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Environmental Health

CHEMICAL DATA MANAGEMENT SYSTEMS

February 8, 2010

Mr. Mark Detterman, P.G, C.E.G.
Hazardous Materials Specialist
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Subject: Response to Request for Information, detailed in the December 10, 2009 Letter from Alameda County Environmental Health Services Agency to Western Forge & Flange, 540 Cleveland Ave. Albany, CA 94706) (Spills, Leaks, Investigations and Cleanup Case No. RO0003009 and Geotracker, Global ID # T10000001598)

Dear Mr. Detterman:

Thank you for meeting with Chemical Data Management Systems (CDMS) staff on January 11, 2010 to help clarify the above-referenced Request for Information. This discussion aided in the preparation of the following response to Alameda County Environmental Health Services Agency's December 10, 2009 letter and includes our responses to the "Technical Report Request" that are due on March 15, 2010.

We appreciate your assistance in the closure of ACEH Case No. RO0003009 and Geotracker, Global ID # T10000001598. The facility has been vacant for over almost three years and the City of Albany would like to purchase the site for its fleet operations.

Below is a summary of ACEH's technical comments and questions, and our responses, in the order presented in the ACEH December 10, 2009 Request for Information.

General

The Closure Plan and the Closure Report has been updated and all appendices and references have been added to these documents. They have been uploaded to the County's server. This was followed up by uploaded to Alameda County's FTP website on February 3 & 7, 2010. This is a list of files that were uploaded:

- RO#0003001_RemovalActionWorkplan_2010-02-03.pdf
- RO#0003009_ Well Completion Report_2010-01-09.pdf
- RO#0003009_ClosureReport_2009-05-5.pdf
- RO#0003009_PHASE1_R_2008_12-22.pdf
- RO#0003009_Well Destruction_1986-06-17.pdf
- RO#0003009_Well Permit_W2008-874_2008-11-21.pdf

- RO#0003009_Closure Plan_WesternForgeAl_7-5-07.pdf
- RO#0003009_Brown&Caldwell Rep_1985-05-10.pdf
- RO#0003009_GeologistReport_2008-12-22.pdf

1. **Request for Information**
   a. **Additional subsurface reports to help document investigations conducted in the mid 1980's at the site (e.g., Phase I reports and Appendices I, II, IV, V of the April 2008 Closure Plan)**
      - See comments on the General section above.

   b. Condition of the four groundwater **monitoring wells installed by Brown & Caldwell in 1984**

   The 1986 Groundwater Protection Ordinance permit for the destruction of monitoring wells were delivered to ACEH on a compact disk on January 11, 2010 and has been uploaded to the ACEH FTP web site.

2. **Clarification of Hazardous Material Use, Storage, and Areas of Investigation**

   The most recent Hazardous Materials Management Plan inventory and drawings were delivered to ACEH on a compact disk on January 11, 2010 as Appendix I and Appendix II of the June 2008 Closure Plan. A complete copy of the Closure Plan has been uploaded to the ACEH FTP web site.

3. **Soil Bore Protocols & Data Validity - The lack of bore logs does not allow for independent judgment of the appropriateness of sample selection, and thus reduces the available data to a supporting role rather than a defining role in the characterization of the site. Please address this apparent data gap.**

   The geology of the Albany WFF site was characterized and documented in Brown and Caldwell, 1984. The borings advanced by CDMS in 2008 were designed to investigate the presence or absence of contaminants in suspect areas at the facility as part of the activities necessary to close the site and sell the property. They were not meant to provide additional, formal geological characterization and no formal logs of the borings were prepared. CDMS employed a Professional Geologist, Fred Hoffman, who was on site during the borings and took notes, which were documented. These notes are documented in Hoffman, 2008, which

is included in the Closure Report and the Geologist Report, indicated that the soils are consistent with the characterization of the site documented in Brown and Caldwell, 1984.

The locations for the borings are shown on the Facility Site Map (Figure 1 – located at the end of this report) and were arrived at in consultation with the ACEH, with the exception of sample locations 5, 6B and 107. These four additional soil-boring locations were selected based upon WFF and CDMS areas of concern. The depths of these sample locations were designed to provide data from the near surface, and at intervals through the clay containing the perched water table. The Table 1 below shows all sample locations where ESLs were exceeded (see Closure Report pages 14, 16 and 17 for a summary of soil analysis results for all soil samples).

Table 1. Summary of TPH Levels in Soil BorIng Locations Where ESLs were Exceeded.

Sample Number	**Depth of Sample Locations and TPH Results**		**Size of Excavation (Width x Length x Depth)**
5	6” to 12”	6,500 (Total)	4 x 4 x 5
	3’ 10”	4,900 (Total)	
6B	1’10’ – 2’4”	3,700 (Total)	4 x 4 x 3
107	1’ – 2’	5,500 (D) 11,000 (MO) 15,000 (Cr)	5 x 5 x 3
	3’ – 4’	230 (D) 520 (MO) 700 (Cr)	

The dimensions of the excavations and their locations were designed based upon the levels of contamination found in the soil borings and are conservatively large. The borings considered in the design of the excavations included those in close proximity to the target soil boring locations where sampling results indicated that the contaminants were not present. Nonetheless, as agreed on January 11, 2010, CDMS agrees to conduct confirmation sampling of the three excavations to verify that any remaining contamination does not exceed the ESLs for TPH. For more information, see response to Question #8 below.

4. Soil Bore Permits - Soil bore permits may not have been obtained from the Alameda County Public Works Agency (ACPWA). ACEH requests clarification of this concern, and any available documentation of permits.

A Soil Bore Permit was obtained from the ACPWA and a copy was delivered to ACEH on a compact disk on January 11, 2010. An electronic copy has been uploaded to the ACEH FTP web site. All permit conditions were satisfied, including closure of all soil borings where contamination was not detected or below the ESL. The three excavations where contaminated soil was removed are awaiting confirmatory sampling before being filled and closed as mentioned in #3 above.

5. Sampling Protocols - To help ACEH determine the appropriateness of sampling preservation protocols and thus sample validity, please specify if, and how, the samples were preserved.

All samples were placed inside an ice chest with ice. Samples were delivered to the laboratory on the same day they were collected, and were logged in by the laboratory as having met the required temperature criteria. Liquid samples prepared for metals analysis were preserved in nitric acid; all water samples were filtered prior to analysis.

6**. Identification of Remedial Goals - ACEH notes that the use of a gross level of contamination has been proposed as an appropriate remedial goal. Please provide justification for the remedial goals for this site in the report requested below.**

The justification of the remedial goals used for the current site closure are based upon the conclusions regarding the site's threat to the Bay and to local ground water reached by the SF Regional Water Quality Control Board (SFRQCB) and the CA Department of Toxic Substance Control following the cleanup of the site in the 1980s. The SFRWQCB stated that although there have been detections of oil and grease in the groundwater, "the shallow groundwater is slightly saline, is high in Total Dissolved Solids and is therefore of limited beneficial use. Furthermore, the aquifer is situated in low-permeability clayey soils which limit the spread of the pollutants in question in the groundwater" (SFRWQCB, 1986). In addition, the SFRWQCB concluded, "the site does not pose a significant threat to the beneficial uses of the waters of the State" (SFRWQCB, 1986). The State Water Resources Control also saw fit to conclude that there was little human health or environmental concern for hydraulic fluids, of the type at the WFF site, released to the environment (SWRCB,

1995). The State Water Resources Control Board letter, "Permanent Hydraulic Fuel Tank Exemption" (1995), is included as Attachment 1.

7. **Request for Remedial Action Progress Report - As reported in the meeting, and implied in the Closure Report, a plan to inoculate groundwater near the Ring Roller Pit was undertaken to help reduce hydrocarbon concentrations at that location. As reported in the meeting RegenOx was utilized to chemically oxidize the hydrocarbons. ACEH requests a Remedial Action Progress Report that documents these actions.**

Background. Fredric Hoffman, geologist and hydrogeologist for the project, prepared a report dated December 18, 2008 which concluded that, based on the chemical analytical reports from sediment samples taken in two soil boring events in November 2008, that sample locations 106 and 107 contained elevated total petroleum hydrocarbon levels above the Regional Water Quality Control Board published soil screening levels, and were candidates for additional cleanup. In addition to sample locations 106 and 107, sample locations 5 and 6B from soil borings conducted in October 2008 were analyzed for oil & grease. The laboratory reports for these samples were reported as HEM and indicated elevated levels. There are no Regional Water Quality Control Board published soil screening levels for oil & grease, but we chose the conservative approach of also excavating these locations.

On January 21, 2009, Francis Macuer of CDMS and Fred Hoffman, Consulting Geologist met with an excavator at the WFF facility in Albany to execute a Soil Clean Up Plan. The remediation events that took place are summarized below and include a description of the locations of these soil borings and the areas that were excavated.

To remediate the potential contamination from 106, 107, 5 and 6B, the soil was removed and disposed of as hazardous waste (dimensions are shown in Table 1). The locations of these excavations are indicated on the Site Map (see Figure 1). The sizes of the excavations were determined by the analytical results from the borings whose samples contained TPH above the screening levels, the analytical results from the surrounding borings, and upon examination of the conditions at the facility.

The planned depths of the excavations were based on the analytical results of samples taken at different depths. Excavations proceeded to the planned depths or until the perched ground water level was encountered, whichever came first. Since none of the ground water samples taken at the site exceed the ground water screening levels, curtailing the

excavations at the water table seemed prudent. In all three of the excavations, the dark gray clay began at 18" below the ground surface (bgs) and was present throughout the excavations. The excavations at sample locations 107 and 6B were terminated at three feet in moist clay. The excavation at sample location 5 was terminated at five feet and water began to accumulate in the bottom of the trench. After breaking up the concrete for the large excavation at sample location 106, we uncovered a large steel foundation and decided to limit the excavation to a 5' wide and 11" long trench that encompassed the sample location and extended parallel to the hydraulic ring roller pit. The excavation was in the dark gray clay and ground water was encountered at 5' bgs and slowly began to cover the bottom of the excavation. As we approached the 10 to 11-foot limit of the planned trench (sample location 106), oil began to seep from a point source in the wall of the trench closest to the Ring Roller pit from 2.5' bgs and began to accumulate on the water in the bottom (see Figure 2).

Recap of Ring Roller Remediation Efforts

On the following morning, January 22, 2009, the oil and water had risen in the trench to 3.5' bgs. We continued to trench along the west side of the roller pit until no more oil was observed seeping into the excavation. We then pumped oil and water out of the excavations into two 55-gallon drums. The excavators began to excavate the sediments right up to the edge of the cement sides of the roller pit. As we excavated into the area close to the roller pit we began removing a layer of gravel that was against the sides of the pit. For the remainder of the day we excavated oily gravel and clay sediments and pumped oil and ground water into four more 55-gallon drums. A total of six 55-gallon drums of oily water and soil were shipped off-site as hazardous waste. The subsequent events of the Ring Roller Pit remediation effort are further described below.

