PORT OF OAKLAND

January 29, 2003

Mr. Lawrence Kolb, Acting Executive Director
REGIONAL WATER QUALITY CONTROL BOARD,
SAN FRANCISCO BAY
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Report of Supplemental Site Investigation
Rolls-Royce Engine Services, Test Cell Facility
6701 Earhart Road, Oakland, California
North Field, Oakland International Airport

Dear Mr. Kolb:

Enclosed you will find a copy of the Kleinfelder document entitled " Report of Supplemental Site Investigation, Rolls Royce Engine Services, Test Cell Facility, 6701 Earhart Road, Oakland, California", dated August 23, 2002.

Should you have any questions concerning the enclosed report, please contact me directly at (510) 627-1118.

Sincerely,

Dale Klettke, CHMM
Associate Environmental Scientist

Enclosure

c: with enc. Scott Seery, Alameda County, Department of Environmental Protection
c: w/o enc. Roberta Schoenholz, EH & SC
Michael Visconti, Airport Properties
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KLEINFELDER

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REPORT OF
SUPPLEMENTAL SITE INVESTIGATION
ROLLS-ROYCE ENGINE SERVICES
TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA

August 23, 2002

REPORT OF SUPPLEMENTAL SITE INVESTIGATION ROLLS-ROYCE ENGINE SERVICES TEST CELL FACILITY 6701 EARHART ROAD OAKLAND, CALIFORNIA

August 23, 2002

A Report Prepared for:

Wendel, Rosen, Black & Dean
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REPORT OF
SUPPLEMENTAL SITE INVESTIGATION
ROLLS-ROYCE ENGINE SERVICES
TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA

Project No. 17646/RPT

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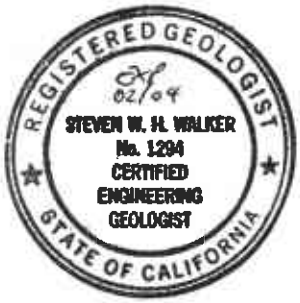

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August 23, 2002

SUPPLEMENTAL SITE INVESTIGATION
ROLLS-ROYCE ENGINE SERVICES
TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA

TABLE OF CONTENTS

Section *Page*

LIST OF TABLES, PLATES, AND APPENDICES

TABLES

PLATES

APPENDICES

1. EXECUTIVE SUMMARY

Kleinfelder, Inc. (Kleinfelder) conducted a Supplemental Site Investigation at the Rolls-Royce Engine Services-Oakland, Inc. (Rolls-Royce or RRESO) Test Cell Facility (the site) located at 6701 Earhart Road, Metropolitan Oakland International Airport (MOIA)-North Field, Oakland, California (Plate 1). The purpose of this investigation was to assess the potential impacts of petroleum hydrocarbons, volatile organic compounds (VOCs), and/or metals to soil and groundwater beneath certain areas of the Rolls-Royce Test Cell Facility and the property immediately west of it.

The objectives of this Supplemental Site Investigation were to:

- Further assess the current extent and magnitude of impacted soil and groundwater at the Rolls-Royce Test Cell Facility;
- Evaluate the potential source(s) of chemical impacts to soil and groundwater based on the document review and site reconnaissance; and
- Develop data to support further investigation or remediation efforts, as necessary.

On the basis of the results of previous investigations by EMCON and others, the information supplied by the Port, and the site reconnaissance, a series of 26 supplemental soil borings were advanced to further evaluate the following onsite areas of concern:

- The three jet fuel USTs;
- The vicinity of the 1998 fuel release into pipeline trenches;
- The offsite storm water drainage ditch system;
- The oily discharge from the gas compressors; and
- The existing groundwater monitoring wells.

Up to three soil samples were collected from each boring beginning at the ground surface (or just beneath pavement and base rock, as conditions permitted), at approximately 1 foot below ground

surface (bgs), and at about 3 feet bgs. Soil samples were generally not collected for chemical analysis below the water table, which occurs between 3 and 5 feet bgs depending on the season. A total of 45 soil samples, 25 reconnaissance groundwater samples (when sufficient sample volume was available), and 5 monitoring well groundwater samples were analyzed for petroleum hydrocarbons, volatile organic compounds (VOCs), and metals.

The analytical results of soil and groundwater samples from the Test Cell Facility and the surrounding property were compared to the Risk-Based Screening Levels (RBSLs). RBSLs were developed by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) as guidance to "expedite the preparation of environmental risk assessments at site where impacted soil and groundwater have been identified" (RWQCB, 2000).

The results of the soil and groundwater samples collected to date at the Rolls-Royce Test Cell Facility indicate that the former fuel pipeline trench is the primary area of concern for releases of petroleum hydrocarbons and associated VOCs that persist at concentrations exceeding industrial site RBSLs. Although soil and groundwater remediation has been performed beneath the trench and at a recovery well, residual fuel continues to act as a source of hydrocarbons to groundwater. Concentrations of petroleum hydrocarbons and metals that exceed RBSLs for industrial/commercial sites also are present in shallow soil and groundwater beneath the unlined ditch west of the site. Past releases of storm water runoff from the Test Cells 1 through 4 area are the most likely source of hydrocarbons and metals.

Petroleum hydrocarbons and metals found in offsite soil at depth are most likely the result of waste materials disposed of at the NPORD Site and not a result of Test Cell operations. The concentrations of metals and hydrocarbons detected beneath the northwestern portion of the Test Cell Facility are most likely the result of past waste disposal at the NPORD Site, over which Test Cells 5 and 6 and other structures were constructed. Impacts here cannot be clearly attributed to activities at the Test Cell Facility, either now or in the past.

The shallow groundwater is typically not considered to be a potential source of drinking water due to its poor quality and salinity. However, releases of petroleum hydrocarbon, metals, and VOCs in the area of Test Cells 1 through 4 have impacted groundwater in excess of regulatory agency guidelines for non-drinking water sources as well.

Although areas with chemical concentrations less than the industrial site RBSLS may not warrant remediation at this time, future development in these areas that involves soil excavation or construction dewatering could generate materials for disposal that would be characterized as hazardous waste.

2. INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) has prepared this *Report of Supplemental Site Investigation* at the Rolls-Royce Engine Services-Oakland, Inc. (Rolls-Royce or RRESO) Test Cell Facility (the site) located at 6701 Earhart Road, Metropolitan Oakland International Airport (MOIA)-North Field, Oakland, California (Plate 1). The Final Workplan for this investigation dated June 27, 2002, was prepared for Wendel, Rosen, Black & Dean, LLP (WRBD), outside counsel to the Port. Drafts of the Workplan were reviewed, revised, and approved by WRBD, the Port, and RRESO (Rolls-Royce, 2002).

This report describes the investigative methods used to assess the potential impacts of petroleum hydrocarbons, volatile organic compounds (VOCs), and/or metals to soil and groundwater beneath certain areas of the Rolls-Royce Test Cell Facility and the property immediately west of it. The site history summary and background information is based on: 1) information provided to Kleinfelder by the Port, and 2) documents obtained by Kleinfelder from the files of the Alameda County Department of Environmental Health (ACDEH), including those pertaining to the adjacent North Port of Oakland Refuse Disposal (NPORD) landfill site to the east.

2.1 OBJECTIVES AND SCOPE OF WORK

The objectives of the Supplemental Site Investigation were to:

- Further assess the current extent and magnitude of impacted soil and groundwater at the Rolls-Royce Test Cell Facility;
- Evaluate the potential onsite and offsite source(s) of chemical impacts to soil and groundwater based on document review, site reconnaissance, and site investigation activities; and
- Develop data to support further investigation or remediation efforts, as necessary.

To meet these objectives, Kleinfelder performed the following scope of work:

- Conducted a site inspection of the Test Cell Facility and adjacent property;
- Performed a soil and reconnaissance groundwater sampling and analysis program; and
- Prepared this report of investigation.

3. BACKGROUND INFORMATION

3.1 SITE DESCRIPTION

The Test Cell Facility (Plate 2) is built on artificial fill material adjacent to tidal wetlands at the north end of Earhart Road on MOIA property. It is surrounded by fencing and comprises an area of approximately 2.3 acres. The Test Cell Facility consists of six engine test cells with auxiliary structures (sheds, pump house, waste water sumps, oil/water separator, control buildings, gas conditioning facility, air receivers, cooling towers, and flare stack), one aboveground fuel tank for liquefied petroleum (LP) gas (30,000 gallons), and three underground storage tanks (USTs) for Jet Fuel A (one 10,000-gallon and two, paired 8,000-gallon tanks).

Groundwater beneath the site is typically shallow and is encountered between approximately 3 to 5 feet below ground surface (bgs). It is anticipated to flow in a westerly direction beneath the site based on previous site groundwater monitoring reports (Envirometrix Corporation [EMC], 1996b, 1997, 1998). The depth to water varies seasonally and may be tidally influence to a limited extent by the wetlands east of the site. There are three shallow groundwater monitoring wells at the site itself, and two monitoring wells are associated with the NPORD Site to the east (Alisto Engineering Group, 1995).

An unlined ditch that borders the southwestern side of the Test Cell site formerly received storm water runoff from the facility; runoff water is now contained and treated. The ditch drains southward through an underground pipe to a channel on airport property. A pumping station lifts water from the channel across the Earhart Road levee to the tidal wetland east of the site where it flows to San Leandro Bay.

3.2 SITE HISTORY SUMMARY

The following site summary is taken primarily from the reviewed reports and correspondence regarding the Rolls-Royce Test Cell Facility provided by the Port or obtained by Kleinfelder.

Although information about early site history is incomplete, the Test Cell Facility is thought to have been built circa World War II by the U.S Navy to test repaired aircraft engines. A portion of the Test Cell site may have been built over the eastern side of the former NPORD Site to the west. According to cross-sections prepared by Golder Associates (1989), a portion of the site does not appear to be underlain by the building demolition debris (wood, concrete, brick, and steel) reportedly disposed of in the landfill until about 1960. However, Rolls-Royce has indicated that construction debris and other refuse were uncovered during the construction of the newer Test Cells 5 and 6 (RRESO, 2002).

National Airmotive Corporation (NAC), under a lease from the Port, took over the Test Cell Facility from the Navy as part of their aircraft engine maintenance operations at MOIA in the late 1960s and subsequently enlarged it. We understand that NAC's operations in Oakland, including the Test Cell and the Maintenance Facility at 7200 Earhart Road (formerly Lockheed Street), were purchased by Rolls-Royce in 1999. We further understand that Rolls-Royce has assumed responsibility for environmental issues involving the former NAC operations and facilities. Rolls-Royce continues to operate the Test Cell Facility under a lease from the Port.

3.2.1 Documented Releases

According to legal counsel for NAC, General Counsel Associates (GCA, 1999b), there were three documented instances of chemical releases at the Test Cell Facility in the 1990s:

1. September 1992 – An accidental release of 1,150 gallons of Jet Fuel A apparently occurred adjacent to two USTs in the northwest corner of the facility. The released product was mostly contained but some was speculated to have entered the uncapped backfill near the USTs (ACDEH, 1996a).

2. April or May 1994 – An accidental discharge of "gray water," or water containing oil from test cell engine wash down operations, occurred near the southwest corner of the facility. Prior to the 1960s and until 1978, gray water reportedly was discharged to an unlined ditch west of the site. In 1978, NAC began treating the gray water through an oil/water separator prior to

discharge. In 1992, NAC stopped discharging treated gray water from the site and had it transported offsite for disposal (EMCON, 1996). After the 1994 release, the ACDEH conducted surface soil sampling west of the Test Cell Facility in and around the drainage channel in May 1994. The ACDEH detected up to 15 percent unspecified "oil and grease" and one elevated concentration of lead in the nine soil samples

3. October 1998 – Petroleum hydrocarbons identified as a mixture of "old motor oil, diesel, and/or kerosene" were discovered during trenching operations for upgrades to the 10,000-gallon jet fuel UST and associated fuel lines. The source of the hydrocarbons was suspected to be from "unidentified leak(s) in the 10,000-gallon Jet Fuel A UST and/or associated piping, or from one or more historical surface spills in and around the storage tank (GCA, 1998).

No further release incidents have reportedly occurred since 1998, although incidences of storm water runoff from the site to the west apparently continue to the present day.

3.2.2 Consent Judgment

As a result of the first two incidents, a Complaint for Civil Penalties and Injunctive Relief was filed against NAC on October 17, 1994, accompanied by a concurrent Stipulation for Consent Judgment reflecting settlement terms between Alameda County and NAC. It was stipulated that NAC pay costs and penalties of $200,000 and one year later pay additional costs of $125,000 to "investigate, monitor, and/or remediate the effects of the discharges of that certain spill of Jet A Fuel and the discharges of oil-containing water at or near the Test Cell Facility." However, NAC could receive credit for the latter amount against costs incurred with complying with the terms of the Consent Judgment.

The Consent Judgement also required NAC to conduct an environmental review of its operations to bring it into compliance with environmental regulations, and to "undertake and complete such action, if any, as required by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), to respond to the matters set forth in the DTSC *Report of Violations*, dated June 29, 1994, served upon NAC." Further information regarding the specifics of the DTSC

Report of Violations and NAC's compliance this last item (Paragraph 5 E) was not available during Kleinfelder's review and was not mentioned in Rolls-Royce's letter of November 7, 2000 to the Port or in GCA correspondence. Therefore, Kleinfelder can make no conclusion regarding the resolution of Paragraph E. Because the Alameda County District Attorney has closed the case on the Consent Judgement, we infer that Paragraph E was addressed to their satisfaction.

3.2.3 Jet Fuel Release Investigation

To assess the impact of the 1992 fuel release, NAC conducted a subsurface investigation in the vicinity of the two USTs in April and November 1995 (EMCON, 1996). Petroleum hydrocarbons in excess of 1,000 milligrams per kilogram (mg/kg) were detected in soil in the immediate vicinity of the USTs. Groundwater next to the USTs and to the west was locally impacted by petroleum hydrocarbons and aromatic hydrocarbon compounds (except benzene). Soil and groundwater in other directions away from the USTs did not appear to be impacted by this release event. However, no soil or groundwater remediation was undertaken by NAC in the vicinity of the two 8,000-gallon USTs as a result.

3.2.4 Gray Water Release Investigation

To investigate the 1994 gray water release, NAC retained EMCON to advance five borings in the drainage ditch area immediately west of the Test Cell Facility boundary in November 1995 and found petroleum hydrocarbons greater than 1,000 mg/kg in soil at two locations. Cadmium, chromium, copper, lead, and mercury were detected in surface soil samples at concentrations exceeding waste disposal limits if the soil were disposed of offsite. However, the investigated area was adjacent to the NPORD, and EMCON speculated that the metals detected could have been associated with disposal activities at the adjacent landfill (EMCON, 1996). A November 3, 1995 ACDEH memorandum to file noted that there are two monitoring wells (MW-3 and MW-4) associated with the NPORD, and in a meeting held that day ACDEH recommended that NAC gain access to these wells for sampling on the western side of the Test Cell. No further investigation or remediation of the elevated petroleum hydrocarbon and metals concentrations west of the Test Cell was performed by NAC and the NPORD wells were not sampled as recommended.

3.2.5 ACDEH Actions

On February 20, 1996, ACDEH notified the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), that results of sampling monitoring wells at the NPORD site indicated that "the presence of organic compounds [jet fuel constituents] in sampled groundwater from the southeast portion of the [landfill] site (that portion adjoining the NAC test site) is from a source not associated with the landfill." In ACDEH's opinion metals identified in the soil samples collected in the drainage ditch area "appear[s] to be from soil materials incorporated into the fill overlying the landfill site, and not from the known releases occurring at the NAC facility." Further, the ACDEH noted that "surface water collects at a pumping station located a short distance southeast of both the subject landfill and NAC test site. Collected water is subsequently pumped into a tidal marsh located immediately east of Earhart Road." Water from the unlined surface culvert or ditch west of the test site flows to the pond via a pipe through a levee. The ACDEH suggested that "discharges to the tidal marsh would be subject to a National Pollutant Discharge Elimination System (NPDES) permit evaluation and consequent testing prior to discharge." At this time, a documented RWQCB response to the ACDEH letter, if any, is unavailable.

3.2.6 Groundwater Monitoring

The following day, February 21, 1996, ACDEH requested that NAC install three groundwater monitoring wells along the eastern side of the Test Cell Facility to "ensure that the jet fuel plume is stable and not migrating towards the tidal marsh" to the east. NAC retained EMC to install the three wells (two along Earhart Road and one in the southwest corner of the facility) in March 1996 (EMC, 1996a and b). The wells were sampled annually in 1996 through 1998. Initial concentrations of jet and/or diesel fuel detected in 1996 diminished and were not detectable by 1998. No aromatic or semi-volatile organic compounds were detected in the groundwater samples. EMC indicated that the groundwater flow direction over the three monitored years was consistently westward, away from the tidal marsh. The final groundwater monitoring report provided by NAC in mid-1998 indicated no detectable spread of Jet Fuel A from the 1992 release and case closure was requested (EMC, 1998).

3.2.7 Pipeline Release Response

After the 1998 petroleum product release in a pipeline trench, Foss Environmental Services, Inc. (FES) contained the product, disposed of excavated impacted soil, and installed a passive product recovery device in a sump constructed in the trench backfill (FES, 1998). The amount of free product recovery diminished rapidly from the initial amounts, and according to NAC records, a total of approximately 3.6 gallons of product were recovered between October 1998 and May 2000 (NAC, 2000a). Soil samples obtained from stained areas remaining in the trenches after excavation was completed contained between 230 and 18,000 mg/kg jet fuel (FES, 1998). The single-wall fuel lines were reportedly removed from the trenches prior to backfilling; Trenches 1 and 3 now contain double-wall fuel lines. Trench 2 no longer contains a fuel line.

3.2.8 Case Closure Status

As of August 1999, the ACDEH had not closed the case. The ACDEH did not require NAC to perform additional work regarding the Test Cell as the conditions of the Consent Judgment had been met to the satisfaction of the Alameda County District Attorney.

3.3 ASSESSMENT OF ENVIRONMENTAL CONDITIONS

On the basis of Kleinfelder's review of written information available to date from the Port, Rolls-Royce, and the ACDEH, NAC/Rolls-Royce conducted initial investigations of the source areas and the approximate extent of the various jet fuel, gray water, and other petroleum hydrocarbon releases at the Test Cell Facility since 1992, and performed limited groundwater monitoring for three years. NAC/Rolls-Royce has improved fuel and chemical handling procedures at the Test Cell to minimize potential future threats to the environment. However, remediation of the impacts of the past releases was focused on surface cleanup of the 1992 fuel release, and limited soil excavation and installation/operation of a product removal skimmer to address residual free product from the 1998 fuel release. Approximately 30 tons of hydrocarbon-impacted soil was excavated to a depth of

30 inches along the pipeline trenches and disposed of offsite, and 3.6 gallons of product were recovered from the well (FES, 1998).

3.3.1 Jet Fuel Release at USTs

Documented concentrations of petroleum hydrocarbons, aromatic hydrocarbons and metals evidently remain in the immediate vicinity of the two 8,000-gallon jet fuel A USTs and in the unlined drainage ditches west of the Test Cell Facility. To our knowledge, NAC investigated these areas but did not addressed removal of residual chemical concentrations in soil and groundwater here. Past impacts to surface water of the tidal marsh east of the site are unknown. Storm water runoff continues to be discharged via a concrete drain to the unlined ditch west of the site and flows southward to the pumping station. Oily appearing residue is present in the concrete drain and unlined ditch (Plate 2).

The maximum concentrations of jet fuel (6,100 mg/kg) and motor oil (1,100 mg/kg) were detected in soil samples from borings B-1 and B-2 adjacent to the paired USTs. The RWQCB has used 100 mg/kg total petroleum hydrocarbons (TPH) as a minimum criterion for additional characterization in underground fuel storage tank (UFST) investigations. The DTSC has used 1,000 mg/kg TPH as a minimum criterion for remediation; this concentration is considered hazardous by virtue of its potential ignitability. The San Francisco International Airport (SFIA) Tier 0 (no further action needed) Saltwater Ecological Protection Zone (SEPZ) cleanup standards for both jet fuel and diesel fuel in soil are 200 mg/kg (Order No. 99-045, RWQCB, 1999). The SEPZ Tier 1 (site remediation, risk management, and/or monitoring needed) risk-based cleanup standards for jet fuel and diesel fuel in soil are 640 and 518 mg/kg, respectively. No cleanup standards were established for motor oil at SFIA.

More recently, the RWQCB has published Risk-Based Screening Levels (RBSLs) that range from 100 to 400 mg/kg for gasoline and 100 to 500 mg/kg for middle distillates (jet and diesel fuel) depending on land use, depth, and beneficial use of groundwater. The RBSL for residual fuels (and motor oil) ranges from 500 to 1,000 mg/kg in soil (RWQCB, 2000). Thus, the TPH concentrations

detected in soil at the Test Cell site exceed the criteria used in similar environments of the Bay Area to evaluate petroleum hydrocarbon releases.

The SFIA Tier 0 SEPZ groundwater cleanup standard for both jet and diesel fuels is 0.2 milligram per liter (mg/L); the Tier 1 SEPZ cleanup standard is 0.64 mg/L. No SFIA cleanup standards were established for motor oil. The groundwater RBSLs for gasoline, jet and diesel fuels, and motor oil range from 0.1 to 0.5 mg/L, 0.1 to 0.64 mg/L, 0.1 to 0.64 mg/L, respectively, depending on land and groundwater use (RWQCB, 2000). Groundwater samples collected by EMCON in 1996 next to the USTs contained jet fuel concentrations ranging from 6.3 to 270 mg/L. Given the Test Cell's close proximity to a wetland, no Dilution Attenuation Factor (DAF) based on distance to surface water is appropriate in this case.

3.3.2 Storm Water Runoff Ditch

In the vicinity of the storm water ditch adjacent to the Test Cell, EMCON detected diesel fuel and motor oil concentrations greater than 1,000 mg/kg in soil. Lead was detected in four soil samples above the EPA Preliminary Remediation Goal (PRG) for industrial soil of 750 mg/kg. Cadmium and chromium were also detected at concentrations less than their respective industrial PRGs but above EPA Soil Screening Levels (SSLs) for potential impact to groundwater. Copper and mercury were also detected above typical background concentrations. Groundwater beneath the ditches contained up to 190 mg/L jet fuel, 36 mg/L diesel fuel, and 5.2 mg/l motor oil.

The concentrations of petroleum hydrocarbons and metals in soil and/or groundwater beneath and adjacent to the Test Cell Facility indicate that the past releases at this site have adversely impacted the environment. Evidence also suggests that surface water also could have been impacted by past disposal practices and accidental releases of gray water to the unlined ditch west of the site.

4. SITE INVESTIGATION ACTIVITIES

4.1 SITE RECONNAISSANCE

In the company of representatives of the Port and Rolls-Royce, Kleinfelder conducted a site reconnaissance of the Rolls-Royce Test Cell Facility and the adjacent property on March 7, 2001, to observe what materials are used and stored onsite, the general facility layout, and current site conditions. Kleinfelder observed that general housekeeping was satisfactory and no violations of hazardous materials handling and storage practices were noted. However, two additional items were observed and noted by the Port and Kleinfelder as areas of concern. Oily discharge was present on the ground in two locations on the west side of the liquefied petroleum (LP) gas compressor facility. The Rolls-Royce representative indicated that the discharge was "blowdown" from the gas compressors. In addition, standing water with oily appearing sediment was present in the concrete drainage channel leading westward from the Test Cell site and also in portions of the unlined ditch into which it drains.

Tentative boring locations were selected during the site reconnaissance and these were marked in a return visit on June 28, 2002, after approval of the Final Workplan by RRESO. An underground utility locating service identified underground utilities in the boring locations at the Test Cell Facility prior to drilling.

4.2 SAMPLING RATIONALE

As stated in Section 1, Introduction, the objectives of this Supplemental Site Investigation were to:

- Further assess the current extent and magnitude of impacted soil and groundwater at the Rolls-Royce Test Cell Facility;
- Evaluate the potential source(s) of chemical impacts to soil and groundwater based on the document review and site reconnaissance; and
- Develop data to support further investigation or remediation efforts, as necessary.

On the basis of the results of previous investigations by EMCON and others, the information supplied by the Port, and the site reconnaissance, a series of 26 supplemental soil borings were advanced to further evaluate the following onsite areas of concern:

- The three jet fuel USTs;
- The vicinity of the 1998 fuel release into pipeline trenches;
- The offsite storm water drainage ditch system;
- The oily discharge from the gas compressors; and
- The existing groundwater monitoring wells.

The 26 borings for the supplemental site investigation were labeled KB-1 through KB-26 and are shown on Plate 2. The soil borings were numbered sequentially and included the identifier "K" to differentiate them from previous borings. The rationale for the boring and sampling locations is discussed in the following paragraphs.

Borings KB-1 through KB-3 were advanced in the immediate vicinity of the two jet fuel USTs (Tanks 2 and 3) to verify residual petroleum hydrocarbon concentrations in soil and groundwater from the 1992 release. Another direct-push boring (KB-4) was located about 25 feet east of the USTs. Two additional borings (KB-5 and KB-6) were located to the west in the assumed downgradient direction near EMCON boring OB-1 (Plate 2). The 10,000-gallon UST (Tank 1) was investigated with two borings (KB-7 and KB-8) to the east and west, respectively.

Residual petroleum hydrocarbons in the 1998 pipeline trenches were assessed by four borings, KB-9 through KB-12. Borings were located immediately adjacent to Trenches 1 and 2 as conditions permitted. Boring KB-8 near Tank 1 also served to evaluate residual petroleum hydrocarbon concentrations in soil adjacent to Trench 1 (Plate 2).

Seven borings (KB-13 through KB-19) were advanced in the unlined drainage ditch west of the Test Cell. Hand augers were used to drill some of the borings, as portions of this area are not accessible

to truck-mounted equipment and much of the ditch is overgrown with blackberry bushes (Plate 2). Boring KB-13 was located near EMCON borings OB-2 and OB-3 to verify elevated petroleum hydrocarbon and lead concentrations detected previously. Borings KB-14 through KB-19 were positioned in low areas of the ditch or at a depression adjacent to the southeast corner of the Test Cell Facility that is subject to storm water runoff.

Soil impacts from the blowdown from the LP gas compressors were investigated by borings KB-20 and KB-21. Because of their close proximity to each other, only boring KB-21 was sampled for groundwater. Due to the restricted access around this corner of the property, a limited-access drilling rig was required here and at boring KB-3 near the USTs.

Borings KB-22 through KB-25 were located approximately 50 feet apart immediately west of the Test Cell Facility on the NPORD Site to evaluate chemicals and metals in offsite soil and groundwater adjacent to the oil/water separator, storage shed, and LP gas compressors (Plate 2). Boring KB-26 was installed at the Port's request to the south of the Test Cell Facility on MOIA property to test for potential groundwater impacts adjacent to the ditch outlet pipe (Plate 2).

Existing Test Cell Facility groundwater monitoring wells MW-1 through MW-3 and NPORD Site monitoring wells MW-3 and MW-4 were sampled as part of this investigation. The depth to water in each well was measured and groundwater samples were collected and analyzed for chemicals of concern.

4.3 SOIL BORING PROCEDURES

Prior to beginning this investigation, Kleinfelder obtained a drilling permit from the Alameda County Public Works Agency, Water Resources Division, and a site-specific Health and Safety Plan (HASP) was prepared for this project. In addition, Kleinfelder field staff attended a RRESO safety briefing. Boring locations within the Test Cell Facility were cleared for underground utilities by using a private utility locator service.

Truck-mounted, direct-push equipment equipped with a vibratory hammer was used to advance the majority of the borings at the Test Cell Facility. Direct-push technology minimizes the amount of waste soil generated by the investigation and a truck-mounted rig was able to reach most of the boring locations. A smaller limited-access drilling rig or hand-auger sampling equipment were used to sample in areas with restricted clearance or access issues. The direct-push down-hole equipment consisted of a 4-foot-long, hollow rod approximately 2 inches in outside diameter and an inner core barrel with sample liners to retrieve continuous soil samples. Hand soil sampling equipment consisted of a hand auger and a 6-inch-long, stainless-steel drive sampler connected to a slide hammer. All down-hole equipment was steam cleaned prior to entering the site and was cleaned between borings and before leaving the site.

4.3.1 Soil Sample Collection

Up to three soil samples were collected from each boring beginning at the ground surface (or just beneath pavement and base rock, as conditions permitted), at approximately 1 foot bgs, and at about 3 feet bgs. However, soil samples were generally not collected for chemical analysis below the water table, which occurs between 3 and 5 feet bgs depending on the season. Half of the 26 direct-push borings extended to the planned depth of 8 feet bgs. The rest of the borings ranged in depth from 1 to 12 feet, extending a minimum of 1 foot below the top of the water table or as required to collect a sufficient volume of water for analyses. The depth of seven borings was limited due to refusal by hard subsurface conditions that prevented the sampling tools from penetrating.

Soil samples were collected in stainless steel or butyrate plastic liners, inspected for signs of staining and odors, and screened for hydrocarbon or VOC vapors using a photoionization detector (PID). An experienced Kleinfelder geologist logged the samples lithologically in the field. The sample tubes were then sealed on both ends with Teflon® sheets and plastic end caps, labeled with the boring name, depth, project number and sampler's name, placed in a Ziploc® bag and stored in a cooler with water ice for delivery to the analytical laboratory under chain-of-custody procedures.

4.3.2 Reconnaissance Groundwater Sample Collection

Reconnaissance groundwater samples were collected from 24 borings. Boring KB-21 was sampled for groundwater rather than KB-20, and no groundwater sample could be obtained from KB-23 due to drilling refusal. One duplicate sample was collected from boring KB-13 for a total of 25 groundwater samples. Samples were obtained by inserting a ¾-inch-diameter slotted polyvinyl chloride (PVC) pipe to the total depth of the boring through the outer direct-push rod and then withdrawing the rod. Groundwater samples were collected from these temporary "wells" using a peristaltic pump and new tubing or a disposable bailer, depending on depth to water and well yield. Groundwater samples were placed in laboratory-supplied containers, labeled, and placed in a cooler with water ice.

4.3.3 Sealing of Borings

After the sampling of each boring was completed, the temporary PVC pipe was removed and each boring was backfilled from bottom to top with neat cement grout (one 94-pound sack of Portland cement mixed with 5 to 6 gallons of clean water). Paved surfaces were repaired with like materials. Investigation-derived wastes (IDW), such as wash water and soil, were separately drummed and temporarily held at the main RRESO site in labeled, U.S. Department of Transportation-approved, 55-gallon steel drums for later disposal by the Port.

4.4 MONITORING WELL SAMPLING PROCEDURES

To supplement reconnaissance-level groundwater samples from the borings, Kleinfelder sampled the three onsite groundwater monitoring wells, MW-1 through MW-3, installed by Envirometrix in 1996. The wells had not been sampled since July of 1998 at which time no detectable petroleum hydrocarbons or aromatic hydrocarbons were detected. In addition, two NPORD Site monitoring wells (NPORD MW-3 and NPORD MW-4) located immediately offsite were monitored (Plate 2). Well NPORD MW-3 was extensively damaged at the surface, but we were still able to obtain a sample from it.

Kleinfelder measured the depth to water and total depth of the wells using an electric water-level meter prior to sampling. The wells were purged of between three and five casing volumes of water to ensure that fresh formation water entered the wells prior to sampling. Field parameters of temperature, electrical conductivity (EC), and hydrogen ion index (pH) were measured during purging to indicate stabilization and purging of stagnant water. Purging and sampling were performed using disposable bailers and/or a submersible pump. Samples from the wells were decanted into appropriate laboratory-supplied containers, labeled, and placed in a cooler with water ice. Purge water was contained in 55-gallon drums for disposal by the Port as IDW (see above). Non-disposable sampling and measuring equipment was cleaned using tap water and detergent and rinsed using deionized water prior to reuse. Wash water was contained for disposal as IDW.

4.5 ANALYTICAL PROGRAM

Selected soil and groundwater samples were submitted under chain of custody to a Port-approved analytical laboratory. The laboratory was certified by the California Environmental Protection Agency (Cal/EPA), Department of Health Services (DHS), under the Environmental Laboratory Accreditation Program (ELAP) to perform the requested analyses. Soil samples were selected for analysis on the basis of field observations, PID readings, and depth above groundwater. Soil samples from beneath the water table were not collected for analysis because groundwater samples are generally more representative of chemical concentrations in the saturated zone. The selected 45 soil samples, 25 reconnaissance groundwater samples (when sufficient sample volume was available), and 5 monitoring well groundwater samples (plus duplicate and trip blank samples as appropriate) were analyzed for the following parameters based on analytical results of previous investigations:

- Total petroleum hydrocarbons quantified as diesel fuel (TPH-d), jet fuel A (TPH-jf), and motor oil (TPH-mo) using EPA Test Method 8015 (modified) with silica gel cleanup. (Both filtered and unfiltered water samples were analyzed to evaluate the effect of entrained soil particles on hydrocarbon concentrations);

- Total petroleum hydrocarbons quantified as gasoline (TPH-g) using EPA Test Method 8015 (modified);
- VOCs using EPA Method 8260;
- Seventeen CCR Title 22 metals (antimony, arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc) using the EPA Method 6010/7000 series. Water samples were lab-filtered and acidified to analyze for dissolved metals; and
- Organic lead using methods specified in the DHS Leaking Underground Fuel Tank (LUFT) Manual.

The samples were analyzed on a standard turnaround basis and preliminary results transmitted to WRBD, the Port, and RRESO as they were available.

In addition, several quality assurance/quality control (QA/QC) samples were collected to verify field sampling techniques and laboratory precision. These QA/QC samples included duplicate samples and trip blanks, as appropriate. One duplicate sample was collected during reconnaissance groundwater sampling from boring KB-13 and three trip blanks for VOC analysis were submitted. The duplicate sample was analyzed for TPH-d, TPH-jf, TPH-mo, TPH-g, and VOCs. Because disposable samplers were used, no equipment rinseate blanks were collected.

5. RESULTS OF INVESTIGATION

5.1 FIELD OBSERVATIONS

Copies of the field investigation notes and data sheets are included in Appendix A. Lithologic logs of the 26 borings are presented in Appendix B. The subsurface lithology to the maximum depth investigated (12 feet bgs) generally consists of 1 to 4 feet of dark to olive-brown sandy clay and gravel fill material overlying greenish gray clayey sand down to depths between 4 and 11 feet bgs. In the area immediately west of the Test Cell Facility and at borings KB-3, -5, -6, -13, and -20 through -25, landfill debris such as wood, rubber, glass, plastic and leather was encountered. The landfill debris was observed to a depth of approximately 8 feet bgs. Below this depth, Young Bay Mud consisting of dark greenish gray, low to high plasticity sandy clay with lenses of sand and gravel was encountered to total depth. During boring advancement, distinct petroleum hydrocarbon odors were noted at borings KB-2, -10, -11, and -12.

Groundwater was encountered between approximately 0.5 foot bgs in the unlined ditch west of the Test Cell to about 8 feet bgs west of the site in the NPORD Site. The average depth to water was about 4 to 5 feet bgs beneath much of the Test Cell.

5.2 ANALYTICAL RESULTS

The analytical results of soil and groundwater samples are presented in Tables 1 through 9 and the certified laboratory data sheets are attached as Appendix C.

5.2.1 Total Petroleum Hydrocarbons

Soil

The maximum concentrations of TPH quantified as diesel, jet fuel, and/or gasoline were detected in soil samples from borings KB-10, -11, and -12 (Table 1) adjacent to the former fuel pipeline trench where the 1998 release occurred (see Section 2.2 and Plate 2). Samples from this area contained up

The TPH analyses for the three onsite monitoring wells detected TPH-d at 51 µg/L (filtered) from MW-3 (Table 3). However, this concentration is just above the laboratory reporting limit of 50 µg/L and the unfiltered sample did not contain any detectable TPH compounds. NPORD monitoring well MW-4 just west of the Test Cell contained TPH-d, TPH-jf, and TPH-g at around 100 µg/L each.

