10/19/2009 16:00	87.26	3.73	83.53				ft btoc
SC20D	10/19/2009 16:00	104.53	13.76	90.77				ft btoc
SC21D	10/19/2009 16:00	91.65	5.81	85.84				ft btoc
SC21S	10/19/2009 16:00	92.64	6.41	86.23				ft btoc
SC22S	10/19/2009 16:00	99.65	8.83	90.82				ft btoc
SC23S	10/19/2009 16:00	102.21	11.46	90.75				ft btoc
SC24D	10/19/2009 16:00	93.52	10.23	83.29				ft btoc
SC24S	10/19/2009 16:00	93.57	9.9	83.67				ft btoc
SC25S	10/19/2009 16:00	102.27	9.76	92.51				ft btoc
SC26D	10/19/2009 16:00	100.45	10.55	89.9				ft btoc
SC27S	10/19/2009 16:00	100.54	9.11	91.43				ft btoc
SC28D	10/19/2009 16:00	106.87	18.96	87.91				ft btoc
SC2D(R)	10/19/2009 16:00	92.7	7.84	84.86				ft btoc
SC30D	10/19/2009 16:00	115.58	27.36	88.22				ft btoc
SC31D	10/19/2009 16:00	102.61	19.05	83.56				ft btoc
SC32D	10/19/2009 16:00	90	11.06	78.94				ft btoc
SC3D(R)	10/19/2009 16:00	91.06	7.11	83.95				ft btoc
SC3S	10/19/2009 16:00	90.32	6.32	84				ft btoc
SC4S	10/19/2009 16:00	93.65	6.77	86.88				ft btoc
SC5D	10/19/2009 16:00	97	12.39	84.61				ft btoc
SC5S	10/19/2009 16:00	96.55	11.85	84.7				ft btoc
SC6D	10/19/2009 16:00	94.38	6.55	87.83				ft btoc

SC6S	10/19/2009 16:00	94.62	5.55	89.07	ft btoc
SC9S	10/19/2009 16:00	96.23	6.56	89.67	ft btoc
W2(R)	10/19/2009 16:00	97.96	5.44	92.52	ft btoc
W3D	10/19/2009 16:00	108.37	15.94	92.43	ft btoc
W4	10/19/2009 16:00	104.58	14.03	90.55	ft btoc
SC1D	11/18/2009 14:35	90.9	7.18	83.72	ft btoc
SC10S	11/18/2009 15:35	95.38	6.44	88.94	ft btoc
SC10D	11/18/2009 16:20	95.72	6.82	88.9	ft btoc
SC1S	11/18/2009 17:00	87.26	2.17	85.09	ft btoc
SC3S	11/19/2009 8:25	90.32	4.76	85.56	ft btoc
SC3D(R)	11/19/2009 8:45	91.06	5.53	85.53	ft btoc
SC25S	11/19/2009 9:35	102.27	8.04	94.23	ft btoc
IW1	11/19/2009 10:35	90.33	3.76	86.57	ft btoc
SC2D(R)	11/19/2009 11:10	92.7	6.36	86.34	ft btoc
IW2	11/19/2009 11:25	91.05	6.43	84.62	ft btoc
SC5S	11/19/2009 11:40	96.55	10.31	86.24	ft btoc
SC5D	11/19/2009 11:45	97	10.89	86.11	ft btoc
SC24S	11/19/2009 12:05	93.57	8.1	85.47	ft btoc
SC24D	11/19/2009 12:25	93.52	8.56	84.96	ft btoc
SC26D	11/19/2009 13:55	100.45	8.96	91.49	ft btoc
SC33D	11/19/2009 15:20	108.08	19.32	88.76	ft btoc
SC34D	11/19/2009 17:30	103.82	16.84	86.98	ft btoc
SC35D	12/7/2009 11:58	81.24	14.77	66.47	ft btoc
SC36D	12/7/2009 13:45	91.8	7.95	83.85	ft btoc
SC26D	12/7/2009 16:05	100.45	9.71	90.74	ft btoc
SC10D	12/7/2009 17:09	95.72	6.83	88.89	ft btoc
SC10S	12/7/2009 17:20	95.38	6.56	88.82	ft btoc
SC25S	12/8/2009 9:06	102.27	8.46	93.81	ft btoc
B	12/8/2009 10:00	94.33	4.19	90.14	ft btoc
A	12/8/2009 10:10	94.82	6.82	88	ft btoc
SC6D	12/8/2009 10:40	94.38	9.81	84.57	ft btoc
SC1D	12/8/2009 11:06	90.9	7.27	83.63	ft btoc
SC1S	12/8/2009 11:22	87.26	2.82	84.44	ft btoc
SC3S	12/8/2009 11:51	90.32	5.55	84.77	ft btoc
SC3D(R)	12/8/2009 11:47	91.06	6.31	84.75	ft btoc
SC2D(R)	12/8/2009 12:53	92.7	7.21	85.49	ft btoc
IW2	12/8/2009 13:10	91.05	7.24	83.81	ft btoc
IW1	12/8/2009 12:41	90.33	4.6	85.73	ft btoc
SC5S	12/8/2009 13:53	96.55	11.1	85.45	ft btoc
SC5D	12/8/2009 14:09	97	11.63	85.37	ft btoc
SC24S	12/8/2009 14:53	93.57	8.7	84.87	ft btoc
SC24D	12/8/2009 14:41	93.52	9.35	84.17	ft btoc
A	1/19/2010 14:56	94.82	4.92	89.9	ft btoc
IWC-3	1/19/2010 14:36	97.83	4.82	93.01	ft btoc
IWC-4	1/19/2010 14:44	98.61	5.58	93.03	ft btoc
IWC-5	1/19/2010 14:34	98.03	5.13	92.9	ft btoc
W3D	1/19/2010 13:40	108.37	12.78	95.59	ft btoc
W4	1/19/2010 15:31	104.58	12.37	92.21	ft btoc
MWH-4	1/19/2010 14:06	99.37	7	92.37	ft btoc
SC12D	1/19/2010 13:41	103.19	8.4	94.79	ft btoc
SC13D	1/19/2010 13:59	101.99	7.57	94.42	ft btoc
SC20D	1/19/2010 15:26	104.53	11.05	93.48	ft btoc

SC22D	1/19/2010 14:03	98.65	5.67	92.98	ft btoc
SC1D	1/19/2010 16:10	90.9	6.11	84.79	ft btoc
SC2D(R)	1/19/2010 16:22	92.53	6.29	86.24	ft btoc
SC3D(R)	1/19/2010 16:14	91.06	5.29	85.77	ft btoc
SC5D	1/19/2010 16:32	97	10.68	86.32	ft btoc
SC6D	1/19/2010 15:55	94.38	4.75	89.63	ft btoc
SC10D	1/19/2010 15:50	95.72	5.64	90.08	ft btoc
SC17D	1/19/2010 16:00	108.07	17.06	91.01	ft btoc
SC18D	1/19/2010 16:02	96.01	7.71	88.3	ft btoc
SC19D	1/19/2010 17:00	92.03	3.62	88.41	ft btoc
SC21D	1/19/2010 16:53	91.65	4.15	87.5	ft btoc
SC24D	1/19/2010 16:38	93.52	8.12	85.4	ft btoc
SC26D	1/19/2010 15:40	100.45	7.91	92.54	ft btoc
IW2	1/19/2010 16:20	92.05	6.37	85.68	ft btoc
SC28D	1/19/2010 15:45	106.87	16.77	90.1	ft btoc
SC30D	1/19/2010 15:42	115.58	24.2	91.38	ft btoc
SC31D	1/19/2010 16:35	102.61	16.93	85.68	ft btoc
SC32D	1/19/2010 16:45	91.62	8.35	83.27	ft btoc
SC33D	1/19/2010 0:00	108.08	17.78	90.3	ft btoc
SC34D	1/19/2010 0:00	103.82	16.14	87.68	ft btoc
SC35D	1/19/2010 0:00	81.24	13.34	67.9	ft btoc
SC36D	1/19/2010 0:00	91.8	7.01	84.79	ft btoc
B	1/19/2010 14:53	94.33	2.77	91.56	ft btoc
K	1/19/2010 15:30	99.18	7.57	91.61	ft btoc
L	1/19/2010 15:16	103.51	9.12	94.39	ft btoc
IWC-2	1/19/2010 14:43	98.51	5.51	93	ft btoc
W2(R)	1/19/2010 13:09	97.96	3.12	94.84	ft btoc
SC9S	1/19/2010 14:59	96.23	4.62	91.61	ft btoc
SC11S(R)	1/19/2010 13:40	108.12	12.34	95.78	ft btoc
SC12S	1/19/2010 13:42	104.76	9.38	95.38	ft btoc
SC13S(R)	1/19/2010 13:58	101.1	5.57	95.53	ft btoc
SC14S	1/19/2010 13:35	108.38	12.82	95.56	ft btoc
SC15S	1/19/2010 15:15	108.32	11.98	96.34	ft btoc
SC16S	1/19/2010 15:35	108.05	15.34	92.71	ft btoc
SC20S	1/19/2010 15:25	104.45	10.62	93.83	ft btoc
SC22S	1/19/2010 14:04	99.65	6.31	93.34	ft btoc
SC23S	1/19/2010 15:21	102.21	5.63	96.58	ft btoc
SC25S	1/19/2010 13:00	102.27	6.34	95.93	ft btoc
SC27S	1/19/2010 15:30	100.54	6.17	94.37	ft btoc
SC1S	1/19/2010 16:12	87.26	1.76	85.5	ft btoc
SC3S	1/19/2010 16:15	90.32	4.71	85.61	ft btoc
SC4S	1/19/2010 16:00	93.65	5.19	88.46	ft btoc
SC5S	1/19/2010 16:33	96.55	10.05	86.5	ft btoc
SC6S	1/19/2010 15:57	94.62	3.98	90.64	ft btoc
SC10S	1/19/2010 15:51	95.38	5.48	89.9	ft btoc
SC17S	1/19/2010 15:55	109.26	17.96	91.3	ft btoc
SC18S	1/19/2010 16:03	95.72	7.39	88.33	ft btoc
SC19S	1/19/2010 17:02	92.98	5.12	87.86	ft btoc
SC21S	1/19/2010 16:54	92.64	4.78	87.86	ft btoc
SC24S	1/19/2010 16:37	93.57	7.67	85.9	ft btoc
IW1	1/19/2010 16:24	90.33	4.84	85.49	ft btoc
SC26D	9/8/2010 9:24	100.45	10.82	89.63	ft btoc

SC28D	9/8/2010 11:06	103.82	19.47	84.35	ft btoc
SC34D	9/8/2010 13:36	103.82	19.11	84.71	ft btoc
SC33D	9/8/2010 12:59	108.08	21.21	86.87	ft btoc
SC36D	9/8/2010 15:09	91.8	9.39	82.41	ft btoc
SC35D	9/8/2010 14:38	81.24	17.08	64.16	ft btoc
SC30D	9/8/2010 16:27	115.58	27.45	88.13	ft btoc
W2(R)	9/8/2010 17:31	97.96	6.02	91.94	ft btoc
SC22S	9/9/2010 9:08	99.65	9.32	90.33	ft btoc
IWC-4	9/9/2010 9:39	98.61	8.62	89.99	ft btoc
SC20D	9/9/2010 10:05	104.53	14.28	90.25	ft btoc
SC14S	9/9/2010 8:57	108.38	16.44	91.94	ft btoc
W3D	9/9/2010 9:12	108.37	16.24	92.13	ft btoc
SC11S(R)	9/9/2010 9:33	108.12	15.81	92.31	ft btoc
SC12D	9/9/2010 9:40	103.19	11.81	91.38	ft btoc
SC16S	9/9/2010 10:40	108.05	18.69	89.36	ft btoc
W4	9/9/2010 11:02	104.58	15.55	89.03	ft btoc
K	9/9/2010 11:20	99.18	10.54	88.64	ft btoc
SC10S	9/8/2010 9:00	95.38	7.88	87.5	ft btoc
SC10D	9/8/2010 9:12	95.72	8.24	87.48	ft btoc
SC6S	9/8/2010 9:55	94.62	8.29	86.33	ft btoc
SC18S	9/8/2010 10:05	95.72	9.98	85.74	ft btoc
SC1D	9/8/2010 10:26	90.9	9.02	81.88	ft btoc
SC1S	9/8/2010 10:48	87.26	4.46	82.8	ft btoc
SC3S	9/8/2010 11:09	90.32	6.97	83.35	ft btoc
SC3D(R)	9/8/2010 11:19	91.06	7.73	83.33	ft btoc
SC2D(R)	9/8/2010 14:34	92.53	8.44	84.09	ft btoc
SC21S	9/8/2010 11:58	92.64	7.12	85.52	ft btoc
SC21D	9/8/2010 12:28	91.65	6.41	85.24	ft btoc
SC24S	9/8/2010 13:15	93.57	10.74	82.83	ft btoc
SC17S	9/8/2010 15:41	109.26	20.92	88.34	ft btoc
SC17D	9/8/2010 15:52	108.07	19.92	88.15	ft btoc
SC32D	9/8/2010 14:15	91.62	11.79	79.83	ft btoc
SC25S	9/8/2010 17:29	102.27	9.57	92.7	ft btoc

technician	dry_indica	measurem	batch_num	dip_or_ele	remark	Lnapl_cas	Lnapl_dep	Dnapl_cas	Dnapl_dep

Task_code

#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	K_012110		WG
TRC-CT	LAYNE_012110		WG
TRC-CT	W9_012110		WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
N	Field			1/21/2010 8:20
N	Field			1/21/2010 8:40
N	Field			1/21/2010 8:50

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
K					1/21/2010
LAYNE					1/21/2010
W9					1/21/2010

sample_receipt_date	sampler	**sampling_company_code**	sampling_reason	sampling_technique
1/21/2010	CC	TRCCTW		
1/21/2010	CC	TRCCTW		
1/21/2010	CC	TRCCTW		

task_code	collection_quarter	composite_yn	composite_desc	sample_class	custom_field_1
		N			
		N			
		N			

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved	column_number
K_012110	E314.0	1/22/2010 19:25	T	
Layne_012110	E314.0	1/22/2010 19:42	T	
W9_012110	E314.0	1/22/2010 20:00	T	

test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor	prep_method
initial	WG	LB	NA		4	
initial	WG	LB	NA		3	
initial	WG	LB	NA		1	

prep_date	leachate_method	leachate_date	lab_name_code	qc_level	lab_sample_id
1/22/2010 23:59			ACTD	quant	JA38134-1
1/22/2010 23:59			ACTD	quant	JA38134-2
1/22/2010 23:59			ACTD	quant	JA38134-3

percent_moisture	subsample_amount	**subsample_amount_unit**	analyst_name	instrument_id	comment
	25	ml	MELISSAS	IONC4	
	25	ml	MELISSAS	IONC4	
	25	ml	MELISSAS	IONC4	

preservative	final_volume	final_volume_unit	cas_rn	chemical_name	result_value
	25	ml	14797-73-0	Perchlorate	78.1
	25	ml	14797-73-0	Perchlorate	67.4
	25	ml	14797-73-0	Perchlorate	6.1

result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers	validator_qualifiers
	TRG	Yes	Y		
	TRG	Yes	Y		
	TRG	Yes	Y		

interpreted_qualifiers	organic_yn	method_detection_limit	reporting_detection_limit	quantitation_limit
	N	3.7	12	12
	N	2.8	9	9
	N	0.92	3	3

result_unit	detection_limit_unit	tic_retention_time	minimum_detectable_conc	counting_error
ug/l	ug/l			
ug/l	ug/l			
ug/l	ug/l			

uncertainty critical_value validation_level result_comment qc_original_conc qc_spike_added

qc_spike_measured qc_spike_recovery qc_dup_original_conc qc_dup_spike_added

qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl qc_rpd_cl

qc_spike_status qc_dup_spike_status qc_rpd_status

K_012110	E314.0	1/22/2010 19:25 T
LAYNE_012110	E314.0	1/22/2010 19:42 T
W9_012110	E314.0	1/22/2010 20:00 T
K_012110	E314.0	1/22/2010 19:25 T
LAYNE_012110	E314.0	1/22/2010 19:42 T
W9_012110	E314.0	1/22/2010 20:00 T

initial	Analysis	GN34240
initial	Analysis	GN34240
initial	Analysis	GN34240
initial	Prep	GP52341
initial	Prep	GP52341
initial	Prep	GP52341

FB090810	E314.0	9/10/2010 13:26 T
FB090810	E314.0	9/10/2010 13:26 T
FB090910	E314.0	9/17/2010 14:04 T
FB090910	E314.0	9/17/2010 14:04 T
IWC-4_090910	E314.0	9/17/2010 14:56 T
IWC-4_090910	E314.0	9/17/2010 14:56 T
J_090910	E314.0	9/18/2010 13:33 T
J_090910	E314.0	9/18/2010 13:33 T
K_090910	E314.0	9/17/2010 18:27 T
K_090910	E314.0	9/17/2010 18:27 T
LAYNE_090910	E314.0	9/17/2010 18:44 T
LAYNE_090910	E314.0	9/17/2010 18:44 T
SC10D_090810	E314.0	9/10/2010 14:18 T
SC10D_090810	E314.0	9/10/2010 14:18 T
SC10S_090810	E314.0	9/10/2010 14:01 T
SC10S_090810	E314.0	9/10/2010 14:01 T
SC11S(R)_090910	E314.0	9/17/2010 15:48 T
SC11S(R)_090910	E314.0	9/17/2010 15:48 T
SC12D_090910	E314.0	9/17/2010 16:05 T
SC12D_090910	E314.0	9/17/2010 16:05 T
SC14S_090910	E314.0	9/17/2010 15:13 T
SC14S_090910	E314.0	9/17/2010 15:13 T
SC16S_090910	E314.0	9/17/2010 17:35 T
SC16S_090910	E314.0	9/17/2010 17:35 T
SC17D_090810	E314.0	9/17/2010 16:43 T
SC17D_090810	E314.0	9/17/2010 16:43 T
SC17S_090810	E314.0	9/17/2010 16:25 T
SC17S_090810	E314.0	9/17/2010 16:25 T
SC18S_090810	E314.0	9/10/2010 14:53 T
SC18S_090810	E314.0	9/10/2010 14:53 T
SC1D_090810	E314.0	9/10/2010 15:10 T
SC1D_090810	E314.0	9/10/2010 15:10 T
SC1S_090810	E314.0	9/10/2010 15:27 T
SC1S_090810	E314.0	9/10/2010 15:27 T
SC20D_090910	E314.0	9/17/2010 17:17 T
SC20D_090910	E314.0	9/17/2010 17:17 T
SC21D_090810	E314.0	9/10/2010 16:37 T
SC21D_090810	E314.0	9/10/2010 16:37 T
SC21S_090810	E314.0	9/10/2010 16:19 T
SC21S_090810	E314.0	9/10/2010 16:19 T
SC22S_090910	E314.0	9/17/2010 14:21 T
SC22S_090910	E314.0	9/17/2010 14:21 T
SC24S_090810	E314.0	9/10/2010 17:11 T
SC24S_090810	E314.0	9/10/2010 17:11 T
SC25S_090810	E314.0	9/17/2010 17:00 T
SC25S_090810	E314.0	9/17/2010 17:00 T
SC26D_090810	E314.0	9/10/2010 12:00 T
SC26D_090810	E314.0	9/10/2010 12:00 T
SC28D_090810	E314.0	9/10/2010 12:17 T
SC28D_090810	E314.0	9/10/2010 12:17 T
SC2D(R)_090810	E314.0	9/10/2010 13:09 T
SC2D(R)_090810	E314.0	9/10/2010 13:09 T

SC30D_090810	E314.0	9/17/2010 13:29 T
SC30D_090810	E314.0	9/17/2010 13:29 T
SC32D_090810	E314.0	9/10/2010 12:52 T
SC32D_090810	E314.0	9/10/2010 12:52 T
SC33D_090810	E314.0	9/10/2010 12:34 T
SC33D_090810	E314.0	9/10/2010 12:34 T
SC34D_090810	E314.0	9/10/2010 11:25 T
SC34D_090810	E314.0	9/10/2010 11:25 T
SC35D_090810	E314.0	9/17/2010 12:55 T
SC35D_090810	E314.0	9/17/2010 12:55 T
SC36D_090810	E314.0	9/17/2010 12:38 T
SC36D_090810	E314.0	9/17/2010 12:38 T
SC37D_090810	E314.0	9/17/2010 13:12 T
SC37D_090810	E314.0	9/17/2010 13:12 T
SC3D(R)_090810	E314.0	9/10/2010 16:02 T
SC3D(R)_090810	E314.0	9/10/2010 16:02 T
SC3S_090810	E314.0	9/10/2010 15:45 T
SC3S_090810	E314.0	9/10/2010 15:45 T
SC6S_090810	E314.0	9/10/2010 14:35 T
SC6S_090810	E314.0	9/10/2010 14:35 T
W2(R)_090810	E314.0	9/17/2010 13:47 T
W2(R)_090810	E314.0	9/17/2010 13:47 T
W3D_090910	E314.0	9/17/2010 15:31 T
W3D_090910	E314.0	9/17/2010 15:31 T
W4_090910	E314.0	9/17/2010 18:09 T
W4_090910	E314.0	9/17/2010 18:09 T

initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42428
initial	Prep	GP55533
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431

initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42159
initial	Prep	GP55431
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524
initial	Analysis	GN42397
initial	Prep	GP55524

