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Alameda County
Environmental Health

Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Document Transmittal
German Autocraft, 301 East 14th Street, San Leandro, California
AC LOP Case # 2783; Fuel Leak Case No. RO0000302; Global ID T0600100639

Dear Sir or Ma'am:

I declare, under penalty of perjury, that the information contained in the attached document / report are true and correct, to the best of my knowledge.

Sincerely,



Lee Seung
Owner, German Autocraft



3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

March 3, 2011
Project No. 2076-0301-01

Mr. Mark Detterman, P.G., C.E.G.
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577
(via ACDEH ftp site only, no paper)

Re: **Well Destruction and Additional Investigation Results Report**
German Autocraft, 301 East 14th Street, San Leandro, California
ACLOP Case #2783; Fuel Leak Case No. RO0000302; Global ID T0600100639

Dear Mr. Detterman:

Stratus Environmental, Inc. (Stratus) has prepared this *Well Destruction and Additional Investigation Results Report*, on behalf of Mr. Seung Lee, for the German Autocraft facility, located at 301 East 14th Street, in San Leandro, California (the site; Figure 1). In a letter dated December 16, 2010, Alameda County Environmental Health Department (ACEHD) concurred with Stratus' proposal made within the Site Conceptual Model and Interim Remediation Plan (SCM/IRAP), dated October 18, 2010, to destroy two monitoring wells (MW-1 and MW-4; in preparation to conduct a remedial excavation) and to conduct additional investigation (the installation of soil boring B-4) in the vicinity of the former dispenser island. Due to a data gap in the vicinity of the former waste oil tank area, ACEHD additionally requested that a soil boring (B-5) be installed in the former waste oil tank location.

Presented herein is a description of the site, a summary of the case history of environmental work at the site, and information regarding Stratus' understanding of the geologic and hydrogeologic conditions in the uppermost 45 feet below ground surface (bgs) at the site. Further, this report documents the advancement and sampling of two soil borings (B-4 and B-5) for the purpose of evaluating the lateral and vertical extent of soil impact beneath the former fuel dispenser island and former waste oil underground storage tank (UST), and the destruction of two groundwater monitoring wells (MW-1 and MW-4) in the vicinity of the planned remedial excavation.

SITE DESCRIPTION

The property is located on the south corner of the intersection of East 14th Street and Garcia Avenue in the City of San Leandro (Figure 1). Available records indicate that the property was used as a retail gasoline service station until 1981. According to historical documents obtained by previous consultants for Mr. Lee, the property was exclusively used for automotive repair from 1981 to present. Mr. Lee purchased the property on April 15, 1985. In September 1990, six

single-walled steel USTs (two 1,000-gallon and two 2,000-gallon USTs previously used to store unleaded gasoline, one 550-gallon UST previously used to store regular gasoline, and one 150-gallon UST previously used to store waste oil) were removed from the property and properly disposed. In addition, the fuel dispenser island and associated product lines were removed at that time. The configuration of the site is shown on Figure 2. The area surrounding the site is mixed commercial and moderate density residential.

According to the State Water Resources Control Board's (SWRCB) GeoTracker database, numerous other contaminated properties under the ACEHD's regulatory oversight are present in the immediate vicinity of German Autocraft. Sunshine Cleaners, a dry cleaning business located at 223 East 14th Street, approximately 130 feet northwest of the site, has had an open environmental case, but largely inactive, since 1993; the site is currently in the assessment phase for chlorinated solvents. San Leandro Chrysler-Plymouth, formerly located at 232 East 14th Street, northeast across 14th Street from German Autocraft, had a leaking UST environmental case open until 1997. Finally, the former Monument Gas station, located at 111 East 14th Street, approximately 375 feet northwest of German Autocraft, had a leaking UST case open until 2005. The Monument Gas case assessed groundwater contamination offsite to the southeast of that site (along Farrelly Drive) until closure.

CASE HISTORY

Environmental investigations at the site began in September 1990, when the six former single-walled steel USTs (two 1,000-gallon and two 2,000-gallon USTs previously used to store unleaded gasoline, one 550-gallon UST previously used to store regular gasoline, and one 150-gallon UST previously used to store waste oil) were removed from the property and properly disposed. The five larger USTs were buried in a common pit on the north side of the property adjacent to Garcia Avenue; the waste oil UST was located on the south side of the station building/garage. During the removal of the USTs, Environmental Construction Company (TECC) noted that both the 1,000-gallon and the 550-gallon USTs had holes in them and showed signs of extensive corrosion. Soil staining was noted in both the main UST area and the waste-oil UST area during excavation. Following the removal of the USTs and product lines, ten soil samples were collected from below the USTs, one soil sample from beneath the former piping, and three samples from stockpiled soil.

The main UST pit was excavated to approximately 44 feet long, 16 feet wide, and 8 feet deep; the waste oil UST pit was excavated to approximately 6 feet by 5 feet, and 6 feet deep. Historical documentation appears to indicate that the soil excavated from the waste oil UST excavation (~15 yd³) was removed from the site. When the main UST area excavation was completed, TECC lined the excavation with plastic, placed the excavated soil back in the excavation, and covered with plastic as an intended temporary containment measure. Analytical results of soil samples collected during the UST removal activities indicated the presence of highly impacted soil (total petroleum hydrocarbons as gasoline [TPHg] and benzene, toluene, ethylbenzene, and total xylenes [BTEX] only) in the main UST pit. No detectable concentrations of TPHg, total petroleum hydrocarbons as diesel (TPHd), BTEX, oil and grease, or purgeable halocarbons were reported in

the soil sample collected at the base of the waste oil UST excavation (though stockpile samples of excavated soil indicated some oil and grease impact).

In December 1990, TECC advanced three onsite soil borings (B-1, B-2, and B-3) to depths of about 35 feet bgs and installed one groundwater monitoring well (MW-1) screened across first-encountered water from approximately 25 to 45 feet bgs, just northeast of the main former UST excavation. Soil and groundwater samples from these borings and the monitoring well indicated TPHg and BTEX impact at all four locations.

In December 1994 and January 1995, Chemist Enterprises (renamed in 1995 as Environmental Testing and Management [ETM]) advanced two additional on-site soil borings (CE-1 and CE-2) and installed two additional on-site groundwater monitoring wells (MW-2 and MW-3) to further evaluate soil and groundwater impact. Boring CE-2 was advanced within the former UST excavation/backfill to assess impact directly beneath the former USTs. Soil and groundwater impact were found to be highest within the smear zone and at the water table surface (approximately 20 to 30 feet bgs).

In June 1994, Mr. Lee applied and was accepted in the SWRCB's UST Cleanup Fund as a priority B claimant.

In August 1995, following the detection of liquid-phase hydrocarbons (LPH) in boring CE-1, one additional groundwater monitoring well (MW-4) was installed by ETM within the former UST excavation for the purpose of removing LPH. LPH was reported in well MW-4 after development; a passive skimmer system was installed in the well for removal of LPH. The thickness of LPH at well MW-4 prior to the installation of the skimmer system on September 22, 1995 was 0.10 feet. The skimmer system was maintained between September 1995 and June 1998, during which time, no measurable quantities of LPH were reported removed from well MW-4 (only water with a hydrocarbon sheen). Following numerous attempts to redevelop the well and extract additional LPH from the vicinity of well MW-4, the skimmer system was removed and the well was added to the regular monitoring and sampling program. During the third quarter 1995, a routine quarterly groundwater monitoring and sampling program was established at the site.

Between November 1995 and April 1996, ETM advanced thirty-nine (39) additional on- and off-site soil borings (ETM-1 through ETM-40, with ETM-16 attempted but not completed) throughout the surrounding residential neighborhood. Soil conditions were logged in borings ETM-1, ETM-2, ETM-5, ETM-6, ETM-7, ETM-10, ETM-11, ETM-17, ETM-19, ETM-21, and ETM-22. Soil samples were collected for laboratory analyses from borings ETM-1, ETM-2, and ETM-7. Grab groundwater samples were collected from all thirty-nine borings (except ETM-6 which did not yield water). Analytical results indicated hydrocarbon impact to groundwater was found to be extensive in the area downgradient of the site; thirty of the thirty-eight grab groundwater samples were reported to contain TPHg and/or benzene. In addition, LPH was reported during the sampling of boring ETM-38, located on West Broadmoor Boulevard, approximately 320 feet northwest of the site. Historical reports indicate that the LPH at boring ETM-38 was chemically

dissimilar than the LPH found in German Autocraft onsite well MW-4, and speculate that the source of the LPH at ETM-38 may have been a short, localized event such as a car accident.

While canvassing the neighborhood to acquire access to properties for the investigation, ETM discovered a private residential irrigation well located at the residence at 141 Farrelly Drive, approximately 440 feet northwest of the site. The owner of the well (and the property), Mr. Mitch Ramirez, had been using the well for landscape irrigation; upon the discovery of LPH in boring ETM-38, approximately 115 feet southeast of the 141 Farrelly Drive irrigation well, ACDEH requested Mr. Ramirez discontinue use of his well. In April 1996, ETM collected a groundwater sample from the 141 Farrelly Drive well; results indicated the well was not impacted by petroleum hydrocarbons. With Mr. Ramirez's permission, the irrigation well was added to the periodic monitoring and sampling program.

In May 1997, the City of San Leandro contracted AllCal Property Services (AllCal) to install one groundwater monitoring well near the location of boring ETM-38. The well was designated MW-1, but is now referred to as MW-1A to avoid confusion with German Autocraft's onsite well MW-1. Initial sampling results of well MW-1A indicated TPHg/BTEX impact (but LPH was not present).

In November 1997, the depression in the UST pits caused by the settling of the excavated soil was filled in with approximately 16 cubic yards of clayey silt soil and covered with Class II base rock.