5.2.2 Volatile Organic Compounds

Soil

The analytical results for individual VOCs in soil samples are listed in Table 4. The most significant VOC concentrations were detected in samples from borings KB-10 through KB-12 adjacent to the former pipeline trenches. Naphthalene, n-butyl benzene, sec-butyl benzene, isopropyl benzene, 4-isopropyl toluene, and n-propyl benzene were found in soil samples from these three borings at concentrations ranging from 3,100 to 230,000 µg/kg (3.1 to 230 mg/kg). In addition, 2-butanone (or methyl ethyl ketone [MEK]), 2-hexanone, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and total xylenes were detected at much lower concentrations ranging from 9 to 92 µg/kg in several borings. These other VOCs were detected in samples from borings in the vicinity of the twin USTs (KB-2, KB-4, and KB-6), the pipeline trench, or the unlined ditch (KB-13, KB-15, and KB-18).

Groundwater

Similar to the soil sample results, the highest VOC concentrations in reconnaissance groundwater samples were at Borings KB-10 through KB-12 (Table 5). Nineteen VOCs, largely similar to those found in soil samples, were detected in 17 groundwater samples. Eight samples did not contain detectable VOCs. The maximum VOC concentration of 240 µg/L naphthalene was detected at KB-10, and the greatest number of VOCs (12) was detected in the sample from KB-12. The most prevalent VOC detected was the solvent 2-butanone (MEK) in 12 of 25 samples. Benzene was detected in only two samples from KB-11 and KB-12. Methyl tertiary-butyl ether (MTBE) was detected at borings KB-8 through KB-12 and in the reconnaissance sample from offsite boring KB-19 located 25 feet southwest of well MW-3.

Five VOCs were detected in the groundwater samples collected from the monitoring wells (Table 6). Carbon disulfide and 2-butanone (MEK) were detected at offsite NPORD well MW-3, and chlorobenzene and 1,4-dichlorobenzene were detected in NPORD well MW-4. Onsite well MW-3 contained MTBE at 1.5 µg/L, but no other VOCs. Samples from onsite wells MW-1 and MW-2 did not contain detectable VOCs.

The analyses of the daily trip blank samples did not detect reportable concentrations of VOCs (Table 5). Likewise, the primary and duplicate groundwater samples from KB-13 did not contain detectable VOCs.

5.2.3 Metals

Soil

Analytical results for the 17 CCR Title 22 metals in soil samples are presented in Table 7. Neither selenium nor thallium was detected, but each of the other 15 metals was detected at least twice. Unusually high amounts of lead and zinc (up to 4,200 and 17,000 mg/kg, respectively) were noted in soil samples from borings KB-1, KB-5, KB-6, KB-13, KB-14, KB-20, KB-22, and KB-24. All these borings, except KB-1, are within the current NPORD Site. However, the north end of the Test Cell Facility was reportedly built over portions of the NPORD Site. High concentrations of barium (2,200 mg/kg) and mercury (100 mg/kg) also were detected in the 3-foot sample from KB-1. Copper was detected at 3,000 mg/kg in the 2-foot bgs sample from KB-13.

Organic lead, such as that found in leaded gasoline, was detected in 11 samples with a maximum concentration of 51 mg/kg (KB-6 at 2 feet bgs). The rest of the detectable organic lead ranged from 0.54 to 3 mg/kg.

Groundwater

Twenty-three groundwater samples were laboratory filtered and acidified prior to analysis for CCR Title 22 metals; the analytical results are listed in Table 8. Dissolved antimony, arsenic, barium, cadmium, lead, selenium, and zinc were detected in one or more samples. The greatest number of metals detected in a sample (5) was found in the sample from offsite boring KB-25. Organic lead was detected in three reconnaissance groundwater samples (KB-11, -13, and -22). Samples from the monitoring wells contained naturally occurring barium, which also was detected in all reconnaissance groundwater samples (Table 9).

6. EVALUATION OF RESULTS

6.1 RISK-BASED SCREENING LEVELS

The analytical results of soil and groundwater samples from the Test Cell Facility and the surrounding property were compared to the RBSLs developed by the RWQCB as guidance to "expedite the preparation of environmental risk assessments at site where impacted soil and groundwater have been identified" (RWQCB, 2000). Soil and groundwater data can be directly compared to the RBSLs and the need for additional work evaluated. RBSLs are not enforceable standards and their use is subject to approval of the RWQCB for cases under regulatory agency direction.

For this investigation, the RBSLs for shallow soil (less than 3 meters deep) at industrial/commercial sites where groundwater is **not** considered to be a current or potential source of drinking water were use for comparison to the analytical results in most cases. Values for particular compounds or metals that exceed their respective RBSLs have been noted in boldface type in Tables 1 through 9. These compounds or metals in soil and groundwater samples have been noted next to the boring locations and sample depths on Plates 3 through 8.

Several points should be mentioned regarding the RBSLs for metals in soil and groundwater. The RBSL for arsenic (13 mg/kg) in deeper soils (deeper than 3 meters bgs) was used for comparison rather than the shallow soil RBSL (2.7 mg/kg). Bay Area soils typically contain naturally occurring background concentrations of arsenic ranging from 6 to 65 mg/kg (Shacklette and Boerngen, 1984). The U.S. mean value of arsenic in soil is 5.2 mg/kg. Therefore, the shallow soil RBSL of 2.7 is unrealistic for comparison, especially in an industrial/commercial setting. For groundwater, the RBSLs for metals are based on freshwater aquatic life protection criteria, which assumes a direct discharge of groundwater to fresh surface water as worst case. As this is not a likely scenario at the Test Cell site that is bordered by tidal wetlands and underlain by non-potable, saline groundwater, the groundwater RBSLs for metals are not strictly applicable for this study. However, the

comparison is included to be consistent and complete, and to indicate areas of potential concern for metals impacts to groundwater.

Discussions of the comparison of analytical results to RBSLs for TPH, VOCs, and metals follow.

6.2 TOTAL PETROLEUM HYDROCARBONS

TPH quantified as gasoline-, diesel fuel-, and/or jet fuel-range compounds have been identified at concentrations greatly exceeding their respective RBSLs (400 to 500 mg/kg, see Table 1). The maximum concentrations of TPH-g, -d, and -jf, (up to 13,000, 29,000, 42,000 mg/kg, respectively) were detected in soil samples from borings KB-10 through KB-12 in the vicinity of the former fuel pipeline trench (Plate 3). Groundwater at these boring locations is similarly impacted (Table 2, Plate 4). These residual values are most likely the result of the 1998 fuel line release and/or previous leakage events that were not fully remediated. TPH-mo impacts to subsurface soil (2 feet bgs) that exceed the RBSL (1,000 mg/kg) also are found at KB-10 and KB-11 and at KB-6 and KB-25, the latter within the NPORD area and likely the result of landfill refuse. Although there were petroleum hydrocarbons detected in the vicinity of the three USTs onsite, the concentrations detected near the tanks do not exceed RBSLs.

Groundwater samples were collected from borings KB-13 through KB-18 in the unlined ditch that received storm water runoff from the Test Cell in the past. Filtered sample results, when available, were compared to RBSLs. Groundwater here (except at KB-17) has been impacted by TPH-d, -g, -jf, and -mo compounds at concentrations above their respective RBSLs (Table 4, Plate 4). Groundwater samples from the onsite and offsite monitoring wells did not contain TPH compounds at levels that exceed RBSLs (Table 3).

6.3 VOLATILE ORGANIC COMPOUNDS

Analytical results for VOC analyses were compared to commercial/industrial land use RBSLs to evaluate potential risk-based impacts. Naphthalene results for both soil and groundwater exceeded the RBSLs at KB-10 (Tables 4 and 5, Plates 5 and 6). Soil samples from KB-11 and KB-12 also

contained naphthalene above the RBSL of 4,900 µg/kg. Groundwater from boring KB-16 contained naphthalene at 68 µg/L, about three times greater than the RBSL of 24 µg/L. No other VOC concentrations exceeded their respective RBSLs for potential health risks at a commercial/industrial site. Although benzene was detected in groundwater at KB-11 and KB-12, the values of 3.9 and 4.9 µg/L do not exceed the RBSL of 46 µg/L for non-drinking water sources. The naphthalene and other VOC compounds detected are generally indicative and typical of engine fuels or industrial solvents. However, no significant concentrations of chlorinated solvents were detected in soil or groundwater.

6.4 METALS

Soil samples from borings in the northwestern portion of the Test Cell Facility and in the adjacent portions of the NPORD Site contained significant concentrations of metals exceeding industrial/commercial site RBSLs. Antimony, arsenic, barium, copper, lead, mercury, and zinc RBSLs were exceeded in the 3-foot bgs sample from KB-1 (Table 7, Plate 7). Elevated levels of copper, lead and zinc were the metals most often detected in samples from KB-5, -6, -21, -22, and -24. Because these metals were detected in samples from 2 feet bgs or deeper, and because this portion of the Test Cell was reportedly built over a portion of the NPORD Site, these metals concentrations in soil are attributed to the former disposal facility and not the Test Cell.

Groundwater samples from this northwestern area typically contained dissolved lead (including one instance of organic lead) and zinc above RBSLs (Plate 8). As discussed above, the groundwater RBSLs for metals may not be strictly applicable for this site, but they corroborate the metals results for soil samples by indicating lead and zinc impacts to groundwater in the same areas.

Copper, lead, mercury, and zinc were detected above RBSLS in surface soil samples collected in the unlined ditch west of the facility in borings KB-13 through KB-18 (Plate 7). Deeper samples were not collected here because the groundwater was present just below the surface. Again, groundwater RBSLs for lead and zinc were exceeded by the analytical results for samples from these borings (Plate 8). The impacts from metals to surface soil capping the NPORD Site could be attributable to

runoff from the Test Cell Facility or to the landfill itself. The fact that surface soils off the northwest corner of the site do not contain elevated metals content indicates that storm water runoff from the Test Cell Facility in the past as the more likely source. The practice of discharging storm water runoff without treatment was discontinued years ago; runoff is now collected and treated through a settling tank and oil/water separator.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

The results of the soil and groundwater samples collected to date at the Rolls-Royce Test Cell Facility indicate that the former fuel pipeline trench is the primary area of concern for releases of petroleum hydrocarbons and associated VOCs that persist at concentrations exceeding industrial site RBSLs. Although soil and groundwater remediation has been performed beneath the trench and at a recovery well, residual fuel continues to act as a source of hydrocarbons to groundwater. Concentrations of petroleum hydrocarbons and metals that exceed RBSLs for industrial/commercial sites also are present in shallow soil and groundwater beneath the unlined ditch west of the site. Past releases of storm water runoff from the Test Cells 1 through 4 area are the most likely source of hydrocarbons and metals.

Petroleum hydrocarbons and metals found in offsite soil at depth are most likely the result of waste materials disposed of at the NPORD Site and not a result of Test Cell operations. The concentrations of metals and hydrocarbons detected beneath the northwestern portion of the Test Cell Facility are most likely the result of past waste disposal at the NPORD Site, over which Test Cells 5 and 6 and other structures were constructed. Impacts here cannot be clearly attributed to activities at the Test Cell, either now or in the past.

The shallow groundwater is typically not considered to be a potential source of drinking water due to its poor quality and salinity. However, releases of petroleum hydrocarbon, metals, and VOCs in the area of Test Cells 1 through 4 have impacted groundwater in excess of regulatory agency guidelines for non-drinking water sources as well.

Although areas with chemical concentrations less than the industrial site RBSLS may not warrant remediation at this time, future development in these areas that involves soil excavation or construction dewatering could generate materials for disposal that would be characterized as hazardous waste.

7.2 RECOMMENDATIONS

On the basis of this site investigation, Kleinfelder recommends that the subsurface soil and groundwater in the vicinity of the former fuel pipeline trenches and the unlined drainage ditch be remediated to remove the continuing source of hydrocarbons and prevent future impacts to soil, groundwater, and potentially surface water. The unlined drainage ditch west of the facility should be excavated to remove impacted soil and groundwater, and the storm water runoff system at the facility should be reviewed and upgraded if needed to improve its function and prevent offsite discharge during storm events. Although petroleum hydrocarbons were detected in the vicinity of the three USTs onsite, the concentrations detected do not warrant further remediation at this time.

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TABLES

Table 1. Analytical Results of Soil Samples
Total Petroleum Hydrocarbons
Rolls Royce Test Cell Facility
Oakland, CA

Boring Number	Depth (feet)	Sample Date (2002)	TPH as Diesel (mg/kg)	TPH as Gasoline (mg/kg)	TPH as Jet Fuel (mg/kg)	TPH as Motor Oil (mg/kg)
KB-01	1.0	15-Jul	3.1 [c]	<1.0	1.2	31
KB-01	3.0	15-Jul	4.9 [c]	<1.0	1.2	26
KB-02	1.0	15-Jul	58 [e]	11 [j]	51	56
KB-02	4.0	15-Jul	78 [f]	34 [j]	82	7
KB-03	0.0	15-Jul	3.1 [c]	<1.0	<1.0	47
KB-03	1.0	15-Jul	2.5 [c]	<1.0	<1.0	47
KB-04	1.0	15-Jul	44 [b,c,d]	<1.0	34	160
KB-04	4.0	15-Jul	<1.0	<1.0	<1.0	<5.0
KB-05	0.0	16-Jul	4.4 [c]	<1.0	<1.0	46
KB-05	2.0	16-Jul	1.1 [c]	<1.0	<1.0	11
KB-06	0.0	16-Jul	1.6 [c]	<1.0	<1.0	18
KB-06	2.0	16-Jul	380 [c]	<1.0	120	**1,700**
KB-07	1.0	15-Jul	1.4 [c]	<1.0	<1.0	13
KB-07	4.0	15-Jul	<1.0	<1.0	<1.0	<5.0
KB-08	1.0	16-Jul	1.5 [c]	6.2 [n]	<1.0	13
KB-08	4.0	16-Jul	<1.0 [c]	1.7 [n]	<1.0	6.5
KB-09	1.0	16-Jul	<1.0	3.8 [j]	<1.0	<5.0
KB-09	4.0	16-Jul	14 [b,c]	<1.0	4.1	50
KB-10	2.0	16-Jul	**29,000** [m]	**13,000** [j]	**42,000**	**2,500**
KB-11	1.0	16-Jul	**2,600** [m]	**3,000** [j]	**3,500**	530
KB-11	3.0	16-Jul	**1,600** [c,g]	**1,300** [j]	**1,800**	**1,900**
KB-12	1.0	16-Jul	470 [c,g]	**480** [j]	**630**	33
KB-12	3.0	16-Jul	**21,000** [m]	**6,400** [j]	**25,000**	<5,000

Table 1. Analytical Results of Soil Samples
Total Petroleum Hydrocarbons
Rolls Royce Test Cell Facility
Oakland, CA

Boring Number	Depth (feet)	Sample Date (2002)	TPH as Diesel (mg/kg)	TPH as Gasoline (mg/kg)	TPH as Jet Fuel (mg/kg)	TPH as Motor Oil (mg/kg)
KB-13	0.0	17-Jul	72 [b,c]	5.7 [a]	14	300
KB-13	2.0	17-Jul	140 [f,p]	92 [j]	170	66
KB-14	0.0	17-Jul	7.9 [b,c]	<1	2.2	89
KB-15	0.0	17-Jul	60 [b,c]	<1	13	180
KB-16	0.0	17-Jul	63 [b,c]	<1	12	180
KB-17	0.0	12-Jul	92 [b,c]	3.7 [j]	49	110
KB-18	0.0	17-Jul	77 [e,p]	<1	17	190
KB-19	0.0	12-Jul	24 [b,c]	<1.0	17	24
KB-20	1.0	15-Jul	3.2 [c]	<1.0	<1.0	93
KB-20	3.0	15-Jul	1.1 [c]	<1.0	<1.0	8.7
KB-21	1.0	15-Jul	3.9 [c]	<1.0	<1.0	45
KB-21	3.0	15-Jul	1.8 [c]	<1.0	<1.0	9.7
KB-22	1.0	16-Jul	16 [c]	<1.0	16	130
KB-22	3.0	16-Jul	1.3 [c]	<1.0	<1.0	9.6
KB-23	0.0	17-Jul	23 [c]	<1	<1	190
KB-24	0.0	17-Jul	2.9 [c]	<1	<1	25
KB-24	2.0	17-Jul	13 [c]	<1	<1	120
KB-25	0.0	17-Jul	6.9 [c]	<1	<5	88
KB-25	2.0	17-Jul	<200 [c]	<1	<200	**3,100**
KB-26	0.0	12-Jul	20 [b,c]	<1.0	8.2	43
KB-26	3.0	12-Jul	4.4 [b,c]	<1.0	2.4	15
		RBSLs	*500*	*400*	*500*	*1,000*

Table 1. Analytical Results of Soil Samples
Total Petroleum Hydrocarbons
Rolls Royce Test Cell Facility
Oakland, CA

Boring Number	Depth (feet)	Sample Date (2002)	TPH as Diesel (mg/kg)	TPH as Gasoline (mg/kg)	TPH as Jet Fuel (mg/kg)	TPH as Motor Oil (mg/kg)

Notes:

TPH	Total Petroleum Hydrocarbons by modified EPA Method 8015, silica gel clean-up used for TPH as diesel, jet fuel, and motor oil
mg/kg	Milligrams per kilogram
RBSLs	Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).
Bold	Values in **boldface** type exceed their respective RBSLs

Lab Qualifiers:

a	Heavier gasoline range compounds are significant (aged gasoline?).
b	Diesel range compounds are significant; no recognizable pattern
c	Oil range compounds are significant.
d	Liquid sample contains greater than ~2 volume % sediment.
e	Aged diesel(?) is significant.
f	Unmodified or weakly modified diesel is significant.
g	Kerosene/kerosene range
j	Strongly aged gasoline or diesel range compounds are significant.
m	Stoddard solvent
n	No recognizable pattern
p	Fuel oil.

Table 2. Analytical Results of Reconnaissance Groundwater Samples
Petroleum Hydrocarbons
Rolls Royce Test Cell Facility
Oakland, CA

Well Number	Sample Date (2002)	TPH as Diesel		TPH as Gasoline	TPH as Jet Fuel		TPH as Motor Oil	
		Unfiltered (µg/L)	Filtered * (µg/L)	Unfiltered (µg/L)	Unfiltered (µg/L)	Filtered * (µg/L)	Unfiltered (µg/L)	Filtered * (µg/L)
KB-01-GW	15-Jul	6,800 [b,c,d]	280 [b,c,d]	100 [d,j]	4,500	170	13,000	520
KB-02-GW	15-Jul	5,700 [c,d,f]	110 [b,d]	68 [d,j]	4,600	99	4,600	<250
KB-03-GW	15-Jul	1,900 [b,c,d]	240 [b,d]	<50 [d]	830	130	2,500	<250
KB-04-GW	15-Jul	38,000 [c,d,g]	360 [d,f]	<50 [d]	42,000	370	13,000	<250
KB-05-GW	16-Jul	11,000 [b,c,d,h]	100 [b/k,d,h]	120 [a,d,h]	6,800	86	32,000	<250
KB-06-GW	16-Jul	1,600 [b,c]	<50	<50	400	<50	4,600	<250
KB-07-GW	15-Jul	5,000	260	<50 [d,h]	5,900	240	1,400	<250
KB-08-GW	16-Jul	2,000 [c]	70 [k]	310 [n]	1,400	<50	7,600	<250
KB-09-GW	16-Jul	1,500 [c,d]	54 [b,d]	100 [d,n]	1,100	<50	8,700	<250
KB-10-GW	16-Jul	1,600,000 [g]	110 [d,h,k]	**27,000** [d,h,j]	2,400,000	98	100,000	<250
KB-11-GW	16-Jul	460,000 [c,d,h]	**3,000** [g,h]	**7,900** [h,j]	830,000	**3,300**	120,000	570
KB-12-GW	16-Jul	21,000 [g,h]	460 [h,k]	**1,300** [h,j]	24,000	500	1,300	<250
KB-13-GW	17-Jul	39,000 [c,d,f,g,h]	**9,900** [d,f,h]	**590** [d,h,j]	39,000	**11,000**	26,000	**1,100**
KB-13-GW (Dup)	17-Jul	8,200 [c,d,f]	**1,900** [c,d,f]	**500** [d,j]	8,300	**1,900**	5,300	**880**
KB-14-GW	17-Jul	56,000 [b,c,d,h]	**3,200** [b,c,d]	150 [d,j]	13,000	**750**	82,000	**4,500**
KB-15-GW	17-Jul	110,000 [b,c,d,k]	**5,300** [b,c,d,k]	**1,200** [d,j]	200,000	**4,800**	52,000	**2,200**
KB-16-GW	12-Jul	8,800 [b,c,d,k]	**5,900** [b,c]	**2,600** [b,d]	9,900	**6,500**	2,100	**690**
KB-17-GW	12-Jul	460 [b,d]	460 [b]	220 [b,d]	480	500	300	<250
KB-18-GW	12-Jul	9,300 [b,c,d,h]	**4,700** [b,c,h]	**1,600** [d,h,j]	9,300	**4,500**	2,300	**2,600**
KB-19-GW	12-Jul	110 [b,d]	<50	<1.0	84	<50	<250	<250
KB-21-GW	15-Jul	6,100 [c,d]	57 [b,d]	<50 [d]	2,800	<50	54,000	<250

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Table 2. Analytical Results of Reconnaissance Groundwater Samples
Petroleum Hydrocarbons
Rolls Royce Test Cell Facility
Oakland, CA

Well Number	Sample Date (2002)	TPH as Diesel		TPH as Gasoline	TPH as Jet Fuel		TPH as Motor Oil	
		Unfiltered (µg/L)	Filtered * (µg/L)	Unfiltered (µg/L)	Unfiltered (µg/L)	Filtered * (µg/L)	Unfiltered (µg/L)	Filtered * (µg/L)
KB-22-GW	16-Jul	6,700 [b,c]	<50	<50	1,800	<50	30,000	<250
KB-24-GW	17-Jul	14,000 [b,c]	160 [b,c]	<50	2,300	<50	29,000	450
KB-25-GW	17-Jul	4,500 [c,d]	130 [b,c,d]	<50 [d]	1,000	<50	23,000	320
KB-26-GW	18-Jul	NA	NA	<50	NA	NA	NA	NA
	RBSLs	*640*		*500*	*640*		*640*	

Notes:

TPH	Total Petroleum Hydrocarbons by modified EPA Method 8015; silica gel clean-up used for TPH as diesel, jet fuel, and motor oil.
*	Samples were filtered to remove entrained sediment with adsorbed hydrocarbons to provide better representation of dissolved fractions of groundwater.
µg/L	Micrograms per liter
RBSLs	Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).
Bold	Values in **boldface** type exceed their respective RBSLs; only filtered sample results for TPH-d, TPH-jf, and TPH-mo compared to RBSLs

Lab Qualifiers:

a	Heavier gasoline range compounds are significant (aged gasoline?).
b	Diesel range compounds are significant; no recognizable pattern
c	Oil range compounds are significant.
d	Liquid sample contains greater than ~2 volume % sediment.
f	Unmodified or weakly modified diesel is significant.
g	Kerosene/kerosene range
h	Lighter than water immiscible sheen/product is present.
j	Strongly aged gasoline or diesel range compounds are significant.
k	Gasoline range compounds are significant.
n	No recognizable pattern

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Table 3. Analytical Results of Monitoring Well Samples
Petroleum Hydrocarbons
Rolls Royce Test Cell Facility
Oakland, CA

Well Number	Sample Date (2002)	TPH as Diesel		TPH as Gasoline	TPH as Jet Fuel		TPH as Motor Oil	
		Unfiltered (µg/L)	Filtered (µg/L)	Unfiltered (µg/L)	Unfiltered (µg/L)	Filtered (µg/L)	Unfiltered (µg/L)	Filtered (µg/L)
MW-1	2-Jul	<50	<50	<50	<50	<50	<250	<250
MW-2	2-Jul	<50	<50	<50	<50	<50	<250	<250
MW-3	2-Jul	<50	51 [b]	<50	<50	<50	<250	<250
NPORD MW-3	2-Jul	<50	<50	<50	<50	<50	<250	<250
NPORD MW-4	2-Jul	100 [b]	85 [b]	110 [a]	98	<50	<250	<250
	RBSLs	*640*		*500*	*640*		*640*	

Notes:

TPH	Total Petroleum Hydrocarbons by modified EPA Method 8015 Silica gel clean-up used for TPH as diesel, jet fuel, and motor oil
µg/L	Micrograms per liter
RBSLs	Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).

Lab Qualifiers:

a	Heavier gasoline range compounds are significant (aged gasoline?).
b	Diesel range compounds are significant; no recognizable pattern

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Table 4. Analytical Results of Soil Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	2-Butanone (µg/kg)	n-Butyl benzene (µg/kg)	sec-Butyl benzene (µg/kg)	Isopropylbenzene (µg/kg)	2-Hexanone (µg/kg)	4-Isopropyl toluene (µg/kg)	Naphthalene (µg/kg)	n-Propyl benzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	Xylenes (total) (µg/kg)
KB-01	1.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-01	3.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-02	1.0	15-Jul	<10	<5.0	5.2	<5.0	<5.0	<5.0	<5.0	<5.0	7.8	<5.0	<5.0
KB-02	4.0	15-Jul	<10	<5.0	17	<5.0	<5.0	<5.0	<5.0	<5.0	43	9.0	<5.0
KB-03	0.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-03	1.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-04	1.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-04	4.0	15-Jul	15	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-06	0.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-06	2.0	16-Jul	11	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-07	1.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-07	4.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-08	1.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Table 4. Analytical Results of Soil Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	2-Butanone (µg/kg)	n-Butyl benzene (µg/kg)	sec-Butyl benzene (µg/kg)	Isopropylbenzene (µg/kg)	2-Hexanone (µg/kg)	4-Isopropyl toluene (µg/kg)	Naphthalene (µg/kg)	n-Propyl benzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	Xylenes (total) (µg/kg)
KB-08	4.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-09	1.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-09	4.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	11	<5.0	<5.0	<5.0	<5.0
KB-10	2.0	16-Jul	<10,000	97,000	38,000	25,000	<5,000	8,100	**230,000**	57,000	<5,000	<5,000	<5,000
KB-11	1.0	16-Jul	<2,000	14,000	4,300	1,500	<1,000	1,600	**5,300**	4,600	<1,000	<1,000	<1,000
KB-11	3.0	16-Jul	<2,000	7,100	1,800	<1,000	<1,000	<1,000	3,900	1,700	<1,000	<1,000	<1,000
KB-12	1.0	16-Jul	<400	<200	<200	<200	<200	<200	720	<200	<200	<200	<200
KB-12	3.0	16-Jul	<4,000	26,000	12,000	6,100	<2,000	3,400	**16,000**	19,000	<2,000	<2,000	<2,000
KB-13	0.0	17-Jul	<100	<50	<50	<50	1,300	<50	<50	<50	<50	<50	<50
KB-13	2.0	17-Jul	23	62	6.8	<5.0	<5.0	12	92	<5.0	50	39	18
KB-14	0.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-15	0.0	17-Jul	29	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-16	0.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Table 4. Analytical Results of Soil Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	2-Butanone (µg/kg)	n-Butyl benzene (µg/kg)	sec-Butyl benzene (µg/kg)	Isopropylbenzene (µg/kg)	2-Hexanone (µg/kg)	4-Isopropyl toluene (µg/kg)	Naphthalene (µg/kg)	n-Propyl benzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	Xylenes (total) (µg/kg)
KB-17	0.0	12-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-18	0.0	17-Jul	16	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-19	0.0	12-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-20	1.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-20	3.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-21	1.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-21	3.0	15-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-22	1.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-22	3.0	16-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-23	0.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-24	0.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-24	2.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-25	0.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Table 4. Analytical Results of Soil Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	2-Butanone (µg/kg)	n-Butyl benzene (µg/kg)	sec-Butyl benzene (µg/kg)	Isopropylbenzene (µg/kg)	2-Hexanone (µg/kg)	4-Isopropyl toluene (µg/kg)	Naphthalene (µg/kg)	n-Propyl benzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	Xylenes (total) (µg/kg)
KB-25	2.0	17-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-26	0.0	12-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
KB-26	3.0	12-Jul	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		RBSLs	*13,000*	*NE*	*NE*	*NE*	*NE*	*NE*	4,900	*NE*	*NE*	*NE*	*1,000*

Notes:

	Volatile Organic Compounds analyzed by EPA Method 8260B
µg/kg	Micrograms per kilogram
RBSLs	Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).
Bold	Values in **boldface** type exceed their respective RBSLs
NE	Not established

Table 5. Analytical Results of Reconnaissance Groundwater Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, CA

Well Number	Sample Date (2002)	Benzene (µg/L)	2-Butanone (µg/L)	n-Butyl benzene (µg/L)	sec-Butyl benzene (µg/L)	tert-Butyl benzene (µg/L)	Carbon disulfide (µg/L)	Chlorobenzene (µg/L)	Ethylbenzene (µg/L)	Isopropylbenzene (µg/L)	4-Isopropyl toluene (µg/L)	4-Methyl-2-pentanone (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	n-Propyl benzene (µg/L)	Styrene (µg/L)	Toluene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Xylenes (total) (µg/L)
KB-01-GW	15-Jul	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-02-GW	15-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.58	<0.5	<0.5	<0.5	1.4	<0.5	<0.5
KB-03-GW	15-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	<0.5	<0.5	<0.5	<0.5	4.1	<0.5	<0.5	3.3
KB-04-GW	15-Jul	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-05-GW	16-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	0.64	<0.5	4.0	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	1.2	0.63	0.74
KB-06-GW	16-Jul	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-07-GW	15-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-08-GW	16-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-09-GW	16-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-10-GW	16-Jul	<2.5	7.0	50	22	<2.5	<2.5	<2.5	<2.5	42	7.2	<2.5	4.9	**240**	86	<2.5	<2.5	7.4	<2.5	<2.5
KB-11-GW	16-Jul	3.9	3.7	<0.5	4.7	<0.5	<0.5	<0.5	<0.5	6.0	7.9	<0.5	30	9.8	3.0	<0.5	1.2	<0.5	<0.5	2.6
KB-13-GW (dup)	17-Jul	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
KB-12-GW	16-Jul	4.9	1.3	6.2	3.4	0.59	<0.5	<0.5	<0.5	3.7	2.4	<0.5	2.1	<0.5	5.4	<0.5	0.54	1.4	<0.5	1.4
KB-13-GW	17-Jul	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
KB-14-GW	17-Jul	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
KB-15-GW	17-Jul	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
KB-16-GW	12-Jul	<1.7	4.8	<1.7	4.0	<1.7	2.2	<1.7	<1.7	<1.7	5.2	<1.7	<1.7	**68**	2.6	<1.7	<1.7	24	2.1	2.0
KB-17-GW	12-Jul	<0.5	2.9	1.6	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.94	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-18-GW	12-Jul	<0.5	1.6	<0.5	2.9	<0.5	3.2	0.52	<0.5	<0.5	5.6	<0.5	<0.5	14	0.88	<0.5	<0.5	6.9	<0.5	1.9

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Table 5. Analytical Results of Reconnaissance Groundwater Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, CA

Well Number	Sample Date (2002)	Benzene (µg/L)	2-Butanone (µg/L)	n-Butyl benzene (µg/L)	sec-Butyl benzene (µg/L)	tert-Butyl benzene (µg/L)	Carbon disulfide (µg/L)	Chlorobenzene (µg/L)	Ethylbenzene (µg/L)	Isopropylbenzene (µg/L)	4-Isopropyl toluene (µg/L)	4-Methyl-2-pentanone (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	n-Propyl benzene (µg/L)	Styrene (µg/L)	Toluene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzene (µg/L)	Xylenes (total) (µg/L)
KB-19-GW	12-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-21-GW	15-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.9	<0.5	<0.5	1.9
KB-22-GW	16-Jul	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KB-24-GW	17-Jul	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
KB-25-GW	17-Jul	<5	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
KB-26-GW	18-Jul	<0.5	4.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank-1	15-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank-2	16-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trip Blank-3	17-Jul	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	RBSLs	*46*	*14,000*	*NE*	*NE*	*NE*	*NE*	*50*	290	*NE*	*NE*	*190*	*1,800*	*24*	*NE*	*NE*	*130*	*NE*	*NE*	*13*

Notes:

	Volatile Organic Compounds analyzed by EPA Method 8260B
µg/L	Micrograms per liter
MTBE	Methyl tertiary-butyl ether
RBSLs	Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).
Bold	Values in **boldface** type exceed their respective RBSLs
NE	Not established

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Table 6. Analytical Results of Monitoring Well Samples
Volatile Organic Compounds
Rolls Royce Test Cell Facility
Oakland, California

Well Number	Sample Date (2002	2-Butanone (µg/L)	Carbon disulfide (µg/L)	Chlorobenzene (µg/L)	1,4-Dichlorobenzene (µg/L)	MTBE (µg/L)
MW-1	2-Jul	<1.0	<0.5	<0.5	<0.5	<0.5
MW-2	2-Jul	<1.0	<0.5	<0.5	<0.5	<0.5
MW-3	2-Jul	<1.0	<0.5	<0.5	<0.5	1.5
NPORD MW-3	2-Jul	2.2	0.66	<0.5	<0.5	<0.5
NPORD MW-4	2-Jul	<1.0	<0.5	1.8	0.88	<0.5
	RBSLs	14,000	NE	50	15	1,800

Notes:

Volatile Organic Compounds analyzed by EPA Method 8260B

µg/L Micrograms per liter

MTBE Methyl tertiary-butyl ether

RBSLs Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).