Round 1: Upon discovery of the oil in the gravel immediately adjacent to the Ring Roller Pit (Figures 2 - 4), the backhoe operator began tracing the extent of the oil and removing oil-contaminated sediments. This effort removed large quantities of oil and left a layer of oil floating on the water standing in the excavation.

Round 2: On the day following the discovery more contaminated soil was removed by backhoe, as the excavation was widened, until the extent of the oil had been determined. At that point a trash pump was deployed with its intake as close to the surface of the water as practicable and the water and oil in the excavation was pumped out. Further large quantities of oil were removed leaving a thin layer of oil floating on the surface.

Round 3: Oil absorbent pillows, booms, and skimmers were deployed removing the layer of

oil floating on the water and leaving globules of oil scattered on the surface of the water.

Round 4: A vacuum truck deployed its nozzle about ¾ of an inch above the water surface. This had the effect of pumping water from the very surface of the water and of drawing the floating globules of oil into the intake. We proceeded in this fashion until the 5,000-gallon truck was full and the water level had dropped to about 4 feet below the ground surface.

Round 5: Oil sorbent pads and booms were deployed on the surface of the water in the excavation and were periodically removed and replaced. Additional hydraulic fluid was removed in this manner, but oil continued to slowly accumulate on the water surface.

Round 6 – **Utilization of RegenOx:** After removing over 5,000 gallons of contaminated water and soil as hazardous waste we concluded that we had removed the source of the contamination. We then addressed the residual oil residing in the disturbed sediments in the bottom and walls of the excavation. This oil remained trapped, slowly seeping into the water from the surrounding sediments and rising to the surface.

Rational for Selecting RegenOx. In an attempt to remediate the oil on the water surface and reach the residual oil, we deployed a more aggressive remediation using an inoculation of Regenox from the in-situ remediation company Regenesis. RegenOx uses a solid alkaline oxidant that mixes with the water and oxidizes the target contaminants. The chemical reaction was monitored for three weeks during which the reactants and hydraulic fluid that continued to appear at the water surface was skimmed, removed and disposed of as hazardous waste. RegenOx was recommended to CDMS to remove the oil from the water and, after reviewing the technical specifications of the product, CDMS purchased and used over 2,000 pounds of RegenOx. Technical specifications for the product are attached (see Attachment 2).

In conclusion, the oil released into the subsurface next to the Ring Roller Pit was held in the gravel layer around the pit and had not appreciably penetrated the surrounding clay. When the excavation nicked a corner of the clay layer the oil was released into the excavation. When the excavated into the gravel layer, pure oil seeped into the trench. The source of the hydraulic fluid release has been removed leaving small amounts of hydraulic fluid sorbed to the materials in the walls of the excavation. CDMS does not believe that additional water sampling is necessary and the rationale is included in response to Question #8 below.

Data Tables and Analytical Data. As previously mentioned, five soil samples will be taken from the bottom and each side (5 samples each) of the three excavations to confirm that remaining soil contamination is within acceptable ESLs. We propose to composite the five

samples into one, and submit one sample per excavation for a total of three additional soil samples.

8. **Request for Data Gap Work Plan - ACEH requests a Data Gap Work Plan for a Soil and Groundwater Investigation, including sampling protocols for soil and groundwater collection, sample preservation, and filtration protocols, to document the current lateral and vertical extent of impacted media. Data gaps that have been identified and require additional investigation, including selective confirmation of currently unverifiable soil collection criteria, should also be investigated.**

The excavations around soil boring numbers 5, 6B, 106 and 107 were not conducted to investigate the possibilities of impacted soils. They were conducted to remove soil that contained slightly elevated levels of hydrocarbon contaminants found in soil borings. The locations and dimensions of the excavations were designed based upon the levels of contamination found in the soil borings and are considered to be conservatively large (see Table 1 on page 3). The borings considered in the design of the excavations included those in close proximity to the target soil boring locations where sampling results indicated that the contaminants were not present. The three excavations along the southern side of the site are awaiting confirmatory samplings before being filled and closed. Data from existing borings located near the excavations, and the fact that the hydraulic fluid is an LNAPL, indicates that the contaminants from the Ring Roller are limited to the Ring roller excavation.

Additional Soil Sampling/Sampling Protocol. In the January 11, 2010 meeting with ACEH staff, CDMC agreed to take confirmatory soil samples from sample points 5, 6 and 107, from the center bottom and centers of the four sides of each of the three open excavations. Five soil samples will be collected from each excavation and the five samples will be composited into a single sample (the 5 sample points per excavation will result in three composite samples, one for each excavation). The composite samples will be preserved on ice, transported to the laboratory on ice, and analyzed for TPH Total, Diesel, Motor Oil and Carbon Range 19 -36.

Additional Water Sampling/Sampling Protocol. Also discussed at the January 11th meeting was whether or not the water inside the Ring Roller excavation was contaminated. It was agreed that this is dependent upon whether or not the Ring Roller Pit and clay soils surrounding it adequately confined the oil to the excavation. Geologist Fred Hoffman prepared the following written argument that the clay soil is indeed adequate.

Hydraulic Fluid Released into Ring Roller Pit Requires No additional Sampling. It is CDMS's conclusion that the hydraulic fluid released into the gravel layer around the Ring

Roller Pit is confined to the excavation around the pit. This conclusion is supported by the geology of the site, visual observations of the hydraulic fluid behavior during and after the excavation, the Light Non-Aqueous Phase Liquid nature of the hydraulic fluid, one recent water sample taken from borehole 103, down-gradient of the Ring Roller Pit, and historical water samples taken in the 1980s from three monitor wells on the western (down-gradient) end of the site.

The Brown and Caldwell subsurface investigation found that the local stratigraphy beneath the site consists of a sandstone that slopes from the east to the west and is overlain by a one foot thick clay bed east of the site and thickening to 14 feet to the west. Water levels, beneath the western part of the facility, were at 5 to 6 feet below ground surface, (Brown and Caldwell, 1984, which is included in the Closure Report). The CDMS investigations in 2008/2009 confirmed that the site is underlain by a low-permeability clay saturated above a dry dense clay above a poorly cemented sand. The clay contains a thin, perched ground water zone between 6 to 12 feet below the ground surface in the southwestern portion of the facility, (Hoffman, 2008 Report, which is included in the Closure Report). The water level of the perched layer varies seasonally. All of the Brown and Caldwell and CDMS borings and excavations encountered the same stratigraphy, with no evidence of any preferential pathways for flow.

The hydraulic fluid released over the years from the Ring Roller operations remained confined to a thin gravel layer that surrounded the construction of the Ring Roller Pit. The surrounding clay held it in place and prevented any lateral migration. When the clay/gravel interface was penetrated by the excavator, the hydraulic fluid was observed to flow into the excavation and float on the surface of the ground water entering the excavation. This flow is documented with photographs and is evidence that the clay itself is the containment vessel.

On 11/14/2008, a water sample was taken from B-103 located down gradient of the Ring roller Pit. Analysis of this sample indicated that it contained 74ug/L of Diesel Range Organics (C10-C28) and ND for Motor Oil Range Organics (C-24-C36) and ND for C19-C36. (TestAmerica Laboratories, 2008). The analysis of this sample is further evidence that the hydraulic fluid released from into the Ring Roller Pit is contained by the clay surrounding the Pit, and is not contaminating the ground water sampled by B-103.

Additional proof is provided by water sample analyses from Wells W2, W3, and W4 on the western portion of the site by Brown and Caldwell also indicated very low or no oil and grease (Brown and Caldwell, 1984). This is additional evidence that there was no hydraulic fluid moving from the Rig Roller Pit to those three wells at that time.

9. **Preferential Pathway Study – We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for horizontal and vertical migration that may be present in the vicinity of the site. Discuss your analysis and interpretation of the results of the preferential pathway study (including the detailed well survey and utility survey requested below) and report your results in the Remedial Action Progress Report requested below. Include an evaluation of the probability of the dissolved phase and NAPL plumes for all constituents of concern encountering preferential pathways and conduits that could spread the contamination, particularly in the vertical direction to deeper aquifers. The results of your study shall contain all information required by 23 CCR, Section 2654(b).**

Utility Survey. There are no known underground utilities in the industrial (western) portion of the site. Underground utilities in the office building on the street side (eastern and up-gradient) extend to the east and into the street rather than westward. All the utilities to the western part of the site appear to have been suspended on the building superstructure.

All excavations and borings conducted at the site from the 1980s to the present time have encountered the undisturbed dense plastic clay of low permeability containing a perched layer of ground water. It is unlikely that there are any lateral preferential pathways through the clay. There are potential vertical pathways along the sides of the equipment pits, which served as foundations for heavy metal working equipment. These extend to an unknown depth, as there are no known as built construction diagrams. However, it is unlikely that vertical pathways exist at those locations as evidenced by the existence of the perched ground water. If the perching layer was penetrated by a possible preferential pathway, it is unlikely that the perched water layer would respond as quickly as it does to wet weather events. In addition, the contaminant of concern is an LNAPL (hydraulic fluid), which will float on the surface of the perched water table with no mechanism to drive it downward.

Well Data. Well data was reviewed from the SWRCB and the ACPWA databases during the Phase I Site Investigation. Only one well was identified and is located to the southeast of the WWF site. The well ID# is 1-0470 and location details are provided in the Phase I report (date) already submitted, page 196 (map). Curoco Steele is the site owner and a description of the LUST case is found in the Phase I report, pages 55 and 197. The wells on the WWF site were destroyed in accordance with the Soil Bore Permit obtained from the ACPWA (a copy was delivered to ACEH on a compact disk on January 11, 2010, and down loaded the County site on February 4, 2010.) All permit conditions for the well destruction were met.

Title 23 § 2654(b)- Initial Site Characterization Requirements. This requires owners/operators to promptly gather information about the underground storage tank site and the nature of the unauthorized release, including information obtained while confirming the release or completing initial abatement and free product removal. This is not an "underground storage tank site" but CDMS has prepared the following in response to this request:

Data on the nature and estimated quantity of release. During the cleanup of sample location SB106, adjacent to the Ring Roller Pit, oil began to seep from a point source in the wall of the trench closest to the ring roller pit at 2.5 feet below ground surface, and began to accumulate on top of a perched layer of water at the bottom of the pit. The amount of oil is difficult to estimate but based on the quantity of oily water removed we estimate that approximately 50 gallons of oil may have been released.