In August 1998, ETM installed onsite monitoring well MW-5 and offsite monitoring wells MW-6, MW-8, MW-9, MW-10, and MW-11 to further evaluate the downgradient extent of TPHg/BTEX impact in Garcia Avenue and the residential city block between Garcia Ave. and Broadmoor Blvd. Well MW-7 was not installed due to a utility obstruction in Garcia Ave. Initial analytical results from the wells indicated impact to all six new wells.

In January 2001, three additional off-site groundwater monitoring wells (MW-12, MW-13, and MW-14) were installed by ETM to continue delineation of the groundwater impact offsite. Initial analytical results from well MW-12 indicated impact; wells MW-13 and MW-14 indicated little to no impact to the southwest of the site in the vicinity of Lafayette Avenue.

In November 2007, Groundwater Cleaners, Inc. (GCI) prepared and submitted a *Corrective Action Plan* (CAP) that provided technical and cost effectiveness evaluations of monitored natural attenuation (MNA), soil excavation, dual phase extraction (DPE) / air sparging (AS), and bioremediation. Results of their evaluation indicated that DPE/AS would be most viable and cost-effective and recommended that a 5-day DPE/AS pilot test be performed. In a letter dated December 28, 2007, ACEHD indicated their concurrence with the proposed DPE/AS feasibility study; however due to the data gap related to potential risk associated with the vapor intrusion pathway, the ACEHD requested that further site characterization be performed; specifically, a soil vapor investigation. GCI prepared a *Work Plan for Soil Vapor Investigation*, dated February 14,

2008, and a *Work Plan for DPE/AS Feasibility Study*, dated February 15, 2008. Both work plans were conditionally approved by ACEHD in a letter dated October 23, 2008.

In January 2009, GCI advanced eight on- and off-site soil borings (SV-1 through SV-8) and collected grab groundwater samples. In immediately adjacent boreholes, GCI installed temporary dual-completion soil vapor sampling points (at depths of approximately 5.0 to 5.5 feet bgs and at approximately 12.5 to 14.0 feet bgs). The shallow points were installed within clayey soil, while the deeper points were placed across a 1-foot thick sandy unit identified during continuous core of the adjacent borings. Analytical results of the soil vapor samples were compared to the Regional Water Quality Control Board, San Francisco's (RWQCB-SF) Environmental Screening Levels (ESLs) protective of vapor intrusion concerns under a commercial land use (for the on-site auto repair business) and residential (for the predominant offsite land use) for TPHg, BTEX, and methyl tertiary butyl ether (MTBE). Analytical results of samples collected at the 5-foot depths did not exceed the onsite commercial or offsite residential ESLs, with the exception of SV-8 (which exceeded the residential ESL for TPHg) and SV-2 (which exceeded the residential ESL for benzene). Based on the results of the soil vapor sampling, GCI concluded that significant vertical attenuation is occurring and that results indicate that vapor intrusion concerns are unlikely, based on commercial on-site and residential off-site uses.

In February and March 2009, GCI conducted the approved 5-day DPE remediation feasibility test at the site. DPE testing was performed using onsite wells MW-1, MW-2, MW-3, and MW-4, both individually and as a group, while using outlying wells MW-5, MW-6, and MW-8 to check for vacuum influences. GCI's *DPE/AS Feasibility Report*, dated March 31, 2009, stated that the DPE testing generally failed (too much water and not enough vapor flow) and concluded that only horizontal DPE wells would be appropriate (AS was never attempted). In response to this report, ACEHD issued a letter dated October 27, 2009, requesting a work plan for installation of DPE wells (and several additional items). GCI submitted a *Work Plan for Additional Investigation*, dated January 15, 2010, in which they partially addressed ACEHD's issues outlined in the October 2009 letter. ACEHD has not reviewed this document (as Stratus verbally rescinded the document, on behalf of Mr. Lee, during a July 22, 2010 meeting).

On July 22, 2010, a meeting was held between ACEHD and Stratus. The purpose of this meeting, which was attended by M. Detterman and D. Dragos of ACEHD, and S. Salcedo and G. Kowtha of Stratus, was to make introductions by Stratus as Mr. Lee's new consultant, to review the current status of the project, to discuss the October 2009 ACEHD letter and GCI January 2010 response/work plan, and to discuss steps to begin remediation efforts at the site immediately. The meeting notes were summarized in email correspondence from S. Salcedo to M. Detterman on July 26, 2010; M. Detterman provided generalized input on the meeting summary in email correspondence on August 6, 2010. During the meeting, it was agreed that an SCM/IRAP would be prepared and would include a comprehensive data tabulation of all historic work performed at the site, would identify data gaps that require additional work, would propose any additional onsite wells/borings needed to complete onsite lateral and vertical soil assessment, and would include a proposal to excavate impacted soil at the former UST area as a preliminary remedial step before

the initiation of DPE remediation. This approach was agreed upon by ACEHD, and was meant to expedite ACEHD's review time on the SCM/IRAP. Also as agreed, a separate addendum to the SCM/IRAP would be prepared and submitted proposing details associated with the installation of the full-scale DPE system and additional extraction wells needed for the cleanup work. On October 18, 2010, Stratus submitted the SCM/IRAP to ACEHD for review.

In a letter dated December 16, 2010, ACEHD provided technical comments on the SCM/IRAP, including a request for a preferential pathway survey, concurrence with the proposal to destroy monitoring wells MW-1 and MW-4 and to install soil boring B-4, as well as a request to install an additional soil boring (B-5) in the vicinity of the former waste oil tank.

In January and February 2011, Stratus conducted a preferential pathway study for the site and the surrounding neighborhood. The study included research of backyard/private water wells, basements, and buried utility conduits in the neighborhood surrounding the site. The results of the study are documented in Stratus' *Preferential Pathway Study*, dated February 24, 2011.

GEOLOGY

Sediments underlying the site and site vicinity are likely derived from the erosion of the Las Trampas Ridge located approximately 4 miles east of the site. These hills are composed of late Mesozoic sedimentary and partially metamorphosed rocks of the Franciscan Complex. The site lies approximately one mile west of the northwest-trending Hayward Fault, and approximately three miles east of the San Francisco Bay. The topography of the immediate area is relatively flat and lies at an elevation of approximately 50 feet above mean seal level (msl).

Local subsurface soil stratigraphy has been investigated by the drilling of more than 60 vertical soil borings at the site and immediately surrounding area on behalf of Mr. Lee, which have been logged by an array of different geologists over the past 15+ years. Most of the historic borings were logged on 5-foot intervals, although the eight soil borings drilled in 2009 (SV-1 through SV-8) were continuously cored (to approximately 14 feet bgs). According to available geologic boring logs related to the site, subsurface soils have been logged to a maximum depth of approximately 45 feet bgs.

From the surface to approximately 25 feet bgs, the soil generally consists of fine-grained materials (lean to fat clays and sandy clays). Beneath the upper fine-grained material, from approximately 25 to 35 feet bgs (ranging from 3 to 13 feet in apparent thickness), a sandy unit of relatively higher permeability is present (clayey and silty sands with some clean sands). It is within this sandy layer that groundwater is first encountered. In general, the sandy water-bearing unit appears to thicken and coarsen to the west and northwest of site (offsite, downgradient). Notably, the sandy layer appears to be thin (to absent) in the center of the site property itself (B-1, B-2, B-3, MW-1, and ETM-7) and to the northeast of the site across 14th Avenue (ETM-10, ETM-11). Beneath the sandy water-bearing unit, additional fine-grained soils have been encountered (clays). In both the upper and lower clayey layers, thin (1 to 4 feet in apparent thickness), discontinuous, sandy layers

are reportedly interbedded. Notably, within the thick upper section of vadose zone clays, an approximate 1-foot thick sand, clay with sand, clayey gravel or gravelly clay was encountered between 11 and 14 feet bgs (targeted in deep soil gas sample locations).

HYDROGEOLOGY

A total of fourteen permanent groundwater monitoring wells (MW-1 through MW-6, MW-8 through MW-14, and MW-1A) have been screened to depths of between 20 and 40 feet bgs to monitor groundwater occurrence and quality in the first encountered water-bearing zone. The monitoring well array includes five onsite wells and nine offsite wells spanning the city block west-northwest of the site, from Garcia Avenue to Broadmoor Boulevard. Historically, groundwater in the monitoring well array has been measured as shallow as 15.05 feet bgs to as deep as 30.25 feet bgs, with a historical average of about 25 feet bgs. Seasonal fluctuations in water table levels on the order of 5 to 10 feet are typical. In the early 1990s, water levels were somewhat lower (~30 feet bgs) than they are at present day. During the 15-year monitoring period (1995 to 2010) groundwater elevations have generally remained consistent over time, though the magnitude of annual fluctuations has decreased during the last 7 to 8 years.

Historically, the dominant groundwater flow in the vicinity of the site has been generally west and west-northwest at an average gradient of approximately 0.002 foot per foot (ft/ft). Onsite, groundwater flow appears to be more complex. During the period 1994 through 1998, only wells MW-1, MW-2, and MW-3 were gauged for depth to groundwater. In that period, groundwater flow was calculated to be predominantly south to southwest (generally towards well MW-2). Following installation of additional wells, the flow direction had the appearance of shifting to the west with the increase in spatial data. However, based on a re-evaluation of the more recent groundwater elevation data of the onsite wells only, it appears that the more southerly groundwater flow direction was not an error or result of a small spatial array, but rather a true onsite sub-gradient of the overall groundwater flow.

SCOPE OF WORK

The scope of work documented herein includes the following: 1) the advancement and soil sampling of borings B-4 and B-5, and 2) the proper destruction of monitoring wells MW-1 and MW-4. All work was conducted under the direct supervision of a State of California Registered Geologist or Engineer, and was conducted in accordance with standards established by the Tri-Regional Board document titled *Appendix A-Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites* (April 16, 2004) and RWQCB guidelines. A California-licensed C-57 drilling contractor performed all drilling and well destruction activities.