NE Not established

Table 7. Analytical Results of Soil Samples
Dissolved Metals
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Lead-organic (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
KB-01	1.0	15-Jul	<2.5	6.4	170	<0.5	0.56	44	9.1	34	54	<0.5	0.17	<2.0	54	<2.5	<1.0	<2.5	35	97
KB-01	3.0	15-Jul	**99**	**24**	**2,200**	<0.5	4.7	52	5.9	**580**	**910**	<0.5	**100**	<2.0	24	<2.5	<1.0	<2.5	19	**3,800**
KB-02	1.0	15-Jul	<2.5	7.8	180	<0.5	0.78	49	11	45	79	<0.5	0.21	<2.0	77	<2.5	<1.0	<2.5	40	130
KB-02	4.0	15-Jul	<2.5	9.3	76	0.52	<0.5	17	3.7	12	11	<0.5	<0.06	<2.0	12	<2.5	<1.0	<2.5	35	42
KB-03	0.0	15-Jul	<2.5	5.8	130	<0.5	0.61	36	11	89	110	<0.5	0.29	<2.0	74	<2.5	<1.0	<2.5	31	120
KB-03	1.0	15-Jul	<2.5	10	320	<0.5	2.2	70	14	93	280	<0.5	0.44	<2.0	48	<2.5	<1.0	<2.5	49	510
KB-04	1.0	15-Jul	<2.5	5.0	52	<0.5	<0.5	6.5	7.0	20	4.1	<0.5	<0.06	<2.0	11	<2.5	<1.0	<2.5	28	39
KB-04	4.0	15-Jul	<2.5	11	140	0.67	<0.5	17	7.0	16	12	<0.5	0.074	<2.0	13	<2.5	<1.0	<2.5	37	55
KB-05	0.0	16-Jul	<2.5	7.2	210	<0.5	3.3	57	12	110	360	<0.5	0.43	<2.0	62	<2.5	<1.0	<2.5	35	480
KB-05	2.0	16-Jul	6.4	8.2	94	<0.5	0.67	120	16	**1,500**	120	<0.5	0.52	2.6	51	<2.5	<1.0	<2.5	29	230
KB-06	0.0	16-Jul	<2.5	11	230	<0.5	1.1	42	11	54	150	<0.5	0.19	<2.0	66	<2.5	<1.0	<2.5	35	450
KB-06	2.0	16-Jul	4.3	<2.5	21	<0.5	6.9	130	30	49	**2,200**	51	<0.06	3.3	8.4	<2.5	<1.0	<2.5	7.4	**17,000**
KB-07	1.0	15-Jul	<2.5	<2.5	62	<0.5	<0.5	9.8	11	25	4.0	<0.5	0.34	<2.0	6.5	<2.5	<1.0	<2.5	61	150
KB-07	4.0	15-Jul	<2.5	<2.5	9.6	<0.5	<0.5	82	22	10	<3.0	<0.5	0.10	<2.0	38	<2.5	<1.0	<2.5	71	32
KB-08	1.0	16-Jul	<2.5	4.5	78	<0.5	<0.5	31	6.1	20	35	<0.5	0.40	<2.0	22	<2.5	<1.0	<2.5	23	49
KB-08	4.0	16-Jul	<2.5	5.6	95	<0.5	<0.5	47	5.7	18	6.0	<0.5	<0.06	5.1	34	<2.5	<1.0	<2.5	31	35
KB-09	1.0	16-Jul	<2.5	9.9	56	0.62	<0.5	14	7.0	78	18	<0.5	0.14	<2.0	11	<2.5	<1.0	<2.5	77	79
KB-09	4.0	16-Jul	<2.5	4.7	82	<0.5	<0.5	30	7.3	17	21	<0.5	<0.06	<2.0	31	<2.5	<1.0	<2.5	24	52
KB-10	2.0	16-Jul	<2.5	<2.5	33	<0.5	<0.5	11	4.6	9.1	7.4	<0.5	<0.06	<2.0	16	<2.5	<1.0	<2.5	22	22
KB-11	1.0	16-Jul	<2.5	6.8	110	<0.5	<0.5	22	9.7	49	11	<0.5	0.18	<2.0	27	<2.5	<1.0	<2.5	58	92
KB-11	3.0	16-Jul	<2.5	3.3	38	<0.5	<0.5	9.4	4.3	8.6	100	2.3	0.071	<2.0	4.1	<2.5	<1.0	<2.5	15	110
KB-12	1.0	16-Jul	<2.5	11	100	<0.5	<0.5	26	8.9	27	13	<0.5	0.13	<2.0	28	<2.5	<1.0	<2.5	34	98
KB-12	3.0	16-Jul	<2.5	7.8	24	<0.5	<0.5	22	4.2	66	16	<0.5	<0.06	<2.0	33	<2.5	<1.0	<2.5	14	21

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Table 7. Analytical Results of Soil Samples
Dissolved Metals
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Lead-organic (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
KB-13	0.0	17-Jul	<2.5	10	490	<0.5	10	69	15	200	**1,700**	3	1.8	10	72	<2.5	<1	<2.5	31	**1,200**
KB-13	2.0	17-Jul	3.2	<5	940	<0.5	4.8	120	12	**13,000**	**4,200**	1.6	0.35	5.8	**210**	<2.5	<1	<2.5	13	**4,500**
KB-14	0.0	17-Jul	<2.5	4.3	730	<0.5	11	49	8.2	170	**2,400**	2.6	1.5	3.9	33	<2.5	3.8	<2.5	21	**1,700**
KB-15	0.0	17-Jul	<2.5	<2.5	55	<0.5	6.3	19	3.3	36	110	1.2	**73**	<2	18	<2.5	<1	<2.5	6.3	180
KB-16	0.0	17-Jul	<2.5	<5	190	<0.5	23	59	7.2	110	260	1.0	4.2	7.1	43	<2.5	<1	<2.5	25	570
KB-17	0.0	12-Jul	<2.5	6.6	170	<0.5	6.9	39	9.7	68	150	0.54	1.7	<2.0	48	<2.5	<1.0	<2.5	24	270
KB-18	0.0	17-Jul	<2.5	<5	190	<0.5	**12**	29	3.1	220	160	<0.5	2.3	<2	30	<2.5	<1	<2.5	16	**610**
KB-19	0.0	12-Jul	<2.5	5.8	55	<0.5	0.72	47	6.8	25	22	<0.5	0.098	<2.0	38	<2.5	<1.0	<2.5	37	90
KB-20	1.0	15-Jul	2.8	8.5	330	<0.5	2.0	45	11	110	570	<0.5	0.32	<2.0	47	<2.5	<1.0	<2.5	32	580
KB-20	3.0	15-Jul	28	6.7	420	<0.5	0.85	41	7.3	120	350	<0.5	0.44	10	51	<2.5	<1.0	<2.5	25	410
KB-21	1.0	15-Jul	<2.5	9.4	140	<0.5	1.0	39	11	54	160	<0.5	0.44	<2.0	50	<2.5	<1.0	<2.5	36	180
KB-21	3.0	15-Jul	<2.5	5.5	510	<0.5	2.4	37	6.7	91	170	<0.5	<0.06	<2.0	31	<2.5	<1.0	<2.5	21	**810**
KB-22	1.0	16-Jul	<2.5	7.4	140	<0.5	0.69	43	9.7	40	68	<0.5	0.10	<2.0	54	<2.5	<1.0	<2.5	32	130
KB-22	3.0	16-Jul	5.9	**30**	490	<0.5	**19**	540	11	**240**	650	<0.5	4.8	4.0	50	<2.5	<1.0	<2.5	32	**1,400**
KB-23	0.0	17-Jul	<2.5	10	180	<0.5	0.91	48	13	36	91	0.90	0.24	<2	77	<5	<1	<2.5	35	150
KB-24	0.0	17-Jul	12	11	340	<0.5	6.4	71	12	**230**	500	<0.5	0.52	<2	54	<2.5	<1	<2.5	35	**2,100**
KB-24	2.0	17-Jul	2.7	8.1	510	<0.5	2.8	34	6.7	120	**760**	0.90	0.33	<2	26	<2.5	<1	<2.5	33	**1,200**
KB-25	0.0	17-Jul	<2.5	4.5	170	<0.5	0.77	63	12	55	95	<0.5	0.15	5.6	73	<2.5	<1	<2.5	38	160
KB-25	2.0	17-Jul	<2.5	3.6	170	<0.5	1.1	24	6.3	57	240	1.1	<0.06	<2	33	<2.5	<1	<2.5	19	350
KB-26	0.0	12-Jul	<2.5	12	77	<0.5	1.9	150	7.5	59	350	<0.5	0.097	<2.0	42	<2.5	1.6	<2.5	43	110
KB-26	3.0	12-Jul	<2.5	5.5	22	<0.5	1.2	34	4.3	18	6.8	<0.5	<0.06	<2.0	23	<2.5	<1.0	<2.5	23	49
		RBSLs	*40*	*13**	*1,500*	*8*	*12*	*750*	*80*	*225*	*750*	*NE*	*10*	*40*	*150*	*10*	*40*	*29*	*200*	*600*

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Table 7. Analytical Results of Soil Samples
Dissolved Metals
Rolls Royce Test Cell Facility
Oakland, California

Boring Number	Depth (feet)	Sample Date (2002)	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Lead-organic (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thallium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)

Notes:

Dissolved metals analyzed by EPA Methods 6010/7000

mg/kg Milligrams per kilogram

RBSLs Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).

Bold Values in **boldface** type exceed their respective RBSLs

NE Not established

* RBSL for arsenic (13 mg/kg) in deeper soil (>3m) used for comparison due to naturally ocurring background levels of arsenic exceeding the shallow soil (<3m) RBSL of 2.7 mg/kg.

Table 8. Analytical Results of Reconnaissance Groundwater Samples
Dissolved Metals
Rolls Royce
Oakland, California

Well Number	Sample Date (2002)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Lead (mg/L)	Lead-organic (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Thallium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)
KB-01-GW	15-Jul	<0.006	<0.005	**0.50**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0067**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-02-GW	15-Jul	<0.01	0.0178	**0.68**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.011**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	**0.061**
KB-03-GW	15-Jul	<0.006	0.0108	**0.58**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0097**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	**0.15**
KB-04-GW	15-Jul	0.0101	0.0137	**1.5**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	**0.072**
KB-05-GW	16-Jul	<0.006	<0.005	**0.90**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-06-GW	16-Jul	<0.01 z	<0.005	**1.0**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-07-GW	15-Jul	<0.006	<0.005	**0.19**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-08-GW	16-Jul	<0.01 z	<0.005	**0.33**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-09-GW	16-Jul	<0.006	<0.005	**0.21**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-10-GW	16-Jul	<0.006	0.0212	**0.25**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-11-GW	16-Jul	<0.01 z	0.0113	**0.12**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	**0.011**	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-12-GW	16-Jul	<0.006	<0.010 z	**0.17**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-13-GW	17-Jul	<0.006	0.00812	**0.37**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0053**	**0.019**	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-14-GW	17-Jul	<0.006	0.00839	**0.48**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-15-GW	17-Jul	<0.006	<0.01 z	**0.38**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-16-GW	12-Jul	<0.05	<0.005	**0.14**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0064**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-17-GW	12-Jul	<0.05	0.0145	**0.37**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-18-GW	12-Jul	<0.05	<0.005	**0.66**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0054**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05

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Table 8. Analytical Results of Reconnaissance Groundwater Samples
Dissolved Metals
Rolls Royce
Oakland, California

Well Number	Sample Date (2002)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Lead (mg/L)	Lead-organic (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Thallium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)
KB-19-GW	12-Jul	<0.05	0.0131	**0.20**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-21-GW	15-Jul	<0.006	<0.010	**0.35**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0099**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	**0.17**
KB-22-GW	16-Jul	<0.006	0.0145	**0.84**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.034**	**0.0057**	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
KB-24-GW	17-Jul	<0.006	<0.005	**0.80**	<0.004	<0.005	<0.02	<0.05	<0.05	**0.0067**	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	**0.050**
KB-25-GW	17-Jul	0.00665	<0.005	**0.51**	<0.004	0.0055	<0.02	<0.05	<0.05	0.011	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	**0.86**
	RBSLs	*0.030*	*0.036*	*0.0039*	*0.0051*	*0.0011*	*0.18*	*0.003*	*0.0024*	*0.0032*	*0.0032*	*0.000012*	*0.24*	*0.0082*	*0.005*	*0.0012*	*0.04*	*0.019*	*0.023*

Notes:

Dissolved metals analyzed by EPA Methods 6010/7000 on filtered and acidified samples.

mg/L Milligrams per liter

RBSLs Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000). RBSLs based on freshwater aquatic life protection assuming a release of groundwater to surface water.

Bold Values in **boldface** type exceed their respective RBSLs; note that laboratory reporting limits exceed RBSLs in some cases.

NE Not established

Lab Qualifiers:

z Reporting limit raised due to matrix interference

KLEINFELDER

Table 9. Analytical Results of Monitoring Well Samples
Dissolved Metals
Rolls Royce
Oakland, California

Well Number	Sample Date (2002)	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Lead (mg/L)	Lead-organic (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Thallium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)
MW-1	2-Jul	<0.06	<0.05	**0.13**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
MW-2	2-Jul	<0.006	<0.005	**0.064**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
MW-3	2-Jul	<0.06	<0.05	**0.91**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
NPORD MW-3	2-Jul	<0.06	<0.05	**0.15**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
NPORD MW-4	2-Jul	<0.006	<0.005	**0.62**	<0.004	<0.005	<0.02	<0.05	<0.05	<0.005	<0.005	<0.0008	<0.05	<0.05	<0.005	<0.01	<0.005	<0.05	<0.05
	RBSLs	*0.030*	*0.036*	*0.0039*	*0.0051*	*0.001*	*0.18*	*0.003*	*0.0024*	*0.0032*	*NE*	*0.000012*	*0.24*	*0.0082*	*0.005*	*0.0012*	*0.040*	*0.019*	*0.023*

Notes:

Dissolved metals analyzed by EPA Methods 6010/7000

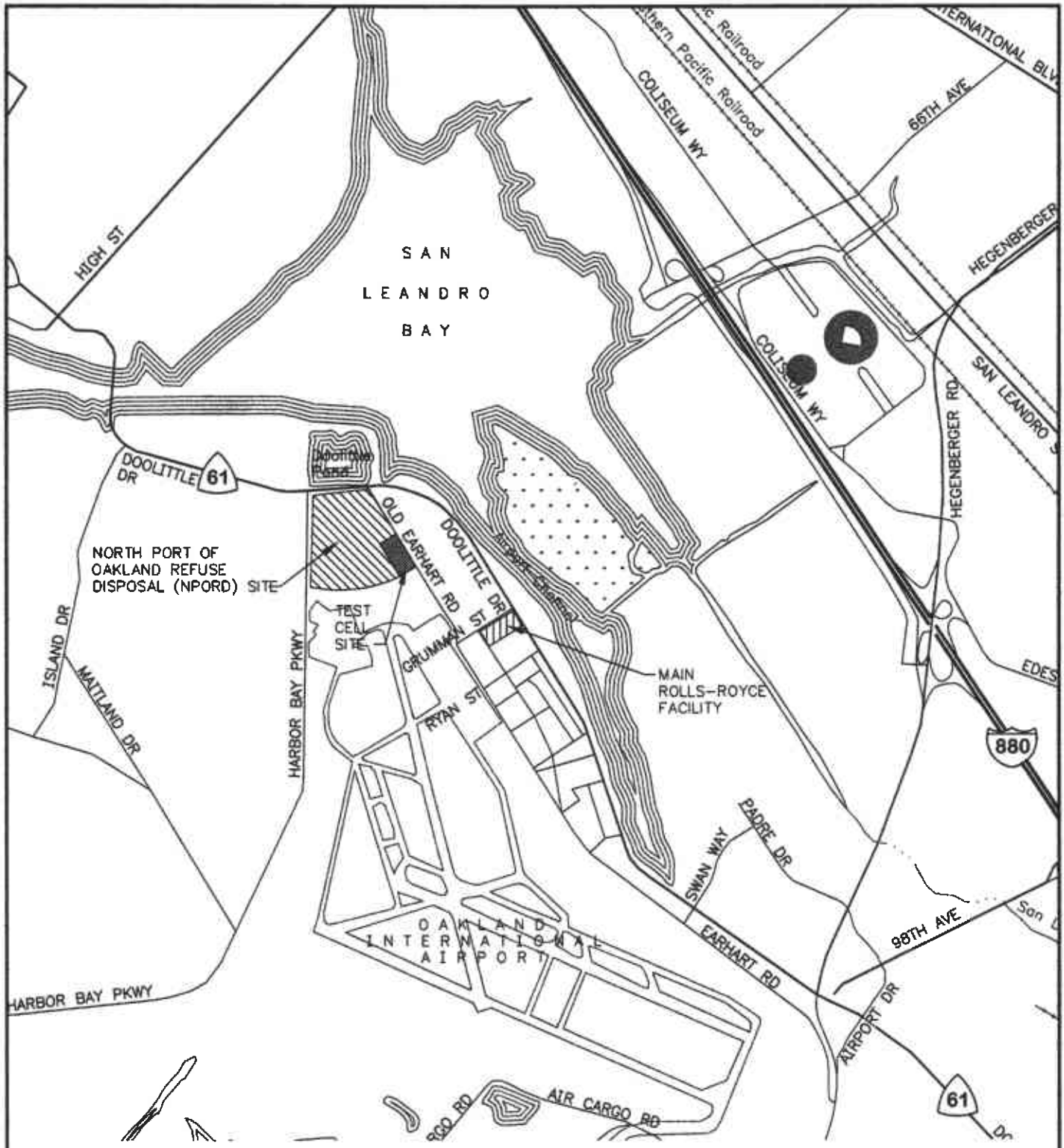
mg/L Milligrams per liter

RBSLs Risk-Based Screening Levels, industrial/commercial land use surface soil (<3 m) and groundwater not a current or potential source of drinking water (RWQCB, 2000).

Bold Values in **boldface** type exceed their respective RBSLs

NE Not established

PLATES



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DRAFTED BY: L. Sue	CHECKED BY: S. Walker
DATE: 08-23-02	REVISION DATE:

SITE VICINITY MAP

ROLLS-ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 17646-RPT

PLATE 1

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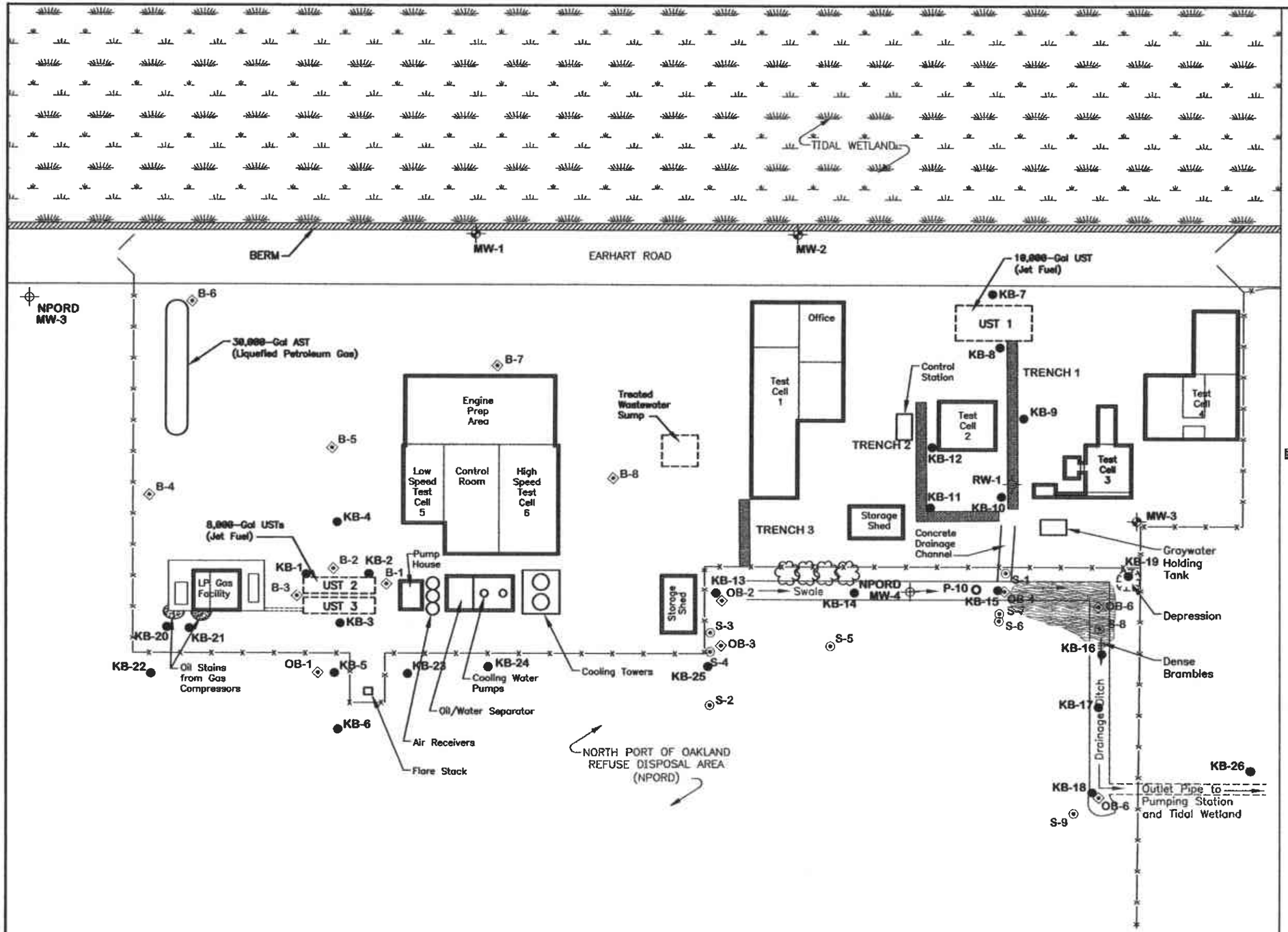

LEGEND

- FENCE
- TREE
- UST UNDERGROUND STORAGE TANK
- AST ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Envirometrix, 1996)
- PREVIOUS SAMPLING LOCATION (by Alameda County, 1994)
- PREVIOUS SAMPLING LOCATION (by Emcon, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- NPORD PIEZOMETER
- SAMPLING LOCATION (by Kleinfelder, 2002)

NOTE: Locations are approximate.

50 0 50
APPROXIMATE SCALE (feet)

PLATE 2

SITE PLAN - SOIL BORING LOCATIONS

ROLLS-ROYCE TEST CELL FACILITY
6781 EARHART ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 17646-RPT

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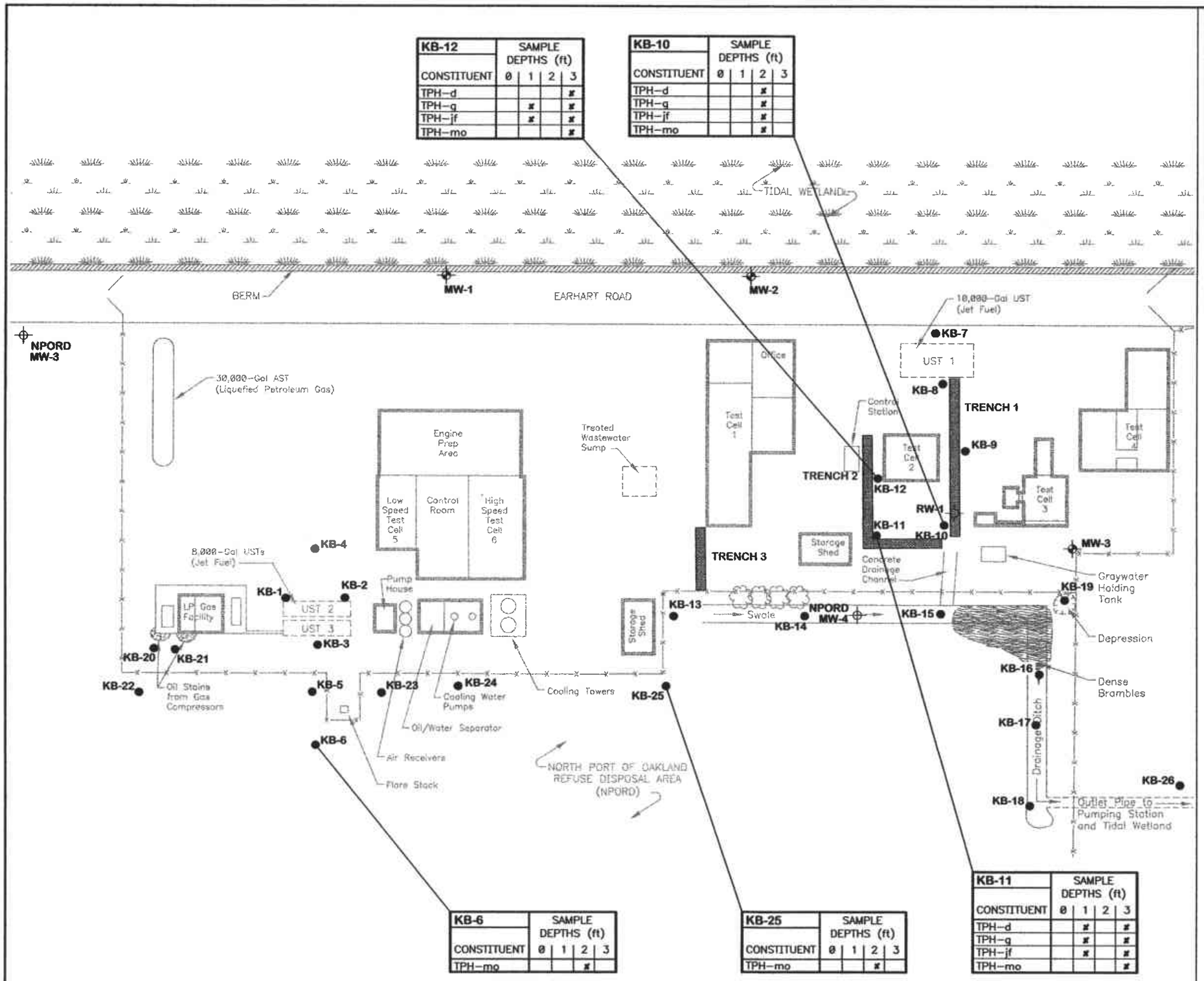

LEGEND

- FENCE
- TREE
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Envirometrix, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- SAMPLING LOCATION (by Kleinfelder, 2002)
- TPH — TOTAL PETROLEUM HYDROCARBONS AS DIESEL (d), GASOLINE (g), JET FUEL (j) AND/OR MOTOR OIL (mo)
- RBSLs — RISK-BASED SCREENING LEVELS FOR COMMERCIAL/ INDUSTRIAL LAND USE, GROUNDWATER NOT A SOURCE OF DRINKING WATER (RWQCB, 2000)

NOTES:
1. Locations are approximate.
2. See Table 1 for details.

PLATE 3

TPH IN SOIL EXCEEDING RBSLs

ROLLS-ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 17646-RPT

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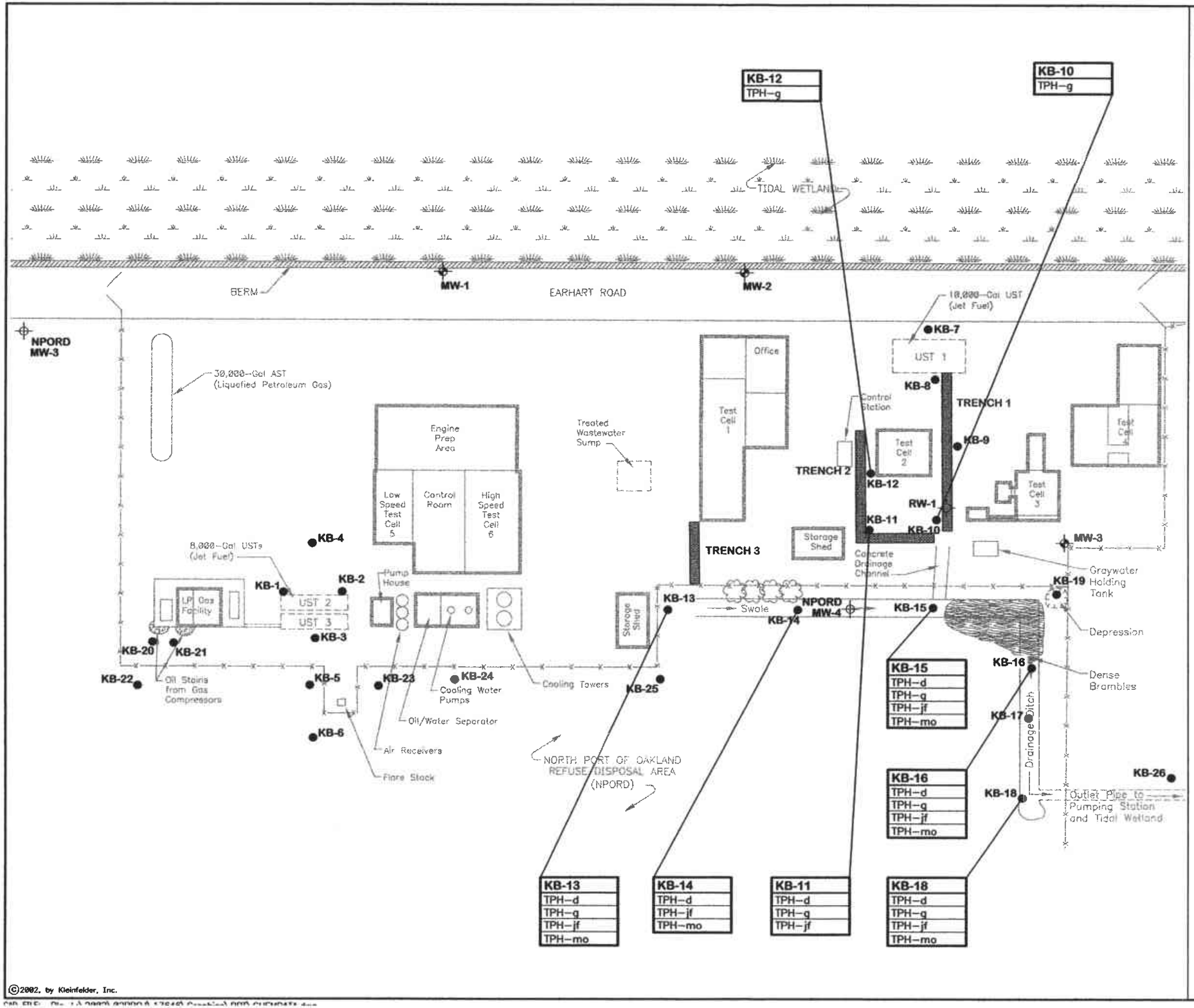
CHECKED BY: S. Walker
DATE: 08-03-02
REVISION DATE:



LEGEND

- FENCE
- TREE
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Envirometrix, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- SAMPLING LOCATION (by Kleinfelder, 2002)
- TPH — TOTAL PETROLEUM HYDROCARBONS AS DIESEL (d), GASOLINE (g), JET FUEL (j) AND/OR MOTOR OIL (mo)
- RBSLs — RISK–BASED SCREENING LEVELS FOR COMMERCIAL/INDUSTRIAL LAND USE, GROUNDWATER NOT A SOURCE OF DRINKING WATER (RWQCB, 2000)

NOTES:
1. Locations are approximate.
2. Results of filtered groundwater samples used when available.
3. See Tables 2 and 3 for details.

50 25 0 50
APPROXIMATE SCALE (feet)

PLATE 4

TPH IN GROUNDWATER EXCEEDING RBSLs

ROLLS–ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 17646–RPT

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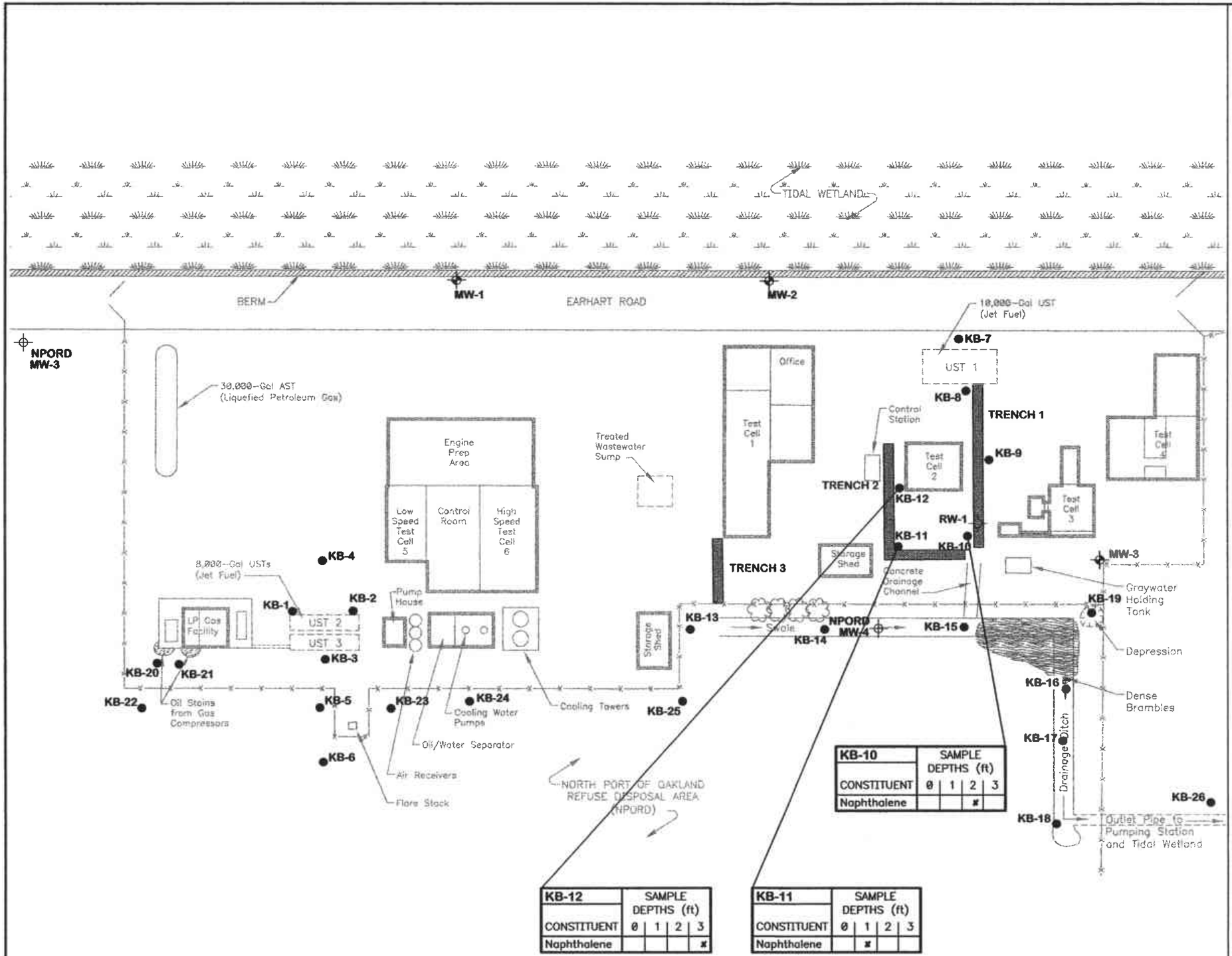

KB-10	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Naphthalene			x	

KB-12	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Naphthalene				x

KB-11	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Naphthalene		x		

LEGEND

- FENCE
- TREE
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Environetrix, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- SAMPLING LOCATION (by Kleinfelder, 2002)
- VOCs — VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8260
- RBSLs — RISK-BASED SCREENING LEVELS FOR COMMERCIAL/ INDUSTRIAL LAND USE, GROUNDWATER NOT A SOURCE OF DRINKING WATER (RWQCB, 2000)

NOTES:
1. Locations are approximate.
2. See Table 4 for details.

50 25 0 50
APPROXIMATE SCALE (feet)

PLATE 5

VOCs IN SOIL EXCEEDING RBSLs

ROLLS-ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 17646-RPT

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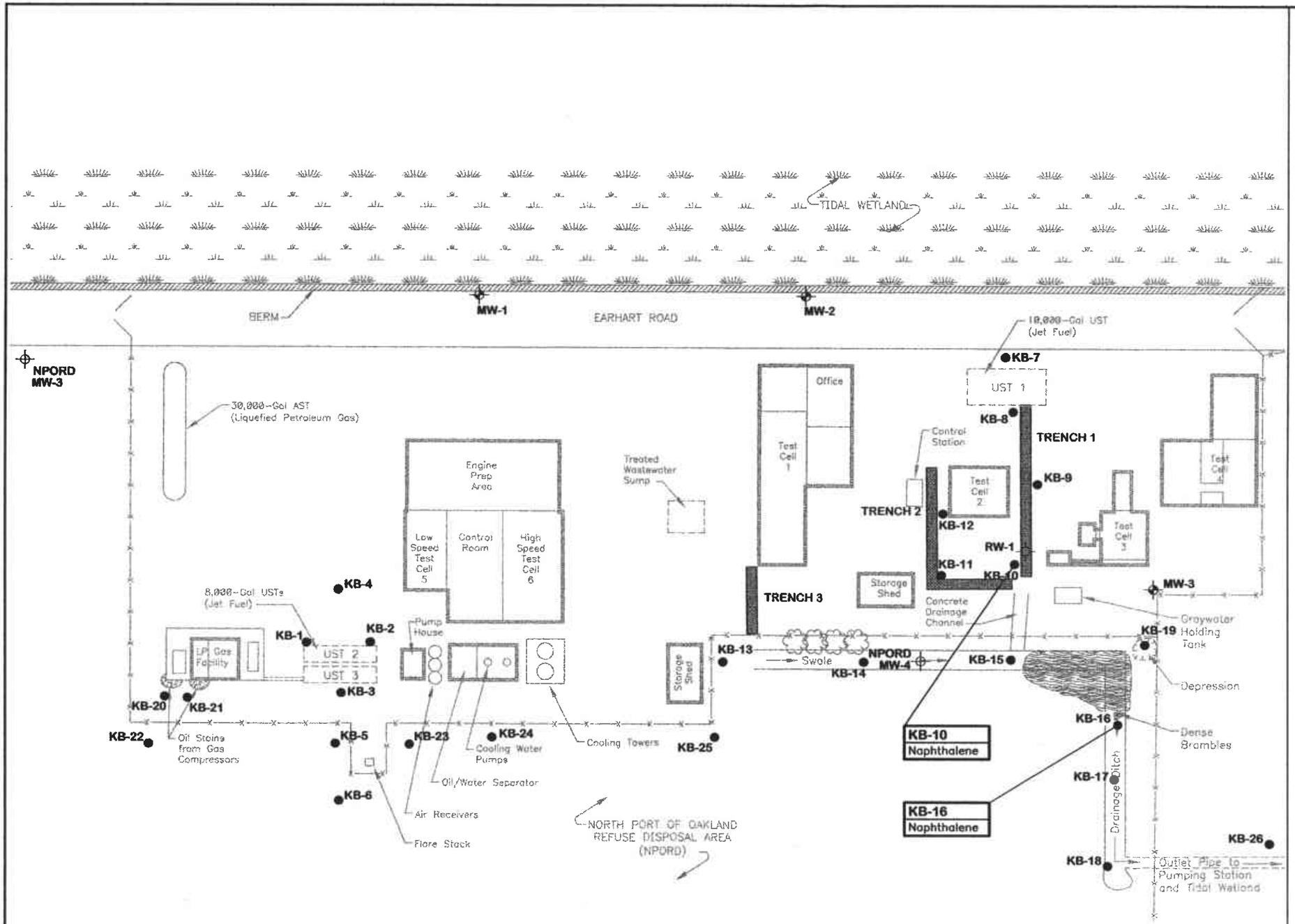

LEGEND

- FENCE
- TREE
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Envirometrix, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- SAMPLING LOCATION (by Kleinfelder, 2002)
- VOCs — VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8260
- RBSLs — RISK-BASED SCREENING LEVELS FOR COMMERCIAL/ INDUSTRIAL LAND USE, GROUNDWATER NOT A SOURCE OF DRINKING WATER (RWQCB, 2000)

NOTES:
1. Locations are approximate.
2. See Tables 5 and 6 for details.