Data from available sources and/or site investigations concerning the surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface utilities, climatological conditions, and land use. A Phase I report were prepared and submitted to the County on compact disk on January 11, 2010 (file name is R0#0003009_Phase 1_R_2008_12-22). The Phase I report, in addition to the site Closure Report, adequately and thoroughly addresses these issues.

10. **GeoTracker Compliance – Please complete the surveying and upload all applicable electronic submittal types such as the analytical data (EDF), survey data (GEO_XY and GEO_Z), and PDF reports from July 1, 2005 to current to GeoTracker.**

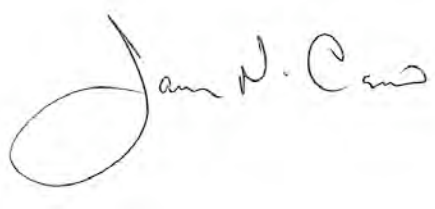
    Many of the GeoTracker reports pertain to underground tank cleanups or groundwater monitoring and remediation sites. We have determined that the following reports are required by the SWRCB (confirmed by telephone) and have uploaded them to the GeoTracker database:

    - Analytical data in EDF format
    - Geo_Map (Facility Site map)
    - Geo_Reports:
        - Closure Plan (April 2008)
        - Phase I Site Environmental Assessment (November 2008)
        - ACPWA Well Permit (November 2008)
        - Geologist Report, Fred Hoffman (December 2008)
        - Closure Report (June 2009)

We appreciate your time and attention to the Western Forge and Flange "SLIC" case. A tour of

the site could be helpful in clarifying or resolving any remaining issues. We'd be more than happy to meet you at the site, so let me suggest that we meet at the site on February 15, 2010, at 10 AM. Please call me at (925) 551-7300 if you have any questions about this letter or to confirm the site visit.

Sincerely,



James Carro
Chairman

Attachments:
1. SWRCB Hydraulic Fluid Exemption, 1995
2. RegenOx™ In-Situ Chemical Oxidation (ISCO) Information

cc: Walter Pierce, Western Forge and Flange Company, 687 Country Road, 2201, Cleveland, TX 77327

Fredric Hoffman, Contaminant Hydrogeologist, (sent via electronic mail to fredric.hoffman@gmail.com)

Donna Drogos, (sent via electronic mail to donna.drogos@acgov.org)

GeoTracker, File

References Cited:

Brown and Caldwell, 1984. *Western Forge and flange, Albany Facility – Problem Definition Report.* Submitted to Western Forge and Flange on July 10, 1984.

SWRCB, 1995. LG 141 *Permanent Hydraulic Fuel Tank Exemption.* Letter to Local Agencies. November 14, 1995 (also see Attachment 1).

Hoffman, 2008. *Data Evaluation of Materials Related to the Subsurface Environmental Closure of Western Forge & Flange, 540 Cleveland Ave., Albany CA.* Prepared for Chemical Data Management Systems, Inc., Dublin, CA (CDMS), December 18, 2008

SFRWQCB, 1986. *Status of water quality concerns at Western Forge and Flange's Albany facility.* Letter to Western Forge and Flange dated January 15, 1986.

TestAmerica Laboratories, November 24, 2008. Analytical Report. Job Number: 720-16931-1.

Figure 1. Facility Site Map

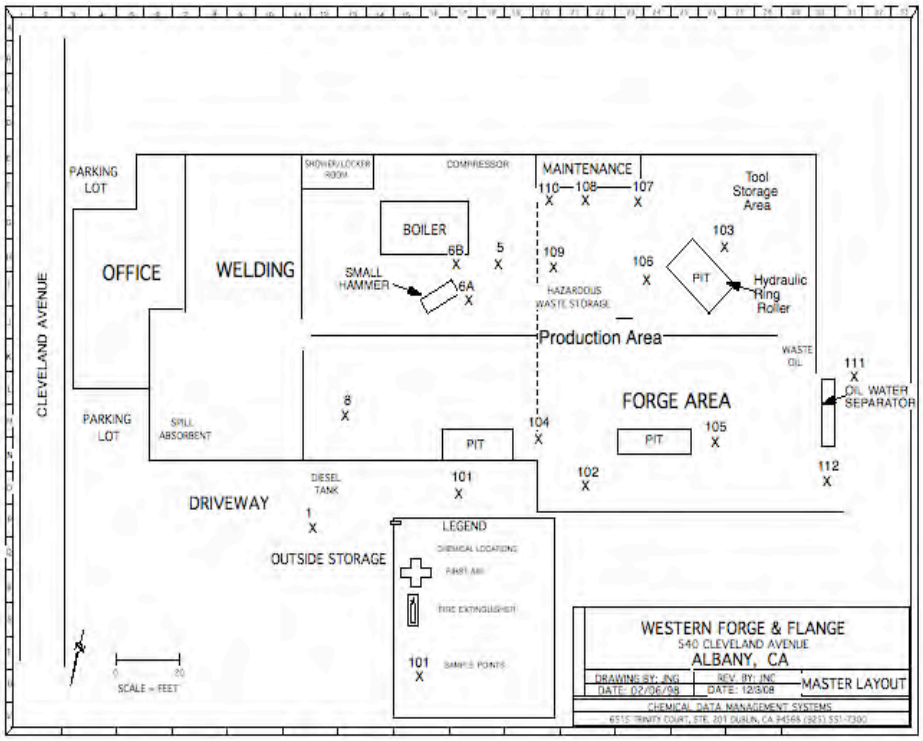


Figure 2. Oil seeping into the excavation from the top center of the photo.

In order to discover the source of the oil, we broke up more concrete and began a new trench on the north side of the roller pit. At 2.5 feet oil, began seeping into the new excavation from the pit side of the trench, but not from the outside face of the trench. (Figure 3).

Figure 3. Oil seeping from the pit face of the trench from 2.5 feet.

We continued to trench around the north and west side of the roller pit following the oil seeps. (Figure 4).

Figure 4. Oil seeping into the excavation near the NW corner of the roller pit.

LG 141

PERMANENT HYDRAULIC FUEL TANK EXEMPTION

November 14, 1995

To: Local Agencies

This letter is to inform the regulatory community that the temporary exemption for hydraulic lift tanks (HLTs) will become permanent on January 1, 1996. Governor Wilson signed SB 1191 on October 5, 1995 (Chapter 639 of 1995). One of the provisions of that bill was the change in Section 25281(x)(1)(D) which eliminated the date upon which the exemption was to expire. The previous language stated that an underground storage tank does not include:

> Until January 1, 1996, a tank holding hydraulic fluid for a closed loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

The new language deletes the phrase "Until January 1, 1996." This permanent exemption means that, under state law, hydraulic lift tanks will no longer require operating permits. Local agencies which are regulating HLTs under state authority and decide to continue regulating them must do so under their own authority [H&SC, Sec. 25299.2(a)].

The State of California's decision to permanently exempt HLTs from regulation under the UST law was based in part on the SWRCB's recommendation contained in the Report on Hydraulic Lift Tanks, dated February 1995. This report concluded that leaks from HLTs do not pose a significant risk to water quality in California. Of the estimated 73,000 HLTs in the state, 78 leaks to the environment were reported to regulatory agencies. Only five of the 27 leaks that reached ground water required cleanup to avoid an adverse impact on drinking water or other current uses of ground water.

With regard to toxicity, a literature search revealed no reported human toxicity associated with the ingestion of petroleum or vegetable based hydraulic oils. Regarding environmental fate, the report concluded the following:

- The base oils are relatively insoluble in water.
- The base oils are less dense than water, so any release to ground water will tend to float on top of the aquifer.
- The base oils have low volatility, tend to adhere to soil particles, and are relatively immobile in a subsurface environment. Leak plumes would be expected to be small and to not travel far from the point of release.
- The base oils are low in aromatic compounds, such as benzene, which poses a hazard in drinking water.
- The base oils will biodegrade, at least partially, after they have been released into the environment.
- The primary route of exposure after a release will be possible human ingestion via degraded drinking water.
- The human toxicity (measured in terms of ingestion associated with these oils) is apparently very low or nonexistent.
- It is unlikely that other species of organisms will be adversely affected by HLT releases under the conditions described above.

This report was mailed to all local agencies and Regional Water Quality Control Boards in the spring of 1995. If you need additional copies of the report, please contact Mrs. Virginia Lopez at (916) 227-4303. If you have any questions about this letter or the report, please contact Mrs. Terry Brazell at (916) 227-4404 or CalNET 8-498-4404.

RegenOx™ In-Situ Chemical Oxidation (ISCO)

Click Here to Visit our Geo-Seal® Vapor Barrier Products Division

Product

RegenOx is an advanced chemical oxidation technology that destroys contaminants through powerful, yet controlled chemical reactions and not through biological means. This product maximizes in situ performance while using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. RegenOx directly oxidizes contaminants while its unique catalytic component generates a range of highly oxidizing free radicals that rapidly and effectively destroy a range of target contaminants including both petroleum hydrocarbons and chlorinated compounds.

Download the Principles of RegenOx Chemical Oxidation Technology Design Manual

Purpose

To rapidly and effectively destroy target contaminants in high concentration source areas within the saturated and vadose zones. For petroleum hydrocarbon treatment, RegenOx also produces a fair amount of oxygen as a result of its reactions providing for an advantageous and seamless transition from in-situ chemical oxidation to enhanced aerobic bioremediation.

Functionality

A RegenOx application will remove significant amounts of contamination from the subsurface (both soil and groundwater) and is applied using direct-injection techniques or wells. The application process enables the two part product to be combined, then pressure injected into the zone of contamination and moved out into the aquifer media. Once in the subsurface, RegenOx produces a cascade of efficient oxidation reactions via a number of mechanisms including: surface mediated oxidation, direct oxidation and free radical oxidation. These reactions destroy a range of contaminants and can be propagated in the presence of RegenOx for periods of up to 30 days on a single injection. RegenOx produces minimal heat and is highly compatible with follow-on enhanced bioremediation application. Additionally RegenOx is a powerful yet relatively safe chemical oxidant that is safe for use in direct contact with underground utilities/infrastructure as it is non-corrosive and produces very low amounts of heat and pressure. As a result the material can be applied using a wide-range of standard field equipment (e.g. direct push injection rigs) or applied directly into excavations.