Soil Borings (B-4 and B-5) and Destruction of Wells MW-1 and MW-4

Site Assessment and Well Abandonment Pre-Field Activities

Stratus personnel completed the following pre-field activities relating to the advancement of borings B-4 and B-5 and the destruction of monitoring wells MW-1 and MW-4:

- Soil boring and well destruction permits were obtained from Alameda County Public Works Agency (ACPWA),
- A licensed C-57 drilling contractor was retained and scheduled,
- The site health and safety plan was updated,
- Boring locations were marked and Underground Service Alert (USA) was contacted to locate underground utilities in the vicinity of the work site, and
- ACEHD, ACPWA, and Mr. Lee were notified of the scheduled field activities.

Direct Push Soil Boring Advancement and Soil Sampling Procedures

On January 24, 2011, Stratus personnel supervised the advancement of soil borings B-4 and B-5 to a total depth of 32 feet bgs at the locations indicated on Figure 2. The initial 5 feet of each boring were advanced with a hand auger to reduce the possibility of damaging underground utilities. The borings were advanced by RSI Drilling using a direct-push rig equipped with 2-inch diameter, 4-foot long steel rods. Soil was continuously cored using disposable acetate sleeves from 4 to 32 feet in each boring. A sample for laboratory analyses was collected at approximate four-foot intervals by cutting the liners and sealing each end of the sample with Teflon™ tape and plastic end caps. Each sample was then labeled, placed in a resealable plastic bag, and stored in an ice-chilled cooler. Chain-of-custody procedures were followed from the time the samples were collected until the time the samples were relinquished to the laboratory. Soil contained in acetate sleeves was also screened for volatile organic compounds using a photo ionization detector (PID). Stratus recorded PID readings, soil types, and other pertinent geologic data from each of the borings on borehole logs (Appendix A).

Five soil samples from each boring were submitted to Alpha Analytical, Inc. for chemical analyses: three from the vadose zone (4-, 8-, and 12-feet bgs), one from the capillary fringe/smear zone (24-feet bgs), and one from the fully saturated zone at the base of the boring (32-feet bgs). Upon reaching the terminal depth, the boreholes were backfilled with neat cement grout to ground surface per ACPWA permit requirements.

Well Destructions

On January 25, 2011, Stratus personnel supervised the permanent destruction of monitoring wells MW-1 and MW-4 by RSI Drilling. Both monitoring wells were overdrilled to total depth (as per

ACEHD's direction) to ensure that residual contamination does not use as a conduit an incompletely removed or grouted sand pack below the proposed IRAP soil removal depth. Once the wells were overdrilled, cement slurry was tremmied to the bottom of the borehole and completely filled to the surface.

Waste Management

Wastewater generated during field activities was contained in a DOT-approved 55-gallon steel drum. The drum is properly labeled and stored at the site pending disposal. Soil cuttings are being stored temporarily in drums and will be disposed of in conjunction with the excavation soil. A licensed contractor will transport the wastewater to an appropriate facility for disposal.

Laboratory Analyses

Soil samples collected from boring B-4 were analyzed for gasoline range organics (GRO) using EPA Method 8015M; for BTEX, tertiary butyl alcohol (TBA), methyl tert-butyl ether (MTBE), diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA), and ethylene dibromide (EDB) by EPA Method 8260B; and for total lead by EPA Method 6020. In addition to these analyses, soil samples from boring B-5 were analyzed for oil range organics (ORO) and diesel range organics (DRO) using EPA Method 8015M; and Total Oil and Grease (Hexane Extractable Material) by EPA Method 1664A. Soil analytical results are summarized on Table 1. A copy of the laboratory analytical report is included as Appendix B.

RESULTS

Soil Boring B-4

Previous site investigations had not included sufficient soil analytical data directly beneath the former fuel dispenser island. Therefore, in order to fill this data gap, Stratus advanced soil boring B-4 in the vicinity of the former fuel dispenser island.

Soil samples collected from the vadose zone (4-, 8-, and 12-foot bgs) from boring B-4 were below laboratory detection limits for all hydrocarbon and oxygenate analytes tested. The sample collected from the capillary fringe (24-foot bgs) contained only low concentrations of GRO reported at the laboratory reporting limit of 1.0 milligrams per kilogram (mg/Kg). The sample collected at the terminal depth of the boring in the saturated zone (32-foot bgs) contained concentrations of GRO, ethylbenzene, and total xylenes at 2,400 mg/Kg, 27 mg/Kg, and 89.6 mg/Kg, respectively. Total lead concentrations (which ranged from 4.2 mg/Kg to 13 mg/Kg) were at background levels. All other analytes were below laboratory reporting limits.

Soil Boring B-5

Previous site investigations had not included sufficient soil analytical data in the area of the former waste oil tank. Therefore, in order to fill this data gap, Stratus advanced soil boring B-5 in the vicinity of the former waste oil tank.

The soil sample collected from boring B-5 at 4-feet bgs contained relatively low concentrations of DRO, ORO, and Oil and Grease at 23 mg/Kg, 150 mg/Kg, and 95 mg/Kg, respectively. With the exception of 0.0055 mg/Kg total xylenes in the sample collected from 12-feet bgs and 9.0 mg/Kg GRO and 0.0061 mg/Kg total xylenes in the sample collected from 32-feet bgs, all other analytes were below laboratory reporting limits in all samples. Total lead concentrations (which ranged from 5.2 mg/Kg to 14 mg/Kg) were at background levels.

CONCLUSIONS AND RECOMMENDATIONS

Concentrations of GRO, ethylbenzene, and total xylenes detected in soil boring B-4 were only found in the samples collected from the capillary fringe (24-feet bgs) and saturated zones (32-feet bgs). Concentrations of DRO, ORO, and Oil and Grease detected in soil boring B-5 were only found in the sample collected at 4-feet bgs. Based on analytical data collected during this investigation, the lateral and vertical extent of impact in the vicinities of both the former dispenser island and the former waste oil tank has been adequately characterized.

Due to the lack of detected analytes in soil borings B-4 and B-5, Stratus recommends that the IRAP be implemented as submitted with the inclusion of the technical comments made by ACEHD in their letter dated December 16, 2010.

March 3, 2011

LIMITATIONS

This report was prepared in general accordance with accepted standards of care that existed at the time this report was prepared. No other warranty, expressed or implied, is made. Conclusions and recommendations are based on field observations and data obtained from this work and previous investigations. It should be recognized that definition and evaluation of geologic conditions is a difficult and somewhat inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface conditions present. More extensive studies may be performed to reduce uncertainties. This report is solely for the use and information of our client, unless otherwise noted.

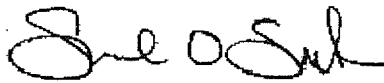
If you have any questions or comments concerning this document, please contact Kasey Jones at (415) 516-0373.

Sincerely,

STRATUS ENVIRONMENTAL, INC.



Kasey L. Jones
Project Manager



Sarah O. Salcedo, P.G.
Senior Geologist



Attachments:

Table 1	Soil Analytical Results
Figure 1	Site Location Map
Figure 2	Site Plan
Appendix A	Boring Logs
Appendix B	Laboratory Analytical Report and Chain-of-Custody Documentation

cc: Mr. Seung Lee, German Autocraft
Ms. Cherie McCaulou, RWQCB-SF

TABLE 1
SOIL ANALYTICAL RESULTS
 German Autocraft, 301 East 14th Street, San Leandro, California

Sample ID	Date Collected	Sample Depth (feet)	DRO (mg/Kg)	ORO (mg/Kg)	GRO (mg/Kg)	Oil & Grease (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl-benzene (mg/Kg)	Total Xylenes (mg/Kg)	TBA (mg/Kg)	MTBE (mg/Kg)	DIPE (mg/Kg)	ETBE (mg/Kg)	TAME (mg/Kg)	EDB (mg/Kg)	1,2-DCA (mg/Kg)	Total Lead (mg/Kg)
B-4-4	01/24/11	4	---	---	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	4.2
B-4-8	01/24/11	8	---	---	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	7.0
B-4-12	01/24/11	12	---	---	<1.0	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	5.7
B-4-24	01/24/11	24	---	---	1.0	---	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	8.8
B-4-32	01/24/11	32	---	---	2,400	---	<0.50 [1]	<0.50 [1]	27	89.6	<50 [1]	<0.50 [1]	<1.0 [1]	<1.0 [1]	<1.0 [1]	<4.0 [1]	<1.0 [1]	13.0
B-5-4	01/24/11	4	23 [2]	150	<1.0	95	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	14.0
B-5-8	01/24/11	8	<10	<10	<1.0	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	7.3
B-5-12	01/24/11	12	<10	<10	<1.0	<50	<0.0050	<0.0050	<0.0050	0.0055	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	5.2
B-5-24	01/24/11	24	<10	<10	<1.0	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	7.9
B-5-32	01/24/11	32	<10	<10	9.0	<50	<0.0050	<0.0050	<0.0050	0.0061	<0.50	<0.0050	<0.020	<0.020	<0.020	<0.040	<0.020	6.9

Notes:

Legend/Key:

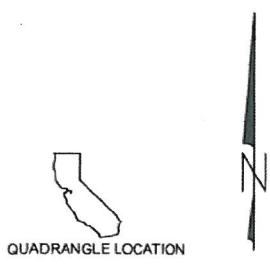
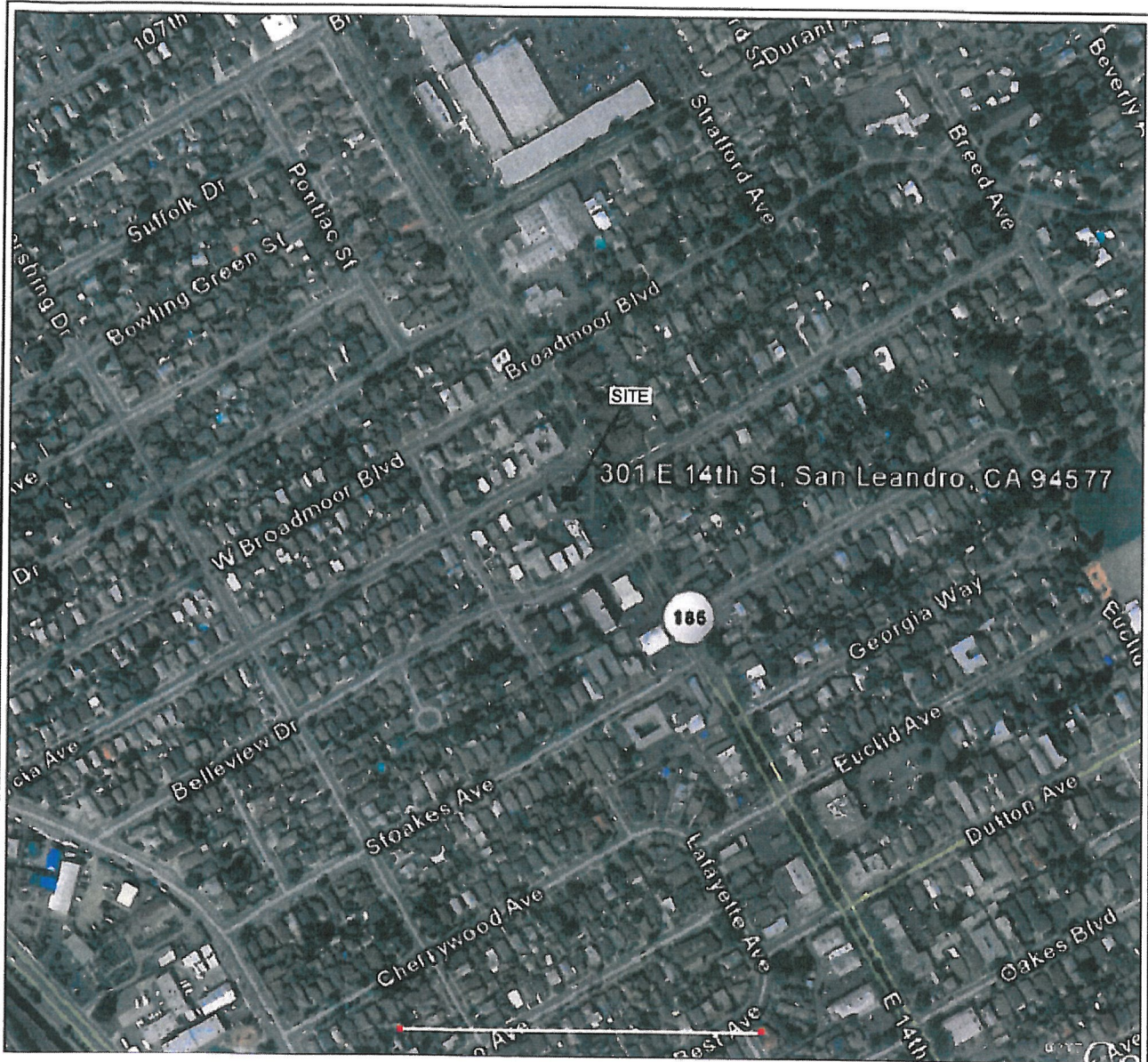
--- = not measured or not analyzed
 DRO = Diesel Range Organics C13-C22
 ORO = Oil Range Organics C22-C40+
 GRO = Gasoline Range Organics C4-C13
 MTBE = Methyl tertiary butyl ether
 TBA = Tertiary butyl alcohol
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tertiary butyl ether
 TAME = Tertiary amyl methyl ether
 1,2-DCA = 1,2-Dichloroethane
 EDB = 1,2-Dibromoethane
 mg/Kg = milligrams per kilogram

Analytical Methods:

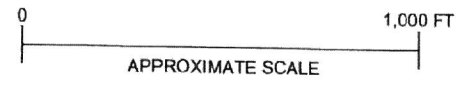
DRO, ORO & GRO analyzed according to EPA Method 8015B
 BTEX, MTBE, TBA, DIPE, ETBE, TAME, 1,2-DCA and EDB analyzed according to EPA Method 8260B
 Total lead analyzed according to EPA Method SW6020
 Oil & Grease analyzed according to EPA Method 1664A

Laboratory Qualifiers/Flags/Notes:

[1] Reporting limits were increased due to high concentrations of target analytes.
 [2] DRO concentration may include contributions from heavier-end hydrocarbons that elute in the DRO range.



QUADRANGLE LOCATION

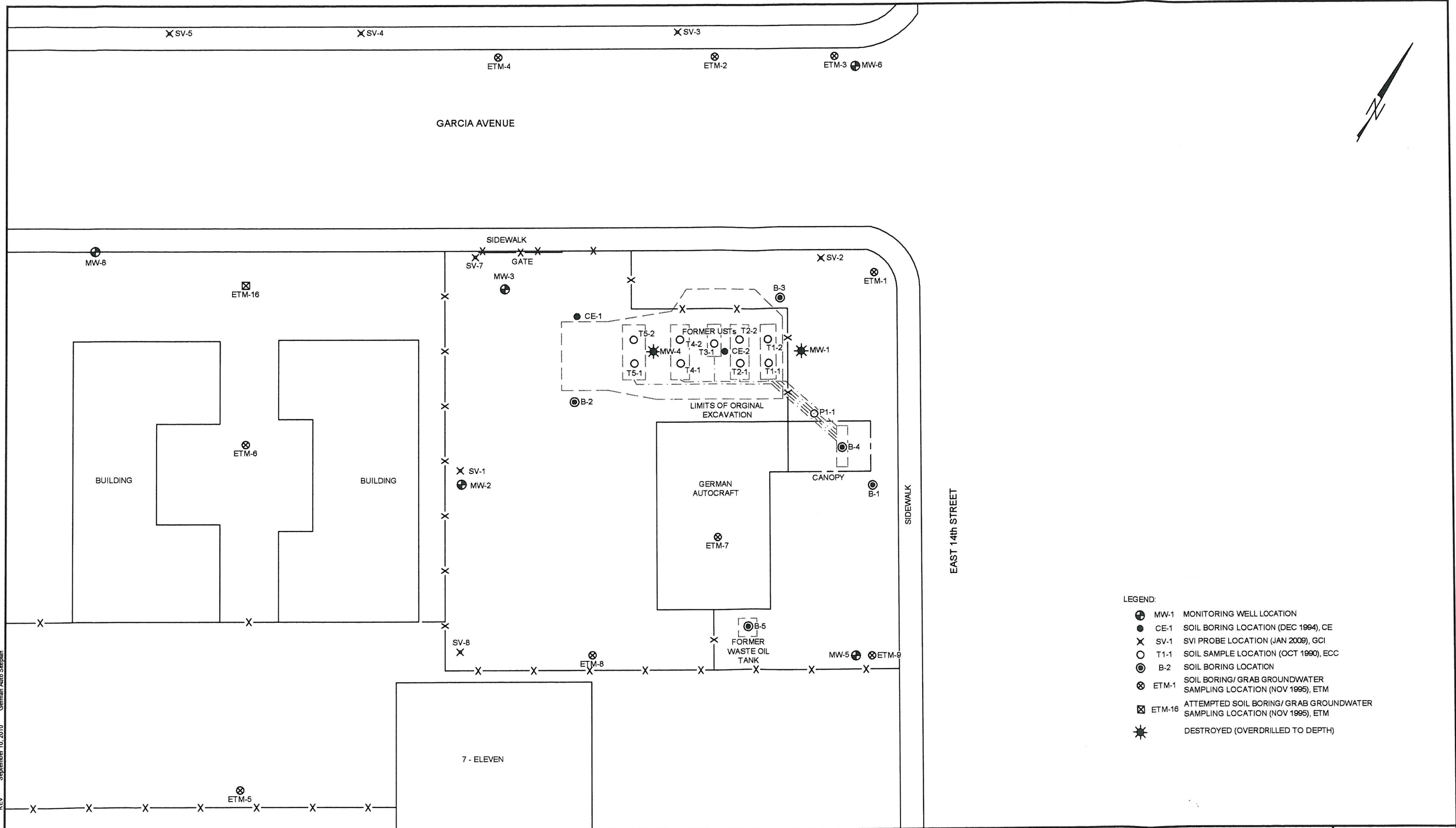


GERMAN AUTOCRAFT
 301 EAST 14th STREET
 SAN LEANDRO, CALIFORNIA

SITE LOCATION MAP

FIGURE
 1

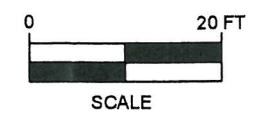
PROJECT NO.
 2076-0301-01



- LEGEND:
- ⊕ MW-1 MONITORING WELL LOCATION
 - CE-1 SOIL BORING LOCATION (DEC 1994), CE
 - × SV-1 SVI PROBE LOCATION (JAN 2009), GCI
 - T1-1 SOIL SAMPLE LOCATION (OCT 1990), ECC
 - ⊙ B-2 SOIL BORING LOCATION
 - ⊗ ETM-1 SOIL BORING/ GRAB GROUNDWATER SAMPLING LOCATION (NOV 1995), ETM
 - ⊠ ETM-16 ATTEMPTED SOIL BORING/ GRAB GROUNDWATER SAMPLING LOCATION (NOV 1995), ETM
 - ★ DESTROYED (OVERDRILLED TO DEPTH)

REV. JMP September 10, 2010 German Auto Stephan

STRATUS
ENVIRONMENTAL, INC.