50 25 0 50
APPROXIMATE SCALE (feet)

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PLATE 6

VOCs IN GROUNDWATER EXCEEDING RBSLs

ROLLS-ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA
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CHECKED BY: S. Walker
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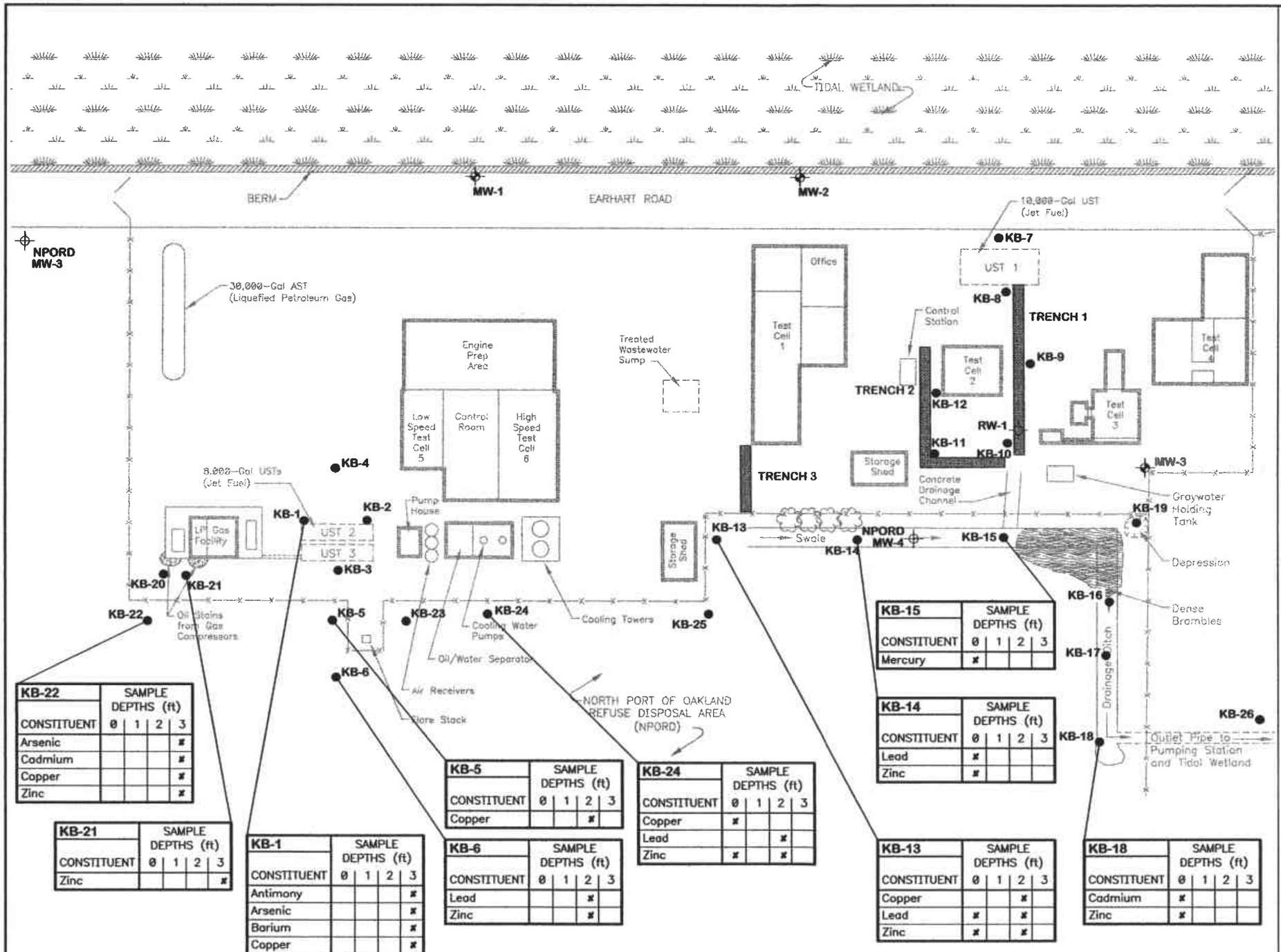

KB-22	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Arsenic				x
Cadmium				x
Copper				x
Zinc				x

KB-21	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Zinc				x

KB-1	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Antimony				x
Arsenic				x
Barium				x
Copper				x
Lead				x
Mercury				x
Zinc				x

KB-5	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Copper			x	

KB-6	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Lead			x	
Zinc			x	

KB-24	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Copper	x			
Lead			x	
Zinc	x		x	

KB-15	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Mercury	x			

KB-14	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Lead	x			
Zinc	x			

KB-13	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Copper			x	
Lead	x		x	
Zinc	x		x	

KB-18	SAMPLE DEPTHS (ft)			
CONSTITUENT	0	1	2	3
Cadmium	x			
Zinc	x			

LEGEND

- FENCE
- TREE
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Envirometrix, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- SAMPLING LOCATION (by Kleinfelder, 2002)
- RBSLs — RISK-BASED SCREENING LEVELS FOR COMMERCIAL/ INDUSTRIAL LAND USE, GROUNDWATER NOT A SOURCE OF DRINKING WATER (RWQCB, 2000)

NOTES:
1. Locations are approximate.
2. Seventeen CCR Title 22 metals analyzed by EPA Method 6010/7000 Series.
3. RBSL for arsenic (13mg/kg) in deeper soil (>3ft) used for comparison due to naturally occurring background levels of arsenic exceeding the shallow soil (<3ft) RBSL of 2.7mg/kg.
4. See Table 7 for details.

50 25 0 50
APPROXIMATE SCALE (feet)

PLATE 7

METALS IN SOIL EXCEEDING RBSLs

ROLLS-ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA

PROJECT NO. 17646-RPT

KLEINFELDER
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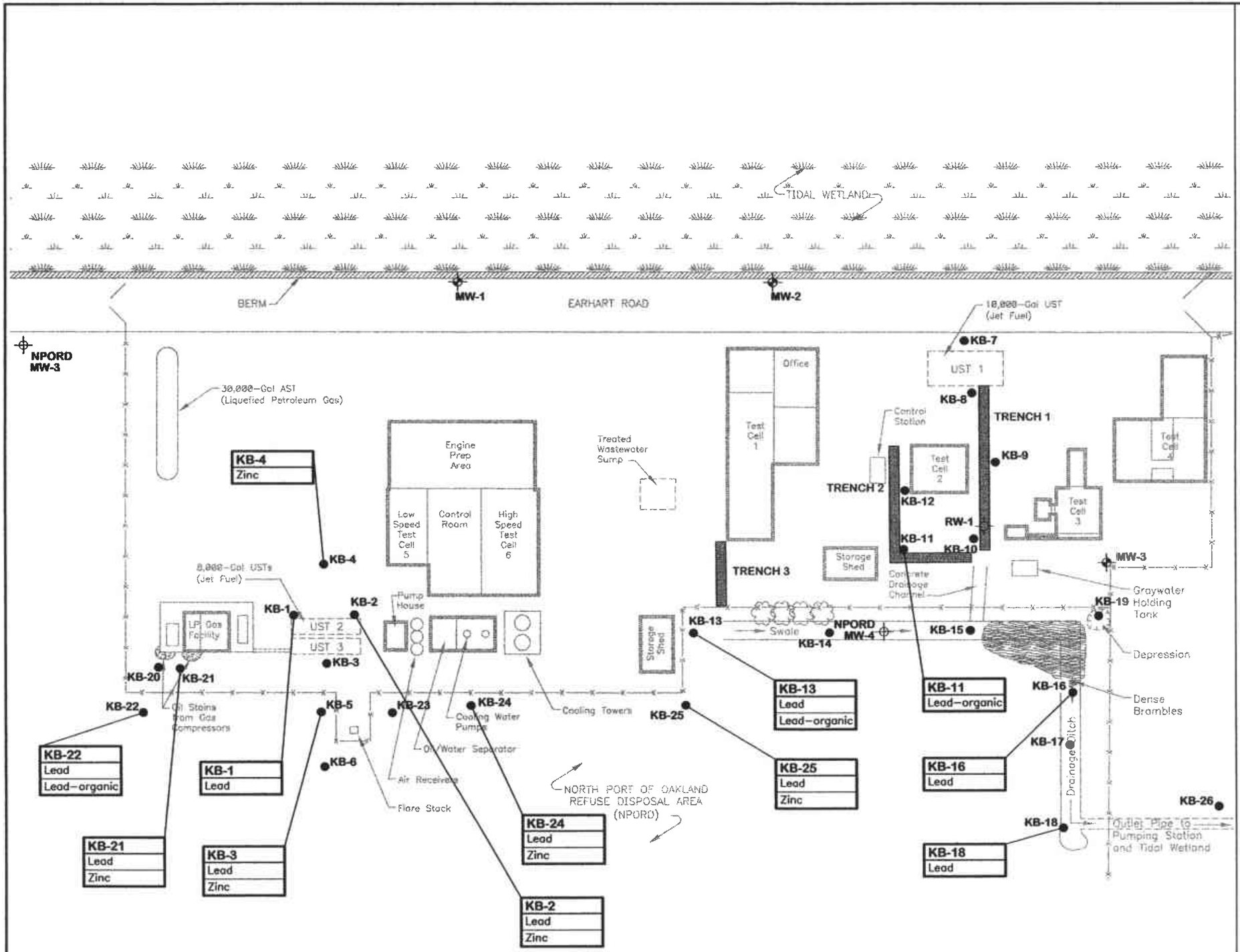

LEGEND

- FENCE
- TREE
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVEGROUND STORAGE TANK
- PRODUCT RECOVERY WELL
- GROUNDWATER MONITORING WELL (by Envirometrix, 1996)
- PIPELINE TRENCH (by Foss, 1998)
- NORTH PORT OF OAKLAND REFUSE DISPOSAL (NPORD) SITE GROUNDWATER MONITORING WELL
- SAMPLING LOCATION (by Kleinfelder, 2002)
- RBSLs — RISK-BASED SCREENING LEVELS FOR COMMERCIAL/ INDUSTRIAL LAND USE, GROUNDWATER NOT A SOURCE OF DRINKING WATER (RWQCB, 2000)

NOTES:

1. Locations are approximate.
2. Seventeen CCR Title 22 metals analyzed by EPA Method 6010/7000 Series. Samples were lab-filtered and acidified.
3. All samples exceeded RBSL for barium which is based on freshwater aquatic life protection, as are the other RBSLs for metals in groundwater.
4. See Tables 8 and 9 for details.

50 25 0 50

APPROXIMATE SCALE (feet)

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PLATE 8

METALS IN GROUNDWATER EXCEEDING RBSLs

ROLLS-ROYCE TEST CELL FACILITY
6701 EARHART ROAD
OAKLAND, CALIFORNIA
PROJECT NO. 17646-RPT

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Pleasanton, CA 94566-3101
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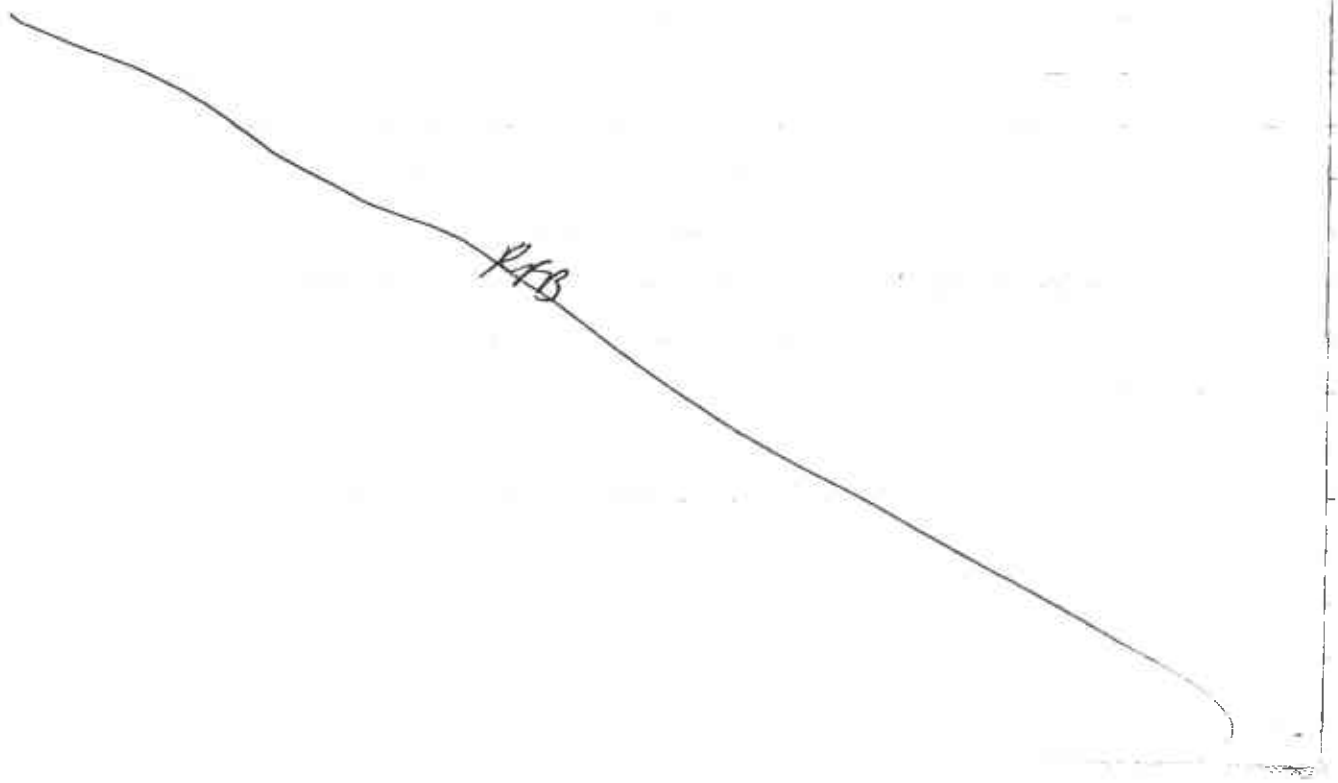
DRAFTED BY: L. Sue
CHECKED BY: S. Walker
DATE: 08-23-02
REVISION DATE:

APPENDIX A

Field Notes

Tues 7/2/02

7:45 Arrive at office Load Truck & Travel to Site
8:45 Arrive on Site met Dave Goldberg & Diane Lowe
9:00 went with Dianne Lowe to check in and complete H & S meeting
9:30 CA Surveys on Site, check on purge & Sample mw-3 @ 1050
10:00 Arrive at test cell begin clearing locations
Open wells to check condition & pressure
1145 CO Surveys off Site go to mw-4
1210 Sample mw-4
1230 Decon pump go to mw 3 NPOLD
1255 Sample mw-3 NPORD, Notice Fur Coming up in bailer well has floating obstruction at ≈ 5'
1320 go to mw-1
1335 Sample mw-1
1350 go to mw-2
1400 Sample mw-2



KA KLEINFELDER

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-1

Date: 7/2/02 Weather: Clear Sheet 1 of 1

Project: Rolls Royce Submitted By: KFB Date:

Project No.: 17646/INV Reviewed By: SW Date:

Purpose of Log ☐ Development ☒ Sampling

Equipment & Decontamination

Purging Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submersable Pump	Dedicated Pump	Other:
Sampling Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submersable Pump	Dedicated Pump	Other:

Test Equipment	Water Level	pH	Conductivity	Turbidity
Meter No.				
Calibration Date/Time	NA			

Decontamination Methods	Wash	Rinse I	Rinse II	Rinse III
TSP, (Alconox), Other:	DI, (Tap), Other; Steam, Hot, (Cool)	(DI), Tap, Other; Steam, Hot, (Cool)	(DI), Tap, Other; Steam, (Cool)	DI, Tap, Other; Steam, Hot, Cool
Vol. (gal):				
Source:				
Decon. Notes:				

Development / Purge Record

Well Security: good fair poor — Well Integrity: good fair poor — Locked: yes no

Purge Volume (CV) T.D. − DTW × Factor × 1 C.V = .75 gal

Well Diam.: ☐ 2" ☐ 4" 7.30 ft. − 3.18 ft. × (2"~0.175, 4"~0.663) × 3 = 2.25 gal

Free Product?: Odor: no yes Floating Product: none sheen film feet thick

								Replicate Goals
Time (24-hr)	1327	1328	1329	1330				
Gallons Purged	0	1	2	3				(dev. only)
Surged (minutes)	↑							
pH	S	7.20	7.18	7.19				±0.10
Temperature (°C)	T	25.6	25.3	25.4				±1°C
Cond. (µmhos/cm)	A	4000	4000	4000				±10%
Salinity (‰)	R							±10%
Turbidity (NTU's)	T							<50 NTUs
Color	↓	Clear →						Colorless
Depth to Water								±0.01'

Reference Point: TOC Other:

Sample Log

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
MW-1	1335	1	1 Liter	Amber	—	yes	TPHd, g + mo	McCampbell
		1	1 Liter	Amber	—	NO	" "	↓
		1	1 Liter	poly	—	yes	Title 22 metals	
		1	500 mL	poly	—	yes	Organic Lead	
		2	40 mL	VOA	HCl	NO	TPHg	
		2	40 mL	VOA	HCl	NO	VOCs	↓

Misc

Other Observations:

Final Check: VOAs free of bubbles? yes / no / NA Well Locked? yes / no / NA

KA KLEINFELDER

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-2

Date: 7/2/02 Weather: clear Sheet 1 of 1

Project: Rolls Royce Submitted By: KPB Date:

Project No.: 17646/INV Reviewed By: SW Date:

Purpose of Log ☐ Development ☒ Sampling

Equipment & Decontamination

Purging Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submersable Pump	Dedicated Pump	Other:
Sampling Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submersable Pump	Dedicated Pump	Other:

Test Equipment	Water Level	pH	Conductivity	Turbidity
Meter No.				
Calibration Date/Time	NA			

Decontamination Methods	Wash	Rinse I	Rinse II	Rinse III
TSP, (Alconox)	DI, (Tap), Other; Steam, Hot, (Cool)	(DI), Tap, Other; Steam, Hot, (Cool)	(DI), Tap, Other; Steam, Hot, (Cool)	DI, Tap, Other; Steam, Hot, Cool
Other:				
Vol. (gal):				
Source:				
Decon. Notes:				

Development / Purge Record

Well Security: good fair poor — Well Integrity: good fair poor — Locked: yes no

Purge Volume (CV): T.D. – DTW × Factor × 1 C.V = .84 gal

Well Diam.: ☐ 2" ☐ 4" 7.70 ft. – 2.95 ft. × (2"=0.175, 4"=0.663) × 3 = 2.5 gal

Free Product?: Odor: no (yes) H_2S Floating Product: (none) sheen film feet thick

									Replicate Goals
Time (24-hr)		1354	1355	1356	1357				
Gallons Purged		0	1	2	3				
Surged (minutes)		↑							(dev. only)
pH		S	6.50	6.97	7.03				±0.10
Temperature (°C)		T	23.8	22.5	22.5				±1°C
Cond. (µmhos/cm)		A	4006	4000	4000				±10%
Salinity (‰)		R							±10%
Turbidity (NTU's)		T	cloudy	→	→				<50 NTUs
Color		↓	grey	→	→				Colorless
Depth to Water									±0.01'

Reference Point: TOC Other:

Sample Log

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
MW-2	1400	1	1 Liter	Amber	—	yes	TPHd, d+mo	McCampbell
		1	1 Liter	Amber	—	NO	" "	
		1	1 Liter	poly	—	yes	Title 22 metals	
		1	500 mL	poly	—	yes	Organic Lead	
		2	40 mL	VOA	HCl	NO	TPHg	
		2	40 mL	VOA	HCl	NO	VOCs	

Misc

Other Observations: H_2S Odor

Final Check: VOAs free of bubbles? yes / no / NA Well Locked? yes / no / NA

KA KLEINFELDER

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-3

Date: 7/2/02 Weather: Clear, Cool Sheet 1 of 1

Project: Rolls Royce Submitted By: KFB Date:

Project No.: 17646/INV Reviewed By: JW Date:

Purpose of Log ☐ Development ☒ Sampling

Equipment & Decontamination

Purging Equipment	Bailer	Disposable Bailer	Suction Pump	Submers-able Pump	Dedicated Pump	Other:
Sampling Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submers-able Pump	Dedicated Pump	Other:

Test Equipment	Water Level	pH	Conductivity	Turbidity
Meter No.				
Calibration Date/Time	NA			

Decontamination Methods	Wash	Rinse I	Rinse II	Rinse III
	DI (Tap) Other	Steam Hot (Cool)	(DI) Tap Other	Steam Hot (Cool)	DI Tap Other	Steam Hot Cool	DI Tap Other	Steam Hot Cool
TSP (Alconox) Other:								
Vol. (gal):								
Source:								
Decon. Notes:								

Development / Purge Record

Well Security: good fair poor Well Integrity: good fair poor Locked: yes no

Purge Volume (CV) T.D. 11.35 ft – DTW 3.85 ft × Factor 2"=0.375 4"=0.663 × 3. × 1 C.V = 1.3 gal = 4.0 gal

Well Diam.: ☒ 2" ☐ 4"

Free Product?: Odor: (no) yes Floating Product: none sheen film feet thick

								Replicate Goals
Time (24-hr)	1039	1041	1044	1048				
Gallons Purged	0	1.5	3.0	4.5				(dev. only)
Surged (minutes)	↑							
pH	S	6.68	6.47	6.50				±0.10
Temperature (°C)	T	21.2	19.4	19.2				±1°C
Cond. (µmhos/cm)	A	4000	4000	4000				±10%
Salinity (‰)	R							±10%
Turbidity (NTU's)	T							<50 NTUs
Color	↓	yellow	→	→				Colorless
Depth to Water					4.12			±0.01'

Reference Point: TOC Other:

Sample Log

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
MW-3	1050	1	1 Liter	Amber	—	yes	TPH3, d+mo	McCampbell
		1	1 Liter	Amber	—	NO	" "	
		1	1 Liter	poly	—	yes	Title 22 metals	
		1	500 mL	poly	—	yes	Organic Lead	
		2	40 mL	VOA	HCl	NO	TPHg	
		2	40 mL	VOA	HCl	NO	VOCs	

Misc

Other Observations:

Final Check: VOAs free of bubbles? yes / no / NA Well Locked? yes / no / NA

KA KLEINFELDER

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-3NPORD

Date: 7/2/02 Weather: Clear

Sheet 1 of 1

Project: Rolls Royce Submitted By: KFB Date:

Project No.: 17646/INV Reviewed By: SW Date:

Purpose of Log ☐ Development ☒ Sampling

Equipment & Decontamination

Purging Equipment	Bailer	Disposable Bailer	Suction Pump	(Submersible Pump)	Dedicated Pump	Other:
Sampling Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submersible Pump	Dedicated Pump	Other:

Test Equipment	Water Level	pH	Conductivity	Turbidity
Meter No.				
Calibration Date/Time	NA			

Decontamination Methods	Wash	Rinse I	Rinse II	Rinse III
TSP (Alconox) Other:	DI (Tap) Other / Steam Hot (Cool)	(DI) Tap Other / Steam Hot (Cool)	(DI) Tap Other / Steam Hot (Cool)	DI Tap Other / Steam Hot Cool
Vol. (gal):				
Source:				
Decon. Notes:				

Development / Purge Record

Well Security: good fair poor | Well Integrity: good fair poor | Locked: yes no

Purge Volume (CV) T.D. − DTW × Factor × 1 C.V = 8 gal

Well Diam.: ☐ 2" ☒ 4" 17.5 ft. − 4.90 ft. × (2"=0.175, 4"=0.663) × 3 = 24 gal

Free Product?: Odor: no (yes) Floating Product: (none) sheen film ____ feet thick

								Replicate Goals (dev. only)
Time (24-hr)	1240	1245	1249	1252				
Gallons Purged	0	8	16	24				
Surged (minutes)	↑							
pH	S	7.02	7.03	7.04				±0.10
Temperature (°C)	T	19.8	19.5	19.7				±1°C
Cond. (µmhos/cm)	A	4000	4000	4000				±10%
Salinity (‰)	R							±10%
Turbidity (NTU's)	T							<50 NTUs
Color	↓	Grey	⟶	⟶				Colorless
Depth to Water								±0.01'

Reference Point: TOC Other:

Sample Log

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
MW-3NPORD	1255	1	1 Liter	Amber	—	yes	TPHs, d + mo	McCampbell
		1	1 Liter	Amber	—	NO	" "	↓
		1	1 Liter	poly	—	yes	Title 22 metals	↓
		1	500 mL	poly	—	yes	Organic Lead	↓
		2	40 mL	VOA	HCl	NO	TPHg	↓
		2	40 mL	VOA	HCl	NO	VOCs	↓

Misc

Other Observations: H2S odor

Final Check: VOAs free of bubbles? yes / no / NA Well Locked? yes / no / NA

KA KLEINFELDER

WELL DEVELOPMENT & SAMPLING LOG

WELL NO. MW-4

Date: 7/2/02 Weather: Sheet 1 of 1

Project: Rolls Royce Submitted By: KFB Date:

Project No.: 17646/INV Reviewed By: SW Date:

Purpose of Log ☐ Development ☒ Sampling

Equipment & Decontamination

Purging Equipment	Bailer	Disposable Bailer	Suction Pump	(Submersible Pump)	Dedicated Pump	Other:
Sampling Equipment	Bailer	(Disposable Bailer)	Suction Pump	Submersible Pump	Dedicated Pump	Other:

Test Equipment	Water Level	pH	Conductivity	Turbidity
Meter No.				
Calibration Date/Time	NA			

Decontamination Methods	Wash	Rinse I	Rinse II	Rinse III
	DI (Tap) Other	Steam Hot (Cool)	(DI) Tap Other	Steam Hot (Cool)	(DI) Tap Other	Steam Hot (Cool)	DI Tap Other	Steam Hot Cool
TSP (Alconox) Other:								
Vol. (gal):								
Source:								
Decon. Notes:								

Development / Purge Record

Well Security: good fair poor Well Integrity: good fair poor Locked: yes no

Purge Volume (CV) T.D. − DTW × Factor × 1 C.V = 7 gal

Well Diam.: ☐ 2" ☒ 4" 13.30 ft. − 2.20 ft. × (2"=0.175, 4"=0.663) × 3 = 21 gal

Free Product?: Odor: (no) yes Floating Product: (none) sheen film feet thick

									Replicate Goals
Time (24-hr)	1155	1158	1202	1205					
Gallons Purged	0	7	14	21					
Surged (minutes)	↑								(dev. only)
pH	S	6.65	6.58	6.59					±0.10
Temperature (°C)	T	20.8	20.1	19.5					±1°C
Cond. (µmhos/cm)	A	4000	4000	4000					±10%
Salinity (‰)	R								±10%
Turbidity (NTU's)	T								<50 NTUs
Color	↓	Yellow	→	→					Colorless
Depth to Water									±0.01'

Reference Point: TOC Other:

Sample Log

Sample #	Time	Quantity	Volume	Type	Preserv.	Filtration	Analysis	Lab
MW-4	1210	1	1 Liter	Amber	−	yes	TPHd, d+mo	McCampbell
		1	1 Liter	Amber	−	NO	" "	
		1	1 Liter	poly	−	yes	Title 22 metals	
		1	500 mL	poly	−	yes	Organic Lead	
		2	40 mL	VOA	HCl	NO	TPHg	
		2	40 mL	VOA	HCl	NO	VOCs	

Misc

Other Observations:

Final Check: VOAs free of bubbles? yes / no / NA Well Locked? yes / no / NA

KLEINFELDER

TECHNICIAN'S DAILY REPORT

Date 7/12/02 Hours

File No. 17646 Miles

Project Rolls Royce Weather

Diary: 7:15 Load truck travel to Site

8:30 on Site meet w/ Dianne Lowe check in

9:30 Call DALE KLEITKE TO ASK About Access to port property begin AT Rolls Royce. Set up decon Equipment begin HAND Augering at KB-18 TD = 2'

9:50 Groundwater Encountered at 8" bgs, no Soil Sample collected

* 10:00 Collect GW Sample, Sheen noticed in boring, DECON Equipment

10:10 Go to KB-17

* 10:15 collect Soil Sample KB-17-0.0 TP = 3.0

10:25 Hit refusal at 1' Appears to be a plastic pipe move 1' north, GW @ 1'

* 11:00 Collect GW Sample, Sheen observed, Decon Equipment go to KB-16 TP = 3'

11:05 go to KB-16, GW Encountered at 6" no Soil Sample collected

* 11:25 Sheen observed in boring, collect GW Sample, Decon Equipment go

11:30 Go to KB-19

* 11:35 collect Soil Sample at KB-19-0.0

1200 collect GW Sample TD = 5.0' DTW 1.5' Decon Equipment

1215 GO TO KB-26, meet DALE KLEITKE TO open gate

1220 Collect Soil Sample KB-26-0.0

1230 Collect Soil Sample KB-26-3.0

1240 Collect Soil Sample KB-26-4.0

1255 Boring completed to a depth of 9' groundwater not Encountered Terminate boring & backfill with cuttings. Decon Equipment meet with DAVE Goldberg, Empty DECON water into purged GW

1340 Drum, Check out ICA OFF Site.

Reviewed by: Signed: KFB

M3

KLEINFELDER

TECHNICIAN'S DAILY REPORT

Date 7/12/02 (CONT.) Hours

File No. 17646 Miles

Project Rolls Royce Weather

Diary:

1430 - ARRIVE at office, unload truck, complete C.O.C. and other paperwork prepare for monday.

TAKE Samples TO McCampbell

FINISH.

Reviewed by:

Signed: KPB

M-1

Monday 7/15/02

7:15 Load truck & travel to site

8:15 on site meet [illegible] & Dave Goldberg, go over Health & Safety meeting

9:00 Set up on KB-20, 21, & KB-3

9:15 begin drilling at KB-03, Hit refusal at 5', wood, Hole sloughed in with gravel, Appears to be wet at 5', will move over, clear surface gravel & try to get down to groundwater

10:00 refusal at 2nd location at 5' wood, move over try again.

10:15 Able to get down to 8' at KB-03, Install pvc

10:25 Collect groundwater sample at KB-03-GW, sheen noticed in samples, VOAs are unpreserved due to Effervescence

10:35 Go to KB-21 Set up begin drilling

10:45 Limited Access rig blew a seal and released small amount of Hydralic Fluid on ground, call Dave Goldberg.

11:00 Dave G. on site, said to scoop up Impacted gravel and put with soil cuttings

11:10 Collect Groundwater Sample at KB-21-GW

11:20 Go to KB-20

11:40 Complete KB-20 collect 2 soil samples KB-20-1.0, KB-20-3.0 No groundwater samples collected at KB-20

Clean up, put away limited access Rig.

12:00 Go to KB-02 Set up begin drilling

1230 Hit refusal at 7', Appears to be wet, Install pvc Attempt to collect Groundwater Sample.

12:45 CU Survey on site to clear KB-11 & KB-12, move KB-11 2' to the East

13:00 CU Survey off site

(Cont)

7/15/02 cont.

1250 Collect groundwater Sample at KB-02-GW
1300 Go to KB-04 Set up Begin Drilling
1325 Collect groundwater Sample at KB-04-GW
1340 Go to KB-01, refusal at 6', Appears to be Saturated Install .pvc, see if water comes in.
1405 Collect Groundwater Sample at KB-01-GW
1415 Finish up in back Area grout KB-01, KB-02, KB-03, KB-04 KB-20, KB-21
1445 Go to KB-07, set up begin drilling
1505 Collect Groundwater Sample at KB-07-GW, Clean up, grout KB-07
Called DAVE Goldberg Empty Soil & Decon water, Leave Drums at Test Cell Facility
1540 KA off Site, check out, go to office
1630 Arrive at office, Talk with Steve Walker about progress, Complete paperwork, get Supplies
1710 Leave office go to Mc Campbell Analytical
1805 Drop off Samples
1840 prepare Labels for Tomorrows Drilling
1945 Finish 12.5 Hours

KB

TUESDAY - 7/16/02

7:30 START

8:10 ARRIVE on SITE, meet Ullonex, check-in

8:30 Set up on KB-08

8:50 collect groundwater Sample at KB-08-GW

9:10 go to KB-09. Set up, break through concrete

935 collect groundwater Sample at KB-09-GW

955 go to KB-10 Set up, break through Concrete

1015 collect groundwater Sample at KB-10-GW; Hydrocarbon odor, Sheen noticed in Sample containers

1030 go to KB-11, Set up, break through Concrete
Hit refusal at 6' at KB-11, possibly large gravels or concrete, INSTALL PVC.

1100 Collect groundwater Sample at KB-11-GW

1115 Go to KB-12, Set up, break through Concrete

1135 Collect groundwater Sample at KB-12-GW

1150 Grout KB08 - KB-12

1210 go to KB 22, NO WATER at 8' go to 9'

1250 Collect groundwater Sample at KB-22-GW, Grout KB-22

1300 go to KB-06, NO water at 8' go to 12'

1330 collect groundwater Sample at KB-06-GW, grout KB-06

1350 go to KB-05, NO water at 8' go to 10'

1405 Collect groundwater Sample at KB-05-GW

2415 grout boring, clean up, dispose of SOIL & water
CHECK OUT, go to McCampbell Analytical

1615 Drop Samples off at Lab

1630 FINISH G.O

KBB

Wednesday 7/17/02

7:30 START

8:15 Arrive on site, meet Witness, check in, Talk w/ Dave Goldberg

8:45 Set up on KB-23, refusal at 5' move over try again

910 refusal again at 3' at KB-23, move over try again

920 refusal again at 5' at KB-23, no groundwater collected, move KB-24 20' to the north ~~drill between~~ KB-24 will be drilled between KB-23 & KB-24 location.

930 grout KB-23, go to KB-24

950 collect groundwater Sample at KB-24-GW

1010 grout KB-24 go to KB-25

1030 Collect Groundwater Sample at KB-25-GW

1050 go to KB-13

1105 Collect Groundwater Sample at KB-13-GW

1115 Collect Duplicate water Sample at KB-13-GW call it KB-113-GW (Analyze Dup for TPHd+mo, TPHg, VOCs

1130 Grout KB-13, KB-25, 24 & 23

1140 go to KB-14

1145 Collect Surface Sample at KB-16-0.0

1150 Collect Surface Sample at KB-16-0.0

1210 Collect Groundwater Sample at KB-14-GW

1220 Attempt to get Rig to KB-15, Soil too Soft Rig begins to Sink, Attempt to Hand Auger

1230 Collect Surface Sample using Drive Sampler

1240 Collect Groundwater Sample at KB-15-GW

1245 DALE KLEWKE on Site, Said he had to go get his Badge and will return in an hour or so to let us in to KB-26, grout KB-14 & 15

1300 - on Standby

1347 - DALE KLEWKE on Site go to KB-26 (cont) →

7/17/02 CONT.