RegenOx Produces Beneficial Detergent-Like Contaminant Desorption Effects

This process occurs as a result of the powerful desorption-surfactant like effect of RegenOx (principally the catalyst) that draws the contaminant off the soil surface and into solution. The contaminant then reaches the catalytic surface where localized free-radical generation occurs leading to focused more efficient contaminant destruction. This also restricts the oxidant losses onto tightly bound and heavier soil organics such as humic, roots, and other natural or immobile fractions. As a result of the above processes, RegenOx-desorbed contaminant mass and partially oxidized (more soluble) organic species can be recovered via groundwater extraction using existing Pump &Treat (P&T) systems, while further

Product Categories

- Enhanced Aerobic Bioremediation
- Enhanced Anaerobic Bioremediation
- In-Situ Chemical Oxidation (ISCO)
  - RegenOx™
- Bioaugmentation
- Metals Immobilization

Quick Links

- Free Tech Transfer Seminars
- Free Cost Estimate & Project Evaluation
- Online Application Software
- Case Studies
- Join our Mailing List
- Site Map

Additional Information:

- RegenOx MSDS (Part A)
- RegenOx MSDS (Part B)
- RegenOx Brochure
- RegenOx Monitoring Info
- RegenOx FAQ's
- RegenOx Application Instructions
- RegenOx Case Studies
- RegenOx Tech Bulletins
- Free Site Evaluation and Cost Estimate

RegenOx™ Remediation Technology Wins Coveted 2006 ICU Innovation Award for Regenesis (June 06)

Article on the use of RegenOx at the NASA Kennedy Space Center. “When Cleanup is Rocket Science,” Pollution Engineering Magazine (February 09)

RegenOx Injection Well Configuration

contamination is destroyed in situ by via the primary oxidation mechanisms. Augmentation of P&T systems using RegenOx can allow for enhanced recovery of petroleum hydrocarbons from soil and groundwater. This process can also be utilized to enhance or optimize multi-phase extraction (MPE) activities during site remediation.

Product Specifications

- A two part product (Part A is the oxidizer powder, Part B is the liquid activator)
- Part A Composition: A mixture of sodium percarbonate [$2Na_2CO_3$- $3H_2O_2$], sodium carbonate [Na_2CO_3], sodium silicate and silica gel
- Part B Composition: A mixture of sodium silicate solution, silica gel and ferrous sulfate
- Packaged and delivered in 30 lb. PVC buckets

Field Applications

- Applicable in Source Areas - ppm levels
- Petroleum, chlorinated or mixed plumes
- Vadose and saturated zone
- Ex-situ or in-situ
- Direct-injection (most common) for source areas and plumes
- Injection wells
- Straight application in excavations
- Soil mixing, milling and trenches

Benefits of Use

- Rapid and sustained oxidation of target compounds
- Detergent-like, contaminant desorption effects
- Safety – generates minimal heat and pressure unlike other widely used chemical oxidants
- Compatible with underground infrastructure, conduits, piping and tanks
- Easily applied with readily available equipment
- Destroys a broad range of contaminants
- More efficient than other solid oxidants
- Enhances subsequent bioremediation
- Avoids detrimental impacts to groundwater
- Longevity - lasts up to 30 days on a single injection
- No Operations and Maintenance
- Faster and more cost-effective than drawn out monitored natural attenuation (MNA)
- Complimentary product application design and site analysis from Regenesis

Application Considerations

- Contaminant type and mass
- Subsurface geology (distribution)
- Depth to groundwater
- Groundwater flow rates
- Free product (if present call Regenesis tech services to discuss options)

Post-Injection RegenOx Field Setup

RegenOx Soil Mixing Application

Post-Injection RegenOx Field Setup
RegenOx Soil Mixing Application Field Operations Injection Setup

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-16931-1

Job Description: Western Forge, Albany

RECEIVED

9:38 am, Feb 08, 2010

Alameda County
Environmental Health

For:
Chemical Data Management
6515 Trinity Court
Suite 201
Dublin, CA 94568-2665

Attention: Mr. James Carro

Melissa Brewer

Approved for release.
Melissa Brewer
Project Manager I
11/24/2008 9:19 AM

Melissa Brewer
Project Manager I
melissa.brewer@testamericainc.com
11/24/2008

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Comments
C19-C36 = Hydraulic Oil

No additional comments.

Receipt
Hold analysis until Monday for client confirmation regarding Silica Gel Cleanup. Felicia confirmed that Silica Gel cleanup required on 11/17/08.

Water samples were logged in for Dissolved Metals and Dissolved TEPH, although the samples were received preserved with acid.

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

GC Semi VOA
Method 8015B: Surrogate recovery for the following sample was outside control limits: W-101 (720-16931-19). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-1	**SB-101 3'-4'**				
Chromium		17	0.95	mg/Kg	6010B
Nickel		22	0.95	mg/Kg	6010B
Lead		12	0.95	mg/Kg	6010B
Zinc		26	0.95	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		85	1.0	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		58	50	mg/Kg	8015B
C19-C36		150	50	mg/Kg	8015B
720-16931-2	**SB-101 7'-8'**				
Chromium		14	0.98	mg/Kg	6010B
Nickel		8.2	0.98	mg/Kg	6010B
Lead		5.2	0.98	mg/Kg	6010B
Zinc		9.4	0.98	mg/Kg	6010B
720-16931-3	**SB-101 11'-12'**				
Chromium		8.8	0.95	mg/Kg	6010B
Nickel		10	0.95	mg/Kg	6010B
Lead		3.7	0.95	mg/Kg	6010B
Zinc		14	0.95	mg/Kg	6010B
720-16931-4	**SB-101 15'-16'**				
Chromium		16	1.0	mg/Kg	6010B
Nickel		20	1.0	mg/Kg	6010B
Lead		6.2	1.0	mg/Kg	6010B
Zinc		23	1.0	mg/Kg	6010B
720-16931-5	**SB-102 3'-4'**				
Chromium		45	1.0	mg/Kg	6010B
Nickel		60	1.0	mg/Kg	6010B
Lead		15	1.0	mg/Kg	6010B
Zinc		33	1.0	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-6	**SB-102 7'-8'**				
Chromium		16	1.0	mg/Kg	6010B
Nickel		7.8	1.0	mg/Kg	6010B
Lead		110	1.0	mg/Kg	6010B
Zinc		70	1.0	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		13	1.0	mg/Kg	8015B
C19-C36		52	50	mg/Kg	8015B
720-16931-7	**SB-102 11'-12'**				
Chromium		13	1.0	mg/Kg	6010B
Nickel		9.4	1.0	mg/Kg	6010B
Lead		5.0	1.0	mg/Kg	6010B
Zinc		13	1.0	mg/Kg	6010B
720-16931-8	**SB-102 15'-16'**				
Chromium		11	0.96	mg/Kg	6010B
Nickel		15	0.96	mg/Kg	6010B
Lead		7.1	0.96	mg/Kg	6010B
Zinc		26	0.96	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		4.9	0.99	mg/Kg	8015B
720-16931-9	**SB-103 3'-4'**				
Chromium		67	1.1	mg/Kg	6010B
Nickel		85	1.1	mg/Kg	6010B
Lead		11	1.1	mg/Kg	6010B
Zinc		52	1.1	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		46	2.0	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		180	99	mg/Kg	8015B
C19-C36		210	99	mg/Kg	8015B

EXECUTIVE SUMMARY - Detections

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-10	**SB-103 7'-8'**				
Chromium		18	1.0	mg/Kg	6010B
Nickel		9.7	1.0	mg/Kg	6010B
Lead		150	1.0	mg/Kg	6010B
Zinc		110	1.0	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		23	1.0	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		94	50	mg/Kg	8015B
C19-C36		110	50	mg/Kg	8015B
720-16931-11	**SB-103 11'-12'**				
Chromium		18	0.96	mg/Kg	6010B
Nickel		23	0.96	mg/Kg	6010B
Lead		3.7	0.96	mg/Kg	6010B
Zinc		12	0.96	mg/Kg	6010B
720-16931-12	**SB-103 15'-16'**				
Chromium		18	1.0	mg/Kg	6010B
Nickel		23	1.0	mg/Kg	6010B
Lead		3.9	1.0	mg/Kg	6010B
Zinc		12	1.0	mg/Kg	6010B
720-16931-13	**SB-111 0'-1'**				
Chromium		37	1.0	mg/Kg	6010B
Nickel		180	1.0	mg/Kg	6010B
Lead		19	1.0	mg/Kg	6010B
Zinc		920	10	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		68	0.99	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		310	49	mg/Kg	8015B
C19-C36		360	49	mg/Kg	8015B

EXECUTIVE SUMMARY - Detections

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-14	**SB-111 3'-4'**				
Chromium		50	0.99	mg/Kg	6010B
Nickel		69	0.99	mg/Kg	6010B
Lead		6.6	0.99	mg/Kg	6010B
Zinc		44	0.99	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		8.6	0.98	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		55	49	mg/Kg	8015B
C19-C36		60	49	mg/Kg	8015B
720-16931-15	**SB-111 5'-6'**				
Chromium		26	0.97	mg/Kg	6010B
Nickel		21	0.97	mg/Kg	6010B
Lead		29	0.97	mg/Kg	6010B
Zinc		62	0.97	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		3.6	0.99	mg/Kg	8015B
720-16931-16	**SB-111 7'-8'**				
Chromium		15	1.0	mg/Kg	6010B
Nickel		12	1.0	mg/Kg	6010B
Lead		49	1.0	mg/Kg	6010B
Zinc		50	1.0	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		23	1.0	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		70	50	mg/Kg	8015B
C19-C36		87	50	mg/Kg	8015B
720-16931-17	**SB-111 9'-10'**				
Chromium		14	1.0	mg/Kg	6010B
Nickel		8.8	1.0	mg/Kg	6010B
Lead		10	1.0	mg/Kg	6010B
Zinc		13	1.0	mg/Kg	6010B

EXECUTIVE SUMMARY - Detections

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-18	**SB-112 3'-4'**				
Chromium		13	0.99	mg/Kg	6010B
Nickel		26	0.99	mg/Kg	6010B
Lead		13	0.99	mg/Kg	6010B
Zinc		29	0.99	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		16	0.99	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		51	50	mg/Kg	8015B
C19-C36		63	50	mg/Kg	8015B
720-16931-19	**W-101**				
Dissolved					
Diesel Range Organics [C10-C28]		58	50	ug/L	8015B
Nickel		0.12	0.0050	mg/L	6010B
Lead		0.0065	0.0050	mg/L	6010B
Zinc		0.056	0.010	mg/L	6010B
720-16931-20	**W-102**				
Dissolved					
Diesel Range Organics [C10-C28]		54	50	ug/L	8015B
Chromium		0.014	0.0050	mg/L	6010B
Nickel		0.14	0.0050	mg/L	6010B
Lead		0.77	0.0050	mg/L	6010B
Zinc		1.2	0.010	mg/L	6010B
720-16931-21	**W-103**				
Dissolved					
Diesel Range Organics [C10-C28]		74	50	ug/L	8015B
Chromium		0.026	0.0050	mg/L	6010B
Nickel		0.38	0.0050	mg/L	6010B
Lead		0.061	0.0050	mg/L	6010B
Zinc		1.4	0.010	mg/L	6010B
720-16931-22	**W-111**				
Dissolved					
Diesel Range Organics [C10-C28]		91	50	ug/L	8015B
Nickel		0.42	0.0050	mg/L	6010B
Zinc		8.4	0.010	mg/L	6010B