GERMAN AUTOCRAFT
301 EAST 14th STREET
SAN LEANDRO, CALIFORNIA
SITE PLAN

FIGURE
2
PROJECT NO.
2076-0301-01

APPENDIX A
BORING LOGS

SOIL BORING/WELL CONSTRUCTION LOG

Boring No. B-4

Sheet: 1 of 2

Client	<u>German Autocraft</u>	Date	<u>January 24, 2011</u>	
Address	<u>301 East 14th Street</u>	Drilling Co.	<u>RSI Drilling</u>	rig type: <u>Geoprobe 6620</u>
	<u>San Leandro, California</u>	Driller	<u>Jose C.</u>	
Project No.	<u>2076-0301-01</u>	Method	<u>Direct-push</u>	Hole Diameter: <u>2 inches</u>
Logged By:	<u>Allan Dudding</u>	Sampler:	<u>4-foot liner</u>	

Depth to GW: ▽ first encountered: 25 feet bgs ▼ Static:

Sample		Blow Count	Sample		Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.				
					1		6" concrete at surface. First five feet cleared with hand auger.	
					2	ML	Silt, ML, dark yellowish brown (10YR 4/4), non-plastic, dry, 100% silt.	
					3			
S	B-4-4		0858		4	SM	Silty Sand, SM, dark yellowish brown (10YR 4/4), fine grained, dry, 60% sand, 40% silt.	0
					5			
					6			
					7			
S	B-4-8		0903		8	CL	Silty Clay, CL, very dark brown (10YR 2/2), medium plasticity, moist, 60% clay, 40% silt.	0
					9			
					10		Silt content decreases, plasticity increases.	
					11	CH		
S	B-4-12		0909		12	CH	Fat Clay, CH, very dark brown (10YR 2/2), high plasticity, moist, 100% clay.	0
					13			
					14	CL	Silty Clay, CL, very dark brown (10YR 2/2), medium plasticity, moist, 60% clay, 40% silt.	
					15			
S	B-4-16		0913		16	CH	Fat Clay, CH, very dark brown (10YR 2/2), high plasticity, moist, 100% clay.	0
					17			
					18			
					19			
S	B-4-20		0920		20			0

Recovery Sample

Comments: Color descriptions from Munsell Color Chart.



SOIL BORING/WELL CONSTRUCTION LOG

Boring No. B-4

Sheet: 2 of 2

Client German Autocraft Date January 24, 2011
 Address 301 East 14th Street Drilling Co. RSI Drilling rig type: Geoprobe 6620
San Leandro, California Driller Jose C.
 Project No. 2076-0301-01 Method Direct-push Hole Diameter: 2 inches
 Logged By: Allan Dudding Sampler: 4-foot liner

Depth to GW: ▽ first encountered: 25 feet bgs ▼ Static:

Type	Sample		Blow Count	Sample		Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
	No.			Time	Recov.				
						21	CH	Fat Clay, CH, olive gray (5Y 4/2), high plasticity, moist, 95% clay, trace silt and fine sand.	
						22			
						23			
S	B-4-24			0925		24			2.9
						25	▽	ML	Clayey Silt, ML, olive gray (5Y 4/2), low plasticity, moist to wet, 60% silt, 40% clay.
						26			
						27			
S	B-4-28			0931		28			
						29			
						30			
						31			
S	B-4-32			0937		32	SM	Silty Sand, SM, olive gray (5Y 4/2), fine to coarse grained, fine grained gravel, wet, 70% sand, 10% gravel, 20% silt, trace clay.	900
						33			
						34			
						35			
						36			
						37			
						38			
						39			
						40			

Recovery Sample

Comments: Color identifications from Munsell Soil Color Chart. Boring advanced to 32 feet bgs.



SOIL BORING/WELL CONSTRUCTION LOG

Boring No. B-5

Sheet: 1 of 2

Client German Autocraft Date January 24, 2011
 Address 301 East 14th Street Drilling Co. RSI Drilling rig type: Geoprobe 6620
San Leandro, California Driller Jose C.
 Project No. 2076-0301-01 Method Direct-push Hole Diameter: 2 inches
 Logged By: Allan Dudding Sampler: 4-foot liner

Depth to GW: ▽ first encountered: 25 feet bgs ▼ Static:

Sample		Blow Count	Sample		Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.				
					1		6" concrete at surface. First five feet cleared with hand auger.	
					2	ML	Clayey Silt, ML, dark yellowish brown (10YR 4/6), low plasticity, dry, 70% silt, 30% clay.	
					3			
S	B-5-4		1051		4			0
					5			
					6			
					7			
S	B-5-8		1055		8	CL	Silty Clay, CL, very dark grayish brown (10YR 3/2), medium plasticity, moist, 70% clay, 30% silt.	0
					9			
					10			
					11			
S	B-5-12		1100		12	CH	Fat Clay, CH, very dark grayish brown (10YR 3/2), high plasticity, moist to dry, 100% clay. Color grades to dark yellowish brown (10YR 4/4) at 12 feet bgs.	
					13	ML	Silt, ML, dark yellowish brown (10YR 4/4), non-plastic, moist, 100% silt.	0
					14	CL	Silty Clay, CL, dark yellowish brown (10YR 4/4), low plasticity, moist, 60% clay, 40% silt.	
					15			
S	B-5-16		1105		16			0
					17			
					18			
					19			
S	B-5-20		1110		20			0

Recovery Sample

Comments: Color descriptions from Munsell Color Chart.



SOIL BORING/WELL CONSTRUCTION LOG

Boring No. B-5

Sheet: 2 of 2

Client German Autocraft Date January 24, 2011
 Address 301 East 14th Street Drilling Co. RSI Drilling rig type: Geoprobe 6620
San Leandro, California Driller Jose C.
 Project No. 2076-0301-01 Method Direct-push Hole Diameter: 2 inches
 Logged By: Allan Dudding Sampler: 4-foot liner

Depth to GW: ∇ first encountered: 25 feet bgs \blacktriangledown Static:

Sample		Blow Count	Sample		Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
Type	No.		Time	Recov.				
					21	CL	Silty Clay, CL, brown (10YR 4/3), medium plasticity, moist, 70% clay, 30% silt.	
					22			
					23			
S	B-5-24		1114		24			2.9
					25	∇		
					26	ML	Clayey Silt, ML, dark olive gray (5Y 3/2), low plasticity, wet, 60% silt, 30% clay, 10% fine sand.	
					27			
S	B-5-28		1120		28			12.7
					29		Silt and sand content decreases, and color grades with depth.	
					30			
					31			
S	B-5-32		1130		32	CH	Fat Clay, CH, dark yellowish brown (10YR 4/4), high plasticity, moist, 100% clay.	2.9
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

Recovery Sample

Comments: Color identifications from Munsell Soil Color Chart. Boring advanced to 32 feet bgs.



APPENDIX B

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Kasey Jones
Phone: (530) 676-6000
Fax: (530) 676-6005
Date Received : 01/29/11

Job: 2076-0301-01/German Auto

Metals by ICPMS
EPA Method SW6020 / SW6020A

Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID: B-4-4 Lab ID : STR11013122-01A Lead (Pb) Date Sampled 01/24/11 08:58	4,200	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-4-8 Lab ID : STR11013122-02A Lead (Pb) Date Sampled 01/24/11 09:03	7,000	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-4-12 Lab ID : STR11013122-03A Lead (Pb) Date Sampled 01/24/11 09:09	5,700	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-4-24 Lab ID : STR11013122-04A Lead (Pb) Date Sampled 01/24/11 09:25	8,800	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-4-32 Lab ID : STR11013122-05A Lead (Pb) Date Sampled 01/24/11 09:37	13,000	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-5-4 Lab ID : STR11013122-06A Lead (Pb) Date Sampled 01/24/11 10:51	14,000	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-5-8 Lab ID : STR11013122-07A Lead (Pb) Date Sampled 01/24/11 10:55	7,300	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-5-12 Lab ID : STR11013122-08A Lead (Pb) Date Sampled 01/24/11 11:00	5,200	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-5-24 Lab ID : STR11013122-09A Lead (Pb) Date Sampled 01/24/11 11:14	7,900	1,000 µg/Kg	02/02/11	02/02/11
Client ID: B-5-32 Lab ID : STR11013122-10A Lead (Pb) Date Sampled 01/24/11 11:30	6,900	1,000 µg/Kg	02/02/11	02/02/11



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Sample results were calculated on a wet weight basis.
Reported in micrograms per Kilogram, per client request.