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#sys_loc_(	measurement_date	historical_	water_leve	water_leve	corrected_	corrected_	measured_	depth_unit
A	10/19/2009 16:00	94.82	5.47	89.35				ft btoc
B	10/19/2009 16:00	94.33	4.75	89.58				ft btoc
IW1	10/19/2009 16:00	90.33	5.23	85.1				ft btoc
IW2	10/19/2009 16:00	91.05	7.91	83.14				ft btoc
IWC-1	10/19/2009 16:00	98.13	7.7	90.43				ft btoc
IWC-2	10/19/2009 16:00	98.51	8.11	90.4				ft btoc
IWC-3	10/19/2009 16:00	97.83	7.41	90.42				ft btoc
IWC-4	10/19/2009 16:00	98.61	8.18	90.43				ft btoc
IWC-5	10/19/2009 16:00	98.03	7.64	90.39				ft btoc
K	10/19/2009 16:00	99.18	9.69	89.49				ft btoc
L	10/19/2009 16:00	103.51	11.87	91.64				ft btoc
MWH-4	10/19/2009 16:00	99.44	9.06	90.38				ft btoc
SC10D	10/19/2009 16:00	95.72	7.39	88.33				ft btoc
SC10S	10/19/2009 16:00	95.38	7.08	88.3				ft btoc
SC11S(R)	10/19/2009 16:00	108.12	15.67	92.45				ft btoc
SC12D	10/19/2009 16:00	103.19	11.59	91.6				ft btoc
SC12S	10/19/2009 16:00	104.76	12.63	92.13				ft btoc
SC13D	10/19/2009 16:00	101.99	10.66	91.33				ft btoc
SC13S(R)	10/19/2009 16:00	101.41	8.69	92.72				ft btoc
SC14S	10/19/2009 16:00	108.38	16.07	92.31				ft btoc
SC15S	10/19/2009 16:00	108.32	14.83	93.49				ft btoc
SC16S	10/19/2009 16:00	108.05	18.05	90				ft btoc
SC17D	10/19/2009 16:00	108.07	19.05	89.02				ft btoc
SC17S	10/19/2009 16:00	109.26	20.19	89.07				ft btoc
SC18D	10/19/2009 16:00	96.01	9.56	86.45				ft btoc
SC18S	10/19/2009 16:00	95.72	9.26	86.46				ft btoc
SC19D	10/19/2009 16:00	92.03	5.31	86.72				ft btoc
SC19S	10/19/2009 16:00	92.98	5.99	86.99				ft btoc
SC1D	10/19/2009 16:00	90.9	8.27	82.63				ft btoc
SC1S	10/19/2009 16:00	87.26	3.73	83.53				ft btoc
SC20D	10/19/2009 16:00	104.53	13.76	90.77				ft btoc
SC21D	10/19/2009 16:00	91.65	5.81	85.84				ft btoc
SC21S	10/19/2009 16:00	92.64	6.41	86.23				ft btoc
SC22S	10/19/2009 16:00	99.65	8.83	90.82				ft btoc
SC23S	10/19/2009 16:00	102.21	11.46	90.75				ft btoc
SC24D	10/19/2009 16:00	93.52	10.23	83.29				ft btoc
SC24S	10/19/2009 16:00	93.57	9.9	83.67				ft btoc
SC25S	10/19/2009 16:00	102.27	9.76	92.51				ft btoc
SC26D	10/19/2009 16:00	100.45	10.55	89.9				ft btoc
SC27S	10/19/2009 16:00	100.54	9.11	91.43				ft btoc
SC28D	10/19/2009 16:00	106.87	18.96	87.91				ft btoc
SC2D(R)	10/19/2009 16:00	92.7	7.84	84.86				ft btoc
SC30D	10/19/2009 16:00	115.58	27.36	88.22				ft btoc
SC31D	10/19/2009 16:00	102.61	19.05	83.56				ft btoc
SC32D	10/19/2009 16:00	90	11.06	78.94				ft btoc
SC3D(R)	10/19/2009 16:00	91.06	7.11	83.95				ft btoc
SC3S	10/19/2009 16:00	90.32	6.32	84				ft btoc
SC4S	10/19/2009 16:00	93.65	6.77	86.88				ft btoc
SC5D	10/19/2009 16:00	97	12.39	84.61				ft btoc
SC5S	10/19/2009 16:00	96.55	11.85	84.7				ft btoc
SC6D	10/19/2009 16:00	94.38	6.55	87.83				ft btoc

SC6S	10/19/2009 16:00	94.62	5.55	89.07	ft btoc
SC9S	10/19/2009 16:00	96.23	6.56	89.67	ft btoc
W2(R)	10/19/2009 16:00	97.96	5.44	92.52	ft btoc
W3D	10/19/2009 16:00	108.37	15.94	92.43	ft btoc
W4	10/19/2009 16:00	104.58	14.03	90.55	ft btoc
SC1D	11/18/2009 14:35	90.9	7.18	83.72	ft btoc
SC10S	11/18/2009 15:35	95.38	6.44	88.94	ft btoc
SC10D	11/18/2009 16:20	95.72	6.82	88.9	ft btoc
SC1S	11/18/2009 17:00	87.26	2.17	85.09	ft btoc
SC3S	11/19/2009 8:25	90.32	4.76	85.56	ft btoc
SC3D(R)	11/19/2009 8:45	91.06	5.53	85.53	ft btoc
SC25S	11/19/2009 9:35	102.27	8.04	94.23	ft btoc
IW1	11/19/2009 10:35	90.33	3.76	86.57	ft btoc
SC2D(R)	11/19/2009 11:10	92.7	6.36	86.34	ft btoc
IW2	11/19/2009 11:25	91.05	6.43	84.62	ft btoc
SC5S	11/19/2009 11:40	96.55	10.31	86.24	ft btoc
SC5D	11/19/2009 11:45	97	10.89	86.11	ft btoc
SC24S	11/19/2009 12:05	93.57	8.1	85.47	ft btoc
SC24D	11/19/2009 12:25	93.52	8.56	84.96	ft btoc
SC26D	11/19/2009 13:55	100.45	8.96	91.49	ft btoc
SC33D	11/19/2009 15:20	108.08	19.32	88.76	ft btoc
SC34D	11/19/2009 17:30	103.82	16.84	86.98	ft btoc
SC35D	12/7/2009 11:58	81.24	14.77	66.47	ft btoc
SC36D	12/7/2009 13:45	91.8	7.95	83.85	ft btoc
SC26D	12/7/2009 16:05	100.45	9.71	90.74	ft btoc
SC10D	12/7/2009 17:09	95.72	6.83	88.89	ft btoc
SC10S	12/7/2009 17:20	95.38	6.56	88.82	ft btoc
SC25S	12/8/2009 9:06	102.27	8.46	93.81	ft btoc
B	12/8/2009 10:00	94.33	4.19	90.14	ft btoc
A	12/8/2009 10:10	94.82	6.82	88	ft btoc
SC6D	12/8/2009 10:40	94.38	9.81	84.57	ft btoc
SC1D	12/8/2009 11:06	90.9	7.27	83.63	ft btoc
SC1S	12/8/2009 11:22	87.26	2.82	84.44	ft btoc
SC3S	12/8/2009 11:51	90.32	5.55	84.77	ft btoc
SC3D(R)	12/8/2009 11:47	91.06	6.31	84.75	ft btoc
SC2D(R)	12/8/2009 12:53	92.7	7.21	85.49	ft btoc
IW2	12/8/2009 13:10	91.05	7.24	83.81	ft btoc
IW1	12/8/2009 12:41	90.33	4.6	85.73	ft btoc
SC5S	12/8/2009 13:53	96.55	11.1	85.45	ft btoc
SC5D	12/8/2009 14:09	97	11.63	85.37	ft btoc
SC24S	12/8/2009 14:53	93.57	8.7	84.87	ft btoc
SC24D	12/8/2009 14:41	93.52	9.35	84.17	ft btoc
A	1/19/2010 14:56	94.82	4.92	89.9	ft btoc
IWC-3	1/19/2010 14:36	97.83	4.82	93.01	ft btoc
IWC-4	1/19/2010 14:44	98.61	5.58	93.03	ft btoc
IWC-5	1/19/2010 14:34	98.03	5.13	92.9	ft btoc
W3D	1/19/2010 13:40	108.37	12.78	95.59	ft btoc
W4	1/19/2010 15:31	104.58	12.37	92.21	ft btoc
MWH-4	1/19/2010 14:06	99.37	7	92.37	ft btoc
SC12D	1/19/2010 13:41	103.19	8.4	94.79	ft btoc
SC13D	1/19/2010 13:59	101.99	7.57	94.42	ft btoc
SC20D	1/19/2010 15:26	104.53	11.05	93.48	ft btoc

SC22D	1/19/2010 14:03	98.65	5.67	92.98	ft btoc
SC1D	1/19/2010 16:10	90.9	6.11	84.79	ft btoc
SC2D(R)	1/19/2010 16:22	92.53	6.29	86.24	ft btoc
SC3D(R)	1/19/2010 16:14	91.06	5.29	85.77	ft btoc
SC5D	1/19/2010 16:32	97	10.68	86.32	ft btoc
SC6D	1/19/2010 15:55	94.38	4.75	89.63	ft btoc
SC10D	1/19/2010 15:50	95.72	5.64	90.08	ft btoc
SC17D	1/19/2010 16:00	108.07	17.06	91.01	ft btoc
SC18D	1/19/2010 16:02	96.01	7.71	88.3	ft btoc
SC19D	1/19/2010 17:00	92.03	3.62	88.41	ft btoc
SC21D	1/19/2010 16:53	91.65	4.15	87.5	ft btoc
SC24D	1/19/2010 16:38	93.52	8.12	85.4	ft btoc
SC26D	1/19/2010 15:40	100.45	7.91	92.54	ft btoc
IW2	1/19/2010 16:20	92.05	6.37	85.68	ft btoc
SC28D	1/19/2010 15:45	106.87	16.77	90.1	ft btoc
SC30D	1/19/2010 15:42	115.58	24.2	91.38	ft btoc
SC31D	1/19/2010 16:35	102.61	16.93	85.68	ft btoc
SC32D	1/19/2010 16:45	91.62	8.35	83.27	ft btoc
SC33D	1/19/2010 0:00	108.08	17.78	90.3	ft btoc
SC34D	1/19/2010 0:00	103.82	16.14	87.68	ft btoc
SC35D	1/19/2010 0:00	81.24	13.34	67.9	ft btoc
SC36D	1/19/2010 0:00	91.8	7.01	84.79	ft btoc
B	1/19/2010 14:53	94.33	2.77	91.56	ft btoc
K	1/19/2010 15:30	99.18	7.57	91.61	ft btoc
L	1/19/2010 15:16	103.51	9.12	94.39	ft btoc
IWC-2	1/19/2010 14:43	98.51	5.51	93	ft btoc
W2(R)	1/19/2010 13:09	97.96	3.12	94.84	ft btoc
SC9S	1/19/2010 14:59	96.23	4.62	91.61	ft btoc
SC11S(R)	1/19/2010 13:40	108.12	12.34	95.78	ft btoc
SC12S	1/19/2010 13:42	104.76	9.38	95.38	ft btoc
SC13S(R)	1/19/2010 13:58	101.1	5.57	95.53	ft btoc
SC14S	1/19/2010 13:35	108.38	12.82	95.56	ft btoc
SC15S	1/19/2010 15:15	108.32	11.98	96.34	ft btoc
SC16S	1/19/2010 15:35	108.05	15.34	92.71	ft btoc
SC20S	1/19/2010 15:25	104.45	10.62	93.83	ft btoc
SC22S	1/19/2010 14:04	99.65	6.31	93.34	ft btoc
SC23S	1/19/2010 15:21	102.21	5.63	96.58	ft btoc
SC25S	1/19/2010 13:00	102.27	6.34	95.93	ft btoc
SC27S	1/19/2010 15:30	100.54	6.17	94.37	ft btoc
SC1S	1/19/2010 16:12	87.26	1.76	85.5	ft btoc
SC3S	1/19/2010 16:15	90.32	4.71	85.61	ft btoc
SC4S	1/19/2010 16:00	93.65	5.19	88.46	ft btoc
SC5S	1/19/2010 16:33	96.55	10.05	86.5	ft btoc
SC6S	1/19/2010 15:57	94.62	3.98	90.64	ft btoc
SC10S	1/19/2010 15:51	95.38	5.48	89.9	ft btoc
SC17S	1/19/2010 15:55	109.26	17.96	91.3	ft btoc
SC18S	1/19/2010 16:03	95.72	7.39	88.33	ft btoc
SC19S	1/19/2010 17:02	92.98	5.12	87.86	ft btoc
SC21S	1/19/2010 16:54	92.64	4.78	87.86	ft btoc
SC24S	1/19/2010 16:37	93.57	7.67	85.9	ft btoc
IW1	1/19/2010 16:24	90.33	4.84	85.49	ft btoc
SC26D	9/8/2010 9:24	100.45	10.82	89.63	ft btoc

SC28D	9/8/2010 11:06	103.82	19.47	84.35	ft btoc
SC34D	9/8/2010 13:36	103.82	19.11	84.71	ft btoc
SC33D	9/8/2010 12:59	108.08	21.21	86.87	ft btoc
SC36D	9/8/2010 15:09	91.8	9.39	82.41	ft btoc
SC35D	9/8/2010 14:38	81.24	17.08	64.16	ft btoc
SC30D	9/8/2010 16:27	115.58	27.45	88.13	ft btoc
W2(R)	9/8/2010 17:31	97.96	6.02	91.94	ft btoc
SC22S	9/9/2010 9:08	99.65	9.32	90.33	ft btoc
IWC-4	9/9/2010 9:39	98.61	8.62	89.99	ft btoc
SC20D	9/9/2010 10:05	104.53	14.28	90.25	ft btoc
SC14S	9/9/2010 8:57	108.38	16.44	91.94	ft btoc
W3D	9/9/2010 9:12	108.37	16.24	92.13	ft btoc
SC11S(R)	9/9/2010 9:33	108.12	15.81	92.31	ft btoc
SC12D	9/9/2010 9:40	103.19	11.81	91.38	ft btoc
SC16S	9/9/2010 10:40	108.05	18.69	89.36	ft btoc
W4	9/9/2010 11:02	104.58	15.55	89.03	ft btoc
K	9/9/2010 11:20	99.18	10.54	88.64	ft btoc
SC10S	9/8/2010 9:00	95.38	7.88	87.5	ft btoc
SC10D	9/8/2010 9:12	95.72	8.24	87.48	ft btoc
SC6S	9/8/2010 9:55	94.62	8.29	86.33	ft btoc
SC18S	9/8/2010 10:05	95.72	9.98	85.74	ft btoc
SC1D	9/8/2010 10:26	90.9	9.02	81.88	ft btoc
SC1S	9/8/2010 10:48	87.26	4.46	82.8	ft btoc
SC3S	9/8/2010 11:09	90.32	6.97	83.35	ft btoc
SC3D(R)	9/8/2010 11:19	91.06	7.73	83.33	ft btoc
SC2D(R)	9/8/2010 14:34	92.53	8.44	84.09	ft btoc
SC21S	9/8/2010 11:58	92.64	7.12	85.52	ft btoc
SC21D	9/8/2010 12:28	91.65	6.41	85.24	ft btoc
SC24S	9/8/2010 13:15	93.57	10.74	82.83	ft btoc
SC17S	9/8/2010 15:41	109.26	20.92	88.34	ft btoc
SC17D	9/8/2010 15:52	108.07	19.92	88.15	ft btoc
SC32D	9/8/2010 14:15	91.62	11.79	79.83	ft btoc
SC25S	9/8/2010 17:29	102.27	9.57	92.7	ft btoc

technician	dry_indica	measurem	batch_num	dip_or_ele	remark	Lnapl_cas	Lnapl_dep	Dnapl_cas	Dnapl_dep

Task_code

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	SC26D	SC26D_090810	pH		
TRC-CT	SC26D	SC26D_090810	SC		
TRC-CT	SC26D	SC26D_090810	TEMP		
TRC-CT	SC28D	SC28D_090810	pH		
TRC-CT	SC28D	SC28D_090810	SC		
TRC-CT	SC28D	SC28D_090810	TEMP		
TRC-CT	SC34D	SC34D_090810	pH		
TRC-CT	SC34D	SC34D_090810	SC		
TRC-CT	SC34D	SC34D_090810	TEMP		
TRC-CT	SC33D	SC33D_090810	pH		
TRC-CT	SC33D	SC33D_090810	SC		
TRC-CT	SC33D	SC33D_090810	TEMP		
TRC-CT	SC36D	SC36D_090810	pH		
TRC-CT	SC36D	SC36D_090810	SC		
TRC-CT	SC36D	SC36D_090810	TEMP		
TRC-CT	SC35D	SC35D_090810	pH		
TRC-CT	SC35D	SC35D_090810	SC		
TRC-CT	SC35D	SC35D_090810	TEMP		
TRC-CT	SC30D	SC30D_090810	pH		
TRC-CT	SC30D	SC30D_090810	SC		
TRC-CT	SC30D	SC30D_090810	TEMP		
TRC-CT	W2(R)	W2(R)_090810	pH		
TRC-CT	W2(R)	W2(R)_090810	SC		
TRC-CT	W2(R)	W2(R)_090810	TEMP		
TRC-CT	SC22S	SC22S_090910	pH		
TRC-CT	SC22S	SC22S_090910	SC		
TRC-CT	SC22S	SC22S_090910	TEMP		
TRC-CT	IWC-4	IWC-4_090910	pH		
TRC-CT	IWC-4	IWC-4_090910	SC		
TRC-CT	IWC-4	IWC-4_090910	TEMP		
TRC-CT	SC20D	SC20D_090910	pH		
TRC-CT	SC20D	SC20D_090910	SC		
TRC-CT	SC20D	SC20D_090910	TEMP		
TRC-CT	SC14S	SC14S_090910	pH		
TRC-CT	SC14S	SC14S_090910	SC		
TRC-CT	SC14S	SC14S_090910	TEMP		
TRC-CT	W3D	W3D_090910	pH		
TRC-CT	W3D	W3D_090910	SC		
TRC-CT	W3D	W3D_090910	TEMP		
TRC-CT	SC11S(R)	SC11S(R)_090910	pH		
TRC-CT	SC11S(R)	SC11S(R)_090910	SC		
TRC-CT	SC11S(R)	SC11S(R)_090910	TEMP		
TRC-CT	SC12D	SC12D_090910	pH		
TRC-CT	SC12D	SC12D_090910	SC		
TRC-CT	SC12D	SC12D_090910	TEMP		
TRC-CT	SC16S	SC16S_090910	pH		
TRC-CT	SC16S	SC16S_090910	SC		
TRC-CT	SC16S	SC16S_090910	TEMP		

TRC-CT	W4	W4_090910	pH
TRC-CT	W4	W4_090910	SC
TRC-CT	W4	W4_090910	TEMP
TRC-CT	K	K_090910	pH
TRC-CT	K	K_090910	SC
TRC-CT	K	K_090910	TEMP
TRC-CT	Layne	Layne_090910	pH
TRC-CT	Layne	Layne_090910	SC
TRC-CT	Layne	Layne_090910	TEMP
TRC-CT	SC10S	SC10S_090810	pH
TRC-CT	SC10S	SC10S_090810	SC
TRC-CT	SC10S	SC10S_090810	TEMP
TRC-CT	SC10D	SC10D_090810	pH
TRC-CT	SC10D	SC10D_090810	SC
TRC-CT	SC10D	SC10D_090810	TEMP
TRC-CT	SC6S	SC6S_090810	pH
TRC-CT	SC6S	SC6S_090810	SC
TRC-CT	SC6S	SC6S_090810	TEMP
TRC-CT	SC18S	SC18S_090810	pH
TRC-CT	SC18S	SC18S_090810	SC
TRC-CT	SC18S	SC18S_090810	TEMP
TRC-CT	SC1D	SC1D_090810	pH
TRC-CT	SC1D	SC1D_090810	SC
TRC-CT	SC1D	SC1D_090810	TEMP
TRC-CT	SC1S	SC1S_090810	pH
TRC-CT	SC1S	SC1S_090810	SC
TRC-CT	SC1S	SC1S_090810	TEMP
TRC-CT	SC3S	SC3S_090810	pH
TRC-CT	SC3S	SC3S_090810	SC
TRC-CT	SC3S	SC3S_090810	TEMP
TRC-CT	SC3D(R)	SC3D(R)_090810	pH
TRC-CT	SC3D(R)	SC3D(R)_090810	SC
TRC-CT	SC3D(R)	SC3D(R)_090810	TEMP
TRC-CT	SC2D(R)	SC2D(R)_090810	pH
TRC-CT	SC2D(R)	SC2D(R)_090810	SC
TRC-CT	SC2D(R)	SC2D(R)_090810	TEMP
TRC-CT	SC21S	SC21S_090810	pH
TRC-CT	SC21S	SC21S_090810	SC
TRC-CT	SC21S	SC21S_090810	TEMP
TRC-CT	SC21D	SC21D_090810	pH
TRC-CT	SC21D	SC21D_090810	SC
TRC-CT	SC21D	SC21D_090810	TEMP
TRC-CT	SC24S	SC24S_090810	pH
TRC-CT	SC24S	SC24S_090810	SC
TRC-CT	SC24S	SC24S_090810	TEMP
TRC-CT	SC17S	SC17S_090810	pH
TRC-CT	SC17S	SC17S_090810	SC
TRC-CT	SC17S	SC17S_090810	TEMP
TRC-CT	SC17D	SC17D_090810	pH

TRC-CT	SC17D	SC17D_090810	SC
TRC-CT	SC17D	SC17D_090810	TEMP
TRC-CT	SC32D	SC32D_090810	pH
TRC-CT	SC32D	SC32D_090810	SC
TRC-CT	SC32D	SC32D_090810	TEMP
TRC-CT	SC25S	SC25S_090810	pH
TRC-CT	SC25S	SC25S_090810	SC
TRC-CT	SC25S	SC25S_090810	TEMP

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	09/08/2010 10:30:00	10:30:00	8.40	ph units		
	09/08/2010 10:30:00	10:30:00	12.92	ms/cm		
	09/08/2010 10:30:00	10:30:00	18.6	deg c		
	09/08/2010 12:35:00	12:35:00	6.07	ph units		
	09/08/2010 12:35:00	12:35:00	1171	ms/cm		
	09/08/2010 12:35:00	12:35:00	24.0	deg c		
	09/08/2010 13:55:00	13:55:00	4.86	ph units		
	09/08/2010 13:55:00	13:55:00	1098	ms/cm		
	09/08/2010 13:55:00	13:55:00	25.1	deg c		
	09/08/2010 13:10:00	13:10:00	5.39	ph units		
	09/08/2010 13:10:00	13:10:00	87.6	ms/cm		
	09/08/2010 13:10:00	13:10:00	24.8	deg c		
	09/08/2010 15:20:00	15:20:00	5.01	ph units		
	09/08/2010 15:20:00	15:20:00	68.2	ms/cm		
	09/08/2010 15:20:00	15:20:00	24.3	deg c		
	09/08/2010 14:50:00	14:50:00	5.16	ph units		
	09/08/2010 14:50:00	14:50:00	97.3	ms/cm		
	09/08/2010 14:50:00	14:50:00	24.8	deg c		
	09/08/2010 16:40:00	16:40:00	5.15	ph units		
	09/08/2010 16:40:00	16:40:00	99.4	ms/cm		
	09/08/2010 16:40:00	16:40:00	24.6	deg c		
	09/08/2010 17:45:00	17:45:00	6.51	ph units		
	09/08/2010 17:45:00	17:45:00	425.5	ms/cm		
	09/08/2010 17:45:00	17:45:00	23.4	deg c		
	09/09/2010 09:15:00	09:15:00	7.06	ph units		
	09/09/2010 09:15:00	09:15:00	915	ms/cm		
	09/09/2010 09:15:00	09:15:00	18.2	deg c		
	09/09/2010 09:51:00	09:51:00	7.14	ph units		
	09/09/2010 09:51:00	09:51:00	262.1	ms/cm		
	09/09/2010 09:51:00	09:51:00	24.2	deg c		
	09/09/2010 11:00:00	11:00:00	5.72	ph units		
	09/09/2010 11:00:00	11:00:00	136.7	ms/cm		
	09/09/2010 11:00:00	11:00:00	17.1	deg c		
	09/09/2010 10:25:00	10:25:00	5.73	ph units		
	09/09/2010 10:25:00	10:25:00	102.8	ms/cm		
	09/09/2010 10:25:00	10:25:00	19.9	deg c		
	09/09/2010 10:35:00	10:35:00	5.58	ph units		
	09/09/2010 10:35:00	10:35:00	104.1	ms/cm		
	09/09/2010 10:35:00	10:35:00	20.6	deg c		
	09/09/2010 10:40:00	10:40:00	5.36	ph units		
	09/09/2010 10:40:00	10:40:00	113.2	ms/cm		
	09/09/2010 10:40:00	10:40:00	19.7	deg c		
	09/09/2010 10:45:00	10:45:00	5.11	ph units		
	09/09/2010 10:45:00	10:45:00	37.3	ms/cm		
	09/09/2010 10:45:00	10:45:00	17.9	deg c		
	09/09/2010 11:10:00	11:10:00	5.60	ph units		
	09/09/2010 11:10:00	11:10:00	206.9	ms/cm		
	09/09/2010 11:10:00	11:10:00	17.5	deg c		