EXECUTIVE SUMMARY - Detections

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-23	**SB-112 7'-8'**				
Chromium		70	0.96	mg/Kg	6010B
Nickel		86	0.96	mg/Kg	6010B
Lead		7.7	0.96	mg/Kg	6010B
Zinc		42	0.96	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organics [C10-C28]		2.2	1.0	mg/Kg	8015B

METHOD SUMMARY

Client: Chemical Data Management Job Number: 720-16931-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Ultrasonic Extraction	TAL SF		SW846 3550B
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
Matrix: Water			
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Sample Filtration	TAL SF		FILTRATION
Liquid-Liquid Extraction (Separatory Funnel)	TAL SF		SW846 3510C SGC
Metals (ICP)	TAL SF	SW846 6010B	
Sample Filtration	TAL SF		FILTRATION
Preparation, Soluble	TAL SF		Soluble Metals

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

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

SAMPLE SUMMARY

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-16931-1	SB-101 3'-4'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-2	SB-101 7'-8'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-3	SB-101 11'-12'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-4	SB-101 15'-16'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-5	SB-102 3'-4'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-6	SB-102 7'-8'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-7	SB-102 11'-12'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-8	SB-102 15'-16'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-9	SB-103 3'-4'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-10	SB-103 7'-8'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-11	SB-103 11'-12'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-12	SB-103 15'-16'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-13	SB-111 0'-1'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-14	SB-111 3'-4'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-15	SB-111 5'-6'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-16	SB-111 7'-8'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-17	SB-111 9'-10'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-18	SB-112 3'-4'	Solid	11/14/2008 1555	11/14/2008 1735
720-16931-19	W-101	Water	11/14/2008 1200	11/14/2008 1735
720-16931-20	W-102	Water	11/14/2008 1250	11/14/2008 1735
720-16931-21	W-103	Water	11/14/2008 1445	11/14/2008 1735
720-16931-22	W-111	Water	11/14/2008 1545	11/14/2008 1735
720-16931-23	SB-112 7'-8'	Solid	11/14/2008 1555	11/14/2008 1735

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-101 3'-4'

Lab Sample ID: 720-16931-1 | Date Sampled: 11/14/2008 1200
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.03 g
Date Analyzed: 11/19/2008 1113 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		85		1.0
Motor Oil Range Organics [C24-C36]		58		50
C19-C36		150		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	1	0 - 5
p-Terphenyl	70	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-101 7'-8'

Lab Sample ID: 720-16931-2 | Date Sampled: 11/14/2008 1200
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.41 g
Date Analyzed: 11/19/2008 1139 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		0.99
Motor Oil Range Organics [C24-C36]		ND		49
C19-C36		ND		49

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	77	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-101 11'-12'

Lab Sample ID: 720-16931-3 | Date Sampled: 11/14/2008 1200
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.12 g
Date Analyzed: 11/19/2008 1206 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		1.0
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	83	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-101 15'-16'

Lab Sample ID: 720-16931-4 | Date Sampled: 11/14/2008 1200
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method:	8015B	Analysis Batch: 720-44103	Instrument ID: HP DRO5
Preparation:	3550B	Prep Batch: 720-43962	Lab File ID: N/A
Dilution:	1.0		Initial Weight/Volume: 30.08 g
Date Analyzed:	11/19/2008 1233		Final Weight/Volume: 5 mL
Date Prepared:	11/18/2008 1212		Injection Volume:
			Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		1.0
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	86	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-102 3'-4'

Lab Sample ID: 720-16931-5 | Date Sampled: 11/14/2008 1250
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.07 g
Date Analyzed: 11/19/2008 1300 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		1.0
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	72	41 - 105

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: **SB-102 7'-8'**

Lab Sample ID: 720-16931-6
Client Matrix: Solid

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B
Preparation: 3550B
Dilution: 1.0
Date Analyzed: 11/19/2008 1327
Date Prepared: 11/18/2008 1212

Analysis Batch: 720-44103
Prep Batch: 720-43962

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.02 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		13		1.0
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		52		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	79	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-102 11'-12'

Lab Sample ID: 720-16931-7 | Date Sampled: 11/14/2008 1250
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.24 g
Date Analyzed: 11/19/2008 1354 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		0.99
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	85	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-102 15'-16'

Lab Sample ID: 720-16931-8 | Date Sampled: 11/14/2008 1250
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.39 g
Date Analyzed: 11/19/2008 2038 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		4.9		0.99
Motor Oil Range Organics [C24-C36]		ND		49
C19-C36		ND		49

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	88	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-103 3'-4'

Lab Sample ID: 720-16931-9 | Date Sampled: 11/14/2008 1400
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 2.0 | Initial Weight/Volume: 30.43 g
Date Analyzed: 11/19/2008 0925 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		46		2.0
Motor Oil Range Organics [C24-C36]		180		99
C19-C36		210		99

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	73	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-103 7'-8'

Lab Sample ID: 720-16931-10 | Date Sampled: 11/14/2008 1400
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method:	8015B	Analysis Batch: 720-44103		Instrument ID:	HP DRO5
Preparation:	3550B	Prep Batch: 720-43962		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	30.11 g
Date Analyzed:	11/19/2008 1728			Final Weight/Volume:	5 mL
Date Prepared:	11/18/2008 1212			Injection Volume:	
				Column ID:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		23		1.0
Motor Oil Range Organics [C24-C36]		94		50
C19-C36		110		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	77	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-103 11'-12'

Lab Sample ID: 720-16931-11 | Date Sampled: 11/14/2008 1400
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.27 g
Date Analyzed: 11/19/2008 2105 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		0.99
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	80	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-103 15'-16'

Lab Sample ID: 720-16931-12 | Date Sampled: 11/14/2008 1400
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.22 g
Date Analyzed: 11/19/2008 2132 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		0.99
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	86	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-111 0'-1'

Lab Sample ID: 720-16931-13 | Date Sampled: 11/14/2008 1510
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.42 g
Date Analyzed: 11/19/2008 1635 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		68		0.99
Motor Oil Range Organics [C24-C36]		310		49
C19-C36		360		49

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	1	0 - 5
p-Terphenyl	77	41 - 105

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-111 3'-4'

Lab Sample ID: 720-16931-14
Client Matrix: Solid

Date Sampled: 11/14/2008 1510
Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B
Preparation: 3550B
Dilution: 1.0
Date Analyzed: 11/19/2008 1755
Date Prepared: 11/18/2008 1212

Analysis Batch: 720-44103
Prep Batch: 720-43962

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.48 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		8.6		0.98
Motor Oil Range Organics [C24-C36]		55		49
C19-C36		60		49

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	81	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-111 5'-6'

Lab Sample ID: 720-16931-15 | Date Sampled: 11/14/2008 1510
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.44 g
Date Analyzed: 11/19/2008 1822 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		3.6		0.99
Motor Oil Range Organics [C24-C36]		ND		49
C19-C36		ND		49

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	78	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-111 7'-8'

Lab Sample ID: 720-16931-16 | Date Sampled: 11/14/2008 1510
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.05 g
Date Analyzed: 11/19/2008 1849 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		23		1.0
Motor Oil Range Organics [C24-C36]		70		50
C19-C36		87		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	84	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-111 9'-10'

Lab Sample ID: 720-16931-17 | Date Sampled: 11/14/2008 1510
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.39 g
Date Analyzed: 11/19/2008 2159 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		ND		0.99
Motor Oil Range Organics [C24-C36]		ND		49
C19-C36		ND		49

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	79	41 - 105

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: **SB-112 3'-4'**

Lab Sample ID: 720-16931-18 | Date Sampled: 11/14/2008 1555
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.24 g
Date Analyzed: 11/19/2008 1916 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		16		0.99
Motor Oil Range Organics [C24-C36]		51		50
C19-C36		63		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	69	41 - 105

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-101

Lab Sample ID: 720-16931-19
Client Matrix: Water

Date Sampled: 11/14/2008 1200
Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B
Preparation: 3510C SGC
Dilution: 1.0
Date Analyzed: 11/20/2008 1921
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	58		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500

Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	44	X	46 - 114

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-102

Lab Sample ID: 720-16931-20
Client Matrix: Water

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B
Preparation: 3510C SGC
Dilution: 1.0
Date Analyzed: 11/20/2008 1948
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	54		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	63	46 - 114

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-103

Lab Sample ID: 720-16931-21
Client Matrix: Water

Date Sampled: 11/14/2008 1445
Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B
Preparation: 3510C SGC
Dilution: 1.0
Date Analyzed: 11/20/2008 2015
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	74		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	47	46 - 114

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-111

Lab Sample ID: 720-16931-22
Client Matrix: Water

Date Sampled: 11/14/2008 1545
Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B
Preparation: 3510C SGC
Dilution: 1.0
Date Analyzed: 11/20/2008 2042
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	91		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	50	46 - 114

Client: Chemical Data Management | Job Number: 720-16931-1

Client Sample ID: SB-112 7'-8'

Lab Sample ID: 720-16931-23 | Date Sampled: 11/14/2008 1555
Client Matrix: Solid | Date Received: 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B | Analysis Batch: 720-44103 | Instrument ID: HP DRO5
Preparation: 3550B | Prep Batch: 720-43962 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 30.04 g
Date Analyzed: 11/19/2008 1943 | Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		2.2		1.0
Motor Oil Range Organics [C24-C36]		ND		50
C19-C36		ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	79	41 - 105

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-101 3'-4'

Lab Sample ID: 720-16931-1
Client Matrix: Solid

Date Sampled: 11/14/2008 1200
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 1.0
Date Analyzed: 11/19/2008 1330
Date Prepared: 11/18/2008 0922

Analysis Batch: 720-44062
Prep Batch: 720-43961

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.05 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		17		0.95
Nickel		22		0.95
Lead		12		0.95
Zinc		26		0.95

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-101 7'-8'

Lab Sample ID: 720-16931-2
Client Matrix: Solid

Date Sampled: 11/14/2008 1200
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.02 g
Date Analyzed:	11/19/2008 1333			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		14		0.98
Nickel		8.2		0.98
Lead		5.2		0.98
Zinc		9.4		0.98

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-101 11'-12'

Lab Sample ID: 720-16931-3
Client Matrix: Solid

Date Sampled: 11/14/2008 1200
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Date Analyzed:	11/19/2008 1337			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		8.8		0.95
Nickel		10		0.95
Lead		3.7		0.95
Zinc		14		0.95

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-101 15'-16'

Lab Sample ID: 720-16931-4
Client Matrix: Solid

Date Sampled: 11/14/2008 1200
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.97 g
Date Analyzed:	11/19/2008 1340			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		16		1.0
Nickel		20		1.0
Lead		6.2		1.0
Zinc		23		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-102 3'-4'