Roger Scholl *Randy Gardner* *Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

^e
2/7/11

Report Date



Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Kasey Jones
Phone: (530) 676-6000
Fax: (530) 676-6005
Date Received : 01/29/11

Job: 2076-0301-01/German Auto

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B
Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B
Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed	
Client ID :	B-4-4					
Lab ID :	STR11013122-01A	TPH-P (GRO)	ND	1,000 µg/Kg	02/02/11	02/02/11
Date Sampled	01/24/11 08:58	Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
		Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
		Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
		Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
		1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
		Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
		Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
		Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
		1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
		Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
		m,p-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
		o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
Client ID :	B-4-8					
Lab ID :	STR11013122-02A	TPH-P (GRO)	ND	1,000 µg/Kg	02/02/11	02/02/11
Date Sampled	01/24/11 09:03	Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
		Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
		Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
		Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
		1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
		Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
		Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
		Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
		1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
		Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
		m,p-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
		o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
Client ID :	B-4-12					
Lab ID :	STR11013122-03A	TPH-P (GRO)	ND	1,000 µg/Kg	02/02/11	02/02/11
Date Sampled	01/24/11 09:09	Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
		Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
		Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
		Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
		1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
		Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
		Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
		Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
		1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
		Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
		m,p-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
		o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11



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Client ID :	B-4-24						
Lab ID :	STR11013122-04A	TPH-P (GRO)	1,000		1,000 µg/Kg	02/02/11	02/02/11
Date Sampled	01/24/11 09:25	Tertiary Butyl Alcohol (TBA)	ND		500 µg/Kg	02/02/11	02/02/11
		Methyl tert-butyl ether (MTBE)	ND		5.0 µg/Kg	02/02/11	02/02/11
		Di-isopropyl Ether (DIPE)	ND		20 µg/Kg	02/02/11	02/02/11
		Ethyl Tertiary Butyl Ether (ETBE)	ND		20 µg/Kg	02/02/11	02/02/11
		1,2-Dichloroethane	ND		20 µg/Kg	02/02/11	02/02/11
		Benzene	ND		5.0 µg/Kg	02/02/11	02/02/11
		Tertiary Amyl Methyl Ether (TAME)	ND		20 µg/Kg	02/02/11	02/02/11
		Toluene	ND		5.0 µg/Kg	02/02/11	02/02/11
		1,2-Dibromoethane (EDB)	ND		40 µg/Kg	02/02/11	02/02/11
		Ethylbenzene	ND		5.0 µg/Kg	02/02/11	02/02/11
		m,p-Xylene	ND		5.0 µg/Kg	02/02/11	02/02/11
		o-Xylene	ND		5.0 µg/Kg	02/02/11	02/02/11

Client ID :	B-4-32						
Lab ID :	STR11013122-05A	TPH-P (GRO)	2,400,000		100,000 µg/Kg	02/02/11	02/02/11
Date Sampled	01/24/11 09:37	Tertiary Butyl Alcohol (TBA)	ND	V	50,000 µg/Kg	02/02/11	02/02/11
		Methyl tert-butyl ether (MTBE)	ND	V	500 µg/Kg	02/02/11	02/02/11
		Di-isopropyl Ether (DIPE)	ND	V	1,000 µg/Kg	02/02/11	02/02/11
		Ethyl Tertiary Butyl Ether (ETBE)	ND	V	1,000 µg/Kg	02/02/11	02/02/11
		1,2-Dichloroethane	ND	V	1,000 µg/Kg	02/02/11	02/02/11
		Benzene	ND	V	500 µg/Kg	02/02/11	02/02/11
		Tertiary Amyl Methyl Ether (TAME)	ND	V	1,000 µg/Kg	02/02/11	02/02/11
		Toluene	ND	V	500 µg/Kg	02/02/11	02/02/11
		1,2-Dibromoethane (EDB)	ND	V	4,000 µg/Kg	02/02/11	02/02/11
		Ethylbenzene	27,000		500 µg/Kg	02/02/11	02/02/11
		m,p-Xylene	82,000		500 µg/Kg	02/02/11	02/02/11
		o-Xylene	7,600		500 µg/Kg	02/02/11	02/02/11

Client ID :	B-5-4						
Lab ID :	STR11013122-06A	TPH-E (DRO)	23,000	L	10,000 µg/Kg	02/01/11	02/03/11
Date Sampled	01/24/11 10:51	TPH-E (ORO)	150,000		10,000 µg/Kg	02/01/11	02/03/11
		TPH-P (GRO)	ND		1,000 µg/Kg	02/02/11	02/02/11
		Tertiary Butyl Alcohol (TBA)	ND		500 µg/Kg	02/02/11	02/02/11
		Methyl tert-butyl ether (MTBE)	ND		5.0 µg/Kg	02/02/11	02/02/11
		Di-isopropyl Ether (DIPE)	ND		20 µg/Kg	02/02/11	02/02/11
		Ethyl Tertiary Butyl Ether (ETBE)	ND		20 µg/Kg	02/02/11	02/02/11
		1,2-Dichloroethane	ND		20 µg/Kg	02/02/11	02/02/11
		Benzene	ND		5.0 µg/Kg	02/02/11	02/02/11
		Tertiary Amyl Methyl Ether (TAME)	ND		20 µg/Kg	02/02/11	02/02/11
		Toluene	ND		5.0 µg/Kg	02/02/11	02/02/11
		1,2-Dibromoethane (EDB)	ND		40 µg/Kg	02/02/11	02/02/11
		Ethylbenzene	ND		5.0 µg/Kg	02/02/11	02/02/11
		m,p-Xylene	ND		5.0 µg/Kg	02/02/11	02/02/11
		o-Xylene	ND		5.0 µg/Kg	02/02/11	02/02/11



Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Client ID : **B-5-8**

Lab ID : STR11013122-07A

Date Sampled 01/24/11 10:55

TPH-E (DRO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-E (ORO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-P (GRO)	ND	1,000 µg/Kg	02/02/11	02/02/11
Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
m,p-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11

Client ID : **B-5-12**

Lab ID : STR11013122-08A

Date Sampled 01/24/11 11:00

TPH-E (DRO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-E (ORO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-P (GRO)	ND	1,000 µg/Kg	02/02/11	02/02/11
Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
m,p-Xylene	5.5	5.0 µg/Kg	02/02/11	02/02/11
o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11

Client ID : **B-5-24**

Lab ID : STR11013122-09A

Date Sampled 01/24/11 11:14

TPH-E (DRO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-E (ORO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-P (GRO)	ND	1,000 µg/Kg	02/02/11	02/02/11
Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
m,p-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11
o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11



Alpha Analytical, Inc.

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Client ID : B-5-32

Lab ID : STR11013122-10A

Date Sampled 01/24/11 11:30

TPH-E (DRO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-E (ORO)	ND	10,000 µg/Kg	02/01/11	02/03/11
TPH-P (GRO)	9,000	1,000 µg/Kg	02/02/11	02/02/11
Tertiary Butyl Alcohol (TBA)	ND	500 µg/Kg	02/02/11	02/02/11
Methyl tert-butyl ether (MTBE)	ND	5.0 µg/Kg	02/02/11	02/02/11
Di-isopropyl Ether (DIPE)	ND	20 µg/Kg	02/02/11	02/02/11
Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/Kg	02/02/11	02/02/11
1,2-Dichloroethane	ND	20 µg/Kg	02/02/11	02/02/11
Benzene	ND	5.0 µg/Kg	02/02/11	02/02/11
Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/Kg	02/02/11	02/02/11
Toluene	ND	5.0 µg/Kg	02/02/11	02/02/11
1,2-Dibromoethane (EDB)	ND	40 µg/Kg	02/02/11	02/02/11
Ethylbenzene	ND	5.0 µg/Kg	02/02/11	02/02/11
m,p-Xylene	6.1	5.0 µg/Kg	02/02/11	02/02/11
o-Xylene	ND	5.0 µg/Kg	02/02/11	02/02/11

Diesel Range Organics (DRO) C13-C22

Gasoline Range Organics (GRO) C4-C13

L = DRO concentration may include contributions from heavier-end hydrocarbons that elute in the DRO range.

Oil Range Organics (ORO) C22-C40+

V = Reporting Limits were increased due to high concentrations of target analytes.

Sample results were calculated on a wet weight basis.

ND = Not Detected

Reported in micrograms per Kilogram, per client request.

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

2/7/11

Report Date



Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
07-Feb-11

QC Summary Report

Work Order:
11013122

Method Blank

Method Blank		Type	Test Code: EPA Method SW6020 / SW6020A							
File ID: 020211.B\054_M.D\		MBLK	Batch ID: 25916		Analysis Date: 02/02/2011 18:11					
Sample ID: MB-25916	Units : µg/Kg	Run ID: ICP/MS_110202C	Prep Date: 02/02/2011 14:09							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Lead (Pb)	ND	1000								

Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method SW6020 / SW6020A							
File ID: 020211.B\055_M.D\		LCS	Batch ID: 25916		Analysis Date: 02/02/2011 18:17					
Sample ID: LCS-25916	Units : µg/Kg	Run ID: ICP/MS_110202C	Prep Date: 02/02/2011 14:09							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Lead (Pb)	22900	1000	25000		92	80	120			

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method SW6020 / SW6020A							
File ID: 020211.B\060_M.D\		MS	Batch ID: 25916		Analysis Date: 02/02/2011 18:45					
Sample ID: 11013122-01AMS	Units : µg/Kg	Run ID: ICP/MS_110202C	Prep Date: 02/02/2011 14:09							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Lead (Pb)	29300	1000	25000	4244	100	75	125			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method SW6020 / SW6020A							
File ID: 020211.B\061_M.D\		MSD	Batch ID: 25916		Analysis Date: 02/02/2011 18:51					
Sample ID: 11013122-01AMSD	Units : µg/Kg	Run ID: ICP/MS_110202C	Prep Date: 02/02/2011 14:09							
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Lead (Pb)	28100	1000	25000	4244	95	75	125	29250	4.1(20)	

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Kilogram, per client request.