09/09/2010 11:20:00	11:20:00	5.24	ph units
09/09/2010 11:20:00	11:20:00	138.3	ms/cm
09/09/2010 11:20:00	11:20:00	17.4	deg c
09/09/2010 11:35:00	11:35:00	6.51	ph units
09/09/2010 11:35:00	11:35:00	288.0	ms/cm
09/09/2010 11:35:00	11:35:00	17.9	deg c
09/09/2010 11:50:00	11:50:00	6.74	ph units
09/09/2010 11:50:00	11:50:00	568	ms/cm
09/09/2010 11:50:00	11:50:00	17.8	deg c
09/08/2010 09:10:00	09:10:00	6.61	ph units
09/08/2010 09:10:00	09:10:00	464	ms/cm
09/08/2010 09:10:00	09:10:00	22.0	deg c
09/08/2010 09:35:00	09:35:00	9.21	ph units
09/08/2010 09:35:00	09:35:00	767	ms/cm
09/08/2010 09:35:00	09:35:00	21.6	deg c
09/08/2010 09:55:00	09:55:00	6.71	ph units
09/08/2010 09:55:00	09:55:00	480	ms/cm
09/08/2010 09:55:00	09:55:00	20.6	deg c
09/08/2010 10:10:00	10:10:00	5.83	ph units
09/08/2010 10:10:00	10:10:00	298.9	ms/cm
09/08/2010 10:10:00	10:10:00	22.6	deg c
09/08/2010 10:35:00	10:35:00	5.43	ph units
09/08/2010 10:35:00	10:35:00	370.8	ms/cm
09/08/2010 10:35:00	10:35:00	19.8	deg c
09/08/2010 10:55:00	10:55:00	5.75	ph units
09/08/2010 10:55:00	10:55:00	175.7	ms/cm
09/08/2010 10:55:00	10:55:00	21.7	deg c
09/08/2010 11:20:00	11:20:00	5.34	ph units
09/08/2010 11:20:00	11:20:00	398.1	ms/cm
09/08/2010 11:20:00	11:20:00	22.0	deg c
09/08/2010 11:35:00	11:35:00	4.57	ph units
09/08/2010 11:35:00	11:35:00	550	ms/cm
09/08/2010 11:35:00	11:35:00	19.1	deg c
09/08/2010 15:00:00	15:00:00	5.76	ph units
09/08/2010 15:00:00	15:00:00	269.2	ms/cm
09/08/2010 15:00:00	15:00:00	22.3	deg c
09/08/2010 12:30:00	12:30:00	4.95	ph units
09/08/2010 12:30:00	12:30:00	174.2	ms/cm
09/08/2010 12:30:00	12:30:00	23.1	deg c
09/08/2010 13:00:00	13:00:00	4.86	ph units
09/08/2010 13:00:00	13:00:00	232.3	ms/cm
09/08/2010 13:00:00	13:00:00	22.6	deg c
09/08/2010 13:20:00	13:20:00	4.14	ph units
09/08/2010 13:20:00	13:20:00	641	ms/cm
09/08/2010 13:20:00	13:20:00	22.7	deg c
09/08/2010 15:45:00	15:45:00	4.82	ph units
09/08/2010 15:45:00	15:45:00	290.9	ms/cm
09/08/2010 15:45:00	15:45:00	22.9	deg c
09/08/2010 16:30:00	16:30:00	4.39	ph units

09/08/2010 16:30:00	16:30:00	1235	ms/cm
09/08/2010 16:30:00	16:30:00	20.4	deg c
09/08/2010 14:20:00	14:20:00	4.74	ph units
09/08/2010 14:20:00	14:20:00	147.2	ms/cm
09/08/2010 14:20:00	14:20:00	23.3	deg c
09/08/2010 17:35:00	17:35:00	6.09	ph units
09/08/2010 17:35:00	17:35:00	295.2	ms/cm
09/08/2010 17:35:00	17:35:00	24.5	deg c

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
WG				
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reportable_result	value_type	remark
Yes	ACTUAL	
Yes	ACTUAL	
Yes	ACTUAL	
Yes	ACTUAL	
Yes	ACTUAL	
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Yes	ACTUAL

#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	FB090810		WQ
TRC-CT	FB090910		WQ
TRC-CT	IWC-4_090910		WG
TRC-CT	J_090910		WG
TRC-CT	K_090910		WG
TRC-CT	LAYNE_090910		WG
TRC-CT	SC10D_090810		WG
TRC-CT	SC10S_090810		WG
TRC-CT	SC11S(R)_090910		WG
TRC-CT	SC12D_090910		WG
TRC-CT	SC14S_090910		WG
TRC-CT	SC16S_090910		WG
TRC-CT	SC17D_090810		WG
TRC-CT	SC17S_090810		WG
TRC-CT	SC18S_090810		WG
TRC-CT	SC1D_090810		WG
TRC-CT	SC1S_090810		WG
TRC-CT	SC20D_090910		WG
TRC-CT	SC21D_090810		WG
TRC-CT	SC21S_090810		WG
TRC-CT	SC22S_090910		WG
TRC-CT	SC24S_090810		WG
TRC-CT	SC25S_090810		WG
TRC-CT	SC26D_090810		WG
TRC-CT	SC28D_090810		WG
TRC-CT	SC2D(R)_090810		WG
TRC-CT	SC30D_090810		WG
TRC-CT	SC32D_090810		WG
TRC-CT	SC33D_090810		WG
TRC-CT	SC34D_090810		WG
TRC-CT	SC35D_090810		WG
TRC-CT	SC36D_090810		WG
TRC-CT	SC37D_090810		WG
TRC-CT	SC3D(R)_090810		WG
TRC-CT	SC3S_090810		WG
TRC-CT	SC6S_090810		WG
TRC-CT	W2(R)_090810		WG
TRC-CT	W3D_090910		WG
TRC-CT	W4_090910		WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
AB	Field			9/8/2010 7:40
AB	Field			9/9/2010 8:10
N	Field			9/9/2010 9:55
FD	Field	K_090910		9/9/2010 12:00
N	Field			9/9/2010 11:35
N	Field			9/9/2010 11:50
N	Field			9/8/2010 9:35
N	Field			9/8/2010 9:10
N	Field			9/9/2010 10:40
N	Field			9/9/2010 10:45
N	Field			9/9/2010 10:25
N	Field			9/9/2010 11:10
N	Field			9/8/2010 16:30
N	Field			9/8/2010 15:45
N	Field			9/8/2010 10:10
N	Field			9/8/2010 10:35
N	Field			9/8/2010 10:55
N	Field			9/9/2010 11:00
N	Field			9/8/2010 13:00
N	Field			9/8/2010 12:30
N	Field			9/9/2010 9:15
N	Field			9/8/2010 13:20
N	Field			9/8/2010 17:35
N	Field			9/8/2010 10:30
N	Field			9/8/2010 12:35
N	Field			9/8/2010 15:00
N	Field			9/8/2010 16:40
N	Field			9/8/2010 14:20
N	Field			9/8/2010 13:10
N	Field			9/8/2010 13:55
N	Field			9/8/2010 14:50
N	Field			9/8/2010 15:20
FD	Field	SC36D_090810		9/8/2010 15:45
N	Field			9/8/2010 11:35
N	Field			9/8/2010 11:20
N	Field			9/8/2010 9:55
N	Field			9/8/2010 17:45
N	Field			9/9/2010 10:35
N	Field			9/9/2010 11:20

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
					9/8/2010
					9/9/2010
IWC-4					9/9/2010
K					9/9/2010
K					9/9/2010
LAYNE					9/9/2010
SC10D					9/8/2010
SC10S					9/8/2010
SC11S(R)					9/9/2010
SC12D					9/9/2010
SC14S					9/9/2010
SC16S					9/9/2010
SC17D					9/8/2010
SC17S					9/8/2010
SC18S					9/8/2010
SC1D					9/8/2010
SC1S					9/8/2010
SC20D					9/9/2010
SC21D					9/8/2010
SC21S					9/8/2010
SC22S					9/9/2010
SC24S					9/8/2010
SC25S					9/8/2010
SC26D					9/8/2010
SC28D					9/8/2010
SC2D(R)					9/8/2010
SC30D					9/8/2010
SC32D					9/8/2010
SC33D					9/8/2010
SC34D					9/8/2010
SC35D					9/8/2010
SC36D					9/8/2010
SC36D					9/8/2010
SC3D(R)					9/8/2010
SC3S					9/8/2010
SC6S					9/8/2010
W2(R)					9/8/2010
W3D					9/9/2010
W4					9/9/2010

sample_receipt_date	sampler	**sampling_company_code**	sampling_reason	sampling_technique
9/8/2010	JM	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/8/2010	JM	TRCCTW		
9/8/2010	JM	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/8/2010	JM	TRCCTW		
9/8/2010	JM	TRCCTW		
9/8/2010	JM	TRCCTW		
9/9/2010	CC	TRCCTW		
9/8/2010	JM	TRCCTW		
9/8/2010	JM	TRCCTW		
9/9/2010	CC	TRCCTW		
9/8/2010	JM	TRCCTW		
9/9/2010	CC	TRCCTW		
9/8/2010	CC	TRCCTW		
9/8/2010	CC	TRCCTW		
9/8/2010	CC	TRCCTW		
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9/8/2010	CC	TRCCTW		
9/8/2010	CC	TRCCTW		
9/8/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/8/2010	JM	TRCCTW		
9/8/2010	JM	TRCCTW		
9/8/2010	JM	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		
9/9/2010	CC	TRCCTW		

task_code	collection_quarter	**composite_yn**	composite_desc	sample_class	custom_field_1
		N			
		N			
		N			
		N			
		N			
		N			
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		N			
		N			

R2-0003043

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
FB090910	E314.0	9/17/2010 14:04	T
IWC-4_090910	E314.0	9/17/2010 14:56	T
J_090910	E314.0	9/18/2010 13:33	T
K_090910	E314.0	9/17/2010 18:27	T
LAYNE_090910	E314.0	9/17/2010 18:44	T
SC11S(R)_090910	E314.0	9/17/2010 15:48	T
SC12D_090910	E314.0	9/17/2010 16:05	T
SC14S_090910	E314.0	9/17/2010 15:13	T
SC16S_090910	E314.0	9/17/2010 17:35	T
SC17D_090810	E314.0	9/17/2010 16:43	T
SC17S_090810	E314.0	9/17/2010 16:25	T
SC20D_090910	E314.0	9/17/2010 17:17	T
SC22S_090910	E314.0	9/17/2010 14:21	T
SC25S_090810	E314.0	9/17/2010 17:00	T
SC30D_090810	E314.0	9/17/2010 13:29	T
SC35D_090810	E314.0	9/17/2010 12:55	T
SC36D_090810	E314.0	9/17/2010 12:38	T
SC37D_090810	E314.0	9/17/2010 13:12	T
W2(R)_090810	E314.0	9/17/2010 13:47	T
W3D_090910	E314.0	9/17/2010 15:31	T
W4_090910	E314.0	9/17/2010 18:09	T
SC26D_090810	E314.0	9/10/2010 12:00	T
SC28D_090810	E314.0	9/10/2010 12:17	T
SC2D(R)_090810	E314.0	9/10/2010 13:09	T
SC32D_090810	E314.0	9/10/2010 12:52	T
SC33D_090810	E314.0	9/10/2010 12:34	T
SC34D_090810	E314.0	9/10/2010 11:25	T
FB090810	E314.0	9/10/2010 13:26	T
SC10D_090810	E314.0	9/10/2010 14:18	T
SC10S_090810	E314.0	9/10/2010 14:01	T
SC18S_090810	E314.0	9/10/2010 14:53	T
SC1D_090810	E314.0	9/10/2010 15:10	T
SC1S_090810	E314.0	9/10/2010 15:27	T
SC21D_090810	E314.0	9/10/2010 16:37	T
SC21S_090810	E314.0	9/10/2010 16:19	T
SC24S_090810	E314.0	9/10/2010 17:11	T
SC3D(R)_090810	E314.0	9/10/2010 16:02	T
SC3S_090810	E314.0	9/10/2010 15:45	T
SC6S_090810	E314.0	9/10/2010 14:35	T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
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	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		6
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	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		6
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	9/17/2010 23:59			ACTD	quant
	9/17/2010 23:59			ACTD	quant
	9/18/2010 23:59			ACTD	quant
	9/17/2010 23:59			ACTD	quant
	9/17/2010 23:59			ACTD	quant
	9/17/2010 23:59			ACTD	quant
	9/17/2010 23:59			ACTD	quant
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	9/10/2010 23:59			ACTD	quant
	9/10/2010 23:59			ACTD	quant
	9/10/2010 23:59			ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA55913-6		25	ml	NATALIER
JA55913-8		25	ml	NATALIER
JA55913-21		25	ml	NATALIER
JA55913-19		25	ml	NATALIER
JA55913-20		25	ml	NATALIER
JA55913-11		25	ml	NATALIER
JA55913-12		25	ml	NATALIER
JA55913-9		25	ml	NATALIER
JA55913-17		25	ml	NATALIER
JA55913-14		25	ml	NATALIER
JA55913-13		25	ml	NATALIER
JA55913-16		25	ml	NATALIER
JA55913-7		25	ml	NATALIER
JA55913-15		25	ml	NATALIER
JA55913-4		25	ml	NATALIER
JA55913-1		25	ml	NATALIER
JA55913-2		25	ml	NATALIER
JA55913-3		25	ml	NATALIER
JA55913-5		25	ml	NATALIER
JA55913-10		25	ml	NATALIER
JA55913-18		25	ml	NATALIER
JA55826-1		25	ml	MELISSAS
JA55826-2		25	ml	MELISSAS
JA55826-6		25	ml	MELISSAS
JA55826-5		25	ml	MELISSAS
JA55826-3		25	ml	MELISSAS
JA55826-4		25	ml	MELISSAS
JA55820-1		25	ml	MELISSAS
JA55820-3		25	ml	MELISSAS
JA55820-2		25	ml	MELISSAS
JA55820-5		25	ml	MELISSAS
JA55820-6		25	ml	MELISSAS
JA55820-7		25	ml	MELISSAS
JA55820-11		25	ml	MELISSAS
JA55820-10		25	ml	MELISSAS
JA55820-12		25	ml	MELISSAS
JA55820-9		25	ml	MELISSAS
JA55820-8		25	ml	MELISSAS
JA55820-4		25	ml	MELISSAS

instrument_id	comment	**preservative**	final_volume	**final_volume_unit**	**cas_rn**	**chemical_name**
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate

result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers
		TRG	Yes	N	U
4.4		TRG	Yes	Y	
3		TRG	Yes	Y	
1.9		TRG	Yes	Y	B
36.6		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
5.6		TRG	Yes	Y	
		TRG	Yes	N	U
6		TRG	Yes	Y	
2		TRG	Yes	Y	B
0.64		TRG	Yes	Y	B
2.8		TRG	Yes	Y	B
2.7		TRG	Yes	Y	B
6.4		TRG	Yes	Y	
5.6		TRG	Yes	Y	
		TRG	Yes	N	U
7.4		TRG	Yes	Y	
0.93		TRG	Yes	Y	B
6.8		TRG	Yes	Y	
16.8		TRG	Yes	Y	
6.6		TRG	Yes	Y	
3.7		TRG	Yes	Y	
		TRG	Yes	N	U
158		TRG	Yes	Y	
		TRG	Yes	N	U
8.5		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
44.5		TRG	Yes	Y	
0.69		TRG	Yes	Y	B
32.8		TRG	Yes	Y	
		TRG	Yes	N	U
2.1		TRG	Yes	Y	B
143		TRG	Yes	Y	
13		TRG	Yes	Y	
19.6		TRG	Yes	Y	

validator_qualifiers	interpreted_qualifiers	organic_yn	method_detection_limit
	U	N	0.58
		N	0.58
		N	0.58
	B	N	0.58
		N	0.58
	U	N	0.58
	U	N	0.58
	U	N	0.58
	U	N	0.58
		N	0.58
	U	N	0.58
		N	0.58
	B	N	0.58
	B	N	0.58
	B	N	0.58
	B	N	0.58
		N	0.58
		N	0.58
	U	N	0.58
		N	0.58
	B	N	0.58
		N	0.58
		N	0.58
		N	0.58
		N	0.58
	U	N	0.58
		N	3.5
	U	N	0.58
		N	0.58
	U	N	0.58
	U	N	0.58
		N	0.58
	B	N	0.58
		N	0.58
	U	N	0.58
	B	N	0.58
		N	3.5
		N	0.58
		N	0.58

reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
18	18	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
18	18	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

#data_provider	sys_loc_code	Latitude	Longitude	surf_elev	elev_unit	coord_sys_desc
#Text(20)	*Text(20)*	*Numeric*	*Numeric*	*Numeric*	*Text(2)*	*Text(20)*
TRC-CT	SC40D	39.542	-75.035	97	ft	LAT LONG

observation_date	alt_x_coord	alt_y_coord	alt_coord_type_code	alt_identifier
DateTime	*Text(20)*	*Text(20)*	*Text(20)*	*Text(20)*

horz_collect_method_code	horz_accuracy_value	horz_accuracy_unit	horz_datum_code
Text(3)	*Text(20)*	*Text(8)*	*Text(3)*
028	2	5	002

elev_collect_method_code	elev_accuracy_value	elev_accuracy_unit	**elev_datum_code**
Text(3)	*Text(20)*	*Text(8)*	*Text(3)*
OT			

source_scale	**subcontractor_name_code**	verification_code	reference_point
Text(2)	*Text(20)*	*Text(1)*	*Text(2)*

geometric_type_code	rank	loc_name	loc_desc	loc_type	loc_purpose	site_code
Text(20)	*Numeric*	*Text(40)*	*Text(255)*	*Text(20)*	*Text(20)*	*Text(3)*
				MW		003

within_facility_yn	loc_county_code	loc_district_code	**loc_state_code**	**loc_major_basin**
Text(1)	*Text(20)*	*Text(3)*	*Text(2)*	*Text(8)*
N				

loc_minor_basin	remark	total_depth	depth_to_bedrock	depth_to_top_of_screen
Text(20)	*Text(255)*	*Numeric*	*Numeric*	*Numeric*

depth_to_bottom_of_screen	top_casing_elev	datum_value	**datum_unit**	step_or_linear
Numeric	*Numeric*	*Numeric*	*Text(15)*	*Text(6)*

datum_collection_method_code	datum_desc	datum_start_date
Text(2)	*Text(70)*	*DateTime*

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boulev		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#sys_loc_code	drill_event	start_depth	end_depth	drill_date	diameter	diameter_unit
#Text(20)	*Text(20)*	*Numeric*	*Numeric*	*DateTime*	*Numeric*	*Text(15)*
SC40D	initial	0	142			

drill_method	fluid	viscosity	hammer_wt	hammer_fall	lift_mechanism	new_yn	repair_yn	deepen_yn
Text(50)	*Text(50)*	*Text(50)*	*Text(50)*	*Text(50)*	*Text(50)*	*Text(1)*	*Text(1)*	*Text(1)*

abandon_yn	replace_yn	public_yn	purpose
Text(1)	*Text(1)*	*Text(1)*	*Text(70)*

#sys_loc_code	start_depth	material_type	geo_unit_code_1
#Text(20)	*Numeric*	*Text(40)*	*Text(20)*
SC40D	0	fine to coarse SAND, minor clay and silt	

geo_unit_code_2	remark1	remark2	moisture	permeable	consolidated_yn	color	observation
Text(20)	*Text(255)*	*Text(255)*	*Text(1)*	*Text(20)*	*Text(1)*	*Text(30)*	*Text(255)*

consistency	sorting	grainsize	odor
Text(20)	*Text(20)*	*Text(20)*	*Text(20)*

#sys_loc_code	well_id	well_description	well_owner	well_purpose	well_status	top_casing_elev
#Text(20)	*Text(30)*	*Text(30)*	*Text(30)*	*Text(20)*	*Text(20)*	*Numeric*
SC40D						

datum_value	datum_unit	datum_desc	step_or_linear	datum_start_date
Numeric	*Text(15)*	*Text(70)*	*Text(6)*	*DateTime*
98.12	ft	top of well casing		2011/6/14 12:00:00

datum_collection_method_code	depth_of_well	**depth_unit**	depth_measure_method
Text(2)	*Numeric*	*Text(15)*	*Text(20)*

stickup_height	**stickup_unit**	sump_length	**sump_unit**	installation_date	construct_start_date
Text(8)	*Text(15)*	*Text(20)*	*Text(15)*	*DateTime*	*DateTime*

construct_complete_date	**construct_contractor**	pump_type	pump_capacity	**pump_unit**
DateTime	*Text(20)*	*Text(20)*	*Text(6)*	*Text(15)*

pump_yield	pump_yield_method	weep_hole	head_configuration	access_port_yn	casing_joint_type
Text(6)	*Text(20)*	*Text(1)*	*Text(50)*	*Text(1)*	*Text(50)*

perforator_used	intake_depth	disinfected_yn	historical_reference_elev	geologic_unit_code	remark
Text(50)	*Numeric*	*Text(1)*	*Numeric*	*Text(20)*	*Text(255)*

#sys_loc_code	measurement_date	historical_reference_elev	water_level_depth
#Text(20)	*DateTime*	*Numeric*	*Numeric*
SC40D	2011/4/29 12:00:00	98.12	12.52

water_level_elev	corrected_depth	corrected_elev	measured_depth_of_well	**depth_unit**	technician
Numeric	*Numeric*	*Numeric*	*Numeric*	*Text(15)*	*Text(30)*

dry_indicator_yn	measurement_method	batch_number	dip_or_elevation	remark	**Lnapl_cas_rn**
Text(1)	*Text(20)*	*Text(10)*	*Text(10)*	*Text(255)*	*Text(15)*

Lnapl_depth	**Dnapl_cas_rn**	Dnapl_depth	Task_code
Numeric	*Text(15)*	*Numeric*	*Text(20)*