Lab Sample ID: 720-16931-5
Client Matrix: Solid

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.99 g
Date Analyzed:	11/19/2008 1343			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.51
Chromium		45		1.0
Nickel		60		1.0
Lead		15		1.0
Zinc		33		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-102 7'-8'

Lab Sample ID: 720-16931-6
Client Matrix: Solid

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.00 g
Date Analyzed:	11/19/2008 1347			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		16		1.0
Nickel		7.8		1.0
Lead		110		1.0
Zinc		70		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-102 11'-12'

Lab Sample ID: 720-16931-7
Client Matrix: Solid

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.00 g
Date Analyzed:	11/19/2008 1351			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		13		1.0
Nickel		9.4		1.0
Lead		5.0		1.0
Zinc		13		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-102 15'-16'

Lab Sample ID: 720-16931-8
Client Matrix: Solid

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 1.0
Date Analyzed: 11/19/2008 1354
Date Prepared: 11/18/2008 0922

Analysis Batch: 720-44062
Prep Batch: 720-43961

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.04 g
Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		11		0.96
Nickel		15		0.96
Lead		7.1		0.96
Zinc		26		0.96

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-103 3'-4'

Lab Sample ID: 720-16931-9
Client Matrix: Solid

Date Sampled: 11/14/2008 1400
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.95 g
Date Analyzed:	11/19/2008 1357			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.53
Chromium		67		1.1
Nickel		85		1.1
Lead		11		1.1
Zinc		52		1.1

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-103 7'-8'

Lab Sample ID: 720-16931-10
Client Matrix: Solid

Date Sampled: 11/14/2008 1400
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.96 g
Date Analyzed:	11/19/2008 1412			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		18		1.0
Nickel		9.7		1.0
Lead		150		1.0
Zinc		110		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-103 11'-12'

Lab Sample ID: 720-16931-11
Client Matrix: Solid

Date Sampled: 11/14/2008 1400
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.04 g
Date Analyzed:	11/19/2008 1415			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		18		0.96
Nickel		23		0.96
Lead		3.7		0.96
Zinc		12		0.96

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-103 15'-16'

Lab Sample ID: 720-16931-12
Client Matrix: Solid

Date Sampled: 11/14/2008 1400
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.00 g
Date Analyzed:	11/19/2008 1419			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		18		1.0
Nickel		23		1.0
Lead		3.9		1.0
Zinc		12		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-111 0'-1'

Lab Sample ID: 720-16931-13
Client Matrix: Solid

Date Sampled: 11/14/2008 1510
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.96 g
Date Analyzed:	11/19/2008 1422			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		37		1.0
Nickel		180		1.0
Lead		19		1.0

Method:	6010B	Analysis Batch: 720-44130		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	10			Initial Weight/Volume:	.96 g
Date Analyzed:	11/21/2008 0921			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Zinc		920		10

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-111 3'-4'

Lab Sample ID: 720-16931-14
Client Matrix: Solid

Date Sampled: 11/14/2008 1510
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Date Analyzed:	11/19/2008 1426			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		50		0.99
Nickel		69		0.99
Lead		6.6		0.99
Zinc		44		0.99

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-111 5'-6'

Lab Sample ID: 720-16931-15
Client Matrix: Solid

Date Sampled: 11/14/2008 1510
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.03 g
Date Analyzed:	11/19/2008 1432			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		26		0.97
Nickel		21		0.97
Lead		29		0.97
Zinc		62		0.97

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-111 7'-8'

Lab Sample ID: 720-16931-16
Client Matrix: Solid

Date Sampled: 11/14/2008 1510
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.96 g
Date Analyzed:	11/19/2008 1436			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		15		1.0
Nickel		12		1.0
Lead		49		1.0
Zinc		50		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-111 9'-10'

Lab Sample ID: 720-16931-17
Client Matrix: Solid

Date Sampled: 11/14/2008 1510
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	.96 g
Date Analyzed:	11/19/2008 1439			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		14		1.0
Nickel		8.8		1.0
Lead		10		1.0
Zinc		13		1.0

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-112 3'-4'

Lab Sample ID: 720-16931-18
Client Matrix: Solid

Date Sampled: 11/14/2008 1555
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.01 g
Date Analyzed:	11/19/2008 1443			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		13		0.99
Nickel		26		0.99
Lead		13		0.99
Zinc		29		0.99

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-101

Lab Sample ID: 720-16931-19
Client Matrix: Water

Date Sampled: 11/14/2008 1200
Date Received: 11/14/2008 1735

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 720-44094		Instrument ID:	Varian ICP
Preparation:	Soluble Metals	Prep Batch: 720-44081		Lab File ID:	N/A
Dilution:	1.07			Initial Weight/Volume:	
Date Analyzed:	11/20/2008 1153			Final Weight/Volume:	1.0 mL
Date Prepared:	11/20/2008 1034				

Analyte	Result (mg/L)	Qualifier	RL
Cadmium	ND		0.0020
Chromium	ND		0.0050
Nickel	0.12		0.0050
Lead	0.0065		0.0050
Zinc	0.056		0.010

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-102

Lab Sample ID: 720-16931-20
Client Matrix: Water

Date Sampled: 11/14/2008 1250
Date Received: 11/14/2008 1735

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 720-44094		Instrument ID:	Varian ICP
Preparation:	Soluble Metals	Prep Batch: 720-44081		Lab File ID:	N/A
Dilution:	1.07			Initial Weight/Volume:	
Date Analyzed:	11/20/2008 1157			Final Weight/Volume:	1.0 mL
Date Prepared:	11/20/2008 1034				

Analyte	Result (mg/L)	Qualifier	RL
Cadmium	ND		0.0020
Chromium	0.014		0.0050
Nickel	0.14		0.0050
Lead	0.77		0.0050
Zinc	1.2		0.010

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-103

Lab Sample ID: 720-16931-21
Client Matrix: Water

Date Sampled: 11/14/2008 1445
Date Received: 11/14/2008 1735

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 720-44094		Instrument ID:	Varian ICP
Preparation:	Soluble Metals	Prep Batch: 720-44081		Lab File ID:	N/A
Dilution:	1.07			Initial Weight/Volume:	
Date Analyzed:	11/20/2008 1201			Final Weight/Volume:	1.0 mL
Date Prepared:	11/20/2008 1034				

Analyte	Result (mg/L)	Qualifier	RL
Cadmium	ND		0.0020
Chromium	0.026		0.0050
Nickel	0.38		0.0050
Lead	0.061		0.0050
Zinc	1.4		0.010

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: W-111

Lab Sample ID: 720-16931-22
Client Matrix: Water

Date Sampled: 11/14/2008 1545
Date Received: 11/14/2008 1735

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 720-44094		Instrument ID:	Varian ICP
Preparation:	Soluble Metals	Prep Batch: 720-44081		Lab File ID:	N/A
Dilution:	1.07			Initial Weight/Volume:	
Date Analyzed:	11/20/2008 1204			Final Weight/Volume:	1.0 mL
Date Prepared:	11/20/2008 1034				

Analyte	Result (mg/L)	Qualifier	RL
Cadmium	ND		0.0020
Chromium	ND		0.0050
Nickel	0.42		0.0050
Lead	ND		0.0050
Zinc	8.4		0.010

Client: Chemical Data Management

Job Number: 720-16931-1

Client Sample ID: SB-112 7'-8'

Lab Sample ID: 720-16931-23
Client Matrix: Solid

Date Sampled: 11/14/2008 1555
Date Received: 11/14/2008 1735

6010B Metals (ICP)

Method:	6010B	Analysis Batch: 720-44062		Instrument ID:	Thermo 6500 ICP
Preparation:	3050B	Prep Batch: 720-43961		Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	1.04 g
Date Analyzed:	11/19/2008 1446			Final Weight/Volume:	50 mL
Date Prepared:	11/18/2008 0922				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		70		0.96
Nickel		86		0.96
Lead		7.7		0.96
Zinc		42		0.96

DATA REPORTING QUALIFIERS

Client: Chemical Data Management Job Number: 720-16931-1

Lab Section	Qualifier	Description
GC Semi VOA		
	X	Surrogate exceeds the control limits

Client: Chemical Data Management Job Number: 720-16931-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 720-43948					
LCS 720-43947/2-B	Lab Control Spike	D	Water	3510C SGC	
LCSD 720-43947/3-B	Lab Control Spike Duplicate	D	Water	3510C SGC	
MB 720-43947/1-B	Method Blank	D	Water	3510C SGC	
720-16931-19	W-101	D	Water	3510C SGC	
720-16931-20	W-102	D	Water	3510C SGC	
720-16931-21	W-103	D	Water	3510C SGC	
720-16931-22	W-111	D	Water	3510C SGC	
Prep Batch: 720-43962					
MB 720-43962/1-A	Method Blank	A	Solid	3550B	
720-16931-1	SB-101 3'-4'	A	Solid	3550B	
720-16931-2	SB-101 7'-8'	A	Solid	3550B	
720-16931-3	SB-101 11'-12'	A	Solid	3550B	
720-16931-3MS	Matrix Spike	A	Solid	3550B	
720-16931-3MSD	Matrix Spike Duplicate	A	Solid	3550B	
720-16931-4	SB-101 15'-16'	A	Solid	3550B	
720-16931-5	SB-102 3'-4'	A	Solid	3550B	
720-16931-6	SB-102 7'-8'	A	Solid	3550B	
720-16931-7	SB-102 11'-12'	A	Solid	3550B	
720-16931-8	SB-102 15'-16'	A	Solid	3550B	
720-16931-9	SB-103 3'-4'	A	Solid	3550B	
720-16931-10	SB-103 7'-8'	A	Solid	3550B	
720-16931-11	SB-103 11'-12'	A	Solid	3550B	
720-16931-12	SB-103 15'-16'	A	Solid	3550B	
720-16931-13	SB-111 0'-1'	A	Solid	3550B	
720-16931-14	SB-111 3'-4'	A	Solid	3550B	
720-16931-15	SB-111 5'-6'	A	Solid	3550B	
720-16931-16	SB-111 7'-8'	A	Solid	3550B	
720-16931-17	SB-111 9'-10'	A	Solid	3550B	
720-16931-18	SB-112 3'-4'	A	Solid	3550B	
720-16931-23	SB-112 7'-8'	A	Solid	3550B	