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Date:
07-Feb-11

QC Summary Report

Work Order:
11013122

Method Blank

File ID: 2A02031109.D

Type: MBLK Test Code: EPA Method SW8015B / E

Batch ID: 25907

Analysis Date: 02/03/2011 13:03

Sample ID: MBLK-25907

Units: µg/Kg

Run ID: FID_2_110201A

Prep Date: 02/01/2011 12:50

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	ND	10000								
TPH-E (ORO)	ND	10000								
Surr: Nonane	6470		6000		108	62	161			

Laboratory Control Spike

File ID: 2A02031108.D

Type: LCS Test Code: EPA Method SW8015B / E

Batch ID: 25907

Analysis Date: 02/03/2011 12:38

Sample ID: LCS-25907

Units: µg/Kg

Run ID: FID_2_110201A

Prep Date: 02/01/2011 12:50

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	112000	5000	100000		112	70	130			
Surr: Nonane	6920		6000		115	62	161			

Sample Matrix Spike

File ID: 2A02031110.D

Type: MS Test Code: EPA Method SW8015B / E

Batch ID: 25907

Analysis Date: 02/03/2011 13:28

Sample ID: 11012825-01AMS

Units: µg/Kg

Run ID: FID_2_110201A

Prep Date: 02/01/2011 12:50

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	195000	5000	100000	69210	126	50	149			
Surr: Nonane	8690		6000		145	62	161			

Sample Matrix Spike Duplicate

File ID: 2A02031111.D

Type: MSD Test Code: EPA Method SW8015B / E

Batch ID: 25907

Analysis Date: 02/03/2011 13:53

Sample ID: 11012825-01AMSD

Units: µg/Kg

Run ID: FID_2_110201A

Prep Date: 02/01/2011 12:50

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	162000	5000	100000	69210	92	50	149	194800	18.6(46)	
Surr: Nonane	7240		6000		121	62	161			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Kilogram, per client request



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Date:
07-Feb-11

QC Summary Report

Work Order:
11013122

Method Blank

File ID: 11020206.D

Type: MBLK

Test Code: EPA Method SW8015B/C

Batch ID: MS08S5904B

Analysis Date: 02/02/2011 10:56

Sample ID: MBLK MS08S5904B

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/02/2011 10:56

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	1000								
Surr: 1,2-Dichloroethane-d4	193		200		96	70	130			
Surr: Toluene-d8	207		200		103	70	130			
Surr: 4-Bromofluorobenzene	198		200		99	70	130			

Laboratory Control Spike

File ID: 11020228.D

Type: LCS

Test Code: EPA Method SW8015B/C

Batch ID: MS08S5904B

Analysis Date: 02/02/2011 20:10

Sample ID: GLCS MS08S5904B

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/02/2011 20:10

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	17000	2000	16000		106	63	148			
Surr: 1,2-Dichloroethane-d4	392		400		98	70	130			
Surr: Toluene-d8	389		400		97	70	130			
Surr: 4-Bromofluorobenzene	430		400		108	70	130			

Sample Matrix Spike

File ID: 11020312.D

Type: MS

Test Code: EPA Method SW8015B/C

Batch ID: MS08S5904B

Analysis Date: 02/03/2011 13:50

Sample ID: 11013122-03AGS

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/03/2011 13:50

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	18300	2000	16000		0	114	35	166		
Surr: 1,2-Dichloroethane-d4	402		400		101	70	130			
Surr: Toluene-d8	384		400		96	70	130			
Surr: 4-Bromofluorobenzene	427		400		107	70	130			

Sample Matrix Spike Duplicate

File ID: 11020313.D

Type: MSD

Test Code: EPA Method SW8015B/C

Batch ID: MS08S5904B

Analysis Date: 02/03/2011 14:14

Sample ID: 11013122-03AGSD

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/03/2011 14:14

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	17900	2000	16000		0	112	35	166	18270	2.2(33)
Surr: 1,2-Dichloroethane-d4	399		400		99.8	70	130			
Surr: Toluene-d8	389		400		97	70	130			
Surr: 4-Bromofluorobenzene	432		400		108	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Kilogram, per client request



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Date:
07-Feb-2011

QC Summary Report

Work Order:
11013122

Method Blank

File ID: 11020206.D

Type MBLK Test Code: EPA Method SW8260B

Batch ID: MS08S5904A

Analysis Date: 02/02/2011 10:56

Sample ID: MBLK MS08S5904A

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/02/2011 10:56

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Tertiary Butyl Alcohol (TBA)	ND	500								
Methyl tert-butyl ether (MTBE)	ND	5								
Di-isopropyl Ether (DIPE)	ND	20								
Ethyl Tertiary Butyl Ether (ETBE)	ND	20								
1,2-Dichloroethane	ND	20								
Benzene	ND	5								
Tertiary Amyl Methyl Ether (TAME)	ND	20								
Toluene	ND	5								
1,2-Dibromoethane (EDB)	ND	40								
Ethylbenzene	ND	5								
m,p-Xylene	ND	5								
o-Xylene	ND	5								
Surr: 1,2-Dichloroethane-d4	193		200		96	70	130			
Surr: Toluene-d8	207		200		103	70	130			
Surr: 4-Bromofluorobenzene	198		200		99	70	130			

Laboratory Control Spike

File ID: 11020225.D

Type LCS Test Code: EPA Method SW8260B

Batch ID: MS08S5904A

Analysis Date: 02/02/2011 18:57

Sample ID: LCS MS08S5904A

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/02/2011 18:57

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	439	10	400		110	61	147			
Benzene	466	10	400		116	70	138			
Toluene	412	10	400		103	70	137			
Ethylbenzene	426	10	400		107	70	138			
m,p-Xylene	389	10	400		97	70	145			
o-Xylene	383	10	400		96	70	145			
Surr: 1,2-Dichloroethane-d4	420		400		105	70	130			
Surr: Toluene-d8	365		400		91	70	130			
Surr: 4-Bromofluorobenzene	452		400		113	70	130			

Sample Matrix Spike

File ID: 11020226.D

Type MS Test Code: EPA Method SW8260B

Batch ID: MS08S5904A

Analysis Date: 02/02/2011 19:21

Sample ID: 11013122-03AMS

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/02/2011 19:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	460	10	400	0	115	42	157			
Benzene	507	10	400	0	127	53	150			
Toluene	455	10	400	0	114	51	149			
Ethylbenzene	479	10	400	0	120	54	150			
m,p-Xylene	436	10	400	0	109	50	161			
o-Xylene	424	10	400	0	106	35	177			
Surr: 1,2-Dichloroethane-d4	419		400		105	70	130			
Surr: Toluene-d8	366		400		92	70	130			
Surr: 4-Bromofluorobenzene	465		400		116	70	130			

Sample Matrix Spike Duplicate

File ID: 11020227.D

Type MSD Test Code: EPA Method SW8260B

Batch ID: MS08S5904A

Analysis Date: 02/02/2011 19:45

Sample ID: 11013122-03AMSD

Units: µg/Kg

Run ID: MSD_08_110202A

Prep Date: 02/02/2011 19:45

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	435	10	400	0	109	42	157	460.5	5.8(32)	
Benzene	486	10	400	0	122	53	150	507.5	4.3(26)	
Toluene	437	10	400	0	109	51	149	455.4	4.2(26)	
Ethylbenzene	455	10	400	0	114	54	150	478.7	5.0(29)	
m,p-Xylene	418	10	400	0	104	50	161	435.8	4.2(38)	
o-Xylene	403	10	400	0	101	35	177	424.2	5.0(40)	
Surr: 1,2-Dichloroethane-d4	419		400		105	70	130			
Surr: Toluene-d8	367		400		92	70	130			
Surr: 4-Bromofluorobenzene	463		400		116	70	130			



Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
07-Feb-2011

QC Summary Report

Work Order:
11013122

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

February 03, 2011

CLS Work Order #: CUB0002
COC #:

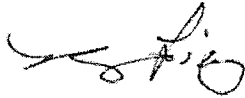
Reyna Vallejo
Alpha Analytical, Inc.-Sparks
255 Glendale Ave.; Suite 21
Sparks, NV 89431

Project Name: STR11013122

Enclosed are the results of analyses for samples received by the laboratory on 02/01/11 09:00. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

Page 2 of 4

02/03/11 14:07

Alpha Analytical, Inc.-Sparks 255 Glendale Ave.; Suite 21 Sparks, NV 89431	Project: STR11013122 Project Number: [none] Project Manager: Reyna Vallejo	CLS Work Order #: CUB0002 COC #:
--	--	-------------------------------------

Conventional Chemistry Parameters by APHA/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
STR11013122-06A (B-5-4) (CUB0002-01) Soil Sampled: 01/24/11 10:51 Received: 02/01/11 09:00									
Hexane Extractable Material (HEM, Oil & Grease)	95	50	mg/kg	1	CU00737	02/02/11	02/02/11	EPA 1664A	
STR11013122-07A (B-5-8) (CUB0002-02) Soil Sampled: 01/24/11 10:55 Received: 02/01/11 09:00									
Hexane Extractable Material (HEM, Oil & Grease)	ND	50	mg/kg	1	CU00737	02/02/11	02/02/11	EPA 1664A	
STR11013122-08A (B-5-12) (CUB0002-03) Soil Sampled: 01/24/11 11:00 Received: 02/01/11 09:00									
Hexane Extractable Material (HEM, Oil & Grease)	ND	50	mg/kg	1	CU00737	02/02/11	02/02/11	EPA 1664A	
STR11013122-09A (B-5-24) (CUB0002-04) Soil Sampled: 01/24/11 11:14 Received: 02/01/11 09:00									
Hexane Extractable Material (HEM, Oil & Grease)	ND	50	mg/kg	1	CU00737	02/02/11	02/02/11	EPA 1664A	
STR11013122-10A (B-5-32) (CUB0002-05) Soil Sampled: 01/24/11 11:30 Received: 02/01/11 09:00									
Hexane Extractable Material (HEM, Oil & Grease)	ND	50	mg/kg	1	CU00737	02/02/11	02/02/11	EPA 1664A	

CA DOHS ELAP Accreditation/Registration Number 1233

3249 Fitzgerald Road Rancho Cordova, CA 95742

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Page 3 of 4

02/03/11 14:07

Alpha Analytical, Inc.-Sparks 255 Glendale Ave.; Suite 21 Sparks, NV 89431	Project: STR11013122 Project Number: [none] Project Manager: Reyna Vallejo	CLS Work Order #: CUB0002 COC #:
--	--	-------------------------------------

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	-----------	-------	-----	-----------	-------

Batch CU00737 - Solvent Extract

Blank (CU00737-BLK1)

Prepared & Analyzed: 02/02/11

Hexane Extractable Material (HEM, Oil & Grease) ND 50 mg/kg

LCS (CU00737-BS1)