Drill Down TO 12' AT KB-26 All bay mud,
no water Came in, Install PVC and at Dale Klettkes
request we will Leave boring open overnight &
Jeff Sola will attempt to collect Groundwater
Sample on Thursday 7/18/02

1415 clean up, load drums, complete paperwork

1445 - unload Drums at Storage area, check out

1500 KA off Site go to office, Demobe, complete paperwork
TAke samples to McCambell Analytical
Drop Samples off at McCamphell Analytical
Finish

KFB

7/18/02

1200 start LOAD truck

1240 left office

1320 AT SITE waiting for Dale w/ the port of OAKLAND

1333 water Level at KB-26 was 5.45 From Surface getting Bottles ready FILLED up 4 VOAS without HCL and ABOUT 1 INCH in the AMBER. checked water Level Water at 10' Depth to Botton is 10.6' Not ABLE to Bail or get any More water Sampled KB-26-GW grouted up hole, Put EQUIPment away

1400

1430 Pulled out side gate, Paper work and Labels on VOAS Clean up EQUIPment

1454 Left Site going to office

1532 AT office UNLOAD EQUIPment, Paper work

1610 Finished

JLS

APPENDIX B

Boring Logs

Drilling method: **Direct Push**

Date Completed: **7/15/02**

Logged By: **K. Brunckhorst**

Total Depth: **6.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-01-1						**SANDY CLAY (CL)** - olive-brown, moist, soft, with fine to coarse sand, trace of fine gravel, trace of wood at 4 feet	
2								
3	KB-01-3							
4								▽ 14:00
5								
6							-refusal at 6', saturated, wood clay mixture Collect groundwater sample at KB-01.GW	Bottom of Boring = 6 feet
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
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24								
25								
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27								
28								
29								
30								

KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-01
Rolls Royce Test Facility
Oakland, California

PLATE
1

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07/29/02 2:05:46 PM

Drilling method: Direct Push

Date Completed: 7/15/02

Logged By: K. Brunckhorst

Total Depth: 7.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-02-1						**SANDY CLAY (CL)** - olive-brown, moist, soft, with fine to medium sand	
2								
3								
4	KB-02-4			36"	86.5		-hydrocarbon odor at 4 feet	▽ 12:50
5								
6								
7				6"			-wood, refusal at 7 feet, wet, install PVC and see if water comes in	Bottom of Boring = 7 feet
8							Collect groundwater sample at 12:50	
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-02
Rolls Royce Test Facility
Oakland, California

PLATE
2

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07/29/02 2:06:03 PM

Drilling method: **Direct Push**

Date Completed: **7/15/02**

Logged By: **K. Brunckhorst**

Total Depth: **8.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-03-0 KB-03-1				0		**CLAY (CL)** - dark brown, moist, soft, low plasticity, with fine to coarse sand, trace of fine gravel, trace of wood at 3 feet, no odor	
5							-refusal at 5 feet, no recovery wood and glass observed in liner, wet, hole filled up with gravel, move over 1 feet try again	▽ 10:15
8							-with sand and wood saturated 10:25 collect groundwater sample	Bottom of Boring = 8 feet

KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-03
Rolls Royce Test Facility
Oakland, California

PLATE 3

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07/29/02 2:06:20 PM

Drilling method: Direct Push

Date Completed: 7/15/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-04-1			36"			**ASPHALT CONCRETE AND AGGREGATE BASE** - approximately 6 inches	
2							**SANDY CLAY (CL)** - olive-brown, moist, soft, fine to coarse sand, trace of fine gravel, no odor	
3								
4	KB-04-4			12"				
5								▽ 13:05
6								
7								
8							-wood, saturated 13:25 Collect groundwater sample	Bottom of Boring = 8 feet
9								
10								
11								
12								
13								
14								
15								
16								
17								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-04
Rolls Royce Test Facility
Oakland, California

PLATE
4

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07/29/02 2:13:37 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 10.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-05-0				0.2		**SANDY CLAY (CL)** - olive-brown, moist, with fine to medium sand, no odor	
2	KB-05-2							
3								
4				24"				
5							-wood, glass, burnt wood, fill material	▽ 14:05
6								
7							**SANDY CLAY (CL)** - black, wet, high plasticity, with fine sand, no odor	
8					0			
9							-saturated, fill material	
10							Collect groundwater sample at 14:05	Bottom of Boring = 10 feet
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
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25								
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29								
30								

KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-05
Rolls Royce Test Facility
Oakland, California

PLATE 5

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07/31/02 10:59:18 AM

Drilling method: **Direct Push**

Date Completed: **7/16/02**

Logged By: **K. Brunckhorst**

Total Depth: **12.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-06-0						**SANDY CLAY (CL)** - olive-brown, dry, stiff, with fine to medium sand, trace to concrete wood and glass	
2	KB-06-2							
3								
4				36"				
5								
6								
7							-wood, leather, glass, fill material, dry, no water go to 12 feet	
8								▽ 13:25
9				12"			-wood, glass, fill material saturated	
10								
11								
12							collect groundwater sample at 13:30	Bottom of Boring = 12 feet
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-06
Rolls Royce Test Facility
Oakland, California

PLATE **6**

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07/29/02 2:07:11 PM

Drilling method: **Direct Push**

Date Completed: **7/15/02**

Logged By: **K. Brunckhorst**

Total Depth: **8.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-07-1						**ASPHALT AND AGGREGATE BASE** - approximately 6 inches thick	
2							**GRAVELLY CLAYEY SAND (SC)** - moist, dense, poorly graded sand gravel, clay mixture	
3								
4	KB-07-4						**CLAY (CL)** - black, saturated, very soft, high plasticity, bay mud	▽ 15:00
5								
6								
7							**CLAYEY SAND (SC)** - black, loose, poorly graded medium sand	
8							Collect groundwater sample at 15:05	Bottom of Boring = 8 feet
9								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-07
Rolls Royce Test Facility
Oakland, California

PLATE
7

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07/29/02 2:07:29 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-08-1				0		**ASPHALT CONCRETE AND AGGREGATE BASE** - approximately 6 inches	
2							**SANDY GRAVELLY CLAY (CL)** - yellow-brown, moist, with fine to coarse sand, with fine to medium gravel, no odor	
3								▼ 9:50
4	KB-08-4				0.4		**CLAYEY SAND (SC)** - dark greenish gray, saturated, fine to medium gravel, no odor, trace of sea shells	
5								▽ 8:50
6								
7								
8							Collect groundwater sample at 8:50 H_2S odor	Bottom of Boring = 8 feet
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-08
Rolls Royce Test Facility
Oakland, California

PLATE 8

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07/29/02 2:07:47 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-09-1						**CONCRETE AND AGGREGATE BASE** - approximately 6 inches	
2							**SANDY GRAVELLY CLAY (CL)** - yellow-brown, moist, poorly graded, sand gravel clay mixture	▽ 9:45
3								
4	KB-09-4						**CLAYEY SAND (SC)** - olive-gray, moist, loose, poorly graded fine sand	
5								
6							-color change to dark greenish gray with black mottling with coarse gravel up to 1 inch, saturated, with sea shells	
7								
8							Collect groundwater sample at 9:35	Bottom of Boring = 8 feet
9								
10								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-09
Rolls Royce Test Facility
Oakland, California

PLATE 9

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07/29/02 2:08:03 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1					98.2		**CONCRETE AND AGGREGATE BASE** - approximately 6 inches	
2	KB-10-2						**SANDY GRAVELLY CLAY (CL)** - olive-gray, moist, soft, with fine to coarse sand, with fine to medium gravel, hydrocarbon odor	
3							-saturated	▽ 10:15
4				36"				
5							**SANDY CLAY (CL)** - dark greenish gray with black mottling, poorly graded fine sand	
6								
7								
8							Collect groundwater sample at 10:15	Bottom of Boring = 8 feet
9								
10								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-10
Rolls Royce Test Facility
Oakland, California

PLATE
10

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07/29/02 2:08:21 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 6.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-11-1				78.2		**CONCRETE AND AGGREGATE BASE** - approximately 6 inches	
2							**SANDY GRAVELLY CLAY (CL)** - olive-gray, moist, with fine to coarse sand, with gravels up to 1/2 inch, hydrocarbon odor	
3	KB-11-3							▽ 11:00
4							**SAND (SP)** - black, saturated, poorly graded fine sand, hydrocarbon odor	
5								
6							-refusal at 6 feet, gravels up to 1.5 inches Collect groundwater sample at 11:00	Bottom of Boring = 6 feet
7								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-11
Rolls Royce Test Facility
Oakland, California

PLATE
11

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07/30/02 1:22:46 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-12-1				92.4		**CONCRETE AND AGGREGATE BASE** - approximately 6 inches	
2							**SANDY GRAVELLY CLAY (CL)** - olive-gray, moist, with fine to coarse sand, with fine medium gravel, hydrocarbon odor	
3	KB-12-3							▽ 11:30
4							**CLAYEY SAND (SC)** - black, saturated, poorly graded fine sand, hydrocarbon odor	
5								
6							-trace of medium gravels	
7							**SANDY CLAY (CL)** - dark greenish gray, saturated, with sea shells	
8							Collect groundwater sample at 11:30	Bottom of Boring = 8 feet
9								
10								
11								
12								
13								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-12
Rolls Royce Test Facility
Oakland, California

PLATE 12

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07/29/02 2:08:55 PM

Drilling method: **Direct Push**

Date Completed: **7/17/02**

Logged By: **K. Brunckhorst**

Total Depth: **8.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-13-0				0		**SANDY CLAY (CL)** - olive-brown, dry, with fine to medium sand, trace of glass, no odor	
2	KB-13-2							▽ 11:05
3							**CLAYEY SAND (SC)** - black, wet, poorly graded with wood, glass and rubber	
4				24"	14			
5								
6							**CLAYEY SAND (SC)** - dark greenish gray, saturated, poorly graded fine sand, with wood, H_2S odor	
7								
8							Collect groundwater sample at 11:05 Collect duplicated sample at KB-13 call it KB-113-GW	Bottom of Boring = 8 feet
9								
10								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-13
Rolls Royce Test Facility
Oakland, California

PLATE **13**

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07/29/02 2:09:12 PM

Drilling method: Direct Push

Date Completed: 7/17/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-14-0						**SANDY CLAY (CL)** - olive-brown, dry, fine to medium sand, with wood, no odor	▽ 12:10
2							-increase in wood, saturated	
3								
4					0.3		**SANDY CLAY (CL)** - black, saturated, with medium to coarse sand, with wood, no odor	
5								
6								
7								
8							Collect groundwater sample at 12:10	Bottom of Boring = 8 feet
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-14
Rolls Royce Test Facility
Oakland, California

PLATE 14

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07/29/02 2:09:29 PM

Drilling method: **Hand Auger**

Date Completed: **7/17/02**

Logged By: **K. Brunckhorst**

Total Depth: **5.0 ft**

Notes: **N/A** *Hammer Wt:* **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-15-0				0		**SANDY CLAY (CL)** - olive-brown, moist, soft, with fine to coarse sand, trace of fine gravel, no odor	▽ 12:40
2								
3								
4							-saturated	
5							Collect groundwater sample at 12:40	Bottom of Boring = 5 feet
6								
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KLEINFELDER

PROJECT NO. **17646/INV**

LOG OF BORING NO. KB-15
Rolls Royce Test Facility
Oakland, California

PLATE **15**

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07/29/02 2:09:46 PM

Drilling method: Hand Auger

Date Completed: 7/12/02

Logged By: K. Brunckhorst

Total Depth: 3.0 ft

Notes: N/A Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-16-0	X					**SANDY CLAY (CL)** - black, saturated, with fine to medium sand, with roots	▽ 11:15
2								
3							Collect groundwater sample at 11:25	Bottom of Boring = 3 feet
4								
5								
6								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-16
Rolls Royce Test Facility
Oakland, California

PLATE 16

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07/29/02 2:10:02 PM

Drilling method: Hand Auger

Date Completed: 7/12/02

Logged By: K. Brunckhorst

Total Depth: 3.0 ft

Notes: N/A Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-17-0	X					**SANDY CLAY (CL)** - olive-brown, moist, with fine to medium sand, no odor	▽ 11:00
2							-hit refusal at 1 foot, move North 1 foot and try again	
3							Collect groundwater sample at 11:00	Bottom of Boring = 3 feet
4								
5								
6								
7								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-17
Rolls Royce Test Facility
Oakland, California

PLATE 17

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07/31/02 11:00:53 AM

Drilling method: Hand Auger

Date Completed: 7/12/02

Logged By: K. Brunckhorst

Total Depth: 1.0 ft

Notes: N/A Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-18-0	X					**SANDY CLAY (CL)** - black, saturated, with roots	▽ 9:45
							Collect groundwater sample	Bottom of Boring = 1 feet

KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-18
Rolls Royce Test Facility
Oakland, California

PLATE 18

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07/29/02 2:10:36 PM

Drilling method: Hand Auger

Date Completed: 7/12/02

Logged By: K. Brunckhorst

Total Depth: 5.0 ft

Notes: N/A Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-19-0						**SANDY CLAY (CL)** - olive-brown, moist, with fine to medium sand, no odor	▽ 11:45
2								
3							**CLAY (CL)** - dark greenish gray, wet, with fine sand, no odor	
4								
5							Collect groundwater sample at 12:00	Bottom of Boring = 5 feet
6								
7								
8								
9								
10								
11								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-19
Rolls Royce Test Facility
Oakland, California

PLATE 19

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07/29/02 2:10:52 PM

Drilling method: **Direct Push**

Date Completed: **7/15/02**

Logged By: **K. Brunckhorst**

Total Depth: **8.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-20-1			24"	0.5		**CLAY (CL)** - olive-brown, moist, soft, medium plasticity, with fine to coarse sand, trace of medium gravel, trace of wood and glass, no odor	
2								
3	KB-20-3			12"	0			
4							-wood, trace of gravel and trace of glass, no odor	
5							**CLAY (CL)** - dark brown, saturated, trace of fine gravel	
6				6"				▽ 11:40
7								
8							No groundwater sample collected	Bottom of Boring = 8 feet
9								
10								
11								
12								
13								
14								
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KLEINFELDER

PROJECT NO. **17646/INV**

LOG OF BORING NO. KB-20
Rolls Royce Test Facility
Oakland, California

PLATE **20**

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07/29/02 2:11:09 PM

Drilling method: Direct Push

Date Completed: 7/15/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-21-1				0		**SANDY GRAVELLY CLAY (CL)** - moist, dark brown, fine to medium sand, trace of medium gravel, trace of wood, no odor	
2								
3	KB-21-3				0			
4								
5							-wet	
6								▽ 10:45
7								
8							-saturated Collect groundwater sample at 11:10	Bottom of Boring = 8 feet
9								
10								
11								
12								
13								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-21
Rolls Royce Test Facility
Oakland, California

PLATE
21

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07/29/02 2:11:25 PM

Drilling method: Direct Push

Date Completed: 7/16/02

Logged By: K. Brunckhorst

Total Depth: 9.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-22-1				0.3		**SANDY CLAY (CL)** - olive-brown, dry, with fine to coarse sand, no odor, trace of wood	
2								
3	KB-22-3							
4				36"			-mostly wood, with trace of leather pieces and glass, moist, will drill down 2-3 more feet to groundwater	
5								
6								▽ 12:50
7								
8								
9							-wood Collect groundwater sample at 12:50	Bottom of Boring = 9 feet
10								
11								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-22
Rolls Royce Test Facility
Oakland, California

PLATE
22

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07/29/02 2:11:43 PM

Drilling method: **Direct Push**

Date Completed: **7/17/02**

Logged By: **K. Brunckhorst**

Total Depth: **5.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-23-0	X		12"			**SANDY CLAY (CL)** - light olive brown, dry, with fine to medium sand, trace of wood, rubber and glass, no odor	
2								
3								
4								
5							-Refusal at 5' move over try again -Refusal at 3' move over try again -Refusal at 5' no groundwater collected	Bottom of Boring = 5 feet
6								
7								
8								
9								
10								
11								
12								
13								
14								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-23
Rolls Royce Test Facility
Oakland, California

PLATE

23

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07/29/02 2:12:00 PM

Drilling method: **Direct Push**

Date Completed: **7/17/02**

Logged By: **K. Brunckhorst**

Total Depth: **8.0 ft**

Notes: **Geoprobe** Hammer Wt: **N/A**

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-24-0						**SANDY CLAY (CL)** - olive-brown, dry, with fine to medium sand, no odor, trace of wood	
2	KB-24-2							
3								
4							-refusal at 4' move over try again	
5				24"			-traces of plastic **CLAY (CL)** - black, saturated, trace of wood, trace of fine to medium sand, H_2S odor	▽ 9:50
6								
7								
8				36"			-Collect groundwater sample at 9:50	Bottom of Boring = 8 feet
9								
10								
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12								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-24
Rolls Royce Test Facility
Oakland, California

PLATE **24**

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07/29/02 2:12:17 PM

Drilling method: Direct Push

Date Completed: 7/17/02

Logged By: K. Brunckhorst

Total Depth: 8.0 ft

Notes: Geoprobe Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-25-0						**SANDY CLAY (CL)** - olive-brown, dry, stiff, with fine to medium sand, trace of wood and glass, no odor	
2	KB-25-2							
3								
4				24"				
5							-wood and fill debris with fine gravel, black, saturated, sheen observed in sample	▽ 10:30
6								
7								
8							Collect groundwater sample at 10:30	Bottom of Boring = 8 feet
9								
10								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-25
Rolls Royce Test Facility
Oakland, California

PLATE 25

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07/29/02 2:12:34 PM

Drilling method: Hand Auger

Date Completed: 7/12/02

Logged By: K. Brunckhorst

Total Depth: 9.0 ft

Notes: N/A Hammer Wt: N/A

Depth (feet)	Sample Number	Sample Type	Blows/Foot	Recovery (%)	OVA (ppm) PID	USCS	Description	Remarks
1	KB-26-0						**SANDY CLAY (CL)** - olive-brown, moist, with fine to coarse sand, trace of gravels up to 1.5 inches, no odor	
2								
3	KB-26-3							
4	KB-26-4							
5							**CLAY (CL)** - dark greenish gray, wet, high plasticity, bay mud	
6								
7								
8								
9							Groundwater sample collected on 7/18	Bottom of Boring = 9 feet
10								
11								
12								
13								
14								
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KLEINFELDER

PROJECT NO. 17646/INV

LOG OF BORING NO. KB-26
Rolls Royce Test Facility
Oakland, California

PLATE
26

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07/29/02 2:12:51 PM

APPENDIX C

Laboratory Data Sheets

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Reported: 07/10/02
	Client P.O.:	Date Completed: 07/10/02

July 10, 2002

Dear Steve:

Enclosed are:

1). the results of **5** samples from your **#17646/INN; Rolls Royce Test Facility project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/05/02-07/09/02
	Client P.O.:	Date Analyzed: 07/05/02-07/09/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0207050

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001C	MW-3	W	ND	1	103
002C	MW-4	W	110,b	1	98.8
003C	MW-3NPORD	W	ND	1	96.9
004C	MW-1	W	ND	1	104
005C	MW-2	W	ND	1	98.3

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/03/02
	Client P.O.:	Date Analyzed: 07/02/02-07/12/02

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0207050

Lab ID	Client ID	Matrix	TPH(jf)	TPH(d)	TPH(mo)	DF	% SS
001A	MW-3	W	ND	ND	ND	1	99.1
001B	MW-3 (Filtered)	W	ND	51,b	ND	1	96.3
002A	MW-4	W	98	100,b	ND	1	95.1
002B	MW-4 (Filtered)	W	ND	85,b	ND	1	94.4
003A	MW-3NPORD	W	ND	ND	ND	1	95.8
003B	MW-3npord (Filt.)	W	ND	ND	ND	1	105
004A	MW-1	W	ND	ND	ND	1	99.6
004B	MW-1 (Filtered)	W	ND	ND	ND	1	100
005A	MW-2	W	ND	ND	ND	1	99.1
005B	MW-2 (Filtered)	W	ND	ND	ND	1	97.5

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	50	250	µg/L
	S	NA	NA	NA	mg/Kg

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

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Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
7133 Koll Center Pkwy, #100		Date Received: 07/02/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/06/02-07/08/02
	Client P.O.:	Date Analyzed: 07/06/02-07/08/02

Volatiles Organics by GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207050

Lab ID	0207050-001D
Client ID	MW-3
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<11	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	1.5	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	110	%SS2:	100
%SS3:	93.8		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
7133 Koll Center Pkwy, #100		Date Received: 07/02/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/06/02-07/08/02
	Client P.O.:	Date Analyzed: 07/06/02-07/08/02

Volatiles Organics by GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207050

Lab ID	0207050-002D
Client ID	MW-4
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<11	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	1.8	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	0.88	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	108	%SS2:	101
%SS3:	94.0		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/06/02-07/08/02
	Client P.O.:	Date Analyzed: 07/06/02-07/08/02

Volatiles Organics by GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207050

Lab ID	0207050-003D
Client ID	MW-3NPORD
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<11	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	2.2	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	0.66	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	108	%SS2:	99.1
%SS3:	92.3		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/06/02-07/08/02
	Client P.O.:	Date Analyzed: 07/06/02-07/08/02

Volatiles Organics by GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207050

Lab ID	0207050-004D
Client ID	MW-1
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<11	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	113	%SS2:	101
%SS3:	95.0		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/06/02-07/08/02
	Client P.O.:	Date Analyzed: 07/06/02-07/08/02

Volatiles Organics by GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207050

Lab ID	0207050-005D
Client ID	MW-2
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<11	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	109	%SS2:	100
%SS3:	96.5		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
7133 Koll Center Pkwy, #100		Date Received: 07/02/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/02/02
	Client P.O.:	Date Analyzed: 07/03/02-07/08/02

CAM / CCR 17 Metals*

Lab ID	0207050-001E	0207050-002E	0207050-003E	0207050-004E	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	MW-3	MW-4	MW-3NPORD	MW-1		
Matrix	W	W	W	W	q	W
Extraction Type	DISS.	DISS.	DISS.	DISS.	mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207050

Dilution Factor	1	1	1	1	1	1
Barium	0.91	0.62	0.15	0.13	NA	0.05
Beryllium	ND	ND	ND	ND	NA	0.004
Cadmium	ND	ND	ND	ND	NA	0.005
Chromium	ND	ND	ND	ND	NA	0.02
Cobalt	ND	ND	ND	ND	NA	0.05
Copper	ND	ND	ND	ND	NA	0.05
Molybdenum	ND	ND	ND	ND	NA	0.05
Nickel	ND	ND	ND	ND	NA	0.05
Silver	ND	ND	ND	ND	NA	0.01
Vanadium	ND	ND	ND	ND	NA	0.05
Zinc	ND	ND	ND	ND	NA	0.05
%SS:	N/A	N/A	N/A	N/A		

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1	1	1	1	1
Antimony	ND<0.06	ND	ND<0.06	ND<0.06	NA	0.006
Arsenic	ND<0.05	ND	ND<0.05	ND<0.05	NA	0.005
Lead	ND	ND	ND	ND	NA	0.005
Selenium	ND	ND	ND	ND	NA	0.005
Thallium	ND	ND	ND	ND	NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1	1	1	1	1
Mercury	ND	ND	ND	ND	NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/02/02
	Client P.O.:	Date Analyzed: 07/03/02-07/08/02

CAM / CCR 17 Metals*

					Reporting Limit for DF =1; ND means not detected above the reporting limit	
Lab ID	0207050-005E				q	W
Client ID	MW-2					
Matrix	W				mg/kg	DISS.(mg/L)
Extraction Type	DISS.					

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207050

Dilution Factor	1				1	1
Barium	0.064				NA	0.05
Beryllium	ND				NA	0.004
Cadmium	ND				NA	0.005
Chromium	ND				NA	0.02
Cobalt	ND				NA	0.05
Copper	ND				NA	0.05
Molybdenum	ND				NA	0.05
Nickel	ND				NA	0.05
Silver	ND				NA	0.01
Vanadium	ND				NA	0.05
Zinc	ND				NA	0.05
%SS:	N/A					

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1				1	1
Antimony	ND				NA	0.006
Arsenic	ND				NA	0.005
Lead	ND				NA	0.005
Selenium	ND				NA	0.005
Thallium	ND				NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1				1	1
Mercury	ND				NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder, Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inn; Rolls Royce Test Facility	Date Sampled: 07/02/02
		Date Received: 07/02/02
	Client Contact: Steve Walker	Date Extracted: 07/02/02
	Client P.O:	Date Analyzed: 07/08/02

Organic Lead

CA Title 22, Chapter 11, Appendix XI

Lab ID	Client ID	Matrix	Organic Lead *
0207050-001F	MW-3	W	ND
0207050-002F	MW-4	W	ND
0207050-003F	MW-3 NPORD	W	ND
0207050-004F	MW-1	W	ND
0207050-005F	MW-2	W	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207050

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2773 Spiked Sample ID: 0207047-001A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	94.7	94.5	0.196	99.9	102	200	80	120
MTBE	ND	10	84.8	86.3	1.79	100	96.7	3.59	80	120
Benzene	ND	10	92.2	89.8	2.66	112	105	6.72	80	120
Toluene	ND	10	96.6	94.3	2.40	114	112	1.93	80	120
Ethylbenzene	ND	10	99.1	96.8	2.29	114	109	4.91	80	120
Xylenes	ND	30	99.3	95.3	4.11	113	110	2.99	80	120
%SS:	103	100	101	100	0.602	111	108	2.37	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0207050

EPA Method: SW8015C Extraction: SW3510C BatchID: 2774 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	106	105	1.25	70	130
%SS:	N/A	100	N/A	N/A	N/A	107	106	0.710	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0207050

EPA Method: SW8260B Extraction: SW5030B BatchID: 2763 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	N/A	10	N/A	N/A	N/A	113	108	4.00	70	130
Chlorobenzene	N/A	10	N/A	N/A	N/A	108	103	5.29	70	130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	88.9	85.1	4.36	70	130
Methyl-t-butyl ether (MTBE)	N/A	10	N/A	N/A	N/A	121	118	2.62	70	130
Toluene	N/A	10	N/A	N/A	N/A	117	112	4.37	70	130
Trichloroethene	N/A	10	N/A	N/A	N/A	89.3	84.7	5.25	70	130
%SS1:	N/A	100	N/A	N/A	N/A	102	101	0.220	70	130
%SS2:	N/A	100	N/A	N/A	N/A	104	105	0.493	70	130
%SS3:	N/A	100	N/A	N/A	N/A	100	101	1.25	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC REPORT

CAM 17

Date: 07/03/02 **Extraction:** Dissolved **Matrix:** Water

Compound	Concentration: mg/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 70302					Instrument	P-1 | AA	
Beryllium	ND	5.3	5.3	5.00	107	107	0.2
Selenium	ND	0.0090	0.0091	0.0100	90	91	0.9
Molybdenum	ND	5.1	5.1	5.00	101	101	0.3
Silver	ND	0.5	0.5	0.50	96	97	1.0
Thallium	ND	0.0095	0.0101	0.0100	95	101	6.6
Barium	ND	4.9	4.8	5.00	99	96	2.3
Nickel	ND	5.1	5.2	5.00	103	105	2.0
Arsenic	ND	0.0093	0.0101	0.0100	93	101	8.2
Vanadium	ND	5.1	5.1	5.00	102	103	0.3
Mercury	ND	0.00085	0.00085	0.00100	85	85	0.4
Zinc	ND	4.8	5.3	5.00	97	106	9.2
Copper	ND	4.9	5.3	5.00	97	107	9.4
Antimony	ND	0.0103	0.0110	0.0100	103	110	6.3
Lead	ND	0.0099	0.0104	0.0100	99	104	5.0
Cadmium	ND	5.1	5.7	5.00	102	113	10.7
Cobalt	ND	5.3	5.7	5.00	106	114	7.3
Chromium	ND	5.1	5.1	5.00	101	103	1.5

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 200$$

RPD means Relative Percent Deviation

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QC SUMMARY REPORT FOR CA T22 CPT11 APPDXI

Matrix: W WorkOrder: 0207050

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2782 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	0.010	N/A	N/A	N/A	111	95.1	15.7	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

KLEINFELDER ZXF522. * 0207050

PROJECT NO.	PROJECT NAME	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	ANALYSIS						RECEIVING LAB:
17646 / INV	Rolls Royce Test Facility			TPH-3 TPHd + mo (8015) w/s Silica Gel	TPH-3 TPHd + mo (8015) w/ Silica Gel	TPHg (8015)	VOCs (8260)	Title 22 metals (6010/hew)	Organic Lead	McCampbell Analytical
L.P. NO. (P.O. NO)	SAMPLERS: (Signature/Number) [signature]									INSTRUCTIONS/REMARKS
										STD 5 DAY TAT

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	TPHd+mo w/ Silica Gel	TPHd+mo w/ Silica Gel	TPHg	VOCs	Title 22 metals	Organic Lead					INSTRUCTIONS/REMARKS
1	7/2/02	1050	MW-3	WATER	8	Amber Poly VOC	X	X	X	X	X	X					
2	↓	1210	MW-4	↓	↓	↓	↓	↓	↓	↓	↓	↓					
3		1255	MW-3 NPORD														
4		1335	MW-1														
5		1400	MW-2														
6																	
7																	
8																	
9																	
10																	*please Filter prior to Analyses
11																	
12																	** Lab to Filter & Acidify
13																	metals Samples prior to Analyses
14																	
15																	
16																	
17																	
18																	
19																	
20																	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Instructions/Remarks:	Send Results To:
[signature]	7/2/02 1505	[signature]	FAX RESULTS TO: STEVE WALKER 925 484 5838	KLEINFELDER 7133 KOLL CENTER PARKWAY SUITE 100 PLEASANTON, CA 94566 ~~(510)~~ 925 484-1700 Attn
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		

M-60 White – Sample L: Linda Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY № 2652

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207050

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17646/INN; Roll
PO:

03-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					22 CPT11 AP	E200_7	E200_9	E245_1	SW8015C	8021B/8015	SW8260B
0207050-001	MW-3	Water	7/2/02 10:50:00 AM		F	E	E	E	A	C	D
0207050-001	MW-3 (Filtered)	Water	7/2/02 10:50:00 AM						B		
0207050-002	MW-4	Water	7/2/02 12:10:00 PM		F	E	E	E	A	C	D
0207050-002	MW-4 (Filtered)	Water	7/2/02 12:10:00 PM						B		
0207050-003	MW-3NPORD	Water	7/2/02 12:55:00 PM		F	E	E	E	A	C	D
0207050-003	MW-3NPORD (Filtered)	Water	7/2/02 12:55:00 PM						B		
0207050-004	MW-1	Water	7/2/02 1:35:00 PM		F	E	E	E	A	C	D
0207050-004	MW-1 (Filtered)	Water	7/2/02 1:35:00 PM						B		
0207050-005	MW-2	Water	7/2/02 2:00:00 PM		F	E	E	E	A	C	D
0207050-005	MW-2 (Filtered)	Water	7/2/02 2:00:00 PM						B		

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Reported: 07/22/02
	Client P.O.:	Date Completed: 07/22/02

July 22, 2002

Dear Steve:

Enclosed are:

1). the results of 9 samples from your **#17646/INN; Rolls Royce project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

AUG 8 RECD

McCampbell Analytical Inc.
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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/13/02-07/19/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0207173

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001C	KB-18	W	1600,g ,h,i	1	104
002C	KB-17	W	220,b,i	1	98.3
003C	KB-16	W	2600,b,i	2	99.9
004C	KB-19	W	ND,i	1	112
005A	KB-26-0.0	S	ND	1	105
006A	KB-26-3.0	S	ND	1	106
008A	KB-17-0.0	S	3.7,g	1	106
009A	KB-19-0.0	S	ND	1	109

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
7133 Koll Center Pkwy, #100		Date Received: 07/12/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/13/02-07/16/02

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0207173

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
001A	KB-18 (FILTER)	W	4700,b,g,h	2600	4500	1	130
001B	KB-18	W	9300,b,g,h,i	2300	9300	1	110
002A	KB-17 (FILTER)	W	460,b	ND	500	1	108
002B	KB-17	W	460,b,i	300	480	1	109
003A	KB-16 (FILTER)	W	5900,b,g	690	6500	1	109
003B	KB-16	W	8800,d,b,g,i	2100	9900	1	93.8
004A	KB-19 (FILTER)	W	ND	ND	ND	1	82.7
004B	KB-19	W	110,b,i	ND	84	1	105
005A	KB-26-0.0	S	20,g,b	43	8.2	1	94.1
006A	KB-26-3.0	S	4.4,g,b	15	2.4	1	94.1
008A	KB-17-0.0	S	92,b,g	110	49	1	92.9
009A	KB-19-0.0	S	24,b,g	24	17	1	92.6

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	50	µg/L
	S	1.0	5.0	1.0	mg/Kg

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/16/02-07/17/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207173

Lab ID	0207173-001D
Client ID	KB-18
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	1.6	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	2.9	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	3.2	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	0.52	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	5.6	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	14	1.0	0.5	n-Propyl benzene	0.88	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	6.9	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	1.9	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	95.6	%SS2:	102
%SS3:	107		

Comments: h,i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/16/02-07/17/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207173

Lab ID	0207173-002D
Client ID	KB-17
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<5.5	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	2.9	1.0	1.0
n-Butyl benzene	1.6	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	2.3	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	0.94	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	96.7	%SS2:	101
%SS3:	103		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
7133 Koll Center Pkwy, #100	Client Contact: Steve Walker	Date Extracted: 07/16/02-07/17/02
Pleasanton, CA 94566	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207173

Lab ID	0207173-003D
Client ID	KB-16
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<17	3.3	5.0	Benzene	ND<1.7	3.3	0.5
Bromobenzene	ND<1.7	3.3	0.5	Bromochloromethane	ND<1.7	3.3	0.5
Bromodichloromethane	ND<1.7	3.3	0.5	Bromoform	ND<1.7	3.3	0.5
Bromomethane	ND<1.7	3.3	0.5	2-Butanone (MEK)	4.8	3.3	1.0
n-Butyl benzene	ND<1.7	3.3	0.5	sec-Butyl benzene	4.0	3.3	0.5
tert-Butyl benzene	ND<1.7	3.3	0.5	Carbon Disulfide	2.2	3.3	0.5
Carbon Tetrachloride	ND<1.7	3.3	0.5	Chlorobenzene	ND<1.7	3.3	0.5
Chloroethane	ND<1.7	3.3	0.5	2-Chloroethyl Vinyl Ether	ND<3.3	3.3	1.0
Chloroform	ND<1.7	3.3	0.5	Chloromethane	ND<1.7	3.3	0.5
2-Chlorotoluene	ND<1.7	3.3	0.5	4-Chlorotoluene	ND<1.7	3.3	0.5
Dibromochloromethane	ND<1.7	3.3	0.5	1,2-Dibromo-3-chloropropane	ND<1.7	3.3	0.5
1,2-Dibromoethane (EDB)	ND<1.7	3.3	0.5	Dibromomethane	ND<1.7	3.3	0.5
1,2-Dichlorobenzene	ND<1.7	3.3	0.5	1,3-Dichlorobenzene	ND<1.7	3.3	0.5
1,4-Dichlorobenzene	ND<1.7	3.3	0.5	Dichlorodifluoromethane	ND<1.7	3.3	0.5
1,1-Dichloroethane	ND<1.7	3.3	0.5	1,2-Dichloroethane (1,2-DCA)	ND<1.7	3.3	0.5
1,1-Dichloroethene	ND<1.7	3.3	0.5	cis-1,2-Dichloroethene	ND<1.7	3.3	0.5
trans-1,2-Dichloroethene	ND<1.7	3.3	0.5	1,2-Dichloropropane	ND<1.7	3.3	0.5
1,3-Dichloropropane	ND<1.7	3.3	0.5	2,2-Dichloropropane	ND<1.7	3.3	0.5
1,1-Dichloropropene	ND<1.7	3.3	0.5	cis-1,3-Dichloropropene	ND<1.7	3.3	0.5
trans-1,3-Dichloropropene	ND<1.7	3.3	0.5	Ethylbenzene	ND<1.7	3.3	0.5
Hexachlorobutadiene	ND<17	3.3	5.0	2-Hexanone	ND<1.7	3.3	0.5
Iodomethane (Methyl iodide)	ND<3.3	3.3	1.0	4-Isopropyl toluene	5.2	3.3	0.5
Isopropylbenzene	ND<1.7	3.3	0.5	4-Methyl-2-pentanone (MIBK)	ND<1.7	3.3	0.5
Methylene chloride	ND<1.7	3.3	0.5	Methyl-t-butyl ether (MTBE)	ND<1.7	3.3	0.5
Naphthalene	68	3.3	0.5	n-Propyl benzene	2.6	3.3	0.5
Styrene	ND<1.7	3.3	0.5	1,1,1,2-Tetrachloroethane	ND<1.7	3.3	0.5
1,1,2,2-Tetrachloroethane	ND<1.7	3.3	0.5	Tetrachloroethene	ND<1.7	3.3	0.5
Toluene	ND<1.7	3.3	0.5	1,2,3-Trichlorobenzene	ND<1.7	3.3	0.5
1,2,4-Trichlorobenzene	ND<1.7	3.3	0.5	1,1,1-Trichloroethane	ND<1.7	3.3	0.5
1,1,2-Trichloroethane	ND<1.7	3.3	0.5	Trichloroethene	ND<1.7	3.3	0.5
Trichlorofluoromethane	ND<1.7	3.3	0.5	1,2,3-Trichloropropane	ND<1.7	3.3	0.5
1,2,4-Trimethylbenzene	24	3.3	0.5	1,3,5-Trimethylbenzene	2.1	3.3	0.5
Vinyl Acetate	ND<17	3.3	5.0	Vinyl Chloride	ND<1.7	3.3	0.5
Xylenes	2.0	3.3	0.5				