Client: Chemical Data Management Job Number: 720-16931-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:720-44103					
MB 720-43962/1-A	Method Blank	A	Solid	8015B	720-43962
720-16931-1	SB-101 3'-4'	A	Solid	8015B	720-43962
720-16931-2	SB-101 7'-8'	A	Solid	8015B	720-43962
720-16931-3	SB-101 11'-12'	A	Solid	8015B	720-43962
720-16931-3MS	Matrix Spike	A	Solid	8015B	720-43962
720-16931-3MSD	Matrix Spike Duplicate	A	Solid	8015B	720-43962
720-16931-4	SB-101 15'-16'	A	Solid	8015B	720-43962
720-16931-5	SB-102 3'-4'	A	Solid	8015B	720-43962
720-16931-6	SB-102 7'-8'	A	Solid	8015B	720-43962
720-16931-7	SB-102 11'-12'	A	Solid	8015B	720-43962
720-16931-8	SB-102 15'-16'	A	Solid	8015B	720-43962
720-16931-9	SB-103 3'-4'	A	Solid	8015B	720-43962
720-16931-10	SB-103 7'-8'	A	Solid	8015B	720-43962
720-16931-11	SB-103 11'-12'	A	Solid	8015B	720-43962
720-16931-12	SB-103 15'-16'	A	Solid	8015B	720-43962
720-16931-13	SB-111 0'-1'	A	Solid	8015B	720-43962
720-16931-14	SB-111 3'-4'	A	Solid	8015B	720-43962
720-16931-15	SB-111 5'-6'	A	Solid	8015B	720-43962
720-16931-16	SB-111 7'-8'	A	Solid	8015B	720-43962
720-16931-17	SB-111 9'-10'	A	Solid	8015B	720-43962
720-16931-18	SB-112 3'-4'	A	Solid	8015B	720-43962
720-16931-23	SB-112 7'-8'	A	Solid	8015B	720-43962
Analysis Batch:720-44141					
LCS 720-43947/2-B	Lab Control Spike	D	Water	8015B	720-43948
LCSD 720-43947/3-B	Lab Control Spike Duplicate	D	Water	8015B	720-43948
MB 720-43947/1-B	Method Blank	D	Water	8015B	720-43948
720-16931-19	W-101	D	Water	8015B	720-43948
720-16931-20	W-102	D	Water	8015B	720-43948
720-16931-21	W-103	D	Water	8015B	720-43948
720-16931-22	W-111	D	Water	8015B	720-43948

Report Basis
D = Dissolved
A = Silica Gel Cleanup

Client: Chemical Data Management Job Number: 720-16931-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-43961					
LCS 720-43961/2-A	Lab Control Spike	T	Solid	3050B	
LCSD 720-43961/3-A	Lab Control Spike Duplicate	T	Solid	3050B	
LCSSRM 720-43961/26-A	LCS-Standard Reference Material	T	Solid	3050B	
MB 720-43961/1-A	Method Blank	T	Solid	3050B	
720-16931-1	SB-101 3'-4'	T	Solid	3050B	
720-16931-2	SB-101 7'-8'	T	Solid	3050B	
720-16931-3	SB-101 11'-12'	T	Solid	3050B	
720-16931-4	SB-101 15'-16'	T	Solid	3050B	
720-16931-5	SB-102 3'-4'	T	Solid	3050B	
720-16931-6	SB-102 7'-8'	T	Solid	3050B	
720-16931-7	SB-102 11'-12'	T	Solid	3050B	
720-16931-8	SB-102 15'-16'	T	Solid	3050B	
720-16931-9	SB-103 3'-4'	T	Solid	3050B	
720-16931-10	SB-103 7'-8'	T	Solid	3050B	
720-16931-11	SB-103 11'-12'	T	Solid	3050B	
720-16931-12	SB-103 15'-16'	T	Solid	3050B	
720-16931-13	SB-111 0'-1'	T	Solid	3050B	
720-16931-14	SB-111 3'-4'	T	Solid	3050B	
720-16931-15	SB-111 5'-6'	T	Solid	3050B	
720-16931-16	SB-111 7'-8'	T	Solid	3050B	
720-16931-17	SB-111 9'-10'	T	Solid	3050B	
720-16931-18	SB-112 3'-4'	T	Solid	3050B	
720-16931-23	SB-112 7'-8'	T	Solid	3050B	

Client: Chemical Data Management Job Number: 720-16931-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:720-44062					
LCS 720-43961/2-A	Lab Control Spike	T	Solid	6010B	720-43961
LCSD 720-43961/3-A	Lab Control Spike Duplicate	T	Solid	6010B	720-43961
LCSSRM 720-43961/26-A	LCS-Standard Reference Material	T	Solid	6010B	720-43961
MB 720-43961/1-A	Method Blank	T	Solid	6010B	720-43961
720-16931-1	SB-101 3'-4'	T	Solid	6010B	720-43961
720-16931-2	SB-101 7'-8'	T	Solid	6010B	720-43961
720-16931-3	SB-101 11'-12'	T	Solid	6010B	720-43961
720-16931-4	SB-101 15'-16'	T	Solid	6010B	720-43961
720-16931-5	SB-102 3'-4'	T	Solid	6010B	720-43961
720-16931-6	SB-102 7'-8'	T	Solid	6010B	720-43961
720-16931-7	SB-102 11'-12'	T	Solid	6010B	720-43961
720-16931-8	SB-102 15'-16'	T	Solid	6010B	720-43961
720-16931-9	SB-103 3'-4'	T	Solid	6010B	720-43961
720-16931-10	SB-103 7'-8'	T	Solid	6010B	720-43961
720-16931-11	SB-103 11'-12'	T	Solid	6010B	720-43961
720-16931-12	SB-103 15'-16'	T	Solid	6010B	720-43961
720-16931-13	SB-111 0'-1'	T	Solid	6010B	720-43961
720-16931-14	SB-111 3'-4'	T	Solid	6010B	720-43961
720-16931-15	SB-111 5'-6'	T	Solid	6010B	720-43961
720-16931-16	SB-111 7'-8'	T	Solid	6010B	720-43961
720-16931-17	SB-111 9'-10'	T	Solid	6010B	720-43961
720-16931-18	SB-112 3'-4'	T	Solid	6010B	720-43961
720-16931-23	SB-112 7'-8'	T	Solid	6010B	720-43961
Prep Batch: 720-44081					
LCS 720-44081/2-A	Lab Control Spike	S	Water	Soluble Metals	
LCSD 720-44081/3-A	Lab Control Spike Duplicate	S	Water	Soluble Metals	
MB 720-43953/1-B	Method Blank	D	Water	Soluble Metals	
720-16931-19	W-101	D	Water	Soluble Metals	
720-16931-19MS	Matrix Spike	D	Water	Soluble Metals	
720-16931-19MSD	Matrix Spike Duplicate	D	Water	Soluble Metals	
720-16931-20	W-102	D	Water	Soluble Metals	
720-16931-21	W-103	D	Water	Soluble Metals	
720-16931-22	W-111	D	Water	Soluble Metals	
Analysis Batch:720-44094					
LCS 720-44081/2-A	Lab Control Spike	S	Water	6010B	720-44081
LCSD 720-44081/3-A	Lab Control Spike Duplicate	S	Water	6010B	720-44081
MB 720-43953/1-B	Method Blank	D	Water	6010B	720-44081
720-16931-19	W-101	D	Water	6010B	720-44081
720-16931-19MS	Matrix Spike	D	Water	6010B	720-44081
720-16931-19MSD	Matrix Spike Duplicate	D	Water	6010B	720-44081
720-16931-20	W-102	D	Water	6010B	720-44081
720-16931-21	W-103	D	Water	6010B	720-44081
720-16931-22	W-111	D	Water	6010B	720-44081

Client: Chemical Data Management Job Number: 720-16931-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:720-44130					
720-16931-13	SB-111 0'-1'	T	Solid	6010B	720-43961

Report Basis
D = Dissolved
S = Soluble
T = Total

Client: Chemical Data Management

Job Number: 720-16931-1

Method Blank - Batch: 720-43948

Method: 8015B
Preparation: 3510C SGC Dissolved

Lab Sample ID: MB 720-43947/1-B
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/20/2008 1853
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500

Surrogate	% Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	68	46 - 114

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-43948

Method: 8015B
Preparation: 3510C SGC Dissolved

LCS Lab Sample ID: LCS 720-43947/2-B
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/20/2008 1759
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-43947/3-B
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/20/2008 1826
Date Prepared: 11/17/2008 1744

Analysis Batch: 720-44141
Prep Batch: 720-43948
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 250 mL
Final Weight/Volume: 1 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diesel Range Organics [C10-C28]	71	71	41 - 103	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
p-Terphenyl	81	80	46 - 114

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management

Job Number: 720-16931-1

Method Blank - Batch: 720-43962

Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

Lab Sample ID: MB 720-43962/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 1046
Date Prepared: 11/18/2008 1212

Analysis Batch: 720-44103
Prep Batch: 720-43962
Units: mg/Kg

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.26 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		0.99
Motor Oil Range Organics [C24-C36]	ND		50
C19-C36	ND		50

Surrogate	% Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	95	41 - 105

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-43962

Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

MS Lab Sample ID: 720-16931-3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 2226
Date Prepared: 11/18/2008 1212

Analysis Batch: 720-44103
Prep Batch: 720-43962

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.15 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

MSD Lab Sample ID: 720-16931-3
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 2253
Date Prepared: 11/18/2008 1212

Analysis Batch: 720-44103
Prep Batch: 720-43962

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.27 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Diesel Range Organics [C10-C28]	75	79	50 - 130	4	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
p-Terphenyl	89	90	41 - 105

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management

Job Number: 720-16931-1

Method Blank - Batch: 720-43961

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 720-43961/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 1557
Date Prepared: 11/18/2008 0922

Analysis Batch: 720-44062
Prep Batch: 720-43961
Units: mg/Kg

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.01 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Cadmium	ND		0.50
Chromium	ND		0.99
Nickel	ND		0.99
Lead	ND		0.99
Zinc	ND		0.99

LCS-Standard Reference Material - Batch: 720-43961

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCSSRM 720-43961/26-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 1537
Date Prepared: 11/18/2008 0922

Analysis Batch: 720-44062
Prep Batch: 720-43961
Units: mg/Kg

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.02 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cadmium	42.2	37.7	89	67 - 118	
Chromium	246	220	89	67 - 121	
Nickel	96.8	84.8	88	65 - 117	
Lead	44.1	36.9	84	62 - 113	
Zinc	44.0	37.3	85	62 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management

Job Number: 720-16931-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-43961

Method: 6010B
Preparation: 3050B

LCS Lab Sample ID: LCS 720-43961/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 1601
Date Prepared: 11/18/2008 0922

Analysis Batch: 720-44062
Prep Batch: 720-43961
Units: mg/Kg

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: .99 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-43961/3-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/19/2008 1604
Date Prepared: 11/18/2008 0922