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
#Text(20)	*Text(20)*	*Text(255)*	*Text(15)*	*Numeric*	*Numeric*
TRC-CT	SC40D	SC40D_201104	TEMP		
TRC-CT	SC40D	SC40D_201104	SC		
TRC-CT	SC40D	SC40D_201104	DIS_OXYGEN		
TRC-CT	SC40D	SC40D_201104	pH		
TRC-CT	SC40D	SC40D_201104	ORP		

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
Text(2)	*DateTime*	*Text(8)*	*Text(14)*	*Text(15)*	*Text(20)*	*Text(20)*
	2011/4/29 12:00:00	12:00:00	13.92	deg c		
	2011/4/29 12:00:00	12:00:00	0.083	ms/cm		
	2011/4/29 12:00:00	12:00:00	8.42	mg/l		
	2011/4/29 12:00:00	12:00:00	5.98	ph units		
	2011/4/29 12:00:00	12:00:00	265.2	millivolts		

sample_matrix_code	qualifier	sampling_company_code	sampling_reason	sampling_method
Text(20)	*Text(20)*	*Text(20)*	*Text(40)*	*Text(40)*
WG		TRC-CT		
WG				
WG				
WG				
WG				

reportable_result	value_type	remark
Text(10)	*Text(10)*	*Text(225)*
Yes	ACTUAL	
Yes	ACTUAL	
Yes	ACTUAL	
Yes	ACTUAL	
Yes	ACTUAL	

TRC-CT	ACTDJA74509201105191747001	FB042911	WQ
TRC-CT	ACTDJA74509201105191747002		WQ
TRC-CT	ACTDJA74509201105191747003		WQ
TRC-CT	ACTDJA74509201105191747004		WQ
TRC-CT	ACTDJA74509201105191747005		WQ
TRC-CT	SC40D_201104	SC40D_201104	WG
TRC-CT	ACTDJA74509201105191747006MS	SC40D_201104	WG
TRC-CT	SC49D_201104	SC49D_201104	WG

AB	Field	
BS	Lab	
BS	Lab	
LB	Lab	
LB	Lab	
N	Field	
MS	Lab	SC40D_201104
FD	Field	SC40D_201104

4/29/2011 7:30		4/29/2011	4/29/2011 CC
5/5/2011 0:00		5/5/2011	
5/10/2011 0:00		5/10/2011	
5/5/2011 0:00		5/5/2011	
5/10/2011 0:00		5/10/2011	
4/29/2011 8:00	SC40D	4/29/2011	4/29/2011 CC
4/29/2011 8:00		4/29/2011	4/29/2011
4/29/2011 8:15		4/29/2011	4/29/2011 CC

TRC-CT
Lab
Lab
Lab
Lab
TRC-CT
TRC-CT
TRC-CT

N

N

N

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_	column_nu
#Text(40)	*Text(35)*	*DateTime*	*Text(1)*	*Text(2)*
ACTDJA74509201105191747002	E314.0	5/6/2011 11:53	T	
ACTDJA74509201105191747003	E314.0	5/11/2011 13:08	T	
ACTDJA74509201105191747004	E314.0	5/6/2011 11:36	T	
ACTDJA74509201105191747005	E314.0	5/10/2011 12:34	T	
ACTDJA74509201105191747001	E314.0	5/5/2011 13:02	T	
ACTDJA74509201105191747001	SW9050	5/13/2011 0:00	T	
ACTDJA74509201105191747006MS	E314.0	5/5/2011 12:11	T	
SC40D_201104	E314.0	5/5/2011 12:45	T	
SC40D_201104	SW9050	5/13/2011 0:00	T	
SC49D_201104	E314.0	5/10/2011 14:00	T	
SC49D_201104	SW9050	5/13/2011 0:00	T	

test_type	lab_matri	analysis_	basis	container_	dilution_factor	prep_date	leachate_n	leachate_d
Text(10)	*Text(3)*	*Text(2)*	*Text(10)*	*Text(30)*	*Numeric*	*DateTime*	*Text(15)*	*DateTime*
initial	WW	LB	NA		1			
initial	WW	LB	NA		1			
initial	WW	LB	NA		1			
initial	WW	LB	NA		1			
initial	WQ	LB	NA		1			
initial	WQ	LB	NA		1			
initial	WG	LB	NA		1			
initial	WG	LB	NA		1			
initial	WG	LB	NA		1			
initial	WG	LB	NA		1			
initial	WG	LB	NA		1			

lab_name	qc_level	lab_sample	percent_m	subsample	subsampl	analyst_na	instrument	comment	preservat
Text(20)	*Text(10)*	*Text(20)*	*Text(5)*	*Text(14)*	*Text(15)*	*Text(30)*	*Text(50)*	*Text(255)*	*Text(20)*
ACTD	quant	GP58614-B1		25	ml	MELISSAS	IONC4		
ACTD	quant	GP58614-B2		25	ml	AIRAMI	IONC4		
ACTD	quant	GP58614-MB1		25	ml	MELISSAS	IONC4		
ACTD	quant	GP58614-MB2		25	ml	AIRAMI	IONC4		
ACTD	quant	JA74509-1		25	ml	MELISSAS	IONC4		
ACTD	quant	JA74509-1				SANJAYA	NONE		
ACTD	quant	GP58614-S1		25	ml	MELISSAS	IONC4		
ACTD	quant	JA74509-2		25	ml	MELISSAS	IONC4		
ACTD	quant	JA74509-2				SANJAYA	NONE		
ACTD	quant	JA74509-3		25	ml	AIRAMI	IONC4		
ACTD	quant	JA74509-3				SANJAYA	NONE		

final_volur	final_volu	cas_rn	chemical_name	result_valu	result_erro	result_typ	reportabl
Numeric	*Text(15)*	*Text(15)*	*Text(75)*	*Numeric*	*Text(20)*	*Text(10)*	*Text(10)*
25	ml	14797-73-(	Perchlorate			SC	Yes
25	ml	14797-73-(	Perchlorate			SC	Yes
25	ml	14797-73-(	Perchlorate			TRG	Yes
25	ml	14797-73-(	Perchlorate			TRG	Yes
25	ml	14797-73-(	Perchlorate			TRG	Yes
		SC	Specific Conductivity	12.6		TRG	Yes
25	ml	14797-73-(	Perchlorate			SC	Yes
25	ml	14797-73-(	Perchlorate	4		TRG	Yes
		SC	Specific Conductivity	364		TRG	Yes
25	ml	14797-73-(	Perchlorate	3.9		TRG	Yes
		SC	Specific Conductivity	358		TRG	Yes

detect_fla	lab_qualifi	validator_c	interprete	organic_y	method_d	reporting_	quantitatic	result_un	detection
Text(2)	*Text(10)*	*Text(10)*	*Text(10)*	*Text(1)*	*Text(20)*	*Numeric*	*Text(20)*	*Text(15)*	*Text(15)*
Y				N	0.73	3	3	ug/l	ug/l
Y				N	0.73	3	3	ug/l	ug/l
N	<		<	N	3	3	3	ug/l	ug/l
N	<		<	N	3	3	3	ug/l	ug/l
N	U		U	N	0.73	3	3	ug/l	ug/l
Y				N	0.5	0.5	0.5	umhos/cm	umhos/cm
Y				N	0.73	3	3	ug/l	ug/l
Y				N	0.73	3	3	ug/l	ug/l
Y				N	0.5	0.5	0.5	umhos/cm	umhos/cm
Y				N	0.73	3	3	ug/l	ug/l
Y				N	0.5	0.5	0.5	umhos/cm	umhos/cm

tic_retenti	minimum_detectable_conc	critical_val	validation_	result_com	qc_original	qc_spike_a	qc_spike_r
Text(8)	*Numeric*	*Numeric*	*Text(20)*	*Text(255)*	*Numeric*	*Numeric*	*Numeric*
		25.7	102.8				
		24.8	99.2				
		31.1	108.4				

qc_spike_r	qc_dup_or	qc_dup_sp	qc_dup_sp	qc_dup_sp	qc_rpd	qc_spike_l	qc_spike_u	qc_rpd_cl	qc_spike_s
Numeric	*Numeric*	*Numeric*	*Numeric*	*Numeric*	*Text(8)*	*Text(8)*	*Text(8)*	*Text(8)*	*Text(10)*
	85	115							
	85	115							
	80	120							

qc_dup_sp	qc_rpd_status
Text(10)	*Text(10)*

ACTDJA74509201105191747002	E314.0	5/6/2011 11:53	T
ACTDJA74509201105191747003	E314.0	5/11/2011 13:08	T
ACTDJA74509201105191747004	E314.0	5/6/2011 11:36	T
ACTDJA74509201105191747005	E314.0	5/10/2011 12:34	T
ACTDJA74509201105191747006MS	E314.0	5/5/2011 12:11	T
ACTDJA74509201105191747001	E314.0	5/5/2011 13:02	T
ACTDJA74509201105191747001	SW9050	5/13/2011 0:00	T
SC40D_201104	E314.0	5/5/2011 12:45	T
SC40D_201104	SW9050	5/13/2011 0:00	T
SC49D_201104	E314.0	5/10/2011 14:00	T
SC49D_201104	SW9050	5/13/2011 0:00	T
ACTDJA74509201105191747002	E314.0	5/6/2011 11:53	T
ACTDJA74509201105191747003	E314.0	5/11/2011 13:08	T
ACTDJA74509201105191747004	E314.0	5/6/2011 11:36	T
ACTDJA74509201105191747005	E314.0	5/10/2011 12:34	T
ACTDJA74509201105191747006MS	E314.0	5/5/2011 12:11	T
ACTDJA74509201105191747001	E314.0	5/5/2011 13:02	T
SC40D_201104	E314.0	5/5/2011 12:45	T
SC49D_201104	E314.0	5/10/2011 14:00	T

initial	Analysis	GN50477
initial	Analysis	GN50648
initial	Analysis	GN50477
initial	Analysis	GN50648
initial	Analysis	GN50477
initial	Analysis	GN50477
initial	Analysis	GN50803
initial	Analysis	GN50477
initial	Analysis	GN50803
initial	Analysis	GN50648
initial	Analysis	GN50803
initial	Prep	GP58614
initial	Prep	GP58614
initial	Prep	GP58614
initial	Prep	GP58614
initial	Prep	GP58614
initial	Prep	GP58614
initial	Prep	GP58614
initial	Prep	GP58614

FB102809	E314.0	11/16/2009 20:44	T
SED-1_10_09	E314.0	11/17/2009 4:34	T
SED-10_10_09	E314.0	11/17/2009 5:44	T
SED-1A_10_09	E314.0	11/17/2009 3:59	T
SED-2_10_09	E314.0	11/17/2009 4:52	T
SED-3_10_09	E314.0	11/18/2009 23:33	T
SED-4_10_09	E314.0	11/17/2009 5:27	T
SW-1_10_09	E314.0	11/16/2009 21:19	T
SW-10_10_09	E314.0	11/16/2009 22:29	T
SW-1A_10_09	E314.0	11/16/2009 20:27	T
SW-2_10_09	E314.0	11/18/2009 23:50	T
SW-3_10_09	E314.0	11/16/2009 21:54	T
SW-4_10_09	E314.0	11/16/2009 22:11	T
FB102809	E314.0	11/16/2009 20:44	T
SED-1_10_09	E314.0	11/17/2009 4:34	T
SED-10_10_09	E314.0	11/17/2009 5:44	T
SED-1A_10_09	E314.0	11/17/2009 3:59	T
SED-2_10_09	E314.0	11/17/2009 4:52	T
SED-3_10_09	E314.0	11/18/2009 23:33	T
SED-4_10_09	E314.0	11/17/2009 5:27	T
SW-1_10_09	E314.0	11/16/2009 21:19	T
SW-10_10_09	E314.0	11/16/2009 22:29	T
SW-1A_10_09	E314.0	11/16/2009 20:27	T
SW-2_10_09	E314.0	11/18/2009 23:50	T
SW-3_10_09	E314.0	11/16/2009 21:54	T
SW-4_10_09	E314.0	11/16/2009 22:11	T
FB102909	E314.0	11/19/2009 3:19	T
SW-5_10_09	E314.0	11/19/2009 3:01	T
SW-6_10_09	E314.0	11/19/2009 2:44	T
SW-7_10_09	E314.0	11/19/2009 3:36	T
SW-9_10_09	E314.0	11/19/2009 3:54	T
FB102909	E314.0	11/19/2009 3:19	T
SW-5_10_09	E314.0	11/19/2009 3:01	T
SW-6_10_09	E314.0	11/19/2009 2:44	T
SW-7_10_09	E314.0	11/19/2009 3:36	T
SW-9_10_09	E314.0	11/19/2009 3:54	T
SED-5_10_09	E314.0	11/17/2009 6:54	T
SED-6_10_09	E314.0	11/17/2009 6:36	T
SED-7_10_09	E314.0	11/17/2009 7:11	T
SED-8_10_09	E314.0	11/17/2009 7:46	T
SED-9_10_09	E314.0	11/17/2009 8:03	T
SED-5_10_09	E314.0	11/17/2009 6:54	T
SED-6_10_09	E314.0	11/17/2009 6:36	T
SED-7_10_09	E314.0	11/17/2009 7:11	T
SED-8_10_09	E314.0	11/17/2009 7:46	T
SED-9_10_09	E314.0	11/17/2009 8:03	T

initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32429
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32429
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Prep	GP51565
initial	Prep	GP51564
initial	Prep	GP51564
initial	Prep	GP51564
initial	Prep	GP51564
initial	Prep	GP51564
initial	Prep	GP51564
initial	Prep	GP51565
initial	Prep	GP51565
initial	Prep	GP51565
initial	Prep	GP51565
initial	Prep	GP51565
initial	Prep	GP51565
initial	Analysis	GN32429
initial	Analysis	GN32429
initial	Analysis	GN32429
initial	Analysis	GN32429
initial	Analysis	GN32429
initial	Prep	GP51615
initial	Prep	GP51615
initial	Prep	GP51615
initial	Prep	GP51615
initial	Prep	GP51615
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Analysis	GN32348
initial	Prep	GP51576
initial	Prep	GP51576
initial	Prep	GP51576
initial	Prep	GP51576
initial	Prep	GP51576

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#data_provider	sys_sample_code	sample_name	sample_matrix_code	sample_type_code
TRC-CT	FB102909		WQ	AB
TRC-CT	SED-5_10_09		SE	N
TRC-CT	SED-6_10_09		SE	N
TRC-CT	SED-7_10_09		SE	N
TRC-CT	SED-8_10_09		SE	N
TRC-CT	SED-9_10_09		SE	N
TRC-CT	SW-5_10_09		WS	N
TRC-CT	SW-6_10_09		WS	N
TRC-CT	SW-7_10_09		WS	N
TRC-CT	SW-9_10_09		WS	N
TRC-CT	FB102809		WQ	AB
TRC-CT	SED-1_10_09		SE	N
TRC-CT	SED-10_10_09		SE	FD
TRC-CT	SED-1A_10_09		SE	N
TRC-CT	SED-2_10_09		SE	N
TRC-CT	SED-3_10_09		SE	N
TRC-CT	SED-4_10_09		SE	N
TRC-CT	SW-1_10_09		WS	N
TRC-CT	SW-10_10_09		WS	FD
TRC-CT	SW-1A_10_09		WS	N
TRC-CT	SW-2_10_09		WS	N
TRC-CT	SW-3_10_09		WS	N
TRC-CT	SW-4_10_09		WS	N

sample_source	parent_sample_code	sample_delivery_group	**sample_date**	sys_loc_code	start_depth
Field			10/29/2009 7:30		
Field			10/28/2009 15:40	SED-5	
Field			10/28/2009 16:10	SED-6	
Field			10/29/2009 8:30	SED-7	
Field			10/29/2009 9:10	SED-8	
Field			10/29/2009 9:45	SED-9	
Field			10/28/2009 15:40	SW-5	
Field			10/28/2009 16:10	SW-6	
Field			10/29/2009 8:30	SW-7	
Field			10/29/2009 9:45	SW-9	
Field			10/28/2009 7:45		
Field			10/28/2009 10:30	SED-1	
Field	SED-4_10_09		10/28/2009 15:00	SED-4	
Field			10/28/2009 9:00	SED-1A	
Field			10/28/2009 11:20	SED-2	
Field			10/28/2009 12:05	SED-3	
Field			10/28/2009 14:30	SED-4	
Field			10/28/2009 10:30	SW-1	
Field	SW-4_10_09		10/28/2009 15:00	SW-4	
Field			10/28/2009 9:00	SW-1A	
Field			10/28/2009 11:20	SW-2	
Field			10/28/2009 12:05	SW-3	
Field			10/28/2009 14:30	SW-4	

end_depth	depth_unit	chain_of_custody	sent_to_lab_date	sample_receipt_date	sampler
			10/29/2009	10/29/2009	CC
			10/28/2009	10/29/2009	CC
			10/28/2009	10/29/2009	CC
			10/29/2009	10/29/2009	CC
			10/29/2009	10/29/2009	CC
			10/29/2009	10/29/2009	CC
			10/28/2009	10/29/2009	CC
			10/28/2009	10/29/2009	CC
			10/29/2009	10/29/2009	CC
			10/29/2009	10/29/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC
			10/28/2009	10/28/2009	CC

sampling_company_code	sampling_reason	sampling_technique	task_code	collection_quarter
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
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TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				
TRCCTW				

composite_yn	composite_desc	sample_class	custom_field_1	custom_field_2	custom_field_3	comment
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						
N						

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
FB102809	E314.0	11/16/2009 20:44	T
SED-1_10_09	E314.0	11/17/2009 4:34	T
SED-10_10_09	E314.0	11/17/2009 5:44	T
SED-1A_10_09	E314.0	11/17/2009 3:59	T
SED-2_10_09	E314.0	11/17/2009 4:52	T
SED-3_10_09	E314.0	11/18/2009 23:33	T
SED-4_10_09	E314.0	11/17/2009 5:27	T
SW-1_10_09	E314.0	11/16/2009 21:19	T
SW-10_10_09	E314.0	11/16/2009 22:29	T
SW-1A_10_09	E314.0	11/16/2009 20:27	T
SW-2_10_09	E314.0	11/18/2009 23:50	T
SW-3_10_09	E314.0	11/16/2009 21:54	T
SW-4_10_09	E314.0	11/16/2009 22:11	T
FB102909	E314.0	11/19/2009 3:19	T
SED-5_10_09	E314.0	11/17/2009 6:54	T
SED-6_10_09	E314.0	11/17/2009 6:36	T
SED-7_10_09	E314.0	11/17/2009 7:11	T
SED-8_10_09	E314.0	11/17/2009 7:46	T
SED-9_10_09	E314.0	11/17/2009 8:03	T
SW-5_10_09	E314.0	11/19/2009 3:01	T
SW-6_10_09	E314.0	11/19/2009 2:44	T
SW-7_10_09	E314.0	11/19/2009 3:36	T
SW-9_10_09	E314.0	11/19/2009 3:54	T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WQ	LB	NA		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	SE	LB	Dry		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1
	initial	WS	LB	NA		1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	11/16/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/13/2009 23:59			ACTD	quant
	11/16/2009 23:59			ACTD	quant
	11/16/2009 23:59			ACTD	quant
	11/16/2009 23:59			ACTD	quant
	11/18/2009 23:59			ACTD	quant
	11/16/2009 23:59			ACTD	quant
	11/16/2009 23:59			ACTD	quant
	11/18/2009 0:00			ACTD	quant
	11/16/2009 0:00			ACTD	quant
	11/16/2009 0:00			ACTD	quant
	11/16/2009 0:00			ACTD	quant
	11/16/2009 0:00			ACTD	quant
	11/16/2009 0:00			ACTD	quant
	11/18/2009 0:00			ACTD	quant
	11/18/2009 0:00			ACTD	quant
	11/18/2009 0:00			ACTD	quant
	11/18/2009 0:00			ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA31506-1		25	ml	MELISSAS
JA31506-5	48.5	33.18	g	MELISSAS
JA31506-13	78.5	33.2	g	MELISSAS
JA31506-3	27	33.09	g	MELISSAS
JA31506-7	52.7	33.13	g	MELISSAS
JA31506-9	28.3	33.14	g	MELISSAS
JA31506-11	78.1	33.17	g	MELISSAS
JA31506-4		25	ml	MELISSAS
JA31506-12		25	ml	MELISSAS
JA31506-2		25	ml	MELISSAS
JA31506-6		25	ml	MELISSAS
JA31506-8		25	ml	MELISSAS
JA31506-10		25	ml	MELISSAS
JA31582-5		25	ml	MELISSAS
JA31582-2	66.6	33.64	g	MELISSAS
JA31582-4	42.9	33.02	g	MELISSAS
JA31582-7	57	33.7	g	MELISSAS
JA31582-8	18.9	33.11	g	MELISSAS
JA31582-10	80.9	33.19	g	MELISSAS
JA31582-1		25	ml	MELISSAS
JA31582-3		25	ml	MELISSAS
JA31582-6		25	ml	MELISSAS
JA31582-9		25	ml	MELISSAS

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate

result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
10.9		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
1.8		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U

validator_qualifiers	interpreted_qualifiers	organic_yn	method_detection_limit
	U	N	0.92
	U	N	3.2
	U	N	7.7
	U	N	2.3
	U	N	3.5
	U	N	2.3
	B	N	7.6
	U	N	0.92
	U	N	0.92
	B	N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
	U	N	4.9
	U	N	2.9
	U	N	3.8
	U	N	2
	U	N	8.7
	U	N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92

reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time
3	3	ug/l	ug/l	
18	18	ug/kg	ug/kg	
42	42	ug/kg	ug/kg	
12	12	ug/kg	ug/kg	
19	19	ug/kg	ug/kg	
13	13	ug/kg	ug/kg	
41	41	ug/kg	ug/kg	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
27	27	ug/kg	ug/kg	
16	16	ug/kg	ug/kg	
21	21	ug/kg	ug/kg	
11	11	ug/kg	ug/kg	
47	47	ug/kg	ug/kg	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