Surrogate Recoveries (%)

%SS1:	97.4	%SS2:	102
%SS3:	105		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/16/02-07/17/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207173

Lab ID	0207173-004D
Client ID	KB-19
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	0.84	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	91.1	%SS2:	103
%SS3:	101		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207173

Lab ID	0207173-005A
Client ID	KB-26-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<90	0.20	50	Benzene	ND	0.20	5.0
Bromobenzene	ND	0.20	5.0	Bromochloromethane	ND	0.20	5.0
Bromodichloromethane	ND	0.20	5.0	Bromoform	ND	0.20	5.0
Bromomethane	ND	0.20	5.0	2-Butanone (MEK)	ND	0.20	10
n-Butyl benzene	ND	0.20	5.0	sec-Butyl benzene	ND	0.20	5.0
tert-Butyl benzene	ND	0.20	5.0	Carbon Disulfide	ND	0.20	5.0
Carbon Tetrachloride	ND	0.20	5.0	Chlorobenzene	ND	0.20	5.0
Chloroethane	ND	0.20	5.0	2-Chloroethyl Vinyl Ether	ND	0.20	10
Chloroform	ND	0.20	5.0	Chloromethane	ND	0.20	5.0
2-Chlorotoluene	ND	0.20	5.0	4-Chlorotoluene	ND	0.20	5.0
Dibromochloromethane	ND	0.20	5.0	1,2-Dibromo-3-chloropropane	ND	0.20	5.0
1,2-Dibromoethane (EDB)	ND	0.20	5.0	Dibromomethane	ND	0.20	5.0
1,2-Dichlorobenzene	ND	0.20	5.0	1,3-Dichlorobenzene	ND	0.20	5.0
1,4-Dichlorobenzene	ND	0.20	5.0	Dichlorodifluoromethane	ND	0.20	5.0
1,1-Dichloroethane	ND	0.20	5.0	1,2-Dichloroethane (1,2-DCA)	ND	0.20	5.0
1,1-Dichloroethene	ND	0.20	5.0	cis-1,2-Dichloroethene	ND	0.20	5.0
trans-1,2-Dichloroethene	ND	0.20	5.0	1,2-Dichloropropane	ND	0.20	5.0
1,3-Dichloropropane	ND	0.20	5.0	2,2-Dichloropropane	ND	0.20	5.0
1,1-Dichloropropene	ND	0.20	5.0	cis-1,3-Dichloropropene	ND	0.20	5.0
trans-1,3-Dichloropropene	ND	0.20	5.0	Ethylbenzene	ND	0.20	5.0
Hexachlorobutadiene	ND	0.20	5.0	2-Hexanone	ND	0.20	5.0
Iodomethane (Methyl iodide)	ND	0.20	10	4-Isopropyl toluene	ND	0.20	5.0
Isopropylbenzene	ND	0.20	5.0	4-Methyl-2-pentanone (MIBK)	ND	0.20	5.0
Methylene chloride	ND	0.20	5.0	Methyl-t-butyl ether (MTBE)	ND	0.20	5.0
Naphthalene	ND	0.20	5.0	n-Propyl benzene	ND	0.20	5.0
Styrene	ND	0.20	5.0	1,1,1,2-Tetrachloroethane	ND	0.20	5.0
1,1,2,2-Tetrachloroethane	ND	0.20	5.0	Tetrachloroethene	ND	0.20	5.0
Toluene	ND	0.20	5.0	1,2,3-Trichlorobenzene	ND	0.20	5.0
1,2,4-Trichlorobenzene	ND	0.20	5.0	1,1,1-Trichloroethane	ND	0.20	5.0
1,1,2-Trichloroethane	ND	0.20	5.0	Trichloroethene	ND	0.20	5.0
Trichlorofluoromethane	ND	0.20	5.0	1,2,3-Trichloropropane	ND	0.20	5.0
1,2,4-Trimethylbenzene	ND	0.20	5.0	1,3,5-Trimethylbenzene	ND	0.20	5.0
Vinyl Acetate	ND	0.20	50	Vinyl Chloride	ND	0.20	5.0
Xylenes	ND	0.20	5.0				

Surrogate Recoveries (%)

%SS1:	94.4	%SS2:	111
%SS3:	106		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207173

Lab ID	0207173-006A
Client ID	KB-26-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<90	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.6	%SS2:	111
%SS3:	102		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

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Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
7133 Koll Center Pkwy, #100		Date Received: 07/12/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207173

Lab ID	0207173-008A
Client ID	KB-17-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<90	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	92.0	%SS2:	107
%SS3:	107		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
7133 Koll Center Pkwy, #100		Date Received: 07/12/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/16/02-07/17/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207173

Lab ID	0207173-009A
Client ID	KB-19-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<90	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	93.9	%SS2:	114
%SS3:	107		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/15/02-07/22/02

CAM / CCR 17 Metals*

Lab ID	0207173-005A	0207173-006A	0207173-008A	0207173-009A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-26-0.0	KB-26-3.0	KB-17-0.0	KB-19-0.0	S	W
Matrix	S	S	S	S	TTLC(mg/Kg)	mg/L
Extraction Type	TTLC	TTLC	TTLC	TTLC		

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207173

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND	ND	2.5	NA
Barium	77	22	170	55	2.5	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	1.9	1.2	6.9	0.72	0.5	NA
Chromium	150	34	39	47	0.5	NA
Cobalt	7.5	4.3	9.7	6.8	2.0	NA
Copper	59	18	68	25	2.0	NA
Lead	390	6.8	150	22	3.0	NA
Molybdenum	ND	ND	ND	ND	2.0	NA
Nickel	42	23	48	38	2.0	NA
Silver	1.6	ND	ND	ND	1.0	NA
Vanadium	43	23	24	37	2.0	NA
Zinc	110	49	270	90	1.0	NA
%SS:	102	102	107	102		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	12	5.5	6.6	5.8	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1	10	1	1	1
Mercury	0.097	ND	1.7	0.098	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INN; Rolls Royce	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O.:	Date Analyzed: 07/15/02-07/19/02

CAM / CCR 17 Metals*

Lab ID	0207173-001E	0207173-002E	0207173-003E	0207173-004E	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-18	KB-17	KB-16	KB-19		
Matrix	W	W	W	W	q	W
Extraction Type	DISS.	DISS.	DISS.	DISS.	mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207173

Dilution Factor	1	1	1	1	1	1
Antimony	ND<0.05	ND<0.05	ND<0.05	ND<0.05	NA	0.005
Barium	0.66	0.37	0.14	0.20	NA	0.05
Beryllium	ND	ND	ND	ND	NA	0.004
Cadmium	ND	ND	ND	ND	NA	0.005
Chromium	ND	ND	ND	ND	NA	0.02
Cobalt	ND	ND	ND	ND	NA	0.05
Copper	ND	ND	ND	ND	NA	0.05
Molybdenum	ND	ND	ND	ND	NA	0.05
Nickel	ND	ND	ND	ND	NA	0.05
Silver	ND	ND	ND	ND	NA	0.01
Vanadium	ND	ND	ND	ND	NA	0.05
Zinc	ND	ND	ND	ND	NA	0.05
%SS:	N/A	N/A	N/A	N/A		

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1	1	1	1	1
Arsenic	ND	0.0145	ND	0.0131	NA	0.005
Lead	0.0054	ND	0.0064	ND	NA	0.005
Selenium	ND	ND	ND	ND	NA	0.005
Thallium	ND	ND	ND	ND	NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1	1	1	1	1
Mercury	ND	ND	ND	ND	NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder, Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inn; Rolls Royce Test Facility	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O:	Date Analyzed: 07/18/02

CA Title 22, Chapter 11, Appendix XI

Organic Lead

Lab ID	Client ID	Matrix	Organic Lead *
0207173-001	KB-18	W	ND
0207173-002	KB-17	W	ND
0207173-003	KB-16	W	ND
0207173-004	KB-19	W	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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Kleinfelder, Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inn; Rolls Royce Test Facility	Date Sampled: 07/12/02
		Date Received: 07/12/02
	Client Contact: Steve Walker	Date Extracted: 07/12/02
	Client P.O:	Date Analyzed: 07/18/02

Organic Lead

CA Title 22, Chapter 11, Appendix XI

Lab ID	Client ID	Matrix	Organic Lead *
0207173-001	KB-18	W	ND
0207173-002	KB-17	W	ND
0207173-003	KB-16	W	ND
0207173-004	KB-19	W	ND
0207173-005	KB-26-0.0	S	ND
0207173-006	KB-26-3.0	S	ND
0207173-008	KB-17-0.0	S	0.54
0207173-009	KB-19-0.0	S	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0207173

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2924 Spiked Sample ID: 0207173-009A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	0.60	105	106	1.01	98.4	102	4.00	80	120
MTBE	ND	0.10	89.9	89	0.935	87	84.1	3.43	80	120
Benzene	ND	0.10	109	108	0.964	107	106	0.569	80	120
Toluene	ND	0.10	111	111	0.227	112	112	0.791	80	120
Ethylbenzene	ND	0.10	112	112	0.676	109	109	0.501	80	120
Xylenes	ND	0.30	113	113	0	110	103	6.25	80	120
%SS:	109	100	105	105	0.203	110	109	0.105	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S

WorkOrder: 0207173

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2908 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	N/A	0.60	N/A	N/A	N/A	113	104	7.91	80	120
MTBE	N/A	0.10	N/A	N/A	N/A	89.9	86.9	3.45	80	120
Benzene	N/A	0.10	N/A	N/A	N/A	106	104	1.80	80	120
Toluene	N/A	0.10	N/A	N/A	N/A	109	107	2.15	80	120
Ethylbenzene	N/A	0.10	N/A	N/A	N/A	109	107	1.65	80	120
Xylenes	N/A	0.30	N/A	N/A	N/A	110	110	0	80	120
%SS:	N/A	100	N/A	N/A	N/A	107	102	4.81	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207173

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2917 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	N/A	60	N/A	N/A	N/A	105	105	0.412	80	120
MTBE	N/A	10	N/A	N/A	N/A	99.8	97.1	2.73	80	120
Benzene	N/A	10	N/A	N/A	N/A	109	109	0.509	80	120
Toluene	N/A	10	N/A	N/A	N/A	111	111	0.639	80	120
Ethylbenzene	N/A	10	N/A	N/A	N/A	112	111	0.662	80	120
Xylenes	N/A	30	N/A	N/A	N/A	113	113	0	80	120
%SS:	N/A	100	N/A	N/A	N/A	102	102	0.197	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0207173

EPA Method: SW8015C Extraction: SW3550C BatchID: 2909 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	150	N/A	N/A	N/A	86	93.6	8.44	70	130
%SS:	N/A	100	N/A	N/A	N/A	111	120	8.25	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0207173

EPA Method: SW8015C Extraction: SW3510C BatchID: 2915 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	93.6	94.2	0.664	70	130
%SS:	N/A	100	N/A	N/A	N/A	97.7	97.6	0.0662	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: S WorkOrder: 0207173

EPA Method: SW8260B Extraction: SW5030B BatchID: 2912 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	N/A	50	N/A	N/A	N/A	114	115	0.634	70	130
Chlorobenzene	N/A	50	N/A	N/A	N/A	124	124	0.351	70	130
1,1-Dichloroethene	N/A	50	N/A	N/A	N/A	105	107	1.63	70	130
Methyl-t-butyl ether (MTBE)	N/A	50	N/A	N/A	N/A	113	113	0.404	70	130
Toluene	N/A	50	N/A	N/A	N/A	112	111	1.70	70	130
Trichloroethene	N/A	50	N/A	N/A	N/A	104	104	0.290	70	130
%SS1:	N/A	100	N/A	N/A	N/A	100	101	0.716	70	130
%SS2:	N/A	100	N/A	N/A	N/A	99.7	98.2	1.49	70	130
%SS3:	N/A	100	N/A	N/A	N/A	92.8	94.1	1.45	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MMS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0207173

EPA Method: SW8260B Extraction: SW5030B BatchID: 2911 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	N/A	10	N/A	N/A	N/A	93.1	95.2	2.26	70	130
Chlorobenzene	N/A	10	N/A	N/A	N/A	107	111	3.94	70	130
1,1-Dichloroethene	N/A	10	N/A	N/A	N/A	89.5	91.2	1.88	70	130
Methyl-t-butyl ether (MTBE)	N/A	10	N/A	N/A	N/A	96	99.9	3.99	70	130
Toluene	N/A	10	N/A	N/A	N/A	96.7	100	3.63	70	130
Trichloroethene	N/A	10	N/A	N/A	N/A	88	89.8	2.02	70	130
%SS1:	N/A	100	N/A	N/A	N/A	101	99.3	1.63	70	130
%SS2:	N/A	100	N/A	N/A	N/A	104	105	0.646	70	130
%SS3:	N/A	100	N/A	N/A	N/A	92.4	91.5	0.933	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC REPORT

CAM 17

Date: 07/1502 **Extraction:** TTLC **Matrix:** Soil

Compound	Concentration: mg/kg				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71002					Instrument	P-1 | AA	
Beryllium	ND	4.9	4.5	5.00	98	90	8.7
Selenium	ND	11.7	11.3	10.00	117	113	3.4
Molybdenum	ND	5.2	5.2	5.00	104	103	0.6
Silver	ND	0.45	0.45	0.50	91	91	0.1
Thallium	ND	8.7	9.7	10.00	87	97	10.9
Barium	ND	4.9	5.0	5.00	98	101	2.5
Nickel	ND	4.9	5.1	5.00	98	102	4.2
Arsenic	ND	10.6	11.5	10.00	106	115	8.4
Vanadium	ND	5.3	5.5	5.00	106	110	3.5
Surrogate1	ND	107.6	104.8	100.00	108	105	2.6
Zinc	ND	4.9	5.0	5.00	99	100	1.1
Copper	ND	4.7	4.9	5.00	94	97	3.0
Antimony	ND	5.0	5.0	5.00	100	99	1.2
Lead	ND	5.0	5.0	5.00	99	99	0.0
Cadmium	ND	5.4	5.2	5.00	108	103	4.3
Cobalt	ND	5.1	5.2	5.00	101	103	1.8
Mercury	ND	0.23	0.24	0.25	94	97	2.7
Chromium	ND	4.9	5.1	5.00	99	102	3.0

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{Amount Spiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 200$$

RPD means Relative Percent Deviation

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QC REPORT

CAM 17

Date: 07/15/02 **Extraction:** TTLC **Matrix:** Water

Compound	Concentration: mg/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71502					Instrument	P-1 | AA	
Beryllium	ND	5.3	5.5	5.00	107	110	3.1
Selenium	ND	0.0109	0.0095	0.0100	109	95	13.2
Molybdenum	ND	4.7	4.8	5.00	95	96	0.7
Silver	ND	0.5	0.5	0.50	91	92	0.9
Thallium	ND	0.0102	0.0099	0.0100	102	99	2.5
Barium	ND	5.1	5.3	5.00	102	106	3.9
Nickel	ND	4.7	4.6	5.00	94	93	1.8
Arsenic	ND	0.0106	0.0092	0.0100	106	92	13.8
Vanadium	ND	4.8	5.0	5.00	95	99	4.4
Mercury	ND	0.00089	0.00092	0.00100	89	92	3.2
Zinc	ND	4.6	4.6	5.00	92	93	1.0
Copper	ND	4.9	5.2	5.00	98	105	6.7
Antimony	ND	0.0101	0.0094	0.0100	101	94	6.3
Lead	ND	0.0100	0.0102	0.0100	100	102	2.2
Cadmium	ND	4.7	5.2	5.00	93	104	10.7
Cobalt	ND	4.6	4.8	5.00	93	97	4.1
Chromium	ND	4.9	4.9	5.00	98	98	0.0

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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QC SUMMARY REPORT FOR CA T22 CPT11 APPDXI

Matrix: W WorkOrder: 0207173

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2922 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	0.010	N/A	N/A	N/A	105	101	3.17	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR CA T22 CPT11 APPD XI

Matrix: S WorkOrder: 0207173

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2923 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	4	N/A	N/A	N/A	114	106	7.23	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207173

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17646/INN; Roll
PO:

12-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					6010C	22 CPT11 AP	22 CPT11 AP	E200_7	E200_9	E245_1	SW7010
0207173-001	KB-18	Water	7/12/02 10:00:00 AM				F	E	E	E	
0207173-002	KB-17	Water	7/12/02 11:00:00 AM				F	E	E	E	
0207173-003	KB-16	Water	7/12/02 11:25:00 AM				F	E	E	E	
0207173-004	KB-19	Water	7/12/02 12:00:00 PM				F	E	E	E	
0207173-005	KB-26-0.0	Soil	7/12/02 12:20:00 PM		A	A					A
0207173-006	KB-26-3.0	Soil	7/12/02 12:30:00 PM		A	A					A
0207173-007	KB-26-4.0	Soil	7/12/02 12:40:00 PM								
0207173-008	KB-17-0.0	Soil	7/12/02 10:15:00 AM		A	A					A
0207173-009	KB-19-0.0	Soil	7/12/02 11:35:00 AM		A	A					A

Comments: SAMPLES 1-4A Filtered

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207173

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17646/INN; Roll
PO:

12-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					SW7471B	SW8015C	8021B/8015	SW8260B			
0207173-001	KB-18	Water	7/12/02 10:00:00 AM			A	C	D			
0207173-002	KB-17	Water	7/12/02 11:00:00 AM			A	C	D			
0207173-003	KB-16	Water	7/12/02 11:25:00 AM			A	C	D			
0207173-004	KB-19	Water	7/12/02 12:00:00 PM			A	C	D			
0207173-005	KB-26-0.0	Soil	7/12/02 12:20:00 PM		A	A	A	A			
0207173-006	KB-26-3.0	Soil	7/12/02 12:30:00 PM		A	A	A	A			
0207173-007	KB-26-4.0	Soil	7/12/02 12:40:00 PM			A					
0207173-008	KB-17-0.0	Soil	7/12/02 10:15:00 AM		A	A	A	A			
0207173-009	KB-19-0.0	Soil	7/12/02 11:35:00 AM		A	A	A	A			

Comments: SAMPLES 1-4A Filtered

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

[redacted] KLE[redacted]NFE[redacted]DER [redacted] 2KF523 *

PROJECT NO.	PROJECT NAME	RECEIVING LAB:
17646 / ENV	ROYLS ROYCE TEST FACILITY	Mc Campbell Analytical
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) [signature]	INSTRUCTIONS/REMARKS: STD 5 DAY TAT

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CONTAINERS	TYPE OF CONTAINERS	TPHd, TPHd+mo w/silica gel (8015)	TPHd, TPHd+mo w/silica gel (8015)	TPHg (8015)	VOCs (8260)	Title 22 metals (6010/7000)*	Organic Lead				HOLD		INSTRUCTIONS/REMARKS
1	7/12/02	1000	KB-18	WATER	8	VOA Poly Amber	X	X	X	X	X	X						
2	↓	1100	KB-17	↓	↓	↓	↓	↓	↓	↓	↓	↓						
3		1125	KB-16															
4		1200	KB-19															
5		1220	KB-26-0.0	SOIL	1	TUBE												
6		1230	KB-26-3.0	↓	1	↓												
7		1240	KB-26-4.0		1											X		
8		1015	KB-17-0.0		1													
9		1135	KB-19-0.0		1													
10																		
11																		
12																		
13																		* Please filter prior to Analyses
14																		for WATER Samples
15																		** Lab to Filter & acidify
16																		metals Samples prior to Analyses
17																		
18																		
19																		
20																		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/12/02 1645	[signature] Valles
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:
FAX RESULTS TO: STEVE WALKER 925 484 5838

SEND EDD TO CCOSTELLO@Kleinfelder.com

Send Results To:

KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
~~(510)~~ 925 484-1700

Attn.

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

№ 2292

McCampbell Analytical Inc.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Reported: 07/24/02
	Client P.O.:	Date Completed: 07/24/02

July 24, 2002

Dear Steve:

Enclosed are:

1). the results of 21 samples from your **#17646/INV; Rolls Royce Test Facility project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0207200

Lab ID	Client ID	Matrix	TPH(g)	DF	%SS
001A	KB-03-0.0	S	ND	1	109
002A	KB-03-1.0	S	ND	1	110
003A	KB-03-GW	W	ND,i	1	98.8
004A	KB-21-1.0	S	ND	1	118
005A	KB-21-3.0	S	ND	1	113
006A	KB-21-GW	W	ND,i	1	98.4
007A	KB-20-1.0	S	ND	1	107
008A	KB-20-3.0	S	ND	1	108
009A	KB-02-1.0	S	11,g	1	87.4
010A	KB-02-4.0	S	34,g	5	98.0
011A	KB-02-GW	W	68,g,i	1	99.1
012A	KB-04-1.0	S	ND	1	117
013A	KB-04-4.0	S	ND	1	109
014A	KB-04-GW	W	ND,i	1	100
015A	KB-01-1.0	S	ND	1	110
016A	KB-01-3.0	S	ND	1	113
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	µg/L	
		S	1.0	mg/Kg	

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

_____Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0207200

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
017A	KB-01-GW	W	100,g,i	1	96.9
018A	KB-07-1.0	S	ND	1	117
019A	KB-07-4.0	S	ND	1	113
020A	KB-07-GW	W	ND,h,i	1	98.4

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/20/02

Diesel (C10-23), Jet Fuel (C9-C18) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0207200

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
001A	KB-03-0.0	S	3.1,g	47	ND	1	94.9
002A	KB-03-1.0	S	2.5,g	47	ND	1	96.4
003B	KB-03-GW	W	1900,b,g,i	2500	830	1	97.2
003D	KB-03-GW (Filter)	W	240,b,i	ND	130	1	98.7
004A	KB-21-1.0	S	3.9,g	45	ND	1	96.7
005A	KB-21-3.0	S	1.8,g	9.7	ND	1	96.6
006B	KB-21-GW	W	6100,g,i	54,000	2800	10	103
006D	B-21-GW (Filter)	W	57,b,i	ND	ND	1	99.3
007A	KB-20-1.0	S	3.2,g	93	ND	1	96.0
008A	KB-20-3.0	S	1.1,g	8.7	ND	1	97.5
009A	KB-02-1.0	S	58,c,g	56	51	1	95.8
010A	KB-02-4.0	S	78,a	7.0	82	1	94.2
011B	KB-02-GW	W	5700,a,g,i	4600	4600	1	95.3
011D	KB-02-GW (Filter)	W	110,b,i	ND	99	1	99.8
012A	KB-04-1.0	S	44,b,g	160	34	10	88.1
013A	KB-04-4.0	S	ND	ND	ND	1	97.9
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	250	50	µg/L	
		S	1.0	5.0	1.0	mg/Kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/20/02

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0207200

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
014B	KB-04-GW	W	38,000,k,g,i	13,000	42,000	1	100
014D	KB-04-GW (Filter)	W	360,a,i	ND	370	1	102
015A	KB-01-1.0	S	3.1,g	31	1.2	1	93.9
016A	KB-01-3.0	S	4.9,g	26	1.2	1	95.6
017B	KB-01-GW	W	6800,b,g,i	13,000	4500	1	104
017D	KB-01-GW (Filter)	W	280,g,b,i	520	170	1	101
018A	KB-07-1.0	S	1.4,g	13	ND	1	95.3
019A	KB-07-4.0	S	ND	ND	ND	1	95.1
020B	KB-07-GW	W	5000,a,g,h,i	1400	5900	1	99.5
020D	KB-07-GW (Filter)	W	260,a,i	ND	240	1	99.3

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	50	µg/L
	S	1.0	5.0	1.0	mg/Kg

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-001A
Client ID	KB-03-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	97.4	%SS2:	102
%SS3:	101		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-002A
Client ID	KB-03-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	97.6	%SS2:	102
%SS3:	101		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
7133 Koll Center Pkwy, #100		Date Received: 07/15/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02-07/20/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-003C
Client ID	KB-03-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	0.68	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	4.1	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	3.3	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	105	%SS2:	100
%SS3:	92.2		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-004A
Client ID	KB-21-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	97.9	%SS2:	102
%SS3:	101		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-005A
Client ID	KB-21-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	96.4	%SS2:	102
%SS3:	99.3		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02-07/20/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-006C
Client ID	KB-21-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	2.9	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	1.9	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	98.1	%SS2:	103
%SS3:	93.6		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-007A
Client ID	KB-20-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	95.7	%SS2:	102
%SS3:	99.4		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-008A
Client ID	KB-20-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	96.3	%SS2:	102
%SS3:	99.6		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
7133 Koll Center Pkwy, #100		Date Received: 07/15/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-009A
Client ID	KB-02-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	5.2	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	7.8	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	95.0	%SS2:	96.9
%SS3:	98.2		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-010A
Client ID	KB-02-4.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	17	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	43	1.0	5.0	1,3,5-Trimethylbenzene	9.0	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)			
%SS1:	98.7	%SS2:	98.2
%SS3:	116		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02-07/20/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-011C
Client ID	KB-02-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	0.58	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	1.4	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	105	%SS2:	101
%SS3:	93.0		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-012A
Client ID	KB-04-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	93.7	%SS2:	107
%SS3:	99.9		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-013A
Client ID	KB-04-4.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<64	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	15	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	96.7	%SS2:	101
%SS3:	105		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

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		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02-07/20/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-014C
Client ID	KB-04-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	2.3	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	104	%SS2:	99.5
%SS3:	93.9		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-015A
Client ID	KB-01-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	94.0	%SS2:	108
%SS3:	98.6		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-016A
Client ID	KB-01-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	99.9	%SS2:	104
%SS3:	91.4		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
7133 Koll Center Pkwy, #100		Date Received: 07/15/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02-07/20/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-017C
Client ID	KB-01-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	1.7	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	105	%SS2:	100
%SS3:	99.0		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
7133 Koll Center Pkwy, #100		Date Received: 07/15/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-018A
Client ID	KB-07-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	92.7	%SS2:	107
%SS3:	97.2		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207200

Lab ID	0207200-019A
Client ID	KB-07-4.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.5	%SS2:	107
%SS3:	98.5		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02-07/20/02
	Client P.O.:	Date Analyzed: 07/17/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-020C
Client ID	KB-07-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	2.0	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	98.2	%SS2:	99.4
%SS3:	99.1		

Comments: h,i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/20/02
	Client P.O.:	Date Analyzed: 07/19/02-07/20/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207200

Lab ID	0207200-021A
Client ID	Trip Blank
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	103	%SS2:	98.2
%SS3:	100		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
7133 Koll Center Pkwy, #100		Date Received: 07/15/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207200-001A	0207200-002A	0207200-004A	0207200-005A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-03-0.0	KB-03-1.0	KB-21-1.0	KB-21-3.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207200

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND	ND	2.5	NA
Barium	130	320	140	510	2.5	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	0.61	2.2	1.0	2.4	0.5	NA
Chromium	36	70	39	37	0.5	NA
Cobalt	11	14	11	6.7	2.0	NA
Copper	89	93	54	91	2.0	NA
Lead	110	280	160	170	3.0	NA
Molybdenum	ND	ND	ND	ND	2.0	NA
Nickel	74	48	50	31	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	31	49	36	21	2.0	NA
Zinc	120	510	180	810	1.0	NA
%SS:	105	97.6	101	105		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	5.8	10	9.4	5.5	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	5	1	1	1	1
Mercury	0.29	0.44	0.44	ND	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207200-007A	0207200-008A	0207200-009A	0207200-010A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-20-1.0	KB-20-3.0	KB-02-1.0	KB-02-4.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207200

Dilution Factor	1	1	1	1	1	1
Antimony	2.8	28	ND	ND	2.5	NA
Barium	330	420	180	76	2.5	NA
Beryllium	ND	ND	ND	0.52	0.5	NA
Cadmium	2.0	0.85	0.78	ND	0.5	NA
Chromium	45	41	49	17	0.5	NA
Cobalt	11	7.3	11	3.7	2.0	NA
Copper	110	120	45	12	2.0	NA
Lead	570	350	79	11	3.0	NA
Molybdenum	ND	10	ND	ND	2.0	NA
Nickel	47	51	77	12	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	32	25	40	35	2.0	NA
Zinc	580	410	130	42	1.0	NA
%SS:	102	104	105	108		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	8.5	6.7	7.8	9.3	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1	1	1	1	1
Mercury	0.32	0.44	0.21	ND	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207200-012A	0207200-013A	0207200-015A	0207200-016A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-04-1.0	KB-04-4.0	KB-01-1.0	KB-01-3.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207200

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND	99	2.5	NA
Barium	52	140	170	2200	2.5	NA
Beryllium	ND	0.67	ND	ND	0.5	NA
Cadmium	ND	ND	0.56	4.7	0.5	NA
Chromium	6.5	17	44	52	0.5	NA
Cobalt	7.0	7.0	9.1	5.9	2.0	NA
Copper	20	16	34	580	2.0	NA
Lead	4.1	12	54	910	3.0	NA
Molybdenum	ND	ND	ND	ND	2.0	NA
Nickel	11	13	54	24	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	28	37	35	19	2.0	NA
Zinc	39	55	97	3800	1.0	NA
%SS:	113	105	102	106		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	5.0	11	6.4	24	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1	1	1000	1	1
Mercury	ND	0.074	0.17	100	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207200-018A	0207200-019A			Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-07-1.0	KB-07-4.0				
Matrix	S	S			S	W
Extraction Type	TTLC	TTLC			TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207200

Dilution Factor	1	1			1	1
Antimony	ND	ND			2.5	NA
Barium	62	9.6			2.5	NA
Beryllium	ND	ND			0.5	NA
Cadmium	ND	ND			0.5	NA
Chromium	9.8	82			0.5	NA
Cobalt	11	22			2.0	NA
Copper	25	10			2.0	NA
Lead	4.0	ND			3.0	NA
Molybdenum	ND	ND			2.0	NA
Nickel	6.5	38			2.0	NA
Silver	ND	ND			1.0	NA
Vanadium	61	71			2.0	NA
Zinc	150	32			1.0	NA
%SS:	104	111				

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1			1	1
Arsenic	ND	ND			2.5	NA
Selenium	ND	ND			2.5	NA
Thallium	ND	ND			2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1			1	1
Mercury	0.34	0.10			0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207200-003E	0207200-006E	0207200-011E	0207200-014E	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-03-GW	KB-21-GW	KB-02-GW	KB-04-GW		
Matrix	W	W	W	W	q	w
Extraction Type	DISS.	DISS.	DISS.	DISS.	mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207200

Dilution Factor	1	1	1	1	1	1
Barium	0.58	0.35	0.68	1.5	NA	0.05
Beryllium	ND	ND	ND	ND	NA	0.004
Cadmium	ND	ND	ND	ND	NA	0.005
Chromium	ND	ND	ND	ND	NA	0.02
Cobalt	ND	ND	ND	ND	NA	0.05
Copper	ND	ND	ND	ND	NA	0.05
Molybdenum	ND	ND	ND	ND	NA	0.05
Nickel	ND	ND	ND	ND	NA	0.05
Silver	ND	ND	ND	ND	NA	0.01
Vanadium	ND	ND	ND	ND	NA	0.05
Zinc	0.15	0.17	0.061	0.072	NA	0.05
%SS:	N/A	N/A	N/A	N/A		

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND<0.01	0.0101	NA	0.006
Arsenic	0.0108	ND<0.010	0.0178	0.0137	NA	0.005
Lead	0.0097	0.0099	0.011	ND	NA	0.005
Selenium	ND	ND	ND	ND	NA	0.005
Thallium	ND	ND	ND	ND	NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1	1	1	1	1
Mercury	ND	ND	ND	ND	NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O.:	Date Analyzed: 07/16/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207200-017E	0207200-020E			Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-01-GW	KB-07-GW			q	W
Matrix	W	W			mg/kg	DISS.(mg/L)
Extraction Type	DISS.	DISS.				