Analysis Batch: 720-44062
Prep Batch: 720-43961
Units: mg/Kg

Instrument ID: Thermo 6500 ICP
Lab File ID: N/A
Initial Weight/Volume: 1.04 g
Final Weight/Volume: 50 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	93	95	80 - 120	3	20		
Chromium	98	100	80 - 120	3	20		
Nickel	95	96	80 - 120	3	20		
Lead	94	95	80 - 120	3	20		
Zinc	95	96	80 - 120	4	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management

Job Number: 720-16931-1

Method Blank - Batch: 720-44081

Method: 6010B
Preparation: Soluble Metals Dissolved

Lab Sample ID: MB 720-43953/1-B
Client Matrix: Water
Dilution: 1.07
Date Analyzed: 11/20/2008 1211
Date Prepared: 11/20/2008 1034

Analysis Batch: 720-44094
Prep Batch: 720-44081
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Cadmium	ND		0.0020
Chromium	ND		0.0050
Nickel	ND		0.0050
Lead	ND		0.0050
Zinc	ND		0.010

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-44081

Method: 6010B
Preparation: Soluble Metals Soluble

LCS Lab Sample ID: LCS 720-44081/2-A
Client Matrix: Water
Dilution: 1.07
Date Analyzed: 11/20/2008 1138
Date Prepared: 11/20/2008 1034

Analysis Batch: 720-44094
Prep Batch: 720-44081
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 720-44081/3-A
Client Matrix: Water
Dilution: 1.07
Date Analyzed: 11/20/2008 1142
Date Prepared: 11/20/2008 1034

Analysis Batch: 720-44094
Prep Batch: 720-44081
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	97	98	80 - 120	1	20		
Chromium	100	101	80 - 120	1	20		
Nickel	98	99	80 - 120	1	20		
Lead	99	100	80 - 120	1	20		
Zinc	96	97	80 - 120	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management

Job Number: 720-16931-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-44081

Method: 6010B
Preparation: Soluble Metals Dissolved

MS Lab Sample ID:	720-16931-19	Analysis Batch: 720-44094	Instrument ID: Varian ICP
Client Matrix:	Water	Prep Batch: 720-44081	Lab File ID: N/A
Dilution:	1.07		Initial Weight/Volume:
Date Analyzed:	11/20/2008 1145		Final Weight/Volume: 1.0 mL
Date Prepared:	11/20/2008 1034		

MSD Lab Sample ID:	720-16931-19	Analysis Batch: 720-44094	Instrument ID: Varian ICP
Client Matrix:	Water	Prep Batch: 720-44081	Lab File ID: N/A
Dilution:	1.07		Initial Weight/Volume:
Date Analyzed:	11/20/2008 1149		Final Weight/Volume: 1.0 mL
Date Prepared:	11/20/2008 1034		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cadmium	92	92	75 - 125	1	20		
Chromium	98	99	75 - 125	1	20		
Nickel	93	94	75 - 125	1	20		
Lead	93	94	75 - 125	1	20		
Zinc	88	90	75 - 125	3	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Brewer, Melissa

From: Felicia Aristakumara [felicia@cdms.com]
Sent: Monday, November 17, 2008 1:27 PM
To: Brewer, Melissa
Cc: Jim Carro
Subject: Re: Silica gel cleanup
Importance: High

Hi Melissa,

Yes, I think we would like to go ahead and filter anyway, for both TEPH and Metals.
Thanks for confirming.

Felicia-

On Nov 17, 2008, at 1:15 PM, Brewer, Melissa wrote:

> I'm glad you mentioned the filtering. Our normal Sample Control employee is gone and the person who logged it in didn't notice your note. I didn't notice it either! I understand that Surinder mentioned that we don't normally filter if the sample is preserved. I assume that you decided to go ahead and filter it anyway?? Surinder is not here right now, so I can't ask her about the conversation.
>
> Also, I assume that you want the Metals bottle filtered as well. The woman in Sample Control thought it was only the Diesel bottles, but I think she might have misunderstood. Our computer will report it as "Dissolved Metals" or "Dissolved TEPH" although it is not really dissolved since the acid could have dissolved something that might normally be filterable.
>
> **MELISSA BREWER**
> Project Manager
>
> (new email address melissa.brewer@testamericainc.com)
>
> Test America
> THE LEADER IN ENVIRONMENTAL TESTING
>
> 1220 Quarry Lane
> Pleasanton, Ca 94566
> Tel 925.484.1919 | Fax 925.600.3002
> www.testamericainc.com
>
> -----Original Message-----
> **From:** Felicia Aristakumara [mailto:felicia@cdms.com]
> **Sent:** Monday, November 17, 2008 1:00 PM
> **To:** Brewer, Melissa
> **Subject:** Silica gel cleanup
>
> Hi Melissa,

720-16931

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 11341

Date 11/14/08 Page 1 of 3

11/24/2008

Page 70 of 73

Report To

Attn: JIM CARRO
Company: CDMS
Address:
Phone: Email:
Bill To: Sampled By:
Attn: Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Pres erv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other	Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other	Low Level Metals by EPA 200.8/6020 (ICP-MS):	☐ W.E.T (STLC) ☐ TCLP	Hexavalent Chromium ☐ pH (24h hold time for H_2O)	Spec Cond. ☐ Alkalinity ☐ TSS ☐ TDS ☐	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4				
1. SB-101 3'-4'	11/14	12:00	S				X									X										
2. SB-101 7'-8'							X									X										
3. SB-101 11'-12'							X									X										
4. SB-101 15'-16'							X									X										
5. SB-102 3'-4'		12:50					X									X										
6. SB-102 7'-8'							X									X										
7. SB-102 11'-12'							X									X										
8. SB-102 15'-16'							X									X										
9. SB-103 3'-4'		2:00					X									X										
10. SB-103 7'-8'							X									X										

Project Info.

Project Name: Western Forge
Project#:
PO#: 102730
Credit Card#:

Sample Receipt

of Containers:
Head Space:
Temp: 3.7°C
Conforms to record:

TAT: (5 Day) 72h 48h 24h Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID
Special Instructions / Comments:
Hold til Monday (confirm on silica gel)

See Terms and Conditions on reverse
*TestAmerica SF reports 8015M from C_5-C_{24} (industry norm). Default for 8015B is C_{12}-C_{28}

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature 5:35 PM Time	Signature Time	Signature Time
FELICIA ARISTAKUMARA 11/14/08 Printed Name Date	Printed Name Date	Printed Name Date
CDMS Company	Company	Company

1) Received by:	2) Received by:	3) Received by:
Signature 17:35 Time	Signature Time	Signature Time
T Bullock 11/14/08 Printed Name Date	Printed Name Date	Printed Name Date
TAL-SF Company	Company	Company

Rev 08/04

720-16931

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 11341

Date 11/14/08 Page 2 of 3

11/24/2008

Page 71 of 73

Report To

Attn: JIM CAPPO
Company:
Address:
Phone: Email:
Bill To: Sampled By:
Attn: Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Pres erv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other Hydraulic oil	Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☑ LUFT ☐ RCRA ☐ Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS):	☐ W.E.T (STLC) ☐ TCLP	Hexavalent Chromium pH (24h hold time for H_2O) ☐ ☐	Spec Cond. ☐ Alkalinity ☐ TSS ☐ TDS ☐	Anions : ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4
10. SB-103 11'-12'	11/14/08	2:00	S				X									X					
11. SB-103 15'-16'	"	5	"				X									X					
12. SB-111 0'-1'		3:10					X									X					
13. SB-111 3'-4'		3:10					X									X					
14. SB-111 5'-6'		3:10					X									X					
15. SB-111 7'-8'		3:10					X									X					
16. SB-111 9'-10'		3:10					X									X					
17. SB-112 3'-4'		3:55					X									X					
18. SB-112 7'-8'		3:55					X									X					

Project Info.

Project Name: Western Forge
Project#:
PO#:
Credit Card#:

TAT: 5 Day | 72h | 48h | 24h

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID

Special Instructions / Comments:

* Hold til Monday (confirm on silica gel)

See Terms and Conditions on reverse

*TestAmerica SF reports 8015M from C_6-C_{24} (industry norm). Default for 8015B is C_{12}-C_{28}

Sample Receipt

of Containers:
Head Space:
Temp:
Conforms to record:

1) Relinquished by: 5:35PM
Signature Time
FELICIA ARISTAKUMARA 11/14/08
Printed Name Date
CPMS
Company

1) Received by: 1735
Signature Time
T Bullock 11/14/08
Printed Name Date
TAL-SF
Company

2) Relinquished by:
Signature Time
Printed Name Date
Company

2) Received by:
Signature Time
Printed Name Date
Company

3) Relinquished by:
Signature Time
Printed Name Date
Company

3) Received by:
Signature Time
Printed Name Date
Company

Rev 04.04

720:16931

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 113411

Date 11/14/08 Page 3 of 3

11/24/2008

Page 72 of 73

Report To

Attn: JIM CARRO
Company: CDMS
Address:
Phone: Email:
Bill To: Sampled By:
Attn: Phone:

Analysis Request

	Sample ID	Date	Time	Matrix	Pres erv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other (Hydro)	Fuel Tests EPA 8260B: ☐ Gas ☐ BTEX ☐ Five Oxygenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other	Low Level Metals by EPA 200.8/6020 (ICP-MS):	W.E.T (STLC) ☐ TCLP ☐	Hexavalent Chromium pH (24h hold time for H_2O) ☐ ☐	Spec Cond. ☐ Alkalinity TSS ☐ TDS ☐ ☐ ☐	Anions: ☐ ☐ ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4				
19.	W-101	11/14	12:00	W		X											X											
20.	W-102	"	12:50	W		X											X											
21.	W-103	"	2:45	W		X											X											
22.	W-111	"	3:45	W		X											X											

Project Info.

Project Name: Wekiva Forge
Project#:
PO#:
Credit Card#:

TAT: 5 Day | 72h | 48h | 24h

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID

Special Instructions / Comments:

* Please filter the samples
* Hold til Monday (confirm on silica gel)

See Terms and Conditions on reverse

*TestAmerica SF reports 8015M from C_8-C_{24} (industry norm). Default for 8015B is C_{10}-C_{28}.

Sample Receipt

of Containers:
Head Space:
Temp:
Conforms to record:
Other

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature 5:35PM Time	Signature Time	Signature Time
FELICIA ARISTAKESSIAN 11/14/08 Printed Name Date	Printed Name Date	Printed Name Date
CDMS Company	Company	Company

1) Received by:	2) Received by:	3) Received by:
Signature 1735 Time	Signature Time	Signature Time
T Bullock 11/14/08 Printed Name Date	Printed Name Date	Printed Name Date
TAL-SF Company	Company	Company

Rev 06/04

Login Sample Receipt Check List

Client: Chemical Data Management

Job Number: 720-16931-1

Login Number: 16931
List Source: TestAmerica San Francisco
Creator: Bullock, Tracy
List Number: 1

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