FB102609(1)	E314.0	11/13/2009 14:57 T
FB102609(1)	E314.0	11/13/2009 14:57 T
FB102609(2)	E314.0	11/13/2009 12:55 T
FB102609(2)	E314.0	11/13/2009 12:55 T
FB102709(1)	E314.0	11/13/2009 15:14 T
FB102709(1)	E314.0	11/13/2009 15:14 T
FB102709(2)	E314.0	11/13/2009 15:31 T
FB102709(2)	E314.0	11/13/2009 15:31 T
FB102809	E314.0	11/16/2009 19:35 T
FB102809	E314.0	11/16/2009 19:35 T
SS-01(12-14')	E314.0	11/12/2009 21:14 T
SS-01(12-14')	E314.0	11/12/2009 21:14 T
SS-01(5-7')	E314.0	11/12/2009 20:56 T
SS-01(5-7')	E314.0	11/12/2009 20:56 T
SS-02(1-3')	E314.0	11/12/2009 21:31 T
SS-02(1-3')	E314.0	11/12/2009 21:31 T
SS-02(14-16')	E314.0	11/12/2009 21:49 T
SS-02(14-16')	E314.0	11/12/2009 21:49 T
SS-03(0-2')	E314.0	11/12/2009 22:06 T
SS-03(0-2')	E314.0	11/12/2009 22:06 T
SS-03(13-15')	E314.0	11/13/2009 14:04 T
SS-03(13-15')	E314.0	11/13/2009 14:04 T
SS-04(14-16')	E314.0	11/13/2009 14:39 T
SS-04(14-16')	E314.0	11/13/2009 14:39 T
SS-04(2-4')	E314.0	11/13/2009 14:22 T
SS-04(2-4')	E314.0	11/13/2009 14:22 T
SS-05(13-15')	E314.0	11/12/2009 23:51 T
SS-05(13-15')	E314.0	11/12/2009 23:51 T
SS-05(5-7')	E314.0	11/12/2009 23:33 T
SS-05(5-7')	E314.0	11/12/2009 23:33 T
SS-06(1-3')	E314.0	11/13/2009 0:08 T
SS-06(1-3')	E314.0	11/13/2009 0:08 T
SS-06(14-16')	E314.0	11/13/2009 0:25 T
SS-06(14-16')	E314.0	11/13/2009 0:25 T
SS-07(13-15')	E314.0	11/13/2009 1:00 T
SS-07(13-15')	E314.0	11/13/2009 1:00 T
SS-07(6-8')	E314.0	11/13/2009 0:43 T
SS-07(6-8')	E314.0	11/13/2009 0:43 T
SS-08(12-14')	E314.0	11/13/2009 1:35 T
SS-08(12-14')	E314.0	11/13/2009 1:35 T
SS-08(3-4')	E314.0	11/13/2009 1:18 T
SS-08(3-4')	E314.0	11/13/2009 1:18 T
SS-09(12-14')	E314.0	11/13/2009 2:10 T
SS-09(12-14')	E314.0	11/13/2009 2:10 T
SS-09(6-8')	E314.0	11/13/2009 1:52 T
SS-09(6-8')	E314.0	11/13/2009 1:52 T
SS-10(2-4')	E314.0	11/13/2009 2:45 T
SS-10(2-4')	E314.0	11/13/2009 2:45 T
SS-10(4-6')	E314.0	11/13/2009 3:02 T
SS-10(4-6')	E314.0	11/13/2009 3:02 T
SS-11(1-3')	E314.0	11/13/2009 21:54 T
SS-11(1-3')	E314.0	11/13/2009 21:54 T

SS-11(5-7')	E314.0	11/13/2009 22:12 T
SS-11(5-7')	E314.0	11/13/2009 22:12 T
SS-12(2-4')	E314.0	11/13/2009 22:29 T
SS-12(2-4')	E314.0	11/13/2009 22:29 T
SS-12(5-7')	E314.0	11/13/2009 22:46 T
SS-12(5-7')	E314.0	11/13/2009 22:46 T
SS-13(1-3')	E314.0	11/16/2009 15:51 T
SS-13(1-3')	E314.0	11/16/2009 15:51 T
SS-13(5-7')	E314.0	11/13/2009 23:21 T
SS-13(5-7')	E314.0	11/13/2009 23:21 T
SS-14(1-3')	E314.0	11/13/2009 23:39 T
SS-14(1-3')	E314.0	11/13/2009 23:39 T
SS-14(6-8')	E314.0	11/14/2009 0:13 T
SS-14(6-8')	E314.0	11/14/2009 0:13 T
SS-15(2-4')	E314.0	11/14/2009 0:31 T
SS-15(2-4')	E314.0	11/14/2009 0:31 T
SS-15(4-6')	E314.0	11/16/2009 16:08 T
SS-15(4-6')	E314.0	11/16/2009 16:08 T
SS-16(1-3')	E314.0	11/14/2009 1:06 T
SS-16(1-3')	E314.0	11/14/2009 1:06 T
SS-16(6-8')	E314.0	11/14/2009 1:23 T
SS-16(6-8')	E314.0	11/14/2009 1:23 T
SS-17(1-3')	E314.0	11/14/2009 1:40 T
SS-17(1-3')	E314.0	11/14/2009 1:40 T
SS-17(5-7')	E314.0	11/14/2009 1:58 T
SS-17(5-7')	E314.0	11/14/2009 1:58 T
SS-18(1-3')	E314.0	11/14/2009 2:15 T
SS-18(1-3')	E314.0	11/14/2009 2:15 T
SS-18(6-8')	E314.0	11/16/2009 16:26 T
SS-18(6-8')	E314.0	11/16/2009 16:26 T
SS-19(1-3')	E314.0	11/14/2009 2:50 T
SS-19(1-3')	E314.0	11/14/2009 2:50 T
SS-19(6-8')	E314.0	11/14/2009 3:25 T
SS-19(6-8')	E314.0	11/14/2009 3:25 T
SS-20(1-3')	E314.0	11/14/2009 3:42 T
SS-20(1-3')	E314.0	11/14/2009 3:42 T
SS-20(4-6')	E314.0	11/16/2009 18:25 T
SS-20(4-6')	E314.0	11/16/2009 18:25 T
SS-21(1-3')	E314.0	11/17/2009 1:23 T
SS-21(1-3')	E314.0	11/17/2009 1:23 T
SS-21(5-7')	E314.0	11/18/2009 22:23 T
SS-21(5-7')	E314.0	11/18/2009 22:23 T
SS-22(1-3')	E314.0	11/18/2009 22:40 T
SS-22(1-3')	E314.0	11/18/2009 22:40 T
SS-22(6-8')	E314.0	11/19/2009 12:23 T
SS-22(6-8')	E314.0	11/19/2009 12:23 T
SS-23(2-4')	E314.0	11/18/2009 23:15 T
SS-23(2-4')	E314.0	11/18/2009 23:15 T
SS-23(6-8')	E314.0	11/17/2009 2:50 T
SS-23(6-8')	E314.0	11/17/2009 2:50 T
SS-24(1-3')	E314.0	11/17/2009 3:07 T
SS-24(1-3')	E314.0	11/17/2009 3:07 T

SS-24(4-6')	E314.0	11/17/2009 3:25 T
SS-24(4-6')	E314.0	11/17/2009 3:25 T
SS-27(6-8')	E314.0	11/13/2009 21:02 T
SS-27(6-8')	E314.0	11/13/2009 21:02 T
SS-32(5-7')	E314.0	11/16/2009 18:43 T
SS-32(5-7')	E314.0	11/16/2009 18:43 T
SS-33(2-4')	E314.0	11/17/2009 3:42 T
SS-33(2-4')	E314.0	11/17/2009 3:42 T

initial	Analysis	GN32290
initial	Prep	GP51565
initial	Analysis	GN32290
initial	Prep	GP51549
initial	Analysis	GN32290
initial	Prep	GP51565
initial	Analysis	GN32290
initial	Prep	GP51565
initial	Analysis	GN32348
initial	Prep	GP51565
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32290
initial	Prep	GP51486
initial	Analysis	GN32290
initial	Prep	GP51486
initial	Analysis	GN32290
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
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initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32251
initial	Prep	GP51486
initial	Analysis	GN32290
initial	Prep	GP51526

initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32348
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32348
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32348
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32348
initial	Prep	GP51564
initial	Analysis	GN32348
initial	Prep	GP51564
initial	Analysis	GN32429
initial	Prep	GP51564
initial	Analysis	GN32429
initial	Prep	GP51564
initial	Analysis	GN32461
initial	Prep	GP51564
initial	Analysis	GN32429
initial	Prep	GP51564
initial	Analysis	GN32348
initial	Prep	GP51564
initial	Analysis	GN32348
initial	Prep	GP51564

initial	Analysis	GN32348
initial	Prep	GP51564
initial	Analysis	GN32290
initial	Prep	GP51526
initial	Analysis	GN32348
initial	Prep	GP51564
initial	Analysis	GN32348
initial	Prep	GP51564

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	FB102709(1)		WQ
TRC-CT	FB102709(2)		WQ
TRC-CT	SS-11(1-3')MS		SO
TRC-CT	SS-11(1-3')		SO
TRC-CT	SS-11(5-7')		SO
TRC-CT	SS-12(2-4')		SO
TRC-CT	SS-12(5-7')		SO
TRC-CT	SS-13(1-3')		SO
TRC-CT	SS-13(5-7')		SO
TRC-CT	SS-14(1-3')		SO
TRC-CT	SS-14(6-8')		SO
TRC-CT	SS-15(2-4')		SO
TRC-CT	SS-15(4-6')		SO
TRC-CT	SS-16(1-3')		SO
TRC-CT	SS-16(6-8')		SO
TRC-CT	SS-17(1-3')		SO
TRC-CT	SS-17(5-7')		SO
TRC-CT	SS-18(1-3')		SO
TRC-CT	SS-18(6-8')		SO
TRC-CT	SS-19(1-3')		SO
TRC-CT	SS-19(6-8')		SO
TRC-CT	SS-20(1-3')		SO
TRC-CT	SS-20(4-6')MS		SO
TRC-CT	SS-20(4-6')		SO
TRC-CT	SS-32(5-7')		SO
TRC-CT	FB102809		WQ
TRC-CT	SS-21(1-3')		SO
TRC-CT	SS-21(5-7')		SO
TRC-CT	SS-22(1-3')		SO
TRC-CT	SS-22(6-8')		SO
TRC-CT	SS-23(2-4')		SO
TRC-CT	SS-23(6-8')		SO
TRC-CT	SS-24(1-3')		SO
TRC-CT	SS-24(4-6')		SO
TRC-CT	SS-33(2-4')		SO
TRC-CT	FB102609(1)		WQ
TRC-CT	FB102609(2)		WQ
TRC-CT	SS-01(12-14')		SO
TRC-CT	SS-01(5-7')MS		SO
TRC-CT	SS-01(5-7')		SO
TRC-CT	SS-02(1-3')		SO
TRC-CT	SS-02(14-16')		SO
TRC-CT	SS-03(0-2')		SO
TRC-CT	SS-03(13-15')		SO
TRC-CT	SS-04(14-16')		SO
TRC-CT	SS-04(2-4')		SO
TRC-CT	SS-05(13-15')		SO
TRC-CT	SS-05(5-7')		SO

TRC-CT	SS-06(1-3')	SO
TRC-CT	SS-06(14-16')	SO
TRC-CT	SS-07(13-15')	SO
TRC-CT	SS-07(6-8')	SO
TRC-CT	SS-08(12-14')	SO
TRC-CT	SS-08(3-4')	SO
TRC-CT	SS-09(12-14')	SO
TRC-CT	SS-09(6-8')	SO
TRC-CT	SS-10(2-4')	SO
TRC-CT	SS-10(4-6')	SO
TRC-CT	SS-27(6-8')	SO

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
AB	Field			10/27/2009 11:05
AB	Field			10/27/2009 12:50
MS	Lab	SS-11(1-3')		10/27/2009 8:00
N	Field			10/27/2009 8:00
N	Field			10/27/2009 8:05
N	Field			10/27/2009 8:30
N	Field			10/27/2009 8:35
N	Field			10/27/2009 9:50
N	Field			10/27/2009 10:00
N	Field			10/27/2009 10:50
N	Field			10/27/2009 10:55
N	Field			10/27/2009 11:30
N	Field			10/27/2009 11:40
N	Field			10/27/2009 11:50
N	Field			10/27/2009 11:55
N	Field			10/27/2009 12:10
N	Field			10/27/2009 12:15
N	Field			10/27/2009 12:30
N	Field			10/27/2009 12:35
N	Field			10/27/2009 13:05
N	Field			10/27/2009 13:10
N	Field			10/27/2009 13:20
MS	Lab	SS-20(4-6')		10/27/2009 13:25
N	Field			10/27/2009 13:25
FD	Field	SS-12(5-7')		10/27/2009 8:40
AB	Field			10/28/2009 8:00
N	Field			10/28/2009 8:40
N	Field			10/28/2009 8:45
N	Field			10/28/2009 9:30
N	Field			10/28/2009 9:40
N	Field			10/28/2009 9:50
N	Field			10/28/2009 10:00
N	Field			10/28/2009 10:15
N	Field			10/28/2009 10:25
FD	Field	SS-23(2-4')		10/28/2009 9:55
AB	Field			10/26/2009 10:10
AB	Field			10/26/2009 10:40
N	Field			10/26/2009 8:25
MS	Lab	SS-01(5-7')		10/26/2009 8:20
N	Field			10/26/2009 8:20
N	Field			10/26/2009 9:10
N	Field			10/26/2009 9:15
N	Field			10/26/2009 9:45
N	Field			10/26/2009 9:55
N	Field			10/26/2009 10:25
N	Field			10/26/2009 10:20
N	Field			10/26/2009 11:05
N	Field			10/26/2009 10:55

N	Field		10/26/2009 11:20
N	Field		10/26/2009 11:25
N	Field		10/26/2009 12:00
N	Field		10/26/2009 11:50
N	Field		10/26/2009 13:25
N	Field		10/26/2009 13:15
N	Field		10/26/2009 14:05
N	Field		10/26/2009 14:00
N	Field		10/26/2009 14:40
N	Field		10/26/2009 14:45
FD	Field	SS-07(6-8')	10/26/2009 11:55

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
					10/27/2009
					10/27/2009
SS-11					10/27/2009
SS-11					10/27/2009
SS-11					10/27/2009
SS-12					10/27/2009
SS-12					10/27/2009
SS-13					10/27/2009
SS-13					10/27/2009
SS-14					10/27/2009
SS-14					10/27/2009
SS-15					10/27/2009
SS-15					10/27/2009
SS-16					10/27/2009
SS-16					10/27/2009
SS-17					10/27/2009
SS-17					10/27/2009
SS-18					10/27/2009
SS-18					10/27/2009
SS-19					10/27/2009
SS-19					10/27/2009
SS-20					10/27/2009
SS-20					10/27/2009
SS-20					10/27/2009
SS-12					10/27/2009
					10/28/2009
SS-21					10/28/2009
SS-21					10/28/2009
SS-22					10/28/2009
SS-22					10/28/2009
SS-23					10/28/2009
SS-23					10/28/2009
SS-24					10/28/2009
SS-24					10/28/2009
SS-23					10/28/2009
					10/26/2009
					10/26/2009
SS-01					10/26/2009
SS-01					10/26/2009
SS-01					10/26/2009
SS-02					10/26/2009
SS-02					10/26/2009
SS-03					10/26/2009
SS-03					10/26/2009
SS-04					10/26/2009
SS-04					10/26/2009
SS-05					10/26/2009
SS-05					10/26/2009

SS-06	10/26/2009
SS-06	10/26/2009
SS-07	10/26/2009
SS-07	10/26/2009
SS-08	10/26/2009
SS-08	10/26/2009
SS-09	10/26/2009
SS-09	10/26/2009
SS-10	10/26/2009
SS-10	10/26/2009
SS-07	10/26/2009

sample_receipt_date	sampler	**sampling_company_code**	sampling_reason	sampling_technique
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009		TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009		TRCCTW		
10/27/2009	JDM	TRCCTW		
10/27/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/28/2009	JDM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009		TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		
10/26/2009	JM	TRCCTW		

10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW
10/26/2009	JM	TRCCTW

task_code	collection_quarter	**composite_yn**	composite_desc	sample_class	custom_field_1
		N			
		N			
		N			
		N			
		N			
		N			
		N			
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		N			

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N
N
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N
N

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
FB102709(1)	E314.0	11/13/2009 15:14	T
FB102709(2)	E314.0	11/13/2009 15:31	T
SS-11(1-3')	E314.0	11/13/2009 21:54	T
SS-11(5-7')	E314.0	11/13/2009 22:12	T
SS-12(2-4')	E314.0	11/13/2009 22:29	T
SS-12(5-7')	E314.0	11/13/2009 22:46	T
SS-13(1-3')	E314.0	11/16/2009 15:51	T
SS-13(5-7')	E314.0	11/13/2009 23:21	T
SS-14(1-3')	E314.0	11/13/2009 23:39	T
SS-14(6-8')	E314.0	11/14/2009 0:13	T
SS-15(2-4')	E314.0	11/14/2009 0:31	T
SS-15(4-6')	E314.0	11/16/2009 16:08	T
SS-16(1-3')	E314.0	11/14/2009 1:06	T
SS-16(6-8')	E314.0	11/14/2009 1:23	T
SS-17(1-3')	E314.0	11/14/2009 1:40	T
SS-17(5-7')	E314.0	11/14/2009 1:58	T
SS-18(1-3')	E314.0	11/14/2009 2:15	T
SS-18(6-8')	E314.0	11/16/2009 16:26	T
SS-19(1-3')	E314.0	11/14/2009 2:50	T
SS-19(6-8')	E314.0	11/14/2009 3:25	T
SS-20(1-3')	E314.0	11/14/2009 3:42	T
SS-20(4-6')	E314.0	11/16/2009 18:25	T
SS-32(5-7')	E314.0	11/16/2009 18:43	T
FB102609(1)	E314.0	11/13/2009 14:57	T
FB102609(2)	E314.0	11/13/2009 12:55	T
SS-01(12-14')	E314.0	11/12/2009 21:14	T
SS-01(5-7')	E314.0	11/12/2009 20:56	T
SS-02(1-3')	E314.0	11/12/2009 21:31	T
SS-02(14-16')	E314.0	11/12/2009 21:49	T
SS-03(0-2')	E314.0	11/12/2009 22:06	T
SS-03(13-15')	E314.0	11/13/2009 14:04	T
SS-04(14-16')	E314.0	11/13/2009 14:39	T
SS-04(2-4')	E314.0	11/13/2009 14:22	T
SS-05(13-15')	E314.0	11/12/2009 23:51	T
SS-05(5-7')	E314.0	11/12/2009 23:33	T
SS-06(1-3')	E314.0	11/13/2009 0:08	T
SS-06(14-16')	E314.0	11/13/2009 0:25	T
SS-07(13-15')	E314.0	11/13/2009 1:00	T
SS-07(6-8')	E314.0	11/13/2009 0:43	T
SS-08(12-14')	E314.0	11/13/2009 1:35	T
SS-08(3-4')	E314.0	11/13/2009 1:18	T
SS-09(12-14')	E314.0	11/13/2009 2:10	T
SS-09(6-8')	E314.0	11/13/2009 1:52	T
SS-10(2-4')	E314.0	11/13/2009 2:45	T
SS-10(4-6')	E314.0	11/13/2009 3:02	T
SS-27(6-8')	E314.0	11/13/2009 21:02	T
FB102809	E314.0	11/16/2009 19:35	T
SS-21(1-3')	E314.0	11/17/2009 1:23	T

SS-21(5-7')	E314.0	11/18/2009 22:23 T
SS-22(1-3')	E314.0	11/18/2009 22:40 T
SS-22(6-8')	E314.0	11/19/2009 12:23 T
SS-23(2-4')	E314.0	11/18/2009 23:15 T
SS-23(6-8')	E314.0	11/17/2009 2:50 T
SS-24(1-3')	E314.0	11/17/2009 3:07 T
SS-24(4-6')	E314.0	11/17/2009 3:25 T
SS-33(2-4')	E314.0	11/17/2009 3:42 T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	WQ	LB	NA		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	WQ	LB	NA		1
	initial	WQ	LB	NA		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	SO	LB	Dry		1
	initial	WQ	LB	NA		1
	initial	SO	LB	Dry		1

initial	SO	LB	Dry	1
initial	SO	LB	Dry	1
initial	SO	LB	Dry	1
initial	SO	LB	Dry	1
initial	SO	LB	Dry	1
initial	SO	LB	Dry	1
initial	SO	LB	Dry	1
initial	SO	LB	Dry	1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	11/13/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/12/2009 0:00			ACTD	quant
	11/12/2009 0:00			ACTD	quant
	11/12/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/9/2009 0:00			ACTD	quant
	11/11/2009 0:00			ACTD	quant
	11/16/2009 0:00			ACTD	quant
	11/13/2009 0:00			ACTD	quant

11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant
11/13/2009 0:00	ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA31399-22		25	ml	MELISSAS
JA31399-23		25	ml	MELISSAS
JA31399-1	9.1	33.57	g	MELISSAS
JA31399-2	10	33.37	g	MELISSAS
JA31399-3	8.1	33.63	g	MELISSAS
JA31399-4	5.9	33.21	g	MELISSAS
JA31399-5	8.8	33.17	g	MELISSAS
JA31399-6	10.1	33.47	g	MELISSAS
JA31399-7	6.6	33.81	g	MELISSAS
JA31399-8	7.4	33.68	g	MELISSAS
JA31399-9	6.3	33.1	g	MELISSAS
JA31399-10	9.8	33.58	g	MELISSAS
JA31399-11	5.8	33.14	g	MELISSAS
JA31399-12	8.8	33.21	g	MELISSAS
JA31399-13	6.4	33.1	g	MELISSAS
JA31399-14	8.3	33.24	g	MELISSAS
JA31399-15	10.8	33.56	g	MELISSAS
JA31399-16	4.3	33.64	g	MELISSAS
JA31399-17	7.9	33.18	g	MELISSAS
JA31399-18	5.6	33.2	g	MELISSAS
JA31399-19	7	33.39	g	MELISSAS
JA31399-20	9.8	33.08	g	MELISSAS
JA31399-21	5.7	33.17	g	MELISSAS
JA31353-21		25	ml	MELISSAS
JA31353-22		25	ml	MELISSAS
JA31353-2	9.9	33.42	g	MELISSAS
JA31353-1	6.8	33.44	g	MELISSAS
JA31353-3	8.4	33.15	g	MELISSAS
JA31353-4	6.7	33.14	g	MELISSAS
JA31353-5	15.4	33.84	g	MELISSAS
JA31353-6	5.4	33.85	g	MELISSAS
JA31353-8	10.8	33	g	MELISSAS
JA31353-7	10.2	33.67	g	MELISSAS
JA31353-10	7.9	33.71	g	MELISSAS
JA31353-9	7.3	33.55	g	MELISSAS
JA31353-11	11.1	33.28	g	MELISSAS
JA31353-12	7.3	33.02	g	MELISSAS
JA31353-14	7.7	33.33	g	MELISSAS
JA31353-13	5.9	33.14	g	MELISSAS
JA31353-16	6.6	33.48	g	MELISSAS
JA31353-15	9.4	33.6	g	MELISSAS
JA31353-18	9.8	33.06	g	MELISSAS
JA31353-17	11.6	33.81	g	MELISSAS
JA31353-19	8.7	33.43	g	MELISSAS
JA31353-20	3.5	33.24	g	MELISSAS
JA31353-23	5.8	33.21	g	MELISSAS
JA31503-10		25	ml	MELISSAS
JA31503-1	6.4	33.04	g	MELISSAS