Prepared & Analyzed: 02/02/11

Hexane Extractable Material (HEM, Oil & Grease) 960 50 mg/kg 1000 96 80-120

LCS Dup (CU00737-BSD1)

Prepared & Analyzed: 02/02/11

Hexane Extractable Material (HEM, Oil & Grease) 970 50 mg/kg 1000 97 80-120 1 20

CA DOHS ELAP Accreditation/Registration Number 1233

3249 Fitzgerald Road Rancho Cordova, CA 95742

www.californialab.com

916-638-7301

Fax: 916-638-4510

CALIFORNIA LABORATORY SERVICES

Page 4 of 4

02/03/11 14:07

Alpha Analytical, Inc.-Sparks
255 Glendale Ave.; Suite 21
Sparks, NV 89431

Project: STR11013122
Project Number: [none]
Project Manager: Reyna Vallejo

CLS Work Order #: CUB0002
COC #:

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

CA DOHS ELAP Accreditation/Registration Number 1233

3249 Fitzgerald Road Rancho Cordova, CA 95742

www.californialab.com

916-638-7301

Fax: 916-638-4510

AMENDED Page 1 of 2

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : STR11013122
Report Due By : 5:00 PM On : 07-Feb-2011

Client:
Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

Table with 3 columns: Report Attention, Phone Number, EMail Address. Row 1: Kasey Jones, (530) 676-6000 x, kaseyjones@statusinc.net

EDD Required : Yes

Sampled by : Allan Dudding

PO :
Client's COC # : 31518 Job : 2076-0301-01/German Auto

Table with 3 columns: Cooler Temp, Samples Received, Date Printed. Row 1: 5 °C, 29-Jan-2011, 07-Feb-2011

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Main data table with columns: Alpha Sample ID, Client Sample ID, Collection Matrix, Date, No. of Bottles Alpha, Sub, TAT, METALS_S O, OG_HEM_S, TPH/E_S, TPH/P_S, VOC_S, Requested Tests, Sample Remarks. Contains 8 rows of sample data.

Comments: Security seals intact. Frozen ice. Saturday delivery. Samples kept cold and secure until login on Monday. Oil and Grease subbed to CLS. Amended 2/7/11 @ 14:53. Per Alan Dudding deleted TPH-Ident and added TPH/E w/ Nevada limits to samples -06A through : -10A. EA

Signature and Log table with columns: Signature, Print Name, Company, Date/Time. Row 1: Elizabeth Adcox, Elizabeth Adcox, Alpha Analytical, Inc., 2-7-11 1458

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

AMENDED
Page: 2 of 2

CA

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : STR11013122

Report Due By : 5:00 PM On : 07-Feb-2011

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

Report Attention	Phone Number	E-Mail Address
Kasey Jones	(530) 676-6000 x	kaseyjones@statusinc.net

EDD Required : Yes

Sampled by : Allan Dudding

PO :

Client's COC # : 31518 Job : 2076-0301-01/German Auto

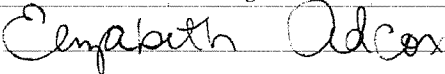
Cooler Temp	Samples Received	Date Printed
5 °C	29-Jan-2011	07-Feb-2011

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles Alpha Sub TAT	Requested Tests					Sample Remarks
				METALS_S O	OG_HEM_S	TPH/E_S	TPH/P_S	VOC_S	
STR11013122-09A	B-5-24	SO 01/24/11 11:14	1 1 5	Pb	Oil and Grease	TPH/E_N	GAS-C	BTEX/OXY/1,2-DCA/EDB_C	
STR11013122-10A	B-5-32	SO 01/24/11 11:30	1 1 5	Pb	Oil and Grease	TPH/E_N	GAS-C	BTEX/OXY/1,2-DCA/EDB_C	

Comments:

Security seals intact. Frozen ice. Saturday delivery. Samples kept cold and secure until login on Monday. Oil and Grease subbed to CLS. Amended 2/7/11 @ 14:53: Per Alan Dudding deleted TPH-Ident and added TPH/E w/ Nevada limits to samples -06A through : -10A. EA

Signature	Print Name	Company	Date/Time
	Elizabeth Adcox	Alpha Analytical, Inc.	2-7-11 1458

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

CA

WorkOrder : STR11013122

Report Due By : 5:00 PM On : 07-Feb-11

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

Report Attention	Phone Number	Email Address
Kasey Jones	(530) 676-6000 x	kaseyjones@statusinc.net

EDD Required : Yes

Sampled by : Allan Dudding

PO :

Client's COC # : 31518

Job : 2076-0301-01/German Auto

Cooler Temp	Samples Received	Date Printed
5 °C	29-Jan-11	31-Jan-11

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			Requested Tests					Sample Remarks			
				Alpha	Sub	TAT	METALS_S O	OG_HEM_S	TPH/E_HCI D_O	TPHP_S	VOC_S				
STR11013122-01A	B-4-4	SO	01/24/11 08:58	1	0	5	Pb				GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-02A	B-4-8	SO	01/24/11 09:03	1	0	5	Pb				GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-03A	B-4-12	SO	01/24/11 09:09	1	0	5	Pb				GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-04A	B-4-24	SO	01/24/11 09:25	1	0	5	Pb				GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-05A	B-4-32	SO	01/24/11 09:37	1	0	5	Pb				GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-06A	B-5-4	SO	01/24/11 10:51	1	1	5	Pb	Oil and Grease	X		GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-07A	B-5-8	SO	01/24/11 10:55	1	1	5	Pb	Oil and Grease	X		GAS-C	BTEX/OXY/1,2-DCA/EDB_C			
STR11013122-08A	B-5-12	SO	01/24/11 11:00	1	1	5	Pb	Oil and Grease	X		GAS-C	BTEX/OXY/1,2-DCA/EDB_C			

Comments: Security seals intact. Frozen ice. Saturday delivery. Samples kept cold and secure until login on Monday. Oil and Grease subbed to CLS. :

Signature	Print Name	Company	Date/Time
<i>K Murray</i>	K Murray	Alpha Analytical, Inc.	1/31/11 1345

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : STR11013122
Report Due By : 5:00 PM On : 07-Feb-11

Client:
 Stratus Environmental
 3330 Cameron Park Drive
 Suite 550
 Cameron Park, CA 95682-8861

Report Attention	Phone Number	E Mail Address
Kasey Jones	(530) 676-6000 x	kaseyjones@statusinc.net

EDD Required : Yes

Sampled by : Allan Dudding

PO :

Client's COC # : 31518 Job : 2076-0301-01/German Auto

Cooler Temp	Samples Received	Date Printed
5 °C	29-Jan-11	31-Jan-11

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	Collection Date	No. of Bottles			Requested Tests					Sample Remarks
				Alpha	Sub	TAT	METALS_S O	OG_HEM_S	TPH/E_HCI_D_O	TPHP_S	VOC_S	
STR11013122-09A	B-5-24	SO	01/24/11 11:14	1	1	5	Pb	Oil and Grease	X	GAS-C	BTEX/OXY/ 1,2-DCA/EDB_C	
STR11013122-10A	B-5-32	SO	01/24/11 11:30	1	1	5	Pb	Oil and Grease	X	GAS-C	BTEX/OXY/ 1,2-DCA/EDB_C	

Comments: Security seals intact. Frozen ice. Saturday delivery. Samples kept cold and secure until login on Monday. Oil and Grease subbed to CLS. :

Signature	Print Name	Company	Date/Time
<i>K Murray</i>	K Murray	Alpha Analytical, Inc.	1/31/11 1345

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:

Company Name Stratus Environmental
 Attn: Kasey Jones
 Address 3330 Cameron Park Dr. #550
 City, State, Zip Cameron Park, CA 95682
 Phone Number 530-676-6004 Fax 530-676-6005



Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21
 Sparks, Nevada 89431-5778
 Phone (775) 355-1044
 Fax (775) 355-0406

31518

Samples Collected From Which State?
 AZ CA NV WA **DOD Site**
 ID OR OTHER Page # 1 of 1

Consultant / Client Name			Job #		Job Name		Analyses Required					Data Validation Level: III or IV		
German Auto			2076-0301-01		German Auto							EDD/EDF? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		
Address			Report Attention / Project Manager									Global ID # <u>T0600100639</u>		
301 E. 14th St.			Name: <u>Kasey Jones</u>									REMARKS		
City, State, Zip			Email: <u>kaseyjones@stratusinc.net</u>											
San Leandro, CA			Phone: _____ Mobile: <u>415-516-0373</u>											
Time Sampled	Date Sampled	Matrix* See Key Below	P.O. #	Lab ID Number	Office (Use Only)	Sample Description	TAT	Field Filtered	# Containers**	GRO (80/15 M)	TPH Finger print by 8015	Oil and Grease	BTEX, SOX, 1,2-DCB, EOB (8260B)	Total Lead (6010)
0858	1/24	SO		STR11013122-01		B-4-4	Std.		1P	X			X	X
0903				FOR 02		B-4-8								
0909				03		B-4-12								
0925				04		B-4-24								
0937				05		B-4-32								
1051				06		B-5-4				X	X			
1055				07		B-5-8								
1100				08		B-5-12								
1114				09		B-5-24								
1130				10		B-5-32								

ADDITIONAL INSTRUCTIONS:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action (NAC 445.0636 (c) (2)). Sampled By: Allan Dudding

Relinquished by: (Signature/Affiliation) <u>[Signature] / Stratus</u>	Received by: (Signature/Affiliation) <u>[Signature] / deSelle</u>	Date: <u>1-28-11</u>	Time: <u>11:15</u>
Relinquished by: (Signature/Affiliation) <u>[Signature] / deSelle</u>	Received by: (Signature/Affiliation) <u>[Signature] / Murray</u>	Date: <u>1/31/11</u>	Time: <u>10:45</u>
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other
NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.