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207200

Dilution Factor	1	1			1	1
Barium	0.50	0.19			NA	0.05
Beryllium	ND	ND			NA	0.004
Cadmium	ND	ND			NA	0.005
Chromium	ND	ND			NA	0.02
Cobalt	ND	ND			NA	0.05
Copper	ND	ND			NA	0.05
Molybdenum	ND	ND			NA	0.05
Nickel	ND	ND			NA	0.05
Silver	ND	ND			NA	0.01
Vanadium	ND	ND			NA	0.05
Zinc	ND	ND			NA	0.05
%SS:	N/A	N/A				

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1			1	1
Antimony	ND	ND			NA	0.006
Arsenic	ND	ND			NA	0.005
Lead	0.0067	ND			NA	0.005
Selenium	ND	ND			NA	0.005
Thallium	ND	ND			NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1			1	1
Mercury	ND	ND			NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

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		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O:	Date Analyzed: 07/17/02-07/18/02

Organic Lead

CA Title 22, Chapter 11, Appendix XI

Lab ID	Client ID	Matrix	Organic Lead *
0207200-001A	KB-03-0.0	S	ND
0207200-002A	KB-03-1.0	S	ND
0207200-003E	KB-03-GW	W	ND
0207200-004A	KB-21-1.0	S	ND
0207200-005A	KB-21-3.0	S	ND
0207200-006E	KB-21-GW	W	ND
0207200-007A	KB-20-1.0	S	ND
0207200-008A	KB-20-3.0	S	ND
0207200-009A	KB-02-1.0	S	ND
0207200-010A	KB-02-4.0	S	ND
0207200-011E	KB-02-GW	W	ND
0207200-012A	KB-04-1.0	S	ND
0207200-013A	KB-04-4.0	S	ND
0207200-014E	KB-04-GW	W	ND
0207200-015A	KB-01-1.0	S	ND
0207200-16A	KB-01-3.0	S	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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Kleinfelder, Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv; Rolls Royce Test Facility	Date Sampled: 07/15/02
		Date Received: 07/15/02
	Client Contact: Steve Walker	Date Extracted: 07/15/02
	Client P.O:	Date Analyzed: 07/17/02-07/18/02

Organic Lead

CA Title 22, Chapter 11, Appendix XI

Lab ID	Client ID	Matrix	Organic Lead *
0207200-017E	KB-01-GW	W	ND
0207200-018A	KB-07-1.0	S	ND
0207200-019A	KB-07-4.0	S	ND
0207200-020E	KB-07-GW	W	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0207200

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2957 Spiked Sample ID: 0207200-018A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	0.60	99.8	102	2.20	105	103	1.42	80	120
MTBE	ND	0.10	84.2	83.3	1.07	94.4	96.7	2.43	80	120
Benzene	ND	0.10	104	99.5	4.56	105	109	3.17	80	120
Toluene	ND	0.10	115	108	6.60	108	110	2.23	80	120
Ethylbenzene	ND	0.10	113	107	5.17	108	111	2.58	80	120
Xylenes	ND	0.30	110	103	6.25	107	110	3.08	80	120
%SS:	117	100	116	111	5.21	104	104	0.163	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207200

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2969 Spiked Sample ID: 0207203-002A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	106	105	0.680	104	108	4.34	80	120
MTBE	ND	10	90.2	93.8	3.90	96.9	95.8	1.13	80	120
Benzene	ND	10	104	107	3.28	111	101	9.53	80	120
Toluene	ND	10	107	110	2.67	112	103	7.97	80	120
Ethylbenzene	ND	10	111	113	1.73	113	107	5.24	80	120
Xylenes	ND	30	113	113	0	110	107	3.08	80	120
%SS:	105	100	103	105	1.89	109	97.5	11.2	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0207200

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 2942	Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	93.9	95.5	1.71	70	130
%SS:	N/A	100	N/A	N/A	N/A	97.7	99.9	2.27	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC SUMMARY REPORT FOR SW8260B

Matrix: S WorkOrder: 0207200

EPA Method: SW8260B Extraction: SW5030B BatchID: 2955 Spiked Sample ID: 0207200-018A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	50	105	103	1.54	122	116	5.00	70	130
Chlorobenzene	ND	50	116	116	0.0573	111	106	4.36	70	130
1,1-Dichloroethene	ND	50	90.4	91.5	1.23	91.7	85.5	6.97	70	130
Methyl-t-butyl ether (MTBE)	ND	50	97.7	96.9	0.839	128	120	6.49	70	130
Toluene	ND	50	103	103	0.286	121	115	4.80	70	130
Trichloroethene	ND	50	95.5	92.7	2.91	84	81.7	2.83	70	130
%SS1:	92.7	100	92.5	91.3	1.29	89.7	86.5	3.69	70	130
%SS2:	107	100	102	102	0.340	105	106	0.864	70	130
%SS3:	97.2	100	87	86.6	0.475	107	109	1.57	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MMS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0207200

EPA Method: SW8015C Extraction: SW3550C BatchID: 2953 Spiked Sample ID: 0207199-015A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	3.128	150	98.2	99.6	1.38	87	87.6	0.652	70	130
%SS:	93.9	100	98.4	99.4	1.06	107	108	0.695	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC REPORT

CAM 17

Date: 07/16/02 **Extraction:** TTLC **Matrix:** Soil

Compound	Concentration: mg/kg				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71002					Instrument	P-1 | AA	
Beryllium	ND	4.9	4.5	5.00	98	90	8.7
Selenium	ND	11.7	11.3	10.00	117	113	3.4
Molybdenum	ND	5.2	5.2	5.00	104	103	0.6
Silver	ND	0.45	0.45	0.50	91	91	0.1
Thallium	ND	8.7	9.7	10.00	87	97	10.9
Barium	ND	4.9	5.0	5.00	98	101	2.5
Nickel	ND	4.9	5.1	5.00	98	102	4.2
Arsenic	ND	10.6	11.5	10.00	106	115	8.4
Vanadium	ND	5.3	5.5	5.00	106	110	3.5
Surrogate1	ND	107.6	104.8	100.00	108	105	2.6
Zinc	ND	4.9	5.0	5.00	99	100	1.1
Copper	ND	4.7	4.9	5.00	94	97	3.0
Antimony	ND	5.0	5.0	5.00	100	99	1.2
Lead	ND	5.0	5.0	5.00	99	99	0.0
Cadmium	ND	5.4	5.2	5.00	108	103	4.3
Cobalt	ND	5.1	5.2	5.00	101	103	1.8
Mercury	ND	0.23	0.24	0.25	94	97	2.7
Chromium	ND	4.9	5.1	5.00	99	102	3.0

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 200$$

RPD means Relative Percent Deviation

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QC REPORT

CAM 17

Date: 07/16/02 **Extraction:** Dissolved **Matrix:** Water

Compound	Concentration: mg/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71502					Instrument	P-1 | AA	
Lead	ND	0.0100	0.0102	0.0100	100	102	2.2
Barium	ND	5.1	5.3	5.00	102	106	3.9
Nickel	ND	4.7	4.6	5.00	94	93	1.8
Chromium	ND	4.9	4.9	5.00	98	98	0.0
Vanadium	ND	4.8	5.0	5.00	95	99	4.4
Beryllium	ND	5.3	5.5	5.00	107	110	3.1
Zinc	ND	4.6	4.6	5.00	92	93	1.0
Thallium	ND	0.0102	0.0099	0.0100	102	99	2.5
Antimony	ND	0.0101	0.0094	0.0100	101	94	6.3
Silver	ND	0.5	0.5	0.50	91	92	0.9
Cadmium	ND	4.7	5.2	5.00	93	104	10.7
Cobalt	ND	4.6	4.8	5.00	93	97	4.1
Mercury	ND	0.00089	0.00092	0.00100	89	92	3.2
Arsenic	ND	0.0106	0.0092	0.0100	106	92	13.8
Selenium	ND	0.0109	0.0095	0.0100	109	95	13.2
Molybdenum	ND	4.7	4.8	5.00	95	96	0.7
Copper	ND	4.9	5.2	5.00	98	105	6.7

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR CA T22 CPT11 APPD XI

Matrix: S WorkOrder: 0207200

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2960 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	4	N/A	N/A	N/A	84.6	75.1	12.0	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR CA T22 CPT11 APPDXI

Matrix: W WorkOrder: 0207200

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2922 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	0.010	N/A	N/A	N/A	105	101	3.17	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

KLEINFELDER 02072-00

PROJECT NO.	PROJECT NAME
17646/Inv	Rolls Royce Test Facility

L.P. NO. (P.O. NO.)

SAMPLERS: (Signature/Number) Saul Bankhead

RECEIVING LAB: McCampbell Analytical

INSTRUCTIONS/REMARKS: STD 5 DAY TAT

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO OF CONTAINERS	TYPE OF CONTAINERS	ANALYSIS: TPH-D (8015) w/ Silica gel	TPH-D (8015) w/o Silica gel	TPH-G (8015) and BTEX	VOCs (8260)	Title 22 metals (6010/7000)	Organic Lead	
1	7/15/02	920	KB-03-0.0	Soil	1	Tube	X	X	X	X	X	X	
2		925	KB-03-1.0	Soil	1	Tube							
+5 3		1025	KB-03-GW***	water	8	Amber VOC poly							
4		1040	KB-21-1.0	Soil	1	Tube							
5		1045	KB-21-3.0	Soil	1	Tube							
+2 6		1110	KB-21-GW***	water	8	Amber VOC poly							
7		1130	KB-20-1.0	Soil	1	Tube							
8		1135	KB-20-3.0	Soil	1	Tube							
9		1220	KB-02-1.0	Soil	1	Tube							
10		1225	KB-02-4.0	Soil	1	Tube							
+5 11		1250	KB-02-GW***	water	8	Amber VOC poly							
12		1310	KB-04-1.0	Soil	1	Tube							
13		1315	KB-04-4.0	Soil	1	Tube							
+5 14		1325	KB-04-GW***	water	8	Amber VOC poly							
15		1350	KB-01-1.0	Soil	1	Tube							
16		1355	KB-01-3.0	Soil	1	Tube							
+5 17		1405	KB-01-GW***	water	8	Amber VOC poly							
18		1455	KB-07-1.0	Soil	1	Tube							
19		1500	KB-07-4.0	Soil	1	Tube							
+5 20		1505	KB-07-GW***	water	8	Amber VOC poly							

* please Filter prior to Analyses

** Lab to Filter and acidify metals Samples prior to Analyses

*** All VOAs are unpreserved EXCEPT FOR THE Trip Blank

PRESERVATION / pH / APPROPRIATE / Containers / HEAD SPACE ABSENT

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Saul Bankhead	7/15/02 1805	Mutu Valler
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:
FAX Results TO: Steve Walker
925 484 5838
SEND EDD TO: CCOSTello@Kleinfelder.com

Send Results To:
KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
~~(510)~~ 925 484-1700
Attn:

M-60 White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy

CHAIN OF CUSTODY LSV No 2294

PRO[redacted]OJECT			RECEIVING LAB
17646 / ENV	Rolls Royce Test Facility		McCampbell
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) [signature]		INSTRUCTIONS/REMARKS: 5 DAY TAT

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	ANALYSIS: VOCs (8260)											INSTRUCTIONS/REMARKS
1	7/15/02	900	Trip Blank	WATER	1	VOA	X											
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		PRESERVATION VOAS O&G METALS OTHER
19												HEAD SPACE ABSENT						APPROPRIATE
20																		CONTAINERS

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Instructions/Remarks:	Send Results To:
[signature]	7/15/02 18:05	[signature]	FAX RESULTS TO: STEVE WALKER 925 484 5838	KLEINFELDER 7133 KOLL CENTER PARKWAY SUITE 100 PLEASANTON, CA 94566 ~~(510)~~ 925 484-1700
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	SEND EDD TO: ccostello@kleinfelder.com	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		Attn

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY LISV № 2295

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207200

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17645/INV; Roll
PO:

19-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					6010C	22 CPT11 AP	22 CPT11 AP	E200_7	E200_9	E245_1	SW7010
0207200-001	KB-03-0.0	Soil	7/15/02 9:20:00 AM			A					
0207200-002	KB-03-1.0	Soil	7/15/02 9:25:00 AM		A	A					A
0207200-003	KB-03-GW	Water	7/15/02 10:25:00 AM				E	E	E	E	
0207200-003	KB-03-GW (Filtered)	Water	7/15/02 10:25:00 AM								
0207200-004	KB-21-1.0	Soil	7/15/02 10:40:00 AM		A	A					A
0207200-005	KB-21-3.0	Soil	7/15/02 10:45:00 AM		A	A					A
0207200-006	KB-21-GW	Water	7/15/02 11:10:00 AM				E	E	E	E	
0207200-006	KB-21-GW (Filtered)	Water	7/15/02 11:10:00 AM								
0207200-007	KB-20-1.0	Soil	7/15/02 11:30:00 AM		A	A					A
0207200-008	KB-20-3.0	Soil	7/15/02 11:35:00 AM		A	A					A
0207200-009	KB-02-1.0	Soil	7/15/02 12:20:00 PM		A	A					A
0207200-010	KB-02-4.0	Soil	7/15/02 12:25:00 PM		A	A					A
0207200-011	KB-02-GW	Water	7/15/02 12:50:00 PM				E	E	E	E	
0207200-011	KB-02-GW (Filtered)	Water	7/15/02 12:50:00 PM								
0207200-012	KB-04-1.0	Soil	7/15/02 1:10:00 PM		A	A					A
0207200-013	KB-04-4.0	Soil	7/15/02 1:15:00 PM		A	A					A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207200

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17645/INV; Roll
PO:

19-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					SW7471B	SW8015C	8021B/8015	SW8260B			
0207200-001	KB-03-0.0	Soil	7/15/02 9:20:00 AM			A	A	A			
0207200-002	KB-03-1.0	Soil	7/15/02 9:25:00 AM		A	A	A	A			
0207200-003	KB-03-GW	Water	7/15/02 10:25:00 AM			B	A	C			
0207200-003	KB-03-GW (Filtered)	Water	7/15/02 10:25:00 AM			D					
0207200-004	KB-21-1.0	Soil	7/15/02 10:40:00 AM		A	A	A	A			
0207200-005	KB-21-3.0	Soil	7/15/02 10:45:00 AM		A	A	A	A			
0207200-006	KB-21-GW	Water	7/15/02 11:10:00 AM			B	A	C			
0207200-006	KB-21-GW (Filtered)	Water	7/15/02 11:10:00 AM			D					
0207200-007	KB-20-1.0	Soil	7/15/02 11:30:00 AM		A	A	A	A			
0207200-008	KB-20-3.0	Soil	7/15/02 11:35:00 AM		A	A	A	A			
0207200-009	KB-02-1.0	Soil	7/15/02 12:20:00 PM		A	A	A	A			
0207200-010	KB-02-4.0	Soil	7/15/02 12:25:00 PM		A	A	A	A			
0207200-011	KB-02-GW	Water	7/15/02 12:50:00 PM			B	A	C			
0207200-011	KB-02-GW (Filtered)	Water	7/15/02 12:50:00 PM			D					
0207200-012	KB-04-1.0	Soil	7/15/02 1:10:00 PM		A	A	A	A			
0207200-013	KB-04-4.0	Soil	7/15/02 1:15:00 PM		A	A	A	A			

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207200

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17645/INV; Roll
PO:

19-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					6010C	22 CPT11 AP	22 CPT11 AP	E200_7	E200_9	E245_1	SW7010
0207200-014	KB-04-GW	Water	7/15/02 1:25:00 PM				E	E	E	E	
0207200-014	KB-04-GW (Filtered)	Water	7/15/02 1:25:00 PM								
0207200-015	KB-01-1.0	Soil	7/15/02 1:50:00 PM		A	A					A
0207200-016	KB-01-3.0	Soil	7/15/02 1:55:00 PM		A	A					A
0207200-017	KB-01-GW	Water	7/15/02 2:05:00 PM				E	E	E	E	
0207200-017	KB-01-GW (Filtered)	Water	7/15/02 2:05:00 PM								
0207200-018	KB-07-1.0	Soil	7/15/02 2:55:00 PM		A	A					A
0207200-019	KB-07-4.0	Soil	7/15/02 3:00:00 PM		A	A					A
0207200-020	KB-07-GW	Water	7/15/02 3:05:00 PM				E	E	E	E	
0207200-020	KB-07-GW (Filtered)	Water	7/15/02 3:05:00 PM								
0207200-021	Trip Blank	Water	7/15/02 9:00:00 AM								

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207200

Client:

Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17645/INV; Roll
PO:

19-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					SW7471B	SW8015C	8021B/8015	SW8260B			
0207200-014	KB-04-GW	Water	7/15/02 1:25:00 PM			B	A	C			
0207200-014	KB-04-GW (Filtered)	Water	7/15/02 1:25:00 PM			D					
0207200-015	KB-01-1.0	Soil	7/15/02 1:50:00 PM		A	A	A	A			
0207200-016	KB-01-3.0	Soil	7/15/02 1:55:00 PM		A	A	A	A			
0207200-017	KB-01-GW	Water	7/15/02 2:05:00 PM			B	A	C			
0207200-017	KB-01-GW (Filtered)	Water	7/15/02 2:05:00 PM			D					
0207200-018	KB-07-1.0	Soil	7/15/02 2:55:00 PM		A	A	A	A			
0207200-019	KB-07-4.0	Soil	7/15/02 3:00:00 PM		A	A	A	A			
0207200-020	KB-07-GW	Water	7/15/02 3:05:00 PM			B	A	C			
0207200-020	KB-07-GW (Filtered)	Water	7/15/02 3:05:00 PM			D					
0207200-021	Trip Blank	Water	7/15/02 9:00:00 AM					A			

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Reported: 07/25/02
	Client P.O.:	Date Completed: 07/25/02

July 25, 2002

Dear Steve:

Enclosed are:

1). the results of **24** samples from your **#17646/INV; Rolls Royce Test Facility project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/24/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: 8015Cm Work Order: 0207213

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	KB-08-1.0	S	6.2,m	1	---#
002A	KB-08-4.0	S	1.7,m	1	---#
003A	KB-08-GW	W	310,m	1	102
004A	KB-09-1.0	S	3.8,g	1	109
005A	KB-09-4.0	S	ND	1	115
006A	KB-09-GW	W	100,m,i	1	117
007A	KB-10-2.0	S	13,000,g	1000	91.1
008A	KB-10-GW	W	27,000,g,h,i	20	120
009A	KB-11-1.0	S	3000,g	200	98.7
010A	KB-11-3.0	S	1300,g	100	82.7
011A	KB-11-GW	W	7900,g,h	20	110
012A	KB-12-1.0	S	480,g	40	83.2
013A	KB-12-3.0	S	6400,g	1000	84.6
014A	KB-12-GW	W	1300,g,h	2	115
015A	KB-22-1.0	S	ND	1	113
016A	KB-22-3.0	S	ND	1	118
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	µg/L	
		S	1.0	mg/Kg	

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCampbell Analytical Inc.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/24/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: 8015Cm Work Order: 0207213

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
017A	KB-22-GW	W	ND	1	106
018A	KB-06-0.0	S	ND	1	116
019A	KB-06-2.0	S	ND	1	118
020A	KB-06-GW	W	ND	1	112
021A	KB-05-0.0	S	ND	1	114
022A	KB-05-2.0	S	ND	1	115
023A	KB-05-GW	W	120,b,h,i	1	108

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/25/02

Diesel (C10-23), Jet Fuel (C9-C18) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0207213

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
001A	KB-08-1.0	S	1.5,g	13	ND	1	104
002A	KB-08-4.0	S	ND,g	6.5	ND	1	104
003E	KB-08-GW	W	2000,g	7600	1400	10	91.8
003F	KB-08-GW Filter	W	70,d	ND	ND	1	110
004A	KB-09-1.0	S	ND	ND	ND	1	105
005A	KB-09-4.0	S	14,b,g	50	4.1	1	102
006E	KB-09-GW	W	1500,g,i	8700	1100	10	99.4
006F	KB-09-GW Filter	W	54,b,i	ND	ND	1	90.6
007A	KB-10-2.0	S	29,000,n	2500	42,000	50	119
008E	KB-10-GW	W	1,600,000,k,h,i	100,000	2,400,000	100	104
008F	KB-10-GW Filter	W	110,d,h,i	ND	98	1	91.6
009A	KB-11-1.0	S	2600,n	530	3500	5	98.2
010A	KB-11-3.0	S	1600,k,g	1900	1800	200	112
011E	KB-11-GW	W	460,000,k,g,h	120,000	830,000	20	123
011F	KB-11-GW Filter	W	3000,k,h	570	3300	1	92.5
012A	KB-12-1.0	S	470,k,g	33	630	1	96.5
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	250	50	µg/L	
		S	1.0	5.0	1.0	mg/Kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/25/02

Diesel (C10-23), Jet Fuel (C9-C18) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0207213

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
013A	KB-12-3.0	S	21,000,n	ND<5000	25,000	1000	---#
014E	KB-12-GW	W	21,000,k,h	1300	24,000	1	100
014F	KB-12-GW Filter	W	460,d,h	ND	500	1	90.5
015A	KB-22-1.0	S	16,g	130	16	10	86.8
016A	KB-22-3.0	S	1.3,g	9.6	ND	1	90.6
017E	KB-22-GW	W	6700,g,b	30,000	1800	10	102
017F	KB-22-GW Filter	W	ND	ND	ND	1	90.5
018A	KB-06-0.0	S	1.6,g	18	ND	1	91.5
019A	KB-06-2.0	S	380,g	1700	120	20	81.9
020E	KB-06-GW	W	1600,g,b	4600	400	1	---#
020F	KB-06-GW Filter	W	ND	ND	ND	1	90.8
021A	KB-05-0.0	S	4.4,g	46	ND	1	101
022A	KB-05-2.0	S	1.1,g	11	ND	1	107
023E	KB-05-GW	W	11,000,b,g,h,i	32,000	6800	10	93.2
023F	KB-05-GW Filter	W	100,d/b,h,i	ND	86	1	93.4
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	250	50	µg/L	
		S	1.0	5.0	1.0	mg/Kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-001A
Client ID	KB-08-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.8	%SS2:	108
%SS3:	108		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-003B
Client ID	KB-08-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	0.79	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	104	%SS2:	101
%SS3:	97.9		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-002A
Client ID	KB-08-4.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)			
%SS1:	89.1	%SS2:	107
%SS3:	108		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
7133 Koll Center Pkwy, #100		Date Received: 07/16/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-004A
Client ID	KB-09-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	92.9	%SS2:	106
%SS3:	103		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-005A
Client ID	KB-09-4.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	11	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	92.0	%SS2:	108
%SS3:	103		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-006B
Client ID	KB-09-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	2.2	1.0	0.5
Naphthalene	1.2	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	77.9	%SS2:	102
%SS3:	99.6		

Comments: i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-007A
Client ID	KB-10-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50,000	1000	50	Benzene	ND<5000	1000	5.0
Bromobenzene	ND<5000	1000	5.0	Bromochloromethane	ND<5000	1000	5.0
Bromodichloromethane	ND<5000	1000	5.0	Bromoform	ND<5000	1000	5.0
Bromomethane	ND<5000	1000	5.0	2-Butanone (MEK)	ND<10,000	1000	10
n-Butyl benzene	97,000	1000	5.0	sec-Butyl benzene	38,000	1000	5.0
tert-Butyl benzene	ND<5000	1000	5.0	Carbon Disulfide	ND<5000	1000	5.0
Carbon Tetrachloride	ND<5000	1000	5.0	Chlorobenzene	ND<5000	1000	5.0
Chloroethane	ND<5000	1000	5.0	2-Chloroethyl Vinyl Ether	ND<10,000	1000	10
Chloroform	ND<5000	1000	5.0	Chloromethane	ND<5000	1000	5.0
2-Chlorotoluene	ND<5000	1000	5.0	4-Chlorotoluene	ND<5000	1000	5.0
Dibromochloromethane	ND<5000	1000	5.0	1,2-Dibromo-3-chloropropane	ND<5000	1000	5.0
1,2-Dibromoethane (EDB)	ND<5000	1000	5.0	Dibromomethane	ND<5000	1000	5.0
1,2-Dichlorobenzene	ND<5000	1000	5.0	1,3-Dichlorobenzene	ND<5000	1000	5.0
1,4-Dichlorobenzene	ND<5000	1000	5.0	Dichlorodifluoromethane	ND<5000	1000	5.0
1,1-Dichloroethane	ND<5000	1000	5.0	1,2-Dichloroethane (1,2-DCA)	ND<5000	1000	5.0
1,1-Dichloroethene	ND<5000	1000	5.0	cis-1,2-Dichloroethene	ND<5000	1000	5.0
trans-1,2-Dichloroethene	ND<5000	1000	5.0	1,2-Dichloropropane	ND<5000	1000	5.0
1,3-Dichloropropane	ND<5000	1000	5.0	2,2-Dichloropropane	ND<5000	1000	5.0
1,1-Dichloropropene	ND<5000	1000	5.0	cis-1,3-Dichloropropene	ND<5000	1000	5.0
trans-1,3-Dichloropropene	ND<5000	1000	5.0	Ethylbenzene	ND<5000	1000	5.0
Hexachlorobutadiene	ND<5000	1000	5.0	2-Hexanone	ND<5000	1000	5.0
Iodomethane (Methyl iodide)	ND<10,000	1000	10	4-Isopropyl toluene	8100	1000	5.0
Isopropylbenzene	25,000	1000	5.0	4-Methyl-2-pentanone (MIBK)	ND<5000	1000	5.0
Methylene chloride	ND<5000	1000	5.0	Methyl-t-butyl ether (MTBE)	ND<5000	1000	5.0
Naphthalene	230,000	1000	5.0	n-Propyl benzene	57,000	1000	5.0
Styrene	ND<5000	1000	5.0	1,1,1,2-Tetrachloroethane	ND<5000	1000	5.0
1,1,2,2-Tetrachloroethane	ND<5000	1000	5.0	Tetrachloroethene	ND<5000	1000	5.0
Toluene	ND<5000	1000	5.0	1,2,3-Trichlorobenzene	ND<5000	1000	5.0
1,2,4-Trichlorobenzene	ND<5000	1000	5.0	1,1,1-Trichloroethane	ND<5000	1000	5.0
1,1,2-Trichloroethane	ND<5000	1000	5.0	Trichloroethene	ND<5000	1000	5.0
Trichlorofluoromethane	ND<5000	1000	5.0	1,2,3-Trichloropropane	ND<5000	1000	5.0
1,2,4-Trimethylbenzene	ND<5000	1000	5.0	1,3,5-Trimethylbenzene	ND<5000	1000	5.0
Vinyl Acetate	ND<50,000	1000	50	Vinyl Chloride	ND<5000	1000	5.0
Xylenes	ND<5000	1000	5.0				

Surrogate Recoveries (%)

%SS1:	98.3	%SS2:	94.0
%SS3:	89.8		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-008B
Client ID	KB-10-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	5.0	5.0	Benzene	ND<2.5	5.0	0.5
Bromobenzene	ND<2.5	5.0	0.5	Bromochloromethane	ND<2.5	5.0	0.5
Bromodichloromethane	ND<2.5	5.0	0.5	Bromoform	ND<2.5	5.0	0.5
Bromomethane	ND<2.5	5.0	0.5	2-Butanone (MEK)	7.0	5.0	1.0
n-Butyl benzene	50	5.0	0.5	sec-Butyl benzene	22	5.0	0.5
tert-Butyl benzene	ND<2.5	5.0	0.5	Carbon Disulfide	ND<2.5	5.0	0.5
Carbon Tetrachloride	ND<2.5	5.0	0.5	Chlorobenzene	ND<2.5	5.0	0.5
Chloroethane	ND<2.5	5.0	0.5	2-Chloroethyl Vinyl Ether	ND<5.0	5.0	1.0
Chloroform	ND<2.5	5.0	0.5	Chloromethane	ND<2.5	5.0	0.5
2-Chlorotoluene	ND<2.5	5.0	0.5	4-Chlorotoluene	ND<2.5	5.0	0.5
Dibromochloromethane	ND<2.5	5.0	0.5	1,2-Dibromo-3-chloropropane	ND<2.5	5.0	0.5
1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5	Dibromomethane	ND<2.5	5.0	0.5
1,2-Dichlorobenzene	ND<2.5	5.0	0.5	1,3-Dichlorobenzene	ND<2.5	5.0	0.5
1,4-Dichlorobenzene	ND<2.5	5.0	0.5	Dichlorodifluoromethane	ND<2.5	5.0	0.5
1,1-Dichloroethane	ND<2.5	5.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5
1,1-Dichloroethene	ND<2.5	5.0	0.5	cis-1,2-Dichloroethene	ND<2.5	5.0	0.5
trans-1,2-Dichloroethene	ND<2.5	5.0	0.5	1,2-Dichloropropane	ND<2.5	5.0	0.5
1,3-Dichloropropane	ND<2.5	5.0	0.5	2,2-Dichloropropane	ND<2.5	5.0	0.5
1,1-Dichloropropene	ND<2.5	5.0	0.5	cis-1,3-Dichloropropene	ND<2.5	5.0	0.5
trans-1,3-Dichloropropene	ND<2.5	5.0	0.5	Ethylbenzene	ND<2.5	5.0	0.5
Hexachlorobutadiene	ND<25	5.0	5.0	2-Hexanone	ND<2.5	5.0	0.5
Iodomethane (Methyl iodide)	ND<5.0	5.0	1.0	4-Isopropyl toluene	7.2	5.0	0.5
Isopropylbenzene	42	5.0	0.5	4-Methyl-2-pentanone (MIBK)	ND<2.5	5.0	0.5
Methylene chloride	ND<2.5	5.0	0.5	Methyl-t-butyl ether (MTBE)	4.9	5.0	0.5
Naphthalene	240	5.0	0.5	n-Propyl benzene	86	5.0	0.5
Styrene	ND<2.5	5.0	0.5	1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5
1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5	Tetrachloroethene	ND<2.5	5.0	0.5
Toluene	ND<2.5	5.0	0.5	1,2,3-Trichlorobenzene	ND<2.5	5.0	0.5
1,2,4-Trichlorobenzene	ND<2.5	5.0	0.5	1,1,1-Trichloroethane	ND<2.5	5.0	0.5
1,1,2-Trichloroethane	ND<2.5	5.0	0.5	Trichloroethene	ND<2.5	5.0	0.5
Trichlorofluoromethane	ND<2.5	5.0	0.5	1,2,3-Trichloropropane	ND<2.5	5.0	0.5
1,2,4-Trimethylbenzene	7.4	5.0	0.5	1,3,5-Trimethylbenzene	ND<2.5	5.0	0.5
Vinyl Acetate	ND<25	5.0	5.0	Vinyl Chloride	ND<2.5	5.0	0.5
Xylenes	ND<2.5	5.0	0.5				

Surrogate Recoveries (%)

%SS1:	79.9	%SS2:	98.3
%SS3:	104		

Comments: h,i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-009A
Client ID	KB-11-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<10,000	200	50	Benzene	ND<1000	200	5.0
Bromobenzene	ND<1000	200	5.0	Bromochloromethane	ND<1000	200	5.0
Bromodichloromethane	ND<1000	200	5.0	Bromoform	ND<1000	200	5.0
Bromomethane	ND<1000	200	5.0	2-Butanone (MEK)	ND<2000	200	10
n-Butyl benzene	14,000	200	5.0	sec-Butyl benzene	4300	200	5.0
tert-Butyl benzene	ND<1000	200	5.0	Carbon Disulfide	ND<1000	200	5.0
Carbon Tetrachloride	ND<1000	200	5.0	Chlorobenzene	ND<1000	200	5.0
Chloroethane	ND<1000	200	5.0	2-Chloroethyl Vinyl Ether	ND<2000	200	10
Chloroform	ND<1000	200	5.0	Chloromethane	ND<1000	200	5.0
2-Chlorotoluene	ND<1000	200	5.0	4-Chlorotoluene	ND<1000	200	5.0
Dibromochloromethane	ND<1000	200	5.0	1,2-Dibromo-3-chloropropane	ND<1000	200	5.0
1,2-Dibromoethane (EDB)	ND<1000	200	5.0	Dibromomethane	ND<1000	200	5.0
1,2-Dichlorobenzene	ND<1000	200	5.0	1,3-Dichlorobenzene	ND<1000	200	5.0
1,4-Dichlorobenzene	ND<1000	200	5.0	Dichlorodifluoromethane	ND<1000	200	5.0
1,1-Dichloroethane	ND<1000	200	5.0	1,2-Dichloroethane (1,2-DCA)	ND<1000	200	5.0
1,1-Dichloroethene	ND<1000	200	5.0	cis-1,2-Dichloroethene	ND<1000	200	5.0
trans-1,2-Dichloroethene	ND<1000	200	5.0	1,2-Dichloropropane	ND<1000	200	5.0
1,3-Dichloropropane	ND<1000	200	5.0	2,2-Dichloropropane	ND<1000	200	5.0
1,1-Dichloropropene	ND<1000	200	5.0	cis-1,3-Dichloropropene	ND<1000	200	5.0
trans-1,3-Dichloropropene	ND<1000	200	5.0	Ethylbenzene	ND<1000	200	5.0
Hexachlorobutadiene	ND<1000	200	5.0	2-Hexanone	ND<1000	200	5.0
Iodomethane (Methyl iodide)	ND<2000	200	10	4-Isopropyl toluene	1600	200	5.0
Isopropylbenzene	1500	200	5.0	4-Methyl-2-pentanone (MIBK)	ND<1000	200	5.0
Methylene chloride	ND<1000	200	5.0	Methyl-t-butyl ether (MTBE)	ND<1000	200	5.0
Naphthalene	5300	200	5.0	n-Propyl benzene	4600	200	5.0
Styrene	ND<1000	200	5.0	1,1,1,2-Tetrachloroethane	ND<1000	200	5.0
1,1,2,2-Tetrachloroethane	ND<1000	200	5.0	Tetrachloroethene	ND<1000	200	5.0
Toluene	ND<1000	200	5.0	1,2,3-Trichlorobenzene	ND<1000	200	5.0
1,2,4-Trichlorobenzene	ND<1000	200	5.0	1,1,1-Trichloroethane	ND<1000	200	5.0
1,1,2-Trichloroethane	ND<1000	200	5.0	Trichloroethene	ND<1000	200	5.0
Trichlorofluoromethane	ND<1000	200	5.0	1,2,3-Trichloropropane	ND<1000	200	5.0
1,2,4-Trimethylbenzene	ND<1000	200	5.0	1,3,5-Trimethylbenzene	ND<1000	200	5.0
Vinyl Acetate	ND<10,000	200	50	Vinyl Chloride	ND<1000	200	5.0
Xylenes	ND<1000	200	5.0				

Surrogate Recoveries (%)			
%SS1:	100	%SS2:	99.8
%SS3:	102		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-010A
Client ID	KB-11-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<10,000	200	50	Benzene	ND<1000	200	5.0
Bromobenzene	ND<1000	200	5.0	Bromochloromethane	ND<1000	200	5.0
Bromodichloromethane	ND<1000	200	5.0	Bromoform	ND<1000	200	5.0
Bromomethane	ND<1000	200	5.0	2-Butanone (MEK)	ND<2000	200	10
n-Butyl benzene	7100	200	5.0	sec-Butyl benzene	1800	200	5.0
tert-Butyl benzene	ND<1000	200	5.0	Carbon Disulfide	ND<1000	200	5.0
Carbon Tetrachloride	ND<1000	200	5.0	Chlorobenzene	ND<1000	200	5.0
Chloroethane	ND<1000	200	5.0	2-Chloroethyl Vinyl Ether	ND<2000	200	10
Chloroform	ND<1000	200	5.0	Chloromethane	ND<1000	200	5.0
2-Chlorotoluene	ND<1000	200	5.0	4-Chlorotoluene	ND<1000	200	5.0
Dibromochloromethane	ND<1000	200	5.0	1,2-Dibromo-3-chloropropane	ND<1000	200	5.0
1,2-Dibromoethane (EDB)	ND<1000	200	5.0	Dibromomethane	ND<1000	200	5.0
1,2-Dichlorobenzene	ND<1000	200	5.0	1,3-Dichlorobenzene	ND<1000	200	5.0
1,4-Dichlorobenzene	ND<1000	200	5.0	Dichlorodifluoromethane	ND<1000	200	5.0
1,1-Dichloroethane	ND<1000	200	5.0	1,2-Dichloroethane (1,2-DCA)	ND<1000	200	5.0
1,1-Dichloroethene	ND<1000	200	5.0	cis-1,2-Dichloroethene	ND<1000	200	5.0
trans-1,2-Dichloroethene	ND<1000	200	5.0	1,2-Dichloropropane	ND<1000	200	5.0
1,3-Dichloropropane	ND<1000	200	5.0	2,2-Dichloropropane	ND<1000	200	5.0
1,1-Dichloropropene	ND<1000	200	5.0	cis-1,3-Dichloropropene	ND<1000	200	5.0
trans-1,3-Dichloropropene	ND<1000	200	5.0	Ethylbenzene	ND<1000	200	5.0
Hexachlorobutadiene	ND<1000	200	5.0	2-Hexanone	ND<1000	200	5.0
Iodomethane (Methyl iodide)	ND<2000	200	10	4-Isopropyl toluene	ND<1000	200	5.0
Isopropylbenzene	ND<1000	200	5.0	4-Methyl-2-pentanone (MIBK)	ND<1000	200	5.0
Methylene chloride	ND<1000	200	5.0	Methyl-t-butyl ether (MTBE)	ND<1000	200	5.0
Naphthalene	3900	200	5.0	n-Propyl benzene	1700	200	5.0
Styrene	ND<1000	200	5.0	1,1,1,2-Tetrachloroethane	ND<1000	200	5.0
1,1,2,2-Tetrachloroethane	ND<1000	200	5.0	Tetrachloroethene	ND<1000	200	5.0
Toluene	ND<1000	200	5.0	1,2,3-Trichlorobenzene	ND<1000	200	5.0
1,2,4-Trichlorobenzene	ND<1000	200	5.0	1,1,1-Trichloroethane	ND<1000	200	5.0
1,1,2-Trichloroethane	ND<1000	200	5.0	Trichloroethene	ND<1000	200	5.0
Trichlorofluoromethane	ND<1000	200	5.0	1,2,3-Trichloropropane	ND<1000	200	5.0
1,2,4-Trimethylbenzene	ND<1000	200	5.0	1,3,5-Trimethylbenzene	ND<1000	200	5.0
Vinyl Acetate	ND<10,000	200	50	Vinyl Chloride	ND<1000	200	5.0
Xylenes	ND<1000	200	5.0				

Surrogate Recoveries (%)

%SS1:	98.1	%SS2:	98.4
%SS3:	96.4		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-011B
Client ID	KB-11-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	1.0	5.0	Benzene	3.9	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	3.7	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	4.7	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	7.9	1.0	0.5
Isopropylbenzene	6.0	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	30	1.0	0.5
Naphthalene	9.8	1.0	0.5	n-Propyl benzene	3.0	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	1.2	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	2.6	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	101	%SS2:	105
%SS3:	112		