JA31503-2	5.1	33.04 g	MELISSAS
JA31503-3	7.5	33.24 g	MELISSAS
JA31503-4	4.6	33.09 g	MELISSAS
JA31503-5	12.2	33.15 g	MELISSAS
JA31503-6	6.5	33.1 g	MELISSAS
JA31503-7	10.4	33.04 g	MELISSAS
JA31503-8	12.4	33.04 g	MELISSAS
JA31503-9	10.6	33.04 g	MELISSAS

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
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IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			100	ml	14797-73-0	Perchlorate

IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate
IONC4	100 ml	14797-73-0	Perchlorate

result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
2.8		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
2		TRG	Yes	Y	B
2.9		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
2.8		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
2.3		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
2.1		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
8.6		TRG	Yes	Y	B
4.2		TRG	Yes	Y	B
7.9		TRG	Yes	Y	B
18.3		TRG	Yes	Y	
58.3		TRG	Yes	Y	
		TRG	Yes	N	U
2.9		TRG	Yes	Y	B
3		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
11		TRG	Yes	Y	

10.7	TRG	Yes	Y	
	TRG	Yes	N	U
12	TRG	Yes	Y	
	TRG	Yes	N	U
	TRG	Yes	N	U
26.5	TRG	Yes	Y	
28.8	TRG	Yes	Y	
	TRG	Yes	N	U

validator_qualifiers	interpreted_qualifiers	organic_yn	method_detection_limit
	U	N	0.92
	U	N	0.92
	U	N	1.8
	B	N	1.8
	U	N	1.8
	U	N	1.8
	B	N	1.8
	B	N	1.8
	U	N	1.7
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	B	N	1.8
	U	N	1.8
	U	N	1.7
	U	N	1.8
	U	N	1.8
	B	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	0.92
	U	N	0.92
	U	N	1.8
	U	N	1.8
	B	N	1.8
	U	N	1.8
	U	N	1.9
	B	N	1.7
	B	N	1.9
	B	N	1.8
		N	1.8
		N	1.8
	U	N	1.9
	B	N	1.8
	B	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.8
	U	N	1.7
	U	N	1.8
	U	N	0.92
		N	1.8

	N	1.8
U	N	1.8
	N	1.7
U	N	1.9
U	N	1.8
	N	1.9
	N	1.9
U	N	1.9

reporting_detection_limit	quantitation_limit	result_unit	detection_limit_unit	tic_retention_time
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
9.8	9.8	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.7	9.7	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.9	9.9	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.5	9.5	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.7	9.7	ug/kg	ug/kg	
9.9	9.9	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.9	9.9	ug/kg	ug/kg	
9.7	9.7	ug/kg	ug/kg	
9.8	9.8	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.3	9.3	ug/kg	ug/kg	
9.8	9.8	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.7	9.7	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
10	10	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.9	9.9	ug/kg	ug/kg	
9.7	9.7	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.4	9.4	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.9	9.9	ug/kg	ug/kg	
9.7	9.7	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.8	9.8	ug/kg	ug/kg	
9.8	9.8	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
9.9	9.9	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
10	10	ug/kg	ug/kg	
9.8	9.8	ug/kg	ug/kg	
9.4	9.4	ug/kg	ug/kg	
9.6	9.6	ug/kg	ug/kg	
3	3	ug/l	ug/l	
9.7	9.7	ug/kg	ug/kg	

9.6	9.6 ug/kg	ug/kg
9.8	9.8 ug/kg	ug/kg
9.5	9.5 ug/kg	ug/kg
10	10 ug/kg	ug/kg
9.7	9.7 ug/kg	ug/kg
10	10 ug/kg	ug/kg
10	10 ug/kg	ug/kg
10	10 ug/kg	ug/kg

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

#data_provider_code	data_provider	data_contact_name	data_contact_address1
#Text(20)	*Text(70)*	*Text(50)*	*Text(40)*
TRC-CT	TRC	Larry Butlien	21 Griffin Road North

data_contact_address2	**data_contact_city**	**data_contact_state**	**data_contact_zipcode**
Text(40)	*Text(30)*	*Text(2)*	*Text(30)*
	Windsor	CT	06095

data_contact_country	**data_contact_phone**	data_contact_email
Text(50)	*Text(20)*	*Text(100)*
	8602989692	

#site_code	Program_code	site_name	site_task_code	site_desc1	site_desc2	contact_name
#Text(3)	*Text(20)*	*Text(60)*	*Text(20)*	*Text(255)*	*Text(255)*	*Text(50)*
003	NJD002365930	Shieldalloy Corp.				Larry Butlien

address1	address2	city	state	zipcode	phone_number	alt_phone_number	fax_number
Text(40)	*Text(40)*	*Text(30)*	*Text(2)*	*Text(10)*	*Text(30)*	*Text(30)*	*Text(30)*
35 South West Boule		Newfield	NJ	08360	8602989692		

email_address

Text(100)

lbutlien@trcsolutions.com

#data_provider	sys_loc_code	sys_sample_code	field_parameter	start_depth	end_depth
TRC-CT	VP-13	VP-13(25-30')	pH		
TRC-CT	VP-13	VP-13(25-30')	SC		
TRC-CT	VP-13	VP-13(25-30')	TURB		
TRC-CT	VP-13	VP-13(25-30')	DIS_OXYGEN		
TRC-CT	VP-13	VP-13(25-30')	TEMP		
TRC-CT	VP-13	VP-13(25-30')	ORP		
TRC-CT	VP-13	VP-13(50-55')	pH		
TRC-CT	VP-13	VP-13(50-55')	SC		
TRC-CT	VP-13	VP-13(50-55')	TURB		
TRC-CT	VP-13	VP-13(50-55')	DIS_OXYGEN		
TRC-CT	VP-13	VP-13(50-55')	TEMP		
TRC-CT	VP-13	VP-13(50-55')	ORP		
TRC-CT	VP-13	VP-13(75-80')	pH		
TRC-CT	VP-13	VP-13(75-80')	SC		
TRC-CT	VP-13	VP-13(75-80')	TURB		
TRC-CT	VP-13	VP-13(75-80')	DIS_OXYGEN		
TRC-CT	VP-13	VP-13(75-80')	TEMP		
TRC-CT	VP-13	VP-13(75-80')	ORP		
TRC-CT	VP-13	VP-13(100-105')	pH		
TRC-CT	VP-13	VP-13(100-105')	SC		
TRC-CT	VP-13	VP-13(100-105')	TURB		
TRC-CT	VP-13	VP-13(100-105')	DIS_OXYGEN		
TRC-CT	VP-13	VP-13(100-105')	TEMP		
TRC-CT	VP-13	VP-13(100-105')	ORP		
TRC-CT	VP-13	VP-13(125-130')	pH		
TRC-CT	VP-13	VP-13(125-130')	SC		
TRC-CT	VP-13	VP-13(125-130')	TURB		
TRC-CT	VP-13	VP-13(125-130')	DIS_OXYGEN		
TRC-CT	VP-13	VP-13(125-130')	TEMP		
TRC-CT	VP-13	VP-13(125-130')	ORP		
TRC-CT	VP-13A	VP-13A(15-20')	pH		
TRC-CT	VP-13A	VP-13A(15-20')	SC		
TRC-CT	VP-13A	VP-13A(15-20')	TURB		
TRC-CT	VP-13A	VP-13A(15-20')	DIS_OXYGEN		
TRC-CT	VP-13A	VP-13A(15-20')	TEMP		
TRC-CT	VP-13A	VP-13A(15-20')	ORP		
TRC-CT	VP-13A	VP-13A(37-42')	pH		
TRC-CT	VP-13A	VP-13A(37-42')	SC		
TRC-CT	VP-13A	VP-13A(37-42')	TURB		
TRC-CT	VP-13A	VP-13A(37-42')	DIS_OXYGEN		
TRC-CT	VP-13A	VP-13A(37-42')	TEMP		
TRC-CT	VP-13A	VP-13A(37-42')	ORP		
TRC-CT	VP-13A	VP-13A(62-67')	pH		
TRC-CT	VP-13A	VP-13A(62-67')	SC		
TRC-CT	VP-13A	VP-13A(62-67')	TURB		
TRC-CT	VP-13A	VP-13A(62-67')	DIS_OXYGEN		
TRC-CT	VP-13A	VP-13A(62-67')	TEMP		
TRC-CT	VP-13A	VP-13A(62-67')	ORP		

TRC-CT	VP-13A	VP-13A(87-92')	pH
TRC-CT	VP-13A	VP-13A(87-92')	SC
TRC-CT	VP-13A	VP-13A(87-92')	TURB
TRC-CT	VP-13A	VP-13A(87-92')	DIS_OXYGEN
TRC-CT	VP-13A	VP-13A(87-92')	TEMP
TRC-CT	VP-13A	VP-13A(87-92')	ORP
TRC-CT	VP-13A	VP-13A(111-116')	pH
TRC-CT	VP-13A	VP-13A(111-116')	SC
TRC-CT	VP-13A	VP-13A(111-116')	TURB
TRC-CT	VP-13A	VP-13A(111-116')	DIS_OXYGEN
TRC-CT	VP-13A	VP-13A(111-116')	TEMP
TRC-CT	VP-13A	VP-13A(111-116')	ORP
TRC-CT	VP-14	VP-14(35-40')	pH
TRC-CT	VP-14	VP-14(35-40')	SC
TRC-CT	VP-14	VP-14(35-40')	TURB
TRC-CT	VP-14	VP-14(35-40')	DIS_OXYGEN
TRC-CT	VP-14	VP-14(35-40')	TEMP
TRC-CT	VP-14	VP-14(35-40')	ORP
TRC-CT	VP-14	VP-14(55-60')	pH
TRC-CT	VP-14	VP-14(55-60')	SC
TRC-CT	VP-14	VP-14(55-60')	TURB
TRC-CT	VP-14	VP-14(55-60')	DIS_OXYGEN
TRC-CT	VP-14	VP-14(55-60')	TEMP
TRC-CT	VP-14	VP-14(55-60')	ORP
TRC-CT	VP-14	VP-14(130-135')	pH
TRC-CT	VP-14	VP-14(130-135')	SC
TRC-CT	VP-14	VP-14(130-135')	TURB
TRC-CT	VP-14	VP-14(130-135')	DIS_OXYGEN
TRC-CT	VP-14	VP-14(130-135')	TEMP
TRC-CT	VP-14	VP-14(130-135')	ORP
TRC-CT	VP-15	VP-15(30-35')	pH
TRC-CT	VP-15	VP-15(30-35')	SC
TRC-CT	VP-15	VP-15(30-35')	TURB
TRC-CT	VP-15	VP-15(30-35')	DIS_OXYGEN
TRC-CT	VP-15	VP-15(30-35')	TEMP
TRC-CT	VP-15	VP-15(30-35')	ORP
TRC-CT	VP-15	VP-15(45-50')	pH
TRC-CT	VP-15	VP-15(45-50')	SC
TRC-CT	VP-15	VP-15(45-50')	TURB
TRC-CT	VP-15	VP-15(45-50')	DIS_OXYGEN
TRC-CT	VP-15	VP-15(45-50')	TEMP
TRC-CT	VP-15	VP-15(45-50')	ORP
TRC-CT	VP-15	VP-15(65-70')	pH
TRC-CT	VP-15	VP-15(65-70')	SC
TRC-CT	VP-15	VP-15(65-70')	TURB
TRC-CT	VP-15	VP-15(65-70')	DIS_OXYGEN
TRC-CT	VP-15	VP-15(65-70')	TEMP
TRC-CT	VP-15	VP-15(65-70')	ORP
TRC-CT	VP-15	VP-15(88-93')	pH

TRC-CT	VP-15	VP-15(88-93')	SC
TRC-CT	VP-15	VP-15(88-93')	TURB
TRC-CT	VP-15	VP-15(88-93')	DIS_OXYGEN
TRC-CT	VP-15	VP-15(88-93')	TEMP
TRC-CT	VP-15	VP-15(88-93')	ORP
TRC-CT	VP-15	VP-15(114-119')	pH
TRC-CT	VP-15	VP-15(114-119')	SC
TRC-CT	VP-15	VP-15(114-119')	TURB
TRC-CT	VP-15	VP-15(114-119')	DIS_OXYGEN
TRC-CT	VP-15	VP-15(114-119')	TEMP
TRC-CT	VP-15	VP-15(114-119')	ORP
TRC-CT	VP-15A	VP-15A(15-20')	pH
TRC-CT	VP-15A	VP-15A(15-20')	SC
TRC-CT	VP-15A	VP-15A(15-20')	TURB
TRC-CT	VP-15A	VP-15A(15-20')	DIS_OXYGEN
TRC-CT	VP-15A	VP-15A(15-20')	TEMP
TRC-CT	VP-15A	VP-15A(15-20')	ORP
TRC-CT	VP-15A	VP-15A(38-43')	pH
TRC-CT	VP-15A	VP-15A(38-43')	SC
TRC-CT	VP-15A	VP-15A(38-43')	TURB
TRC-CT	VP-15A	VP-15A(38-43')	DIS_OXYGEN
TRC-CT	VP-15A	VP-15A(38-43')	TEMP
TRC-CT	VP-15A	VP-15A(38-43')	ORP
TRC-CT	VP-15A	VP-15A(55-60')	pH
TRC-CT	VP-15A	VP-15A(55-60')	SC
TRC-CT	VP-15A	VP-15A(55-60')	TURB
TRC-CT	VP-15A	VP-15A(55-60')	DIS_OXYGEN
TRC-CT	VP-15A	VP-15A(55-60')	TEMP
TRC-CT	VP-15A	VP-15A(55-60')	ORP
TRC-CT	VP-15A	VP-15A(77-82')	pH
TRC-CT	VP-15A	VP-15A(77-82')	SC
TRC-CT	VP-15A	VP-15A(77-82')	TURB
TRC-CT	VP-15A	VP-15A(77-82')	DIS_OXYGEN
TRC-CT	VP-15A	VP-15A(77-82')	TEMP
TRC-CT	VP-15A	VP-15A(77-82')	ORP
TRC-CT	VP-15A	VP-15A(99-104')	pH
TRC-CT	VP-15A	VP-15A(99-104')	SC
TRC-CT	VP-15A	VP-15A(99-104')	TURB
TRC-CT	VP-15A	VP-15A(99-104')	DIS_OXYGEN
TRC-CT	VP-15A	VP-15A(99-104')	TEMP
TRC-CT	VP-15A	VP-15A(99-104')	ORP

depth_unit	result_date	result_time	result_value	result_unit	quantitation_limit	task_code
	10/14/2009 11:35:00	11:35:00	4.31	ph units		
	10/14/2009 11:35:00	11:35:00	0.153	ms/cm		
	10/14/2009 11:35:00	11:35:00	57.3	ntu		
	10/14/2009 11:35:00	11:35:00	8.59	mg/l		
	10/14/2009 11:35:00	11:35:00	12.82	deg c		
	10/14/2009 11:35:00	11:35:00	302.3	millivolts		
	10/14/2009 13:45:00	13:45:00	4.65	ph units		
	10/14/2009 13:45:00	13:45:00	0.175	ms/cm		
	10/14/2009 13:45:00	13:45:00	46.9	ntu		
	10/14/2009 13:45:00	13:45:00	2.17	mg/l		
	10/14/2009 13:45:00	13:45:00	13.44	deg c		
	10/14/2009 13:45:00	13:45:00	277.6	millivolts		
	10/14/2009 14:53:00	14:53:00	4.41	ph units		
	10/14/2009 14:53:00	14:53:00	0.125	ms/cm		
	10/14/2009 14:53:00	14:53:00	8.2	ntu		
	10/14/2009 14:53:00	14:53:00	7.50	mg/l		
	10/14/2009 14:53:00	14:53:00	14.16	deg c		
	10/14/2009 14:53:00	14:53:00	287.0	millivolts		
	10/15/2009 09:11:00	09:11:00	4.68	ph units		
	10/15/2009 09:11:00	09:11:00	0.113	ms/cm		
	10/15/2009 09:11:00	09:11:00	35.4	ntu		
	10/15/2009 09:11:00	09:11:00	8.20	mg/l		
	10/15/2009 09:11:00	09:11:00	13.99	deg c		
	10/15/2009 09:11:00	09:11:00	252.4	millivolts		
	10/15/2009 11:38:00	11:38:00	5.05	ph units		
	10/15/2009 11:38:00	11:38:00	0.033	ms/cm		
	10/15/2009 11:38:00	11:38:00	15.1	ntu		
	10/15/2009 11:38:00	11:38:00	8.44	mg/l		
	10/15/2009 11:38:00	11:38:00	14.16	deg c		
	10/15/2009 11:38:00	11:38:00	235.6	millivolts		
	10/22/2009 12:35:00	12:35:00	4.73	ph units		
	10/22/2009 12:35:00	12:35:00	0.462	ms/cm		
	10/22/2009 12:35:00	12:35:00	44.2	ntu		
	10/22/2009 12:35:00	12:35:00	0.43	mg/l		
	10/22/2009 12:35:00	12:35:00	19.17	deg c		
	10/22/2009 12:35:00	12:35:00	205.2	millivolts		
	10/22/2009 14:14:00	14:14:00	4.42	ph units		
	10/22/2009 14:14:00	14:14:00	0.182	ms/cm		
	10/22/2009 14:14:00	14:14:00	32.8	ntu		
	10/22/2009 14:14:00	14:14:00	0.23	mg/l		
	10/22/2009 14:14:00	14:14:00	14.50	deg c		
	10/22/2009 14:14:00	14:14:00	213.9	millivolts		
	10/22/2009 15:50:00	15:50:00	4.80	ph units		
	10/22/2009 15:50:00	15:50:00	0.148	ms/cm		
	10/22/2009 15:50:00	15:50:00	3.7	ntu		
	10/22/2009 15:50:00	15:50:00	0.29	mg/l		
	10/22/2009 15:50:00	15:50:00	16.44	deg c		
	10/22/2009 15:50:00	15:50:00	174.7	millivolts		

10/23/2009 08:52:00	08:52:00	4.55	ph units
10/23/2009 08:52:00	08:52:00	0.100	ms/cm
10/23/2009 08:52:00	08:52:00	26.3	ntu
10/23/2009 08:52:00	08:52:00	6.60	mg/l
10/23/2009 08:52:00	08:52:00	14.19	deg c
10/23/2009 08:52:00	08:52:00	201.2	millivolts
10/26/2009 10:17:00	10:17:00	4.88	ph units
10/26/2009 10:17:00	10:17:00	0.037	ms/cm
10/26/2009 10:17:00	10:17:00	15.1	ntu
10/26/2009 10:17:00	10:17:00	7.70	mg/l
10/26/2009 10:17:00	10:17:00	14.49	deg c
10/26/2009 10:17:00	10:17:00	200.7	millivolts
10/16/2009 13:06:00	13:06:00	4.76	ph units
10/16/2009 13:06:00	13:06:00	0.252	ms/cm
10/16/2009 13:06:00	13:06:00	180.0	ntu
10/16/2009 13:06:00	13:06:00	2.87	mg/l
10/16/2009 13:06:00	13:06:00	14.94	deg c
10/16/2009 13:06:00	13:06:00	177.5	millivolts
10/16/2009 14:13:00	14:13:00	4.60	ph units
10/16/2009 14:13:00	14:13:00	0.085	ms/cm
10/16/2009 14:13:00	14:13:00	36.4	ntu
10/16/2009 14:13:00	14:13:00	8.01	mg/l
10/16/2009 14:13:00	14:13:00	14.59	deg c
10/16/2009 14:13:00	14:13:00	260.9	millivolts
10/19/2009 15:07:00	15:07:00	4.60	ph units
10/19/2009 15:07:00	15:07:00	0.061	ms/cm
10/19/2009 15:07:00	15:07:00	55.0	ntu
10/19/2009 15:07:00	15:07:00	3.67	mg/l
10/19/2009 15:07:00	15:07:00	14.32	deg c
10/19/2009 15:07:00	15:07:00	251.6	millivolts
10/12/2009 14:34:00	14:34:00	4.94	ph units
10/12/2009 14:34:00	14:34:00	0.119	ms/cm
10/12/2009 14:34:00	14:34:00	48.7	ntu
10/12/2009 14:34:00	14:34:00	8.53	mg/l
10/12/2009 14:34:00	14:34:00	17.94	deg c
10/12/2009 14:34:00	14:34:00	254.2	millivolts
10/12/2009 15:34:00	15:34:00	4.83	ph units
10/12/2009 15:34:00	15:34:00	0.071	ms/cm
10/12/2009 15:34:00	15:34:00	33.3	ntu
10/12/2009 15:34:00	15:34:00	2.79	mg/l
10/12/2009 15:34:00	15:34:00	17.10	deg c
10/12/2009 15:34:00	15:34:00	256.7	millivolts
10/13/2009 09:14:00	09:14:00	4.72	ph units
10/13/2009 09:14:00	09:14:00	0.072	ms/cm
10/13/2009 09:14:00	09:14:00	9.6	ntu
10/13/2009 09:14:00	09:14:00	4.87	mg/l
10/13/2009 09:14:00	09:14:00	16.38	deg c
10/13/2009 09:14:00	09:14:00	246.3	millivolts
10/13/2009 10:38:00	10:38:00	4.61	ph units

10/13/2009 10:38:00	10:38:00	0.059	ms/cm
10/13/2009 10:38:00	10:38:00	42.4	ntu
10/13/2009 10:38:00	10:38:00	5.64	mg/l
10/13/2009 10:38:00	10:38:00	15.35	deg c
10/13/2009 10:38:00	10:38:00	281.1	millivolts
10/13/2009 12:13:00	12:13:00	4.15	ph units
10/13/2009 12:13:00	12:13:00	0.036	ms/cm
10/13/2009 12:13:00	12:13:00	65.2	ntu
10/13/2009 12:13:00	12:13:00	0.32	mg/l
10/13/2009 12:13:00	12:13:00	16.83	deg c
10/13/2009 12:13:00	12:13:00	107.7	millivolts
10/20/2009 15:39:00	15:39:00	5.56	ph units
10/20/2009 15:39:00	15:39:00	0.518	ms/cm
10/20/2009 15:39:00	15:39:00	34.1	ntu
10/20/2009 15:39:00	15:39:00	5.77	mg/l
10/20/2009 15:39:00	15:39:00	17.28	deg c
10/20/2009 15:39:00	15:39:00	131.0	millivolts
10/21/2009 08:50:00	08:50:00	4.75	ph units
10/21/2009 08:50:00	08:50:00	0.084	ms/cm
10/21/2009 08:50:00	08:50:00	44.6	ntu
10/21/2009 08:50:00	08:50:00	4.01	mg/l
10/21/2009 08:50:00	08:50:00	14.53	deg c
10/21/2009 08:50:00	08:50:00	214.3	millivolts
10/21/2009 10:20:00	10:20:00	4.52	ph units
10/21/2009 10:20:00	10:20:00	0.049	ms/cm
10/21/2009 10:20:00	10:20:00	43.0	ntu
10/21/2009 10:20:00	10:20:00	4.20	mg/l
10/21/2009 10:20:00	10:20:00	14.44	deg c
10/21/2009 10:20:00	10:20:00	268.5	millivolts
10/21/2009 11:27:00	11:27:00	4.39	ph units
10/21/2009 11:27:00	11:27:00	0.046	ms/cm
10/21/2009 11:27:00	11:27:00	90.0	ntu
10/21/2009 11:27:00	11:27:00	5.72	mg/l
10/21/2009 11:27:00	11:27:00	14.83	deg c
10/21/2009 11:27:00	11:27:00	261.1	millivolts
10/21/2009 13:54:00	13:54:00	3.67	ph units
10/21/2009 13:54:00	13:54:00	0.054	ms/cm
10/21/2009 13:54:00	13:54:00	9.2	ntu
10/21/2009 13:54:00	13:54:00	6.60	mg/l
10/21/2009 13:54:00	13:54:00	14.37	deg c
10/21/2009 13:54:00	13:54:00	271.6	millivolts

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Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL
Yes	ACTUAL

R2-0003197

#data_provider	sys_sample_code	sample_name	sample_matrix_code
TRC-CT	FB101209		WQ
TRC-CT	FB101309		WQ
TRC-CT	FB101409		WQ
TRC-CT	FB101509		WQ
TRC-CT	FB101609		WQ
TRC-CT	FB101909		WQ
TRC-CT	FB102009		WQ
TRC-CT	FB102109		WQ
TRC-CT	FB102209		WQ
TRC-CT	FB102309		WQ
TRC-CT	VP-13(100-105')		WG
TRC-CT	VP-13(125-130')		WG
TRC-CT	VP-13(25-30')		WG
TRC-CT	VP-13(50-55')		WG
TRC-CT	VP-13(75-80')		WG
TRC-CT	VP-13A(111-116')		WG
TRC-CT	VP-13A(15-20')		WG
TRC-CT	VP-13A(37-42')		WG
TRC-CT	VP-13A(62-67')		WG
TRC-CT	VP-13A(87-92')		WG
TRC-CT	VP-13A(87-92')MS		WG
TRC-CT	VP-14(105-110')		WG
TRC-CT	VP-14(105-110')MS		WG
TRC-CT	VP-14(130-135')		WG
TRC-CT	VP-14(35-40')		WG
TRC-CT	VP-14(55-60')		WG
TRC-CT	VP-14(80-85')		WG
TRC-CT	VP-15(114-119')		WG
TRC-CT	VP-15(30-35')		WW
TRC-CT	VP-15(45-50')		WW
TRC-CT	VP-15(65-70')		WG
TRC-CT	VP-15(88-93')		WG
TRC-CT	VP-15A(15-20')		WG
TRC-CT	VP-15A(38-43')		WG
TRC-CT	VP-15A(55-60')		WG
TRC-CT	VP-15A(77-82')		WG
TRC-CT	VP-15A(99-104')		WG
TRC-CT	VP-24(105-110')		WG
TRC-CT	VP-25A(99-104')		WG

sample_type_code	sample_source	parent_sample_code	sample_delivery_group	sample_date
AB	Field			10/12/2009 16:20
AB	Field			10/13/2009 13:50
AB	Field			10/14/2009 15:15
AB	Field			10/15/2009 13:00
AB	Field			10/16/2009 13:35
AB	Field			10/19/2009 14:00
AB	Field			10/20/2009 16:00
AB	Field			10/21/2009 14:30
AB	Field			10/22/2009 16:05
AB	Field			10/23/2009 9:40
N	Field			10/15/2009 9:15
N	Field			10/15/2009 11:40
N	Field			10/14/2009 11:35
N	Field			10/14/2009 13:45
N	Field			10/14/2009 14:55
N	Field			10/23/2009 10:20
N	Field			10/22/2009 12:35
N	Field			10/22/2009 14:15
N	Field			10/22/2009 15:50
N	Field			10/23/2009 8:55
MS	Lab	VP-13A(87-92')		10/23/2009 8:55
N	Field			10/19/2009 12:15
MS	Lab	VP-14(105-110')		10/19/2009 12:15
N	Field			10/19/2009 15:10
N	Field			10/16/2009 13:10
N	Field			10/16/2009 14:15
N	Field			10/19/2009 10:25
N	Field			10/13/2009 12:15
N	Field			10/12/2009 14:40
N	Field			10/12/2009 15:35
N	Field			10/13/2009 9:15
N	Field			10/13/2009 10:40
N	Field			10/20/2009 15:40
N	Field			10/21/2009 8:50
N	Field			10/21/2009 10:20
N	Field			10/21/2009 11:30
N	Field			10/21/2009 13:55
FD	Field	VP-14(105-110')		10/19/2009 16:00
FD	Field	VP-15A(99-104')		10/21/2009 15:30

sys_loc_code	start_depth	end_depth	depth_unit	chain_of_custody	sent_to_lab_date
					10/12/2009
					10/13/2009
					10/14/2009
					10/15/2009
					10/16/2009
					10/19/2009
					10/20/2009
					10/21/2009
					10/22/2009
					10/23/2009
VP-13					10/15/2009
VP-13					10/15/2009
VP-13					10/14/2009
VP-13					10/14/2009
VP-13					10/14/2009
VP-13A					10/23/2009
VP-13A					10/22/2009
VP-13A					10/22/2009
VP-13A					10/22/2009
VP-13A					10/23/2009
VP-13A					10/23/2009
VP-14					10/19/2009
VP-14					10/19/2009
VP-14					10/19/2009
VP-14					10/16/2009
VP-14					10/16/2009
VP-14					10/19/2009
VP-15					10/13/2009
VP-15					10/12/2009
VP-15					10/12/2009
VP-15					10/13/2009
VP-15					10/13/2009
VP-15A					10/20/2009
VP-15A					10/21/2009
VP-15A					10/21/2009
VP-15A					10/21/2009
VP-15A					10/21/2009
VP-14					10/19/2009
VP-15A					10/21/2009

sample_receipt_date	sampler	**sampling_company_code**	sampling_reason	sampling_technique
10/13/2009	JDM	TRCCTW		
10/13/2009	JDM	TRCCTW		
10/14/2009	JDM	TRCCTW		
10/15/2009	JDM	TRCCTW		
10/16/2009	JDM	TRCCTW		
10/19/2009	JM	TRCCTW		
10/21/2009	JM	TRCCTW		
10/21/2009	JDM	TRCCTW		
10/23/2009	JDM	TRCCTW		
10/23/2009	JDM	TRCCTW		
10/15/2009	JDM	TRCCTW		
10/15/2009	JDM	TRCCTW		
10/14/2009	JDM	TRCCTW		
10/14/2009	JDM	TRCCTW		
10/14/2009	JDM	TRCCTW		
10/23/2009	JDM	TRCCTW		
10/22/2009	JDM	TRCCTW		
10/22/2009	JDM	TRCCTW		
10/23/2009	JDM	TRCCTW		
10/23/2009	JDM	TRCCTW		
10/23/2009		TRCCTW		
10/19/2009	JM	TRCCTW		
10/19/2009		TRCCTW		
10/19/2009	JM	TRCCTW		
10/16/2009	JDM	TRCCTW		
10/16/2009	JDM	TRCCTW		
10/19/2009	JM	TRCCTW		
10/13/2009	JDM	TRCCTW		
10/12/2009	JDM	TRCCTW		
10/12/2009	JDM	TRCCTW		
10/13/2009	JDM	TRCCTW		
10/13/2009	JDM	TRCCTW		
10/21/2009	JM	TRCCTW		
10/21/2009	JM	TRCCTW		
10/21/2009	JDM	TRCCTW		
10/21/2009	JDM	TRCCTW		
10/21/2009	JDM	TRCCTW		
10/19/2009	JM	TRCCTW		
10/21/2009	JDM	TRCCTW		

task_code	collection_quarter	**composite_yn**	composite_desc	sample_class	custom_field_1
		N			
		N			
		N			
		N			
		N			
		N			
		N			
		N			
		N			
		N			
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		N			
		N			
		N			
		N			
		N			
		N			
		N			
		N			

custom_field_2 custom_field_3 comment

#sys_sample_code	lab_anl_method_name	analysis_date	total_or_dissolved
FB102309	E314.0	10/26/2009 19:33	T
VP-13A(111-116')	E314.0	10/26/2009 19:50	T
VP-15(30-35')	E314.0	10/13/2009 13:51	T
VP-15(45-50')	E314.0	10/13/2009 14:08	T
FB102209	E314.0	10/26/2009 19:16	T
VP-13A(62-67')	E314.0	10/26/2009 18:58	T
VP-13A(87-92')	E314.0	10/26/2009 18:41	T
VP-13A(15-20')	E314.0	10/23/2009 12:55	T
VP-13A(37-42')	E314.0	10/23/2009 13:13	T
FB101209	E314.0	10/13/2009 14:25	T
VP-15(65-70')	E314.0	10/13/2009 14:43	T
FB101309	E314.0	10/15/2009 11:30	T
VP-15(114-119')	E314.0	10/15/2009 11:13	T
VP-15(88-93')	E314.0	10/15/2009 11:48	T
FB101409	E314.0	10/15/2009 12:05	T
VP-13(25-30')	E314.0	10/15/2009 12:22	T
VP-13(50-55')	E314.0	10/15/2009 12:40	T
VP-13(75-80')	E314.0	10/15/2009 12:57	T
VP-13(100-105')	E314.0	10/15/2009 18:11	T
FB101509	E314.0	10/16/2009 11:47	T
VP-13(125-130')	E314.0	10/16/2009 11:30	T
FB101609	E314.0	10/19/2009 13:43	T
VP-14(35-40')	E314.0	10/19/2009 13:08	T
VP-14(55-60')	E314.0	10/19/2009 13:26	T
FB101909	E314.0	10/20/2009 18:07	T
VP-14(105-110')	E314.0	10/20/2009 17:15	T
VP-14(130-135')	E314.0	10/20/2009 18:24	T
VP-14(80-85')	E314.0	10/20/2009 17:32	T
VP-24(105-110')	E314.0	10/20/2009 17:49	T
FB102009	E314.0	10/22/2009 11:48	T
VP-15A(15-20')	E314.0	10/22/2009 11:31	T
VP-15A(38-43')	E314.0	10/22/2009 12:06	T
FB102109	E314.0	10/22/2009 13:33	T
VP-15A(55-60')	E314.0	10/22/2009 12:23	T
VP-15A(77-82')	E314.0	10/22/2009 12:40	T
VP-15A(99-104')	E314.0	10/22/2009 12:58	T
VP-25A(99-104')	E314.0	10/22/2009 15:34	T

column_number	test_type	lab_matrix_code	analysis_location	basis	container_id	dilution_factor
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WW	LB	NA		1
	initial	WW	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WQ	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1
	initial	WG	LB	NA		1

prep_method	prep_date	leachate_method	leachate_date	lab_name_code	qc_level
	10/26/2009 0:00			ACTD	quant
	10/26/2009 0:00			ACTD	quant
	10/13/2009 0:00			ACTD	quant
	10/13/2009 0:00			ACTD	quant
	10/26/2009 0:00			ACTD	quant
	10/26/2009 0:00			ACTD	quant
	10/26/2009 0:00			ACTD	quant
	10/23/2009 0:00			ACTD	quant
	10/23/2009 0:00			ACTD	quant
	10/13/2009 0:00			ACTD	quant
	10/13/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/15/2009 0:00			ACTD	quant
	10/16/2009 0:00			ACTD	quant
	10/16/2009 0:00			ACTD	quant
	10/19/2009 0:00			ACTD	quant
	10/19/2009 0:00			ACTD	quant
	10/19/2009 0:00			ACTD	quant
	10/20/2009 0:00			ACTD	quant
	10/20/2009 0:00			ACTD	quant
	10/20/2009 0:00			ACTD	quant
	10/20/2009 0:00			ACTD	quant
	10/20/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant
	10/22/2009 0:00			ACTD	quant

lab_sample_id	percent_moisture	subsample_amount	subsample_amount_unit	analyst_name
JA31195-1		25	ml	MELISSAS
JA31195-2		25	ml	MELISSAS
JA30215-1		25	ml	MELISSAS
JA30215-2		25	ml	MELISSAS
JA31156-2		25	ml	MELISSAS
JA31156-1		25	ml	MELISSAS
JA31156-3		25	ml	MELISSAS
JA31056-1		25	ml	MELISSAS
JA31056-2		25	ml	MELISSAS
JA30232-1		25	ml	MELISSAS
JA30232-2		25	ml	MELISSAS
JA30294-3		25	ml	MELISSAS
JA30294-2		25	ml	MELISSAS
JA30294-1		25	ml	MELISSAS
JA30398-1		25	ml	MELISSAS
JA30398-2		25	ml	MELISSAS
JA30398-3		25	ml	MELISSAS
JA30398-4		25	ml	MELISSAS
JA30457-1		25	ml	MELISSAS
JA30523-2		25	ml	MELISSAS
JA30523-1		25	ml	MELISSAS
JA30622-3		25	ml	MELISSAS
JA30622-1		25	ml	MELISSAS
JA30622-2		25	ml	MELISSAS
JA30759-4		25	ml	MELISSAS
JA30759-2		25	ml	MELISSAS
JA30759-5		25	ml	MELISSAS
JA30759-1		25	ml	MELISSAS
JA30759-3		25	ml	MELISSAS
JA30903-2		25	ml	MELISSAS
JA30903-1		25	ml	MELISSAS
JA30903-3		25	ml	MELISSAS
JA30950-5		25	ml	MELISSAS
JA30950-1		25	ml	MELISSAS
JA30950-2		25	ml	MELISSAS
JA30950-3		25	ml	MELISSAS
JA30950-4		25	ml	MELISSAS

instrument_id	comment	preservative	final_volume	final_volume_unit	cas_rn	chemical_name
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
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IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate
IONC4			25	ml	14797-73-0	Perchlorate

result_value	result_error_delta	result_type_code	reportable_result	detect_flag	lab_qualifiers
		TRG	Yes	N	U
6		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
4.3		TRG	Yes	Y	
3.4		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	<
		TRG	Yes	N	<
		TRG	Yes	N	U
		TRG	Yes	N	U
4.9		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
3.9		TRG	Yes	Y	
10.6		TRG	Yes	Y	
		TRG	Yes	N	U
5.7		TRG	Yes	Y	
		TRG	Yes	N	U
0.93		TRG	Yes	Y	B
		TRG	Yes	N	U
		TRG	Yes	N	U
6.2		TRG	Yes	Y	
12.5		TRG	Yes	Y	
1.6		TRG	Yes	Y	B
5.9		TRG	Yes	Y	
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
		TRG	Yes	N	U
1.6		TRG	Yes	Y	B
2.5		TRG	Yes	Y	B
2.9		TRG	Yes	Y	B

validator_qualifiers	interpreted_qualifiers	organic_yn	method_detection_limit
	U	N	0.92
		N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
		N	0.92
		N	0.92
	U	N	0.92
	U	N	0.92
	<	N	3
	<	N	3
	U	N	0.92
	U	N	0.92
		N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
		N	0.92
		N	0.92
	U	N	0.92
		N	0.92
	U	N	0.92
	B	N	0.92
	U	N	0.92
	U	N	0.92
		N	0.92
		N	0.92
	B	N	0.92
		N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
	U	N	0.92
	B	N	0.92
	B	N	0.92
	B	N	0.92

reporting_detection_limit	quantitation_limit	**result_unit**	**detection_limit_unit**	tic_retention_time
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	
3	3	ug/l	ug/l	

minimum_detectable_conc counting_error uncertainty critical_value validation_level result_comment

qc_original_conc qc_spike_added qc_spike_measured qc_spike_recovery qc_dup_original_conc

qc_dup_spike_added qc_dup_spike_measured qc_dup_spike_recovery qc_rpd qc_spike_lcl qc_spike_ucl

qc_rpd_cl qc_spike_status qc_dup_spike_status qc_rpd_status

FB101209	E314.0	10/13/2009 14:25 T
FB101209	E314.0	10/13/2009 14:25 T
FB101309	E314.0	10/15/2009 11:30 T
FB101309	E314.0	10/15/2009 11:30 T
FB101409	E314.0	10/15/2009 12:05 T
FB101409	E314.0	10/15/2009 12:05 T
FB101509	E314.0	10/16/2009 11:47 T
FB101509	E314.0	10/16/2009 11:47 T
FB101609	E314.0	10/19/2009 13:43 T
FB101609	E314.0	10/19/2009 13:43 T
FB101909	E314.0	10/20/2009 18:07 T
FB101909	E314.0	10/20/2009 18:07 T
FB102009	E314.0	10/22/2009 11:48 T
FB102009	E314.0	10/22/2009 11:48 T
FB102109	E314.0	10/22/2009 13:33 T
FB102109	E314.0	10/22/2009 13:33 T
FB102209	E314.0	10/26/2009 19:16 T
FB102209	E314.0	10/26/2009 19:16 T
FB102309	E314.0	10/26/2009 19:33 T
FB102309	E314.0	10/26/2009 19:33 T
VP-13(100-105')	E314.0	10/15/2009 18:11 T
VP-13(100-105')	E314.0	10/15/2009 18:11 T
VP-13(125-130')	E314.0	10/16/2009 11:30 T
VP-13(125-130')	E314.0	10/16/2009 11:30 T
VP-13(25-30')	E314.0	10/15/2009 12:22 T
VP-13(25-30')	E314.0	10/15/2009 12:22 T
VP-13(50-55')	E314.0	10/15/2009 12:40 T
VP-13(50-55')	E314.0	10/15/2009 12:40 T
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VP-13(75-80')	E314.0	10/15/2009 12:57 T
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VP-13A(111-116')	E314.0	10/26/2009 19:50 T
VP-13A(15-20')	E314.0	10/23/2009 12:55 T
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VP-14(130-135')	E314.0	10/20/2009 18:24 T
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VP-15A(99-104')	E314.0	10/22/2009 12:58 T
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initial	Analysis	GN31152
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initial	Analysis	GN31237
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initial	Analysis	GN31286
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initial	Analysis	GN31340
initial	Prep	GP51181
initial	Analysis	GN31381
initial	Prep	GP51193
initial	Analysis	GN31493
initial	Prep	GP51151
initial	Analysis	GN31493
initial	Prep	GP51151
initial	Analysis	GN31601
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initial	Analysis	GN31381
initial	Prep	GP51193
initial	Analysis	GN31493
initial	Prep	GP51151

APPENDIX J

SOIL MASS FLUX AND GROUNDWATER MASS BALANCE CALCULATION

SHEET NO. 1 OF 4
PROJECT NO.
DATE 3/12/10
BY DAVID HAY
CHK'D

SUBJECT SMC POTASSIUM PERCHLORATE

SOIL MOISTURE CONCENTRATION

Log K_{oc} $KClO_4$ = 1.687

K_{oc} = 48.64 L/Kg

$K_d = K_{oc} \times f_{oc}$ ASSUME TYPICAL ORGANIC CARBON FRACTION = 2%

$K_d = 48.64 \times 0.02 = 0.97$ L/Kg

$K_d = \frac{[Soil]\ ug/Kg}{[WATER]\ ug/L} = 0.97$ L/Kg

Soil concentration = 58.3 ug/Kg

∴ WATER concentration = 59.93 ug/L

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R2-0003221

TRC

SUBJECT SMC POTASSIUM PERCHLORATE

SOIL CONCENTRATION = 58.3 ug/kg

What is soil concentration on a per unit volume basis?

DRY SAND bulk density = 1.60 g/cm3
DRY SAND And gravel bulk density = 1.73 g/cm3
1kg soil = 1000 g

1000 g ÷ 1.6 g/cm3 = 625 cm3
1000 g ÷ 1.73 g/cm3 = 578 cm3
AVERAGE volume OF 1 kg soil = 600 cm3
600 cm3 = 0.021 FT3
58.3 ug / 0.021 FT3 = 2776 ug/FT3

What is specific mass (mass/unit area) of VADOSE ZONE contamination?

VADOSE ZONE IS 15 FT THICK
2776 ug/FT3 X 15 FT = 41640 ug/FT2
That is mass available TO BE released TO GW PER UNIT AREA OF CONTAMINATED SOIL.

what is the TRAVEL LENGTH OF GW BENEATH SOIL CONTAMINATION?

ASSUME 1000 FT2 SOIL CONTAMINATION
ASSUME Roughly CYLINDRICAL DISTRIBUTION TO GW

$\pi R^2 = 1000\ FT^2$
R = 17.84 FT
DIAMETER = 35.7 FT = MAXIMUM TRAVEL LENGTH

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TRC

SUBJECT SMC POTASSIUM PERCHLORATE

What is the total volume of water in which mass released from the vadose zone contamination mixes on a per unit volume basis (includes recharge through contaminated soil)?

The mixing zone assumption is a 10 FT thick column of water under a unit area of contaminated soil

GW Flow: $Q\ (FT^3) = KAi$; $K = 85.5$ FT/DAY, $A = 10\ FT^2$
$i = 0.0025$ (conservative for concentration calc.)
$Q = 2.14\ FT^3/DAY$

30-yr (1971-2000) Avg. Annual precip at Atlantic City International Airport = 40.59 in.
Recharge rate of 21.6% of precip. = 8.77 in/yr = 0.002 FT/DAY
Volumetric recharge rate per unit area = 0.002 FT3/DAY

Total recharge per unit volume of GW traversing maximum length of contaminated zone is dependent upon GW seepage velocity

$V_s = \frac{Ki}{\theta}$; assume θ (eff. porosity) is 0.30, which is conservatively high/near total porosity, yielding minimum seepage velocity/maximum time of GW traverse (maximum mass to GW)

$V_s = 0.7125$ FT/DAY

Maximum travel length 35.7 FT ÷ 0.7125 FT/DAY
⇒ 50.10 DAYS

50.10 DAYS × 0.002 FT^3/DAY = 0.10 FT^3 recharge

∴ Total mixing volume = 0.10 FT^3 + 2.14 FT^3 = 2.24 FT^3 (3.42)A

TRC

SUBJECT SINGLE POTASSIUM PERCHLORATE

What is the total mass required to be leached from the VADOSE ZONE during the GW TRAVERSE beneath the MAXIMUM TRAVEL LENGTH OF 35.7 FT to produce 5 ug/L in GW?

$$\frac{X \text{ ug/L}}{63.4 \text{ L}} = 5 \text{ ug/L} \; ; \; X = 317 \text{ ug}$$

What is the mass flux corresponding to the 50.10 DAYS of TRAVERSE?

317 ug ÷ 50.10 DAYS = 6.33 ug/day

What is the CONCENTRATION OF THE Recharge WATER (SOIL MOISTURE) required to yield 5 ug/L GW AT THE END OF the TRAVERSE?

$$6.33 \text{ ug/day} \div 0.002 \frac{\text{FT}^3}{\text{DAY}} \left(0.057 \frac{\text{L}}{\text{DAY}}\right) = 111 \text{ ug/L}$$

COMPARE 111 ug/L TO SOIL MOISTURE CONCENTRATION OF 59.93 ug/L calculated with Kd.

CONCLUSION: The soil CONCENTRATION OF 58.3 ug/kg IS TOO LOW TO produce 5 ug/L IN GW

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SHEET NO. _____ OF _____

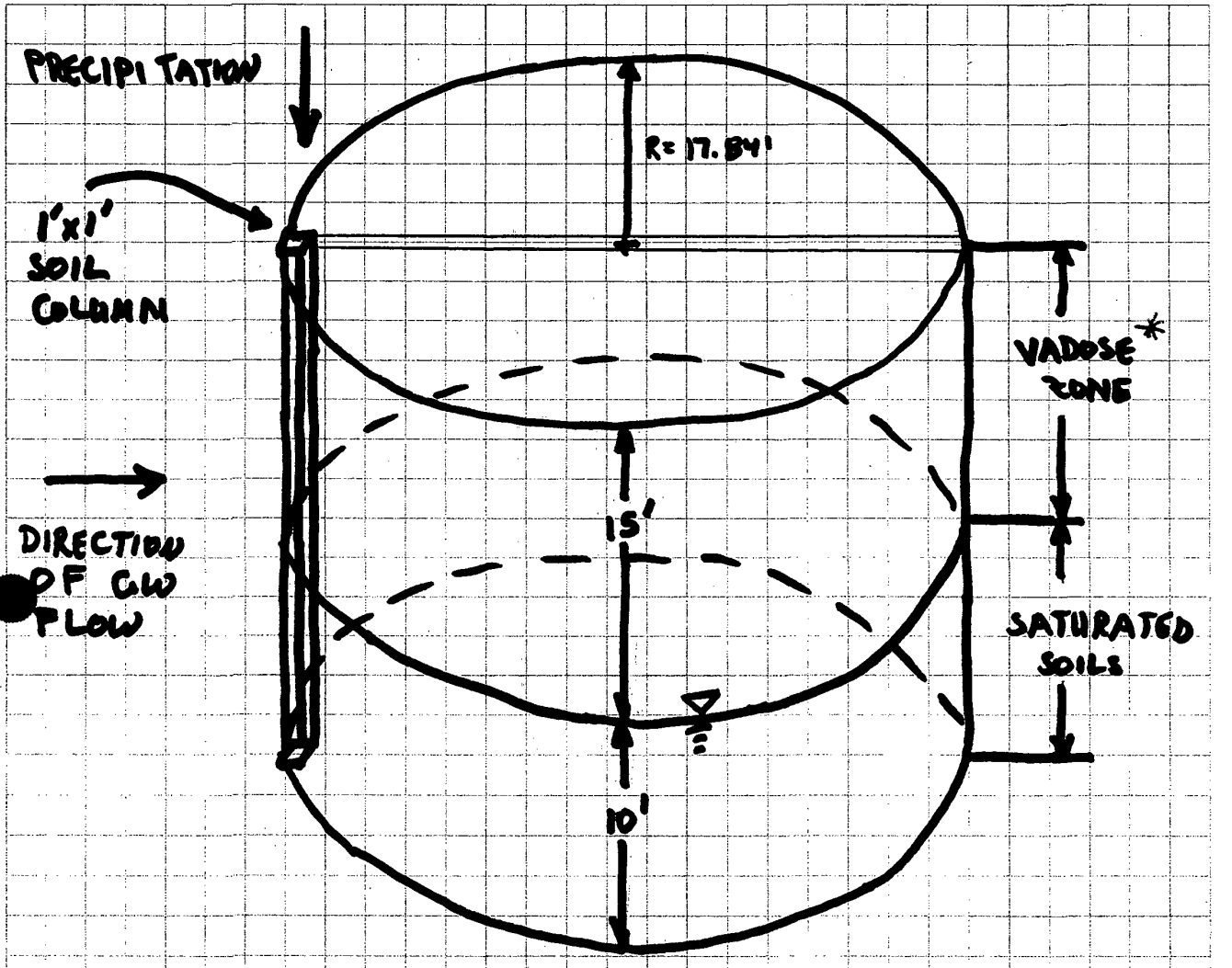
PROJECT NO. _____

DATE 3/15/2010

BY B. KLINE

CHK'D _____

SUBJECT SMC POTASSIUM PERCHLORATE



* Assume the upper 15 ft. of the vadose zone is soil contaminated with 58.3 mg/kg perchlorate

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would result in < 10% of the reference dose recommended by the National Academy of Sciences (Sanchez et al. 2005a&b). A controlled laboratory study investigating food chain transfer found that perchlorate has a limited ability to bioaccumulate in aquatic systems (Park et al. 2005).

Key physicochemical properties of the three most common perchlorate salts, estimated using EPI-Suites 2000 Software (developed by the United States Environmental Protection Agency [USEPA]), and are provided in Table 1. Because the three perchlorate salts are estimated to have low vapor pressures (3.96×10^{-26} - 4.34×10^{-18} mm Hg at 25 °C; [USEPA 2000]), partitioning to air will be limited. Additionally, all are highly soluble in water (0.15×10^{5} to 21×10^{5} mg/L at 25 °C) and have been identified in both surface and groundwater.

Table 1. Summary of Physical-Chemical Properties of Perchlorate

Physical Property	Cations associated with Perchlorate anion		
	$NH_4(ClO_4)$	$Na(ClO_4)$	$K(ClO_4)$
CAS No.	7790-98-9	7601-89-0	7778-74-7
Percent Perchlorate Ion by Weight	84.67%	81.22%	71.8%
Molecular weight	117.49	122.44	138.54
Color	White	White	White
Physical state	Crystalline solid	Crystalline solid	Powder
Melting point[a]	266.8 °C	302.6 °C	302.6 °C
Boiling point[a]	616.0 °C	692.7 °C	692.7 °C
Odor	No data	Odorless	Odorless
Solubility in water at 25 °C (g/L)[b]	2.1×10^{2}	2.0×10^{2}	15×10^{1}
Partition coefficients [a]:			
Log K_{ow}	-5.84	-7.18	-7.18
Log K_{oc}	1.985	1.687	1.687
Henry's Law constant at 25 °C (atm-m^3/mole)[a]	2.8×10^{-11}	9.15×10^{-19}	2.17×10^{-19}
Vapor pressure at 25 °C (mm Hg)[a]	4.34×10^{-18}	1.47×10^{-25}	3.96×10^{-26}
Conversion factors	1 ppm = 4.80 mg/m^3 1 mg/m^3 = 0.208ppm	1 ppm = 5.0 mg/m^3 1 mg/m^3 = 0.20ppm	1 ppm = 5.66 mg/m^3 1 mg/m^3 = 0.177ppm
(% is ClO_4^- ion by weight)	(84.7%)	(81.2%)	(71.8%)

[a]Values estimated with EPA EPI Software (USEPA 2000)

[b]HSDB 2006

R2-0003226

APPENDIX K

USEPA CORRESPONDENCE

12th Floor East Tower
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August 15, 2010

Ms. Sherrel Henry
USEPA - Region II
290 Broadway, 19th Floor
New York, NY 10007-1866

Re: Groundwater Monitoring Event Notification
Perchlorate Remedial Investigation
Shieldalioy Metallurgical Corporation Facility - Newfield, NJ

Dear Ms. Henry:

As a follow-up to our project kickoff meeting held in your offices on June 9, 2010, TRC Environmental Corporation (TRC) is pleased to present this notification and schedule for conducting a second round of groundwater sampling for the perchlorate remedial investigation (RI) at Shieldalioy Metallurgical Corporation's (SMC) facility in Newfield, New Jersey. The perchlorate RI is required to be conducted by SMC as part of Operable Unit 3 (OU3) of the Administrative Settlement Agreement and Order on Consent (AOC) and Scope of Work (SOW) signed by SMC, TRC and USEPA and executed on April 28, 2010. OU3 requires the investigation and delineation of perchlorate contamination in groundwater, soil, sediment and surface water attributable to the SMC facility.

During the project kickoff meeting, USEPA indicated that they would require at least two rounds of groundwater sampling in order to adequately review the OU3 groundwater perchlorate RI results. In accordance with the USEPA and NJDEP-approved Draft Final Perchlorate RI Work Plan dated October 2008, TRC collected one complete round of groundwater samples from the current array of site wells during Fall 2009. During the project kickoff meeting, USEPA indicated that they would require the collection of a second round of groundwater samples under the existing perchlorate RI work plan (i.e., a new work plan under the OU3 AOC/SOW would not be necessary).

Existing Monitoring Well Sampling/Analysis

TRC recommends groundwater sampling of select monitoring wells and extraction wells that were sampled as part of the Fall 2009 perchlorate RI groundwater sampling. The second round of groundwater sampling will assist in confirming the distribution of perchlorate within the shallow, intermediate, and deep zones of the aquifer. Data from the second round of groundwater sampling will also assist in delineating the northern extent of the perchlorate plume, where perchlorate was detected at 5.3 parts per billion (ppb) in monitoring well SC36D, which slightly exceeds the 5 ppb New Jersey action level. Lastly, the second round of groundwater sampling will satisfy the USEPA's request to have at least two rounds of groundwater sampling results presented in the RI report.

The proposed wells to be included in the second round of sampling include 13 shallow zone wells, 6 intermediate zone wells and 16 deep zone wells, as follows:

Shallow Zone Wells	Intermediate Zone Wells	Deep Zone Wells
K	IWC-4	SC1D
Layne	SC1S	SC2D(R)
SC10S	SC3S	SC3D(R)
SC11S(R)	SC6S	SC10D
SC14S	SC33D	SC12D
SC16S	W4	SC17D
SC17S		SC20D
SC18S		SC21D
SC21S		SC26D
SC22S		SC28D
SC24S		SC30D
SC25S		SC32D
W2(R)		SC34D
		SC35D
		SC36D
		W3D

Groundwater Data Validation, Update RI Report Preparation

Once the groundwater sampling results are received from the laboratory, TRC will conduct full data validation of 25% of the laboratory results in accordance with the approved perchlorate RI work plan. Once validated, the data will be evaluated and then included into the draft perchlorate RI report.

Schedule

As discussed during the kickoff meeting, in order to replicate a groundwater sampling event during so-called "low water table" conditions, TRC will collect the second round of groundwater samples during the late August- early September 2010 time-frame. It is anticipated that two to three field days will be necessary to collect the groundwater samples.

Following the receipt of sample results around early October 2010, TRC will conduct data validation on the sample results as discussed above. Data validation will be completed on or about early November 2010 with the draft perchlorate RI report submitted for EPA review by the end of December 2010.

We will plan to proceed, unless the EPA has an objection. If you should have any questions regarding this information, please do not hesitate to contact me at (215) 850-1126.

Regards,

TRC

Patrick J. Hansen, PE
Project Coordinator

Attachment
cc: D. White, SMC
L. Budien, TRC

Butlien, Larry (Windsor,CT-US)

From: Hansen, Patrick (Philadelphia, PA-US)
Sent: Friday, August 27, 2010 10:59 AM
To: 'Henry.Sherrel@epamail.epa.gov'
Cc: 'White, David'; Butlien, Larry (Windsor,CT-US); Faecher, Marc (Millburn,NJ-US); Smith, Robert (Windsor,CT-US)
Subject: RE: SMC--quarteriy progress report; additional perchlorate GW-sampling notice

Thank you Sherrel.

We plan to perform this sampling the week of Sept 7. If you would like to observe, kindly drop us a line.

Thanks for your attention to this.

Have a nice weekend!

PJ Hansen
Project Coordinator

From: Henry.Sherrel@epamail.epa.gov [mailto:Henry.Sherrel@epamail.epa.gov]
Sent: Friday, August 27, 2010 9:33 AM
To: Hansen, Patrick (Philadelphia, PA-US)
Cc: 'White, David'; Butlien, Larry (Windsor,CT-US); Faecher, Marc (Millburn,NJ-US); Smith, Robert (Windsor,CT-US)
Subject: Re: SMC--quarteriy progress report; additional perchlorate GW sampling notice

[redacted],

TRC recommendation for groundwater sampling of the selected monitoring wells and extraction wells that were sampled as part of the Fall 2009 perchlorate RI groundwater sampling is acceptable to EPA. Please inform me of the actual days that sampling will be performed. Thank you

Regards,

Sherrel Henry, Project Manager
U.S. EPA- Region 2
290 Broadway, 20th Floor
New York, NY 10007-1866
Phone: (212) 637-4273
Fax: (212) 637-3966
Email:henry.sherrel@epa.gov

From: "Hansen, Patrick (Philadelphia, PA-US)" <PHansen@trcsolutions.com>
To: Sherrel Henry/R2/USEPA/US@EPA
Cc: "White, David" <dwhite@metvan.com>, "Faecher, Marc (Millburn,NJ-US)" <MFaecher@trcsolutions.com>, "Smith, Robert (Windsor,CT-US)" <RSmith@trcsolutions.com>, "Butlien, Larry (Windsor,CT-US)" <LButlien@trcsolutions.com>
Date: 08/17/2010 02:37 PM
Subject: SMC--quarterly progress report; additional perchlorate GW sampling notice

---

[redacted],

Sherrel,

R2-0003231

Following our conversation late last week, TRC has prepared and attached the quarterly progress report for the SMC project.

Also, following our discussions starting at our June 9 meeting at your office and continuing thereafter, we are planning the second round of perchlorate ground water sampling for September, which we have summarized in the attached letter.

Please let me know if you have any questions.

Regards,

PJ Hansen
Project Coordinator

Patrick J. Hansen, PE
Director of Operations
Philadelphia Metro Area

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[attachment "Shieldalloy Superfund Site Progress Report 08 15 2010 final.pdf" deleted by Sherrel Henry/R2/USEPA/US] [attachment "EPA Notification Ltr second round perchlorate samplIng.pdf ' deleted by Sherrel Henry/R2/USEPA/US]

R2-0003232

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January 31, 2011

Ms. Sherrel Henry
USEPA - Region II
290 Broadway, 19th Floor
New York, NY 10007-1866

Re: Additional Monitoring Well Installation/Sampling Notification
OU3 Perchlorate Remedial Investigation
Shieldalioy Metallurgical Corporation Facility - Newfield, NJ

Dear Ms. Henry:

As a follow-up to our phone conversation of January 25, 2011, TRC Environmental Corporation (TRC), on behalf of Shieldalioy Metallurgical Corporation (SMC), is pleased to present this notice and schedule for installing and sampling one additional groundwater monitoring well for the OU3 perchlorate remedial investigation (RI) at the SMC facility in Newfield, New Jersey (Site). The perchlorate RI is required to be conducted by SMC as part of Operable Unit 3 (OU3) of the Administrative Settlement Agreement and Order on Consent (AOC) and Scope of Work (SOW) signed by SMC, TRC and USEPA and executed on April 28, 2010. OU3 requires the investigation and delineation of perchlorate contamination in groundwater, soil, sediment and surface water attributable to the SMC facility.

As discussed during our phone conversation, based on the perchlorate RI work conducted to date, a data gap exists in the northern limit of the perchlorate groundwater plume in the deep aquifer zone. This zone may not have been fully delineated relative to the New Jersey Administrative Consent Order (ACO) action level of 5 ppb (required by the AOC-SOW). As discussed further below, this plume may be related to a regional perchlorate issue unrelated to the historical/industrial operations at the Site. Therefore, TRC recommends on behalf of SMC the installation and sampling of one additional deep monitoring well along Salem Avenue at a location approximately 1,000 feet northeast of monitoring well SC36D and approximately 2,000 feet west of the property line of the former SMC manufacturing facility (see attached figure). The proposed monitoring well would be installed and sampled using the approved methods and procedures utilized for the monitoring wells installed and sampled as part of the perchlorate RI (i.e., SC35D and SC36D). It is recommended that the proposed monitoring well be installed and sampled under the existing EPA- and NJDEP-approved Perchlorate RI work plan. Conducting this proposed work under the existing work plan would avoid unnecessarily delaying completion of the OU-3 Perchlorate RI and would be consistent with the perchlorate RI work performed to date.

By way of further explanation, there is evidence that there is likely a regional deep aquifer perchlorate issue not related to the Site, with concentrations of perchlorate above the New Jersey ACO action level of 5 ppb identified in deep wells located upgradient or side gradient of the Site. While the source or sources of this regional plume have yet to be verified, this may have resulted from the widespread agricultural land use of the surrounding area, which probably used Chilean-mined fertilizers extensively of which perchlorate was a known component. Further supporting the need to investigate background is the fact that the Site's Former Chemical Storage Building and adjacent unpaved road (AOC-1), the former furnace building (AOC-2), and the former unlined/lined lagoons (AOC-3) presently show only extremely low to non-detectable concentrations of perchlorate in the soil, thereby suggesting the need to explore the possibility of other sources. Thus, the installation and sampling of the proposed monitoring well would provide further information with respect to background conditions and possible other regional sources than the Site itself Furthermore, subsequent studies/evaluations of the regional groundwater perchlorate issue may be necessary, at the appropriate point, in order to perform the future risk assessment for the Site.

New Monitoring Well Installation/Sampling/Analysis

The proposed monitoring well will be installed under the existing perchlorate RI work plan. The monitoring well will be installed using mud-rotary drilling techniques. Soil samples will be collected using a split-spoon device at a frequency of every 10 feet until the basal clay confining layer is encountered (estimated to be approximately 125 to 130 feet below grade based on the depth of the next closest well SC36D). The soils will be geologically logged in a field notebook with a general soil description (e.g., grain size distribution, color, moisture, staining and odors) performed. The proposed monitoring well will be installed using two–inch diameter Schedule 40 PVC riser pipe and screen. Ten feet of 0.010-inch slot screen will be used with flush-threaded riser pipe to the ground surface. The bottom of the well screened interval will be at the base of the Cohansey aquifer (i.e., on top of the clay confining unit). A gravel pack will be placed in the borehole annular space to several feet above the top of the screened interval. A 2-foot thick layer of fine #00 sand will be used as a seal above the gravel pack. To ensure a proper gravel pack and seal, the gravel pack and #00 sand will be placed in the annular space via the tremie method. Once the gravel pack and seal are completed, a cement/bentonite grout mixture will be tremied into the remaining annular space. The monitoring well will be completed with a locking, flush-mounted curb-box. All soil cuttings and drilling mud generated during monitoring well installation will be containerized and returned to the SMC facility pending proper disposal. Following installation, the monitoring well will be properly developed using a pumping and surging technique with all development water containerized and transported back to the SMC on-site water treatment plant for treatment.

At least two weeks following well development, TRC will collect a groundwater sample from the well using the volume-averaged purging technique outlined in the approved perchlorate RI work plan. This groundwater sampling procedure has been used historically at SMC (including the perchlorate RI groundwater sampling) and will continue to be used for consistency purposes (i.e., to support the comparisons of historic groundwater results to current and future results). In accordance with the purging technique, approximately three to five well volumes will be purged from the well. Groundwater samples will be collected using a dedicated, bottom-loading, laboratory-decontaminated Teflon® bailer. During sampling, the bailer will be lowered gently into the well to minimize agitation of the water column within the well. An aliquot of water will be field-tested with a turbidity meter. The remaining water will be retained for laboratory analysis. Additional field parameters, including pH, temperature, DO, ORP, and specific conductance, will be measured in-situ using a multi-parameter probe (e.g., YSI 600 XLM). Although the analytical method for perchlorate (Method 314.0, EPA, 1999) does not require chemical preservation, there is anecdotal evidence of the potential for microbial degradation (ITRC, 2005). In accordance with the approved perchlorate RI work plan, TRC will ultra-filter the sample in the field through a sterile 0.2-micron filter into a laboratory-supplied 125 ml, pre-sterilized nalgene bottle. TRC will also collect the sample with significant headspace (i.e., at a minimum, the top third of the sample bottle will be left empty). TRC will pour the water from the bailer into a laboratory-supplied bottle (standard un-preserved 200 ml polyethylene bottle). The water will then be transferred through the filtering device, via a dedicated sterile syringe, into the sterile nalgene sample bottle. The filtering device will be a 0.2-micron pore-diameter filter fitted to the syringe, supplied by the laboratory. All filters and syringes will be sterile and dedicated to the sampled well. In addition to the sample from the well, TRC will also collect quality assurance/quality control (QA/QC) samples including a blind duplicate, field rinsate blank and matrix spike/matrix spike duplicate. All samples will be submitted to a New Jersey-certified laboratory and analyzed for perchlorate using EPA Method 314.0.

Groundwater Data Validation, Update RI Report Preparation

Once the groundwater sampling results are received from the laboratory, TRC will conduct full data validation of the laboratory results in accordance with the approved perchlorate RI work plan. Once validated, the data will be evaluated and then included into the perchlorate RI report.

Schedule

Following EPA concurrence with the proposed work, it will take approximately a month to get all the permits and then schedule a driller to start drilling. It is estimated that the well installation will occur in March and that complete well installation and development will take several days to complete. Two weeks after the well is developed (likely in April), TRC will collect a groundwater sample (and QA/QC samples) from the new well. Following the receipt of sample results from the laboratory, TRC will conduct data validation on the sample results as discussed above. After the results are validated, the information about the new well and the analytical results will be incorporated into the OU3 perchlorate RI report. Given the sequence of events outlined above, the perchlorate RI report submittal date to the EPA is estimated to be in June 2011. We request an extension of the report submission until that time.

We will plan to proceed as outlined above, unless the EPA has an objection. If you should have any questions regarding this information, please do not hesitate to contact me at (215) 850-1126.

Very truly yours,

TRC

Patrick J. Hansen, PE
Senior Manager

Attachment
cc: D. White, SMC
L. Butlien, TRC

LEGEND

- 2006/2007 OFFSITE GROUND WATER VERTICAL PROFILING LOCATION
- 2009 SUPPLEMENTAL OFFSITE VERTICAL PROFILING LOCATION
- APPROXIMATE LOCATION OF HIGH-CAPACITY WELL
- PROPOSED MONITORING WELL LOCATION

0 1,000' 2,000'

GRAPHIC SCALE

SOURCE:
BASE MAP FROM JAMES M. STEWART, INC., LAND SURVEYORS, PHILADELPHIA, PA. AND ON-SITE OBSERVATIONS.

ORTHOPHOTOS FROM NEW JERSEY IMAGE WAREHOUSE WEB SITE, PUBLISHED 10/2008 WITH PHOTOS TAKEN IN 2007 & 2008.

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SHIELDALLOY METALLURGICAL CORPORATION
NEWFIELD, NEW JERSEY

PROPOSED MONITORING WELL LOCATION

J:\CAD\171441\000050\Remedial Inv Report\
Plate-4.dwg Layout:Prop Mon Well Loc January 31, 2011-10:22AM KHollenbeck

Date: 01/25/11 | **Project No.** 171441-000050-000000