Comments: h

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-012A
Client ID	KB-12-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<2000	40	50	Benzene	ND<200	40	5.0
Bromobenzene	ND<200	40	5.0	Bromochloromethane	ND<200	40	5.0
Bromodichloromethane	ND<200	40	5.0	Bromoform	ND<200	40	5.0
Bromomethane	ND<200	40	5.0	2-Butanone (MEK)	ND<400	40	10
n-Butyl benzene	ND<200	40	5.0	sec-Butyl benzene	ND<200	40	5.0
tert-Butyl benzene	ND<200	40	5.0	Carbon Disulfide	ND<200	40	5.0
Carbon Tetrachloride	ND<200	40	5.0	Chlorobenzene	ND<200	40	5.0
Chloroethane	ND<200	40	5.0	2-Chloroethyl Vinyl Ether	ND<400	40	10
Chloroform	ND<200	40	5.0	Chloromethane	ND<200	40	5.0
2-Chlorotoluene	ND<200	40	5.0	4-Chlorotoluene	ND<200	40	5.0
Dibromochloromethane	ND<200	40	5.0	1,2-Dibromo-3-chloropropane	ND<200	40	5.0
1,2-Dibromoethane (EDB)	ND<200	40	5.0	Dibromomethane	ND<200	40	5.0
1,2-Dichlorobenzene	ND<200	40	5.0	1,3-Dichlorobenzene	ND<200	40	5.0
1,4-Dichlorobenzene	ND<200	40	5.0	Dichlorodifluoromethane	ND<200	40	5.0
1,1-Dichloroethane	ND<200	40	5.0	1,2-Dichloroethane (1,2-DCA)	ND<200	40	5.0
1,1-Dichloroethene	ND<200	40	5.0	cis-1,2-Dichloroethene	ND<200	40	5.0
trans-1,2-Dichloroethene	ND<200	40	5.0	1,2-Dichloropropane	ND<200	40	5.0
1,3-Dichloropropane	ND<200	40	5.0	2,2-Dichloropropane	ND<200	40	5.0
1,1-Dichloropropene	ND<200	40	5.0	cis-1,3-Dichloropropene	ND<200	40	5.0
trans-1,3-Dichloropropene	ND<200	40	5.0	Ethylbenzene	ND<200	40	5.0
Hexachlorobutadiene	ND<200	40	5.0	2-Hexanone	ND<200	40	5.0
Iodomethane (Methyl iodide)	ND<400	40	10	4-Isopropyl toluene	ND<200	40	5.0
Isopropylbenzene	ND<200	40	5.0	4-Methyl-2-pentanone (MIBK)	ND<200	40	5.0
Methylene chloride	ND<200	40	5.0	Methyl-t-butyl ether (MTBE)	ND<200	40	5.0
Naphthalene	720	40	5.0	n-Propyl benzene	ND<200	40	5.0
Styrene	ND<200	40	5.0	1,1,1,2-Tetrachloroethane	ND<200	40	5.0
1,1,2,2-Tetrachloroethane	ND<200	40	5.0	Tetrachloroethene	ND<200	40	5.0
Toluene	ND<200	40	5.0	1,2,3-Trichlorobenzene	ND<200	40	5.0
1,2,4-Trichlorobenzene	ND<200	40	5.0	1,1,1-Trichloroethane	ND<200	40	5.0
1,1,2-Trichloroethane	ND<200	40	5.0	Trichloroethene	ND<200	40	5.0
Trichlorofluoromethane	ND<200	40	5.0	1,2,3-Trichloropropane	ND<200	40	5.0
1,2,4-Trimethylbenzene	ND<200	40	5.0	1,3,5-Trimethylbenzene	ND<200	40	5.0
Vinyl Acetate	ND<2000	40	50	Vinyl Chloride	ND<200	40	5.0
Xylenes	ND<200	40	5.0				

Surrogate Recoveries (%)

%SS1:	98.0	%SS2:	99.7
%SS3:	101		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-013A
Client ID	KB-12-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<20,000	400	50	Benzene	ND<2000	400	5.0
Bromobenzene	ND<2000	400	5.0	Bromochloromethane	ND<2000	400	5.0
Bromodichloromethane	ND<2000	400	5.0	Bromoform	ND<2000	400	5.0
Bromomethane	ND<2000	400	5.0	2-Butanone (MEK)	ND<4000	400	10
n-Butyl benzene	26,000	400	5.0	sec-Butyl benzene	12,000	400	5.0
tert-Butyl benzene	ND<2000	400	5.0	Carbon Disulfide	ND<2000	400	5.0
Carbon Tetrachloride	ND<2000	400	5.0	Chlorobenzene	ND<2000	400	5.0
Chloroethane	ND<2000	400	5.0	2-Chloroethyl Vinyl Ether	ND<4000	400	10
Chloroform	ND<2000	400	5.0	Chloromethane	ND<2000	400	5.0
2-Chlorotoluene	ND<2000	400	5.0	4-Chlorotoluene	ND<2000	400	5.0
Dibromochloromethane	ND<2000	400	5.0	1,2-Dibromo-3-chloropropane	ND<2000	400	5.0
1,2-Dibromoethane (EDB)	ND<2000	400	5.0	Dibromomethane	ND<2000	400	5.0
1,2-Dichlorobenzene	ND<2000	400	5.0	1,3-Dichlorobenzene	ND<2000	400	5.0
1,4-Dichlorobenzene	ND<2000	400	5.0	Dichlorodifluoromethane	ND<2000	400	5.0
1,1-Dichloroethane	ND<2000	400	5.0	1,2-Dichloroethane (1,2-DCA)	ND<2000	400	5.0
1,1-Dichloroethene	ND<2000	400	5.0	cis-1,2-Dichloroethene	ND<2000	400	5.0
trans-1,2-Dichloroethene	ND<2000	400	5.0	1,2-Dichloropropane	ND<2000	400	5.0
1,3-Dichloropropane	ND<2000	400	5.0	2,2-Dichloropropane	ND<2000	400	5.0
1,1-Dichloropropene	ND<2000	400	5.0	cis-1,3-Dichloropropene	ND<2000	400	5.0
trans-1,3-Dichloropropene	ND<2000	400	5.0	Ethylbenzene	ND<2000	400	5.0
Hexachlorobutadiene	ND<2000	400	5.0	2-Hexanone	ND<2000	400	5.0
Iodomethane (Methyl iodide)	ND<4000	400	10	4-Isopropyl toluene	3400	400	5.0
Isopropylbenzene	6100	400	5.0	4-Methyl-2-pentanone (MIBK)	ND<2000	400	5.0
Methylene chloride	ND<2000	400	5.0	Methyl-t-butyl ether (MTBE)	ND<2000	400	5.0
Naphthalene	16,000	400	5.0	n-Propyl benzene	19,000	400	5.0
Styrene	ND<2000	400	5.0	1,1,1,2-Tetrachloroethane	ND<2000	400	5.0
1,1,2,2-Tetrachloroethane	ND<2000	400	5.0	Tetrachloroethene	ND<2000	400	5.0
Toluene	ND<2000	400	5.0	1,2,3-Trichlorobenzene	ND<2000	400	5.0
1,2,4-Trichlorobenzene	ND<2000	400	5.0	1,1,1-Trichloroethane	ND<2000	400	5.0
1,1,2-Trichloroethane	ND<2000	400	5.0	Trichloroethene	ND<2000	400	5.0
Trichlorofluoromethane	ND<2000	400	5.0	1,2,3-Trichloropropane	ND<2000	400	5.0
1,2,4-Trimethylbenzene	ND<2000	400	5.0	1,3,5-Trimethylbenzene	ND<2000	400	5.0
Vinyl Acetate	ND<20,000	400	50	Vinyl Chloride	ND<2000	400	5.0
Xylenes	ND<2000	400	5.0				

Surrogate Recoveries (%)			
%SS1:	95.9	%SS2:	100
%SS3:	101		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-014B
Client ID	KB-12-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	1.0	5.0	Benzene	4.9	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	1.3	1.0	1.0
n-Butyl benzene	6.2	1.0	0.5	sec-Butyl benzene	3.4	1.0	0.5
tert-Butyl benzene	0.59	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	2.4	1.0	0.5
Isopropylbenzene	3.7	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	2.1	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	5.4	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	0.54	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	1.4	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	1.4	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	---#	%SS2:	103
%SS3:	112		

Comments: h

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-015A
Client ID	KB-22-1.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)			
%SS1:	91.2	%SS2:	110
%SS3:	104		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-016A
Client ID	KB-22-3.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.0	%SS2:	111
%SS3:	104		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-017B
Client ID	KB-22-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	1.1	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	101	%SS2:	101
%SS3:	104		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-018A
Client ID	KB-06-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	90.4	%SS2:	110
%SS3:	99.8		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-019A
Client ID	KB-06-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	11	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	93.8	%SS2:	109
%SS3:	116		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-020B
Client ID	KB-06-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	1.5	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	0.61	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	102	%SS2:	---#
%SS3:	112		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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	Client Contact: Steve Walker	Date Extracted: 07/17/02
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Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-021A
Client ID	KB-05-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.2	%SS2:	111
%SS3:	106		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

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Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-022A
Client ID	KB-05-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	9.9	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	22	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	91.6	%SS2:	109
%SS3:	104		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207213

Lab ID	0207213-023B
Client ID	KB-05-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	0.64	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	4.0	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	2.6	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	1.2	1.0	0.5	1,3,5-Trimethylbenzene	0.63	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	0.74	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	101	%SS2:	102
%SS3:	101		

Comments: h,i

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/19/02-07/24/02
	Client P.O.:	Date Analyzed: 07/19/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207213

Lab ID	0207213-024A
Client ID	TRIP BLANK
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	100	%SS2:	101
%SS3:	104		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
7133 Koll Center Pkwy, #100		Date Received: 07/16/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/24/02

CAM / CCR 17 Metals*

Lab ID	0207213-001A	0207213-002A	0207213-004A	0207213-005A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-08-1.0	KB-08-4.0	KB-09-1.0	KB-09-4.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207213

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND	ND	2.5	NA
Barium	78	95	56	82	2.5	NA
Beryllium	ND	ND	0.62	ND	0.5	NA
Cadmium	ND	ND	ND	ND	0.5	NA
Chromium	31	47	14	30	0.5	NA
Cobalt	6.1	5.7	7.0	7.3	2.0	NA
Copper	20	18	78	17	2.0	NA
Lead	35	6.0	18	21	3.0	NA
Molybdenum	ND	5.1	ND	ND	2.0	NA
Nickel	22	34	11	31	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	23	31	77	24	2.0	NA
Zinc	49	35	79	52	1.0	NA
%SS:	107	114	114	115		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	4.5	5.6	9.9	4.7	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1	1	1	1	1
Mercury	0.40	ND	0.14	ND	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
7133 Koll Center Pkwy, #100		Date Received: 07/16/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/24/02

CAM / CCR 17 Metals*

Lab ID	0207213-007A	0207213-009A	0207213-010A	0207213-012A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-10-2.0	KB-11-1.0	KB-11-3.0	KB-12-1.0	S	W
Matrix	S	S	S	S	TTLC(mg/Kg)	mg/L
Extraction Type	TTLC	TTLC	TTLC	TTLC		

ICP Metals, Concentration*

Analytical Method: 6010C Extraction Method: SW3050B Work Order: 0207213

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND	ND	2.5	NA
Barium	33	110	38	100	2.5	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	ND	ND	ND	ND	0.5	NA
Chromium	11	22	9.4	26	0.5	NA
Cobalt	4.6	9.7	4.3	8.9	2.0	NA
Copper	9.1	49	8.6	27	2.0	NA
Lead	7.4	11	100	13	3.0	NA
Molybdenum	ND	ND	ND	ND	2.0	NA
Nickel	16	27	4.1	28	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	22	58	15	34	2.0	NA
Zinc	22	92	110	98	1.0	NA
%SS:	108	104	110	106		

GFAA Metals, Concentration*

Analytical Method: SW7010 Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	ND	6.8	3.3	11	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B Extraction Method: SW7471B

Dilution Factor	1	1	1	1	1	1
Mercury	ND	0.18	0.071	0.13	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/24/02

CAM / CCR 17 Metals*

Lab ID	0207213-013A	0207213-015A	0207213-016A	0207213-018A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-12-3.0	KB-22-1.0	KB-22-3.0	KB-06-0.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207213

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	5.9	ND	2.5	NA
Barium	24	140	490	230	2.5	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	ND	0.69	19	1.1	0.5	NA
Chromium	22	43	540	42	0.5	NA
Cobalt	4.2	9.7	11	11	2.0	NA
Copper	66	40	240	54	2.0	NA
Lead	16	68	650	150	3.0	NA
Molybdenum	ND	ND	4.0	ND	2.0	NA
Nickel	33	54	50	66	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	14	32	32	35	2.0	NA
Zinc	21	130	1400	450	1.0	NA
%SS:	111	106	114	101		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	7.8	7.4	30	11	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1	10	1	1	1
Mercury	ND	0.10	4.8	0.19	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
7133 Koll Center Pkwy, #100		Date Received: 07/16/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/24/02

CAM / CCR 17 Metals*

Lab ID	0207213-019A	0207213-021A	0207213-022A		Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-06-2.0	KB-05-0.0	KB-05-2.0			
Matrix	S	S	S		S	W
Extraction Type	TTLC	TTLC	TTLC		TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C Extraction Method: SW3050B Work Order: 0207213

Dilution Factor	1	1	1		1	1
Antimony	4.3	ND	6.4		2.5	NA
Barium	21	210	94		2.5	NA
Beryllium	ND	ND	ND		0.5	NA
Cadmium	6.9	3.3	0.67		0.5	NA
Chromium	130	57	120		0.5	NA
Cobalt	30	12	16		2.0	NA
Copper	49	110	1500		2.0	NA
Lead	2200	360	120		3.0	NA
Molybdenum	3.3	ND	2.6		2.0	NA
Nickel	8.4	62	51		2.0	NA
Silver	ND	ND	ND		1.0	NA
Vanadium	7.4	35	29		2.0	NA
Zinc	17,000	480	230		1.0	NA
%SS:	80.4	100	81.9			

GFAA Metals, Concentration*

Analytical Method: SW7010 Extraction Method: SW3050B

Dilution Factor	1	1	1		1	1
Arsenic	ND	7.2	8.2		2.5	NA
Selenium	ND	ND	ND		2.5	NA
Thallium		ND			2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B Extraction Method: SW7471B

Dilution Factor	1	1	1		1	1
Mercury	ND	0.43	0.52		0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc.	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
7133 Koll Center Pkwy, #100		Date Received: 07/16/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207213-003C	0207213-006C	0207213-008C	0207213-011C	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-08-GW	KB-09-GW	KB-10-GW	KB-11-GW		
Matrix	W	W	W	W	q	W
Extraction Type	DISS.	DISS.	DISS.	DISS.	mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207213

Dilution Factor	1	1	1	1	1	1
Barium	0.33	0.21	0.25	0.12	NA	0.05
Beryllium	ND	ND	ND	ND	NA	0.004
Cadmium	ND	ND	ND	ND	NA	0.005
Chromium	ND	ND	ND	ND	NA	0.02
Cobalt	ND	ND	ND	ND	NA	0.05
Copper	ND	ND	ND	ND	NA	0.05
Molybdenum	ND	ND	ND	ND	NA	0.05
Nickel	ND	ND	ND	ND	NA	0.05
Silver	ND	ND	ND	ND	NA	0.01
Vanadium	ND	ND	ND	ND	NA	0.05
Zinc	ND	ND	ND	ND	NA	0.05
%SS:	N/A	N/A	N/A	N/A		

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1	1	1	1	1
Antimony	ND<0.01,z	ND	ND	ND<0.01,z	NA	0.006
Arsenic	ND	ND	0.0212	0.0113	NA	0.005
Lead	ND	ND	ND	ND	NA	0.005
Selenium	ND	ND	ND	ND	NA	0.005
Thallium	ND	ND	ND	ND	NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1	1	1	1	1
Mercury	ND	ND	ND	ND	NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/INV; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received: 07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207213-014C	0207213-017C	0207213-020C	0207213-023C	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-12-GW	KB-22-GW	KB-06-GW	KB-05-GW		
Matrix	W	W	W	W	q	w
Extraction Type	DISS.	DISS.	DISS.	DISS.	mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207213

Dilution Factor	1	1	1	1	1	1
Barium	0.17	0.84	1.0	0.90	NA	0.05
Beryllium	ND	ND	ND	ND	NA	0.004
Cadmium	ND	ND	ND	ND	NA	0.005
Chromium	ND	ND	ND	ND	NA	0.02
Cobalt	ND	ND	ND	ND	NA	0.05
Copper	ND	ND	ND	ND	NA	0.05
Molybdenum	ND	ND	ND	ND	NA	0.05
Nickel	ND	ND	ND	ND	NA	0.05
Silver	ND	ND	ND	ND	NA	0.01
Vanadium	ND	ND	ND	ND	NA	0.05
Zinc	ND	ND	ND	ND	NA	0.05
%SS:	N/A	N/A	N/A	N/A		

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	ND<0.01,z	ND	NA	0.006
Arsenic	ND<0.010,z	0.0145	ND	ND	NA	0.005
Lead	ND	0.034	ND	ND	NA	0.005
Selenium	ND	ND	ND	ND	NA	0.005
Thallium	ND	ND	ND	ND	NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1	1	1	1	1
Mercury	ND	ND	ND	ND	NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder, Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received:07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/16/02
	Client P.O:	Date Analyzed: 7/25/02

Organic Lead

CA Title 22, Chapter 11, Appendix XI

Lab ID	Client ID	Matrix	Organic Lead *
0207213-001A	KB-08-1.0	S	ND
0207213-002A	KB-08-4.0	S	ND
0207213-004A	KB-09-1.0	S	ND
0207213-005A	KB-09-4.0	S	ND
0207213-007A	KB-10-2.0	S	ND
0207213-009A	KB-11-1.0	S	ND
0207213-010A	KB-11-3.0	S	2.3
0207213-012A	KB-12-1.0	S	ND
0207213-013A	KB-12-3.0	S	ND
0207213-015A	KB-22-1.0	S	ND
0207213-016A	KB-22-3.0	S	ND
0207213-018A	KB-06-0.0	S	ND
0207213-019A	KB-06-2.0	S	51
0207213-021A	KB-05-0.0	S	ND
0207213-022A	KB-05-2.0	S	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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Kleinfelder, Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv; Rolls Royce Test Facility	Date Sampled: 07/16/02
		Date Received:07/16/02
	Client Contact: Steve Walker	Date Extracted: 07/16/02
	Client P.O:	Date Analyzed: 07/24/02

Organic Lead

CA Title 22, Chapter 11, Appendix XI

Lab ID	Client ID	Matrix	Organic Lead *
0207213-003D	KB-08-GW	W	ND
0207213-006D	KB-09-GW	W	ND
0207213-008D	KB-10-GW	W	ND
0207213-011D	KB-11-GW	W	0.011
0207213-014D	KB-12-GW	W	ND
0207213-017D	KB-22-GW	W	0.0057
0207213-020D	KB-06-GW	W	ND
0207213-023D	KB-05-GW	W	ND
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	0.005 mg/L
		S	0.5 mg/kg

* water samples are reported in mg/L, soil and sludge samples in mg/kg and wipes in mg/wipe

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207213

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2984 Spiked Sample ID: 0207221-005A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	101	101	0.438	92.5	88.8	4.09	80	120
MTBE	ND	10	105	105	0.196	83.1	85.2	2.44	80	120
Benzene	ND	10	105	110	4.68	85.3	84.1	1.30	80	120
Toluene	ND	10	113	119	5.22	89.5	87.7	1.99	80	120
Ethylbenzene	ND	10	108	114	5.71	92.1	90.1	2.25	80	120
Xylenes	ND	30	107	113	6.06	94.3	90	4.70	80	120
%SS:	109	100	106	107	0.888	97.1	96.8	0.332	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0207213

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2983 Spiked Sample ID: 0207218-001A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	0.60	90.5	88.4	2.34	103	105	2.19	80	120
MTBE	ND	0.10	85.5	94.3	9.80	93.9	87	7.57	80	120
Benzene	ND	0.10	87	86	1.13	109	107	2.38	80	120
Toluene	ND	0.10	92.5	91.9	0.608	113	112	1.31	80	120
Ethylbenzene	ND	0.10	95	95.4	0.478	110	110	0.456	80	120
Xylenes	ND	0.30	95	95	0	103	110	6.25	80	120
%SS:	106	100	98.4	99.8	1.43	113	109	4.10	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0207213

EPA Method: SW8015C	Extraction: SW3550C	BatchID: 2987	Spiked Sample ID: 0207213-022A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	ND	150	94.9	95.5	0.644	104	104	0.560	70	130
%SS:	ND	100	105	107	1.06	104	105	0.824	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0207213

EPA Method: SW8015C Extraction: SW3510C BatchID: 2998 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	112	104	7.97	70	130
%SS:	N/A	100	N/A	N/A	N/A	112	103	8.71	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: S WorkOrder: 0207213

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 2985	Spiked Sample ID: 0207213-022A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	N/A	50	N/A	N/A	N/A	101	103	1.13	70	130
Chlorobenzene	N/A	50	N/A	N/A	N/A	121	120	0.269	70	130
1,1-Dichloroethene	N/A	50	N/A	N/A	N/A	92	92.8	0.910	70	130
Methyl-t-butyl ether (MTBE)	N/A	50	N/A	N/A	N/A	108	106	1.90	70	130
Toluene	N/A	50	N/A	N/A	N/A	108	107	0.855	70	130
Trichloroethene	N/A	50	N/A	N/A	N/A	92.7	91.8	1.03	70	130
%SS1:	N/A	100	N/A	N/A	N/A	95.3	94.4	0.955	70	130
%SS2:	N/A	100	N/A	N/A	N/A	101	101	0.373	70	130
%SS3:	N/A	100	N/A	N/A	N/A	95.4	96.5	1.07	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MMS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0207213

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 2992	Spiked Sample ID: 0207221-005B

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	10	105	103	2.62	118	114	2.98	70	130
Chlorobenzene	ND	10	109	107	1.72	106	103	2.07	70	130
1,1-Dichloroethene	ND	10	85.6	86	0.512	85.9	83.3	3.08	70	130
Methyl-t-butyl ether (MTBE)	1.309	10	111	104	6.16	121	119	2.19	70	130
Toluene	ND	10	109	106	2.78	115	112	2.96	70	130
Trichloroethene	ND	10	74.1	72.6	2.00	81	79.1	2.33	70	130
%SS1:	108	100	105	105	0.463	85.6	84.8	0.885	70	130
%SS2:	103	100	102	102	0.416	106	106	0.0201	70	130
%SS3:	102	100	100	101	1.10	108	106	1.16	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

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QC REPORT

CAM 17

Date: 07/17/02 **Extraction:** TTLC **Matrix:** Soil

Compound	Concentration: mg/kg				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71002					Instrument	P-1 | AA	
Beryllium	ND	4.9	4.5	5.00	98	90	8.7
Selenium	ND	11.7	11.3	10.00	117	113	3.4
Molybdenum	ND	5.2	5.2	5.00	104	103	0.6
Silver	ND	0.45	0.45	0.50	91	91	0.1
Thallium	ND	8.7	9.7	10.00	87	97	10.9
Barium	ND	4.9	5.0	5.00	98	101	2.5
Nickel	ND	4.9	5.1	5.00	98	102	4.2
Arsenic	ND	10.6	11.5	10.00	106	115	8.4
Vanadium	ND	5.3	5.5	5.00	106	110	3.5
Surrogate1	ND	107.6	104.8	100.00	108	105	2.6
Zinc	ND	4.9	5.0	5.00	99	100	1.1
Copper	ND	4.7	4.9	5.00	94	97	3.0
Antimony	ND	5.0	5.0	5.00	100	99	1.2
Lead	ND	5.0	5.0	5.00	99	99	0.0
Cadmium	ND	5.4	5.2	5.00	108	103	4.3
Cobalt	ND	5.1	5.2	5.00	101	103	1.8
Mercury	ND	0.23	0.24	0.25	94	97	2.7
Chromium	ND	4.9	5.1	5.00	99	102	3.0

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC REPORT

CAM 17

Date: 07/17/02 **Extraction:** Dissolved **Matrix:** Water

Compound	Concentration: mg/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71502					Instrument	P-1 | AA	
Beryllium	ND	5.3	5.5	5.00	107	110	3.1
Selenium	ND	0.0109	0.0095	0.0100	109	95	13.2
Molybdenum	ND	4.7	4.8	5.00	95	96	0.7
Silver	ND	0.5	0.5	0.50	91	92	0.9
Thallium	ND	0.0102	0.0099	0.0100	102	99	2.5
Barium	ND	5.1	5.3	5.00	102	106	3.9
Nickel	ND	4.7	4.6	5.00	94	93	1.8
Arsenic	ND	0.0106	0.0092	0.0100	106	92	13.8
Vanadium	ND	4.8	5.0	5.00	95	99	4.4
Mercury	ND	0.00089	0.00092	0.00100	89	92	3.2
Zinc	ND	4.6	4.6	5.00	92	93	1.0
Copper	ND	4.9	5.2	5.00	98	105	6.7
Antimony	ND	0.0101	0.0094	0.0100	101	94	6.3
Lead	ND	0.0100	0.0102	0.0100	100	102	2.2
Cadmium	ND	4.7	5.2	5.00	93	104	10.7
Cobalt	ND	4.6	4.8	5.00	93	97	4.1
Chromium	ND	4.9	4.9	5.00	98	98	0.0

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} 2 \cdot 100$$

RPD means Relative Percent Deviation

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QC SUMMARY REPORT FOR CA T22 CPT11 APPD XI

Matrix: S WorkOrder: 0207213

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2989 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	4	N/A	N/A	N/A	100	101	0.381	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR CA T22 CPT11 APPDXI

Matrix: W WorkOrder: 0207213

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2922 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	0.010	N/A	N/A	N/A	105	101	3.17	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207213

Client:

Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17646/INV; Roll
PO:

17-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests 6010C	22 CPT11 AP	22 CPT11 AP	E200_7	SW7010	SW7471B	SW8015C
0207213-001	KB-08-1.0	Soil	7/16/02 8:40:00 AM		A	A			A	A	A
0207213-002	KB-08-4.0	Soil	7/16/02 8:45:00 AM		A	A			A	A	A
0207213-003	KB-08-GW	Water	7/16/02 8:50:00 AM				D	C			E
0207213-003	KB-08-GW FILTERED	Water	7/16/02 8:50:00 AM								F
0207213-004	KB-09-1.0	Soil	7/16/02 9:20:00 AM		A	A					A
0207213-005	KB-09-4.0	Soil	7/16/02 9:25:00 AM		A	A					A
0207213-006	KB-09-GW	Water	7/16/02 9:35:00 AM				D	C			E
0207213-006	KB-09-GW FILTERED	Water	7/16/02 9:35:00 AM								F
0207213-007	KB-10-2.0	Soil	7/16/02 10:05:00 AM		A	A					A
0207213-008	KB-10-GW	Water	7/16/02 10:15:00 AM				D	C			E
0207213-008	KB-10-GW FILTERED	Water	7/16/02 10:15:00 AM								F
0207213-009	KB-11-1.0	Soil	7/16/02 10:45:00 AM		A	A					A
0207213-010	KB-11-3.0	Soil	7/16/02 10:50:00 AM		A	A					A
0207213-011	KB-11-GW	Water	7/16/02 11:00:00 AM				D	C			E
0207213-011	KB-11-GW FILTERED	Water	7/16/02 11:00:00 AM								F
0207213-012	KB-12-1.0	Soil	7/16/02 11:20:00 AM		A	A					A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207213

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17646/INV; Roll
PO:

17-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests 8021B/8015	SW8260B
0207213-001	KB-08-1.0	Soil	7/16/02 8:40:00 AM		A	A
0207213-002	KB-08-4.0	Soil	7/16/02 8:45:00 AM		A	A
0207213-003	KB-08-GW	Water	7/16/02 8:50:00 AM		A	B
0207213-003	KB-08-GW FILTERED	Water	7/16/02 8:50:00 AM			
0207213-004	KB-09-1.0	Soil	7/16/02 9:20:00 AM		A	A
0207213-005	KB-09-4.0	Soil	7/16/02 9:25:00 AM		A	A
0207213-006	KB-09-GW	Water	7/16/02 9:35:00 AM		A	B
0207213-006	KB-09-GW FILTERED	Water	7/16/02 9:35:00 AM			
0207213-007	KB-10-2.0	Soil	7/16/02 10:05:00 AM		A	A
0207213-008	KB-10-GW	Water	7/16/02 10:15:00 AM		A	B
0207213-008	KB-10-GW FILTERED	Water	7/16/02 10:15:00 AM			
0207213-009	KB-11-1.0	Soil	7/16/02 10:45:00 AM		A	A
0207213-010	KB-11-3.0	Soil	7/16/02 10:50:00 AM		A	A
0207213-011	KB-11-GW	Water	7/16/02 11:00:00 AM		A	B
0207213-011	KB-11-GW FILTERED	Water	7/16/02 11:00:00 AM			
0207213-012	KB-12-1.0	Soil	7/16/02 11:20:00 AM		A	A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207213

Client:

Kleinfelder Inc.
7133 Koll Center Pkwy, #100
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ProjectNo: #17646/INV; Roll
PO:

17-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests 6010C	22 CPT11 AP	22 CPT11 AP	E200_7	SW7010	SW7471B	SW8015C
0207213-013	KB-12-3.0	Soil	7/16/02 11:25:00 AM		A	A					A
0207213-014	KB-12-GW	Water	7/16/02 11:35:00 AM				D	C			E
0207213-014	KB-12-GW FILTERED	Water	7/16/02 11:35:00 AM								F
0207213-015	KB-22-1.0	Soil	7/16/02 12:35:00 PM		A	A					A
0207213-016	KB-22-3.0	Soil	7/16/02 12:40:00 PM		A	A					A
0207213-017	KB-22-GW	Water	7/16/02 12:50:00 PM				D	C			E
0207213-017	KB-22-GW FILTERED	Water	7/16/02 12:50:00 PM								F
0207213-018	KB-06-0.0	Soil	7/16/02 1:15:00 PM		A	A					A
0207213-019	KB-06-2.0	Soil	7/16/02 1:20:00 PM		A	A					A
0207213-020	KB-06-GW	Water	7/16/02 1:30:00 PM				D	C			E
0207213-020	KB-06-GW FILTERED	Water	7/16/02 1:30:00 PM								F
0207213-021	KB-05-0.0	Soil	7/16/02 1:55:00 PM		A	A					A
0207213-022	KB-05-2.0	Soil	7/16/02 2:00:00 PM		A	A					A
0207213-023	KB-05-GW	Water	7/16/20 2:05:00 PM				D	C			E
0207213-023	KB-05-GW FILTERED	Water	7/16/20 2:05:00 PM								F
0207213-024	TRIP BLANK	Water	7/16/02								

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207213

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #17646/INV; Roll
PO:

17-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests 8021B/8015	SW8260B
0207213-013	KB-12-3.0	Soil	7/16/02 11:25:00 AM		A	A
0207213-014	KB-12-GW	Water	7/16/02 11:35:00 AM		A	B
0207213-014	KB-12-GW FILTERED	Water	7/16/02 11:35:00 AM			
0207213-015	KB-22-1.0	Soil	7/16/02 12:35:00 PM		A	A
0207213-016	KB-22-3.0	Soil	7/16/02 12:40:00 PM		A	A
0207213-017	KB-22-GW	Water	7/16/02 12:50:00 PM		A	B
0207213-017	KB-22-GW FILTERED	Water	7/16/02 12:50:00 PM			
0207213-018	KB-06-0.0	Soil	7/16/02 1:15:00 PM		A	A
0207213-019	KB-06-2.0	Soil	7/16/02 1:20:00 PM		A	A
0207213-020	KB-06-GW	Water	7/16/02 1:30:00 PM		A	B
0207213-020	KB-06-GW FILTERED	Water	7/16/02 1:30:00 PM			
0207213-021	KB-05-0.0	Soil	7/16/02 1:55:00 PM		A	A
0207213-022	KB-05-2.0	Soil	7/16/02 2:00:00 PM		A	A
0207213-023	KB-05-GW	Water	7/16/20 2:05:00 PM		A	B
0207213-023	KB-05-GW FILTERED	Water	7/16/20 2:05:00 PM			
0207213-024	TRIP BLANK	Water	7/16/02			A

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

KLEINFELDER   D09213 ZKP525

PROJECT NO.	PROJECT NAME	RECEIVING LAB
17646/INV	Rolls Royce TEST Facility	McCampbell Analytical

L.P. NO. (P.O. NO)

SAMPLERS: (Signature/Number) [signature]

INSTRUCTIONS/REMARKS: STD 5 DAY TAT

ANALYSIS: (A) TPH-d TPH-mo w/silica gel (8015); (B) TPH-d TPH-mo w/silica gel (8015); (C) TPH-g (8015); (D) VOCs (8260)*; (E) Title 22 metals (6010/7000)*; (F) Organic Lead

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CONTAINERS	TYPE OF CONTAINERS	A	B	C	D	E	F	INSTRUCTIONS/REMARKS
1	7/16/02	840	KB-08-1.0	Soil	1	tube	X	X	X	X	X	X	
2		845	KB-08-4.0	Soil	1	tube							
3		850	KB-08-GW***	Water	8	Amber VOA poly							
4		920	KB-09-1.0	Soil	1	tube							
5		925	KB-09-4.0	Soil	1	tube							
6		935	KB-09-GW***	Water	8	Amber VOA poly							
7		1005	KB-10-2.0	Soil	1	tube							
8		1015	KB-10-GW***	Water	8	Amber VOA poly							
9		1045	KB-11-1.0	Soil	1	tube							*please Filter prior to Analyses
10		1050	KB-11-3.0	Soil	1	tube							
11		1100	KB-11-GW***	Water	8	Amber VOA poly							** LAB to Filter & Acidify
12		1120	KB-12-1.0	Soil	1	tube							metals Samples prior to Analyses
13		1125	KB-12-3.0	Soil	1	tube							
14		1135	KB-12-GW***	Water	8	Amber VOA poly							*** All VOAs Are Unpreserved
15		1235	KB-22-1.0	Soil	1	Tube							EXCEPT FOR TRIP BLANK
16		1240	KB-22-3.0	Soil	1	Tube							
17		1250	KB-22-GW***	Water	8	Amber VOA poly							VOAS / O&G / METALS / OTHER
18		1315	KB-06-0.0	Soil	1	Tube							ICE / GOOD CONDITION ✓ PRESERVATION
19		1320	KB-06-2.0	Soil	1	tube							HEAD SPACE ABSENT ✓ APPROPRIATE
20		1330	KB-06-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓	CONTAINERS ✓ Filtered & presv. upon arrival @ lab

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/16/02 1615	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
		[signature]

Instructions/Remarks:
FAX Results TO: STEVE WALKER 925 484 5838
SEND EDD TO: CCOSTELLO@KLEINFELDER.COM

Send Results To:
KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
~~(510)~~ 925 484-1700
Attn

M-60   White – Sampler   Canary – Return Copy To Shipper   Pink – Lab Copy

CHAIN OF CUSTODY   № 2653

PROJECT NO.	PROJECT NAME	RECEIVING LAB
17646 / ENV	Rolls Royce Test Facility	McCampbell Analytical

L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number)	INSTRUCTIONS/REMARKS
	[signature]	STD 5 DAY TAT

ANALYSIS

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	TPH-d + mo w/ silica gel (8015)	TPH-d + mo w/ silica gel (8015)	TPH-g (8015)	VOCs (8260)	Title 22 metals (6010)	Organic Lead						
1	7/16/02	1355	KB-05-0.0	Soil	1	Tube	X	X	X	X	X	X						
2	↓	1400	KB-05-2.0	Soil	1	Tube	X	X	X	X	X	X						
3		1405	KB-05-GW***	Water	8	Amber VOA Poly	X	X	X	X	X	X						
4			Trip Blank	Water	1	VOA				X								
5																		
6																		
7																		
8																		*please Filter prior to Analyses
9																		
10																		** LAB to Filter & Acidify
11																		metals Samples prior to Analyses
12																		
13																		*** All Voas Are Unpreserved
14																		Except For Trip Blank
15																		
16																		
17																		VOAS / O&G / METALS / OTHER
18																		PRESERVATION
19																		
20																		Filtered & pres upon arrival

HEAD SPACE ABSENT

APPROPRIATE CONTAINERS

Filtered & pres upon arrival [initials]

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Instructions/Remarks:	Send Results To:
[signature]	7/16/02 1615		Fax Results to: Steve Walker 925 484 5838	KLEINFELDER 7133 KOLL CENTER PARKWAY SUITE 100 PLEASANTON, CA 94566 ~~(510)~~ 484-1700
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Send EDD to:	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) [signature]	ccostello@kleinfelder.com	Attn 925

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

№ 2654

[redacted] KLEINFELDER

PROJECT NO.	PROJECT NAME
17646 / INV	Rolls Royce TEST Facility
L.P. NO. (P.O. NO.)	SAMPLERS (Signature/Number): [signature]

RECEIVING LAB: McCampbell Analytical

INSTRUCTIONS/REMARKS: STD 5 DAY TAT

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	TPH-3 TPHd + mo w/silica gel (8015) *	TPH3 TPHd + mo w/silica gel (8015)	TPHg (8015)	VOCs (8260)	Title 22 metals (6010) **	organic lead
1	7/16/02	840	KB-08-1.0	Soil	1	Tube	X	X	X	X	X	X
2	↓	845	KB-08-4.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
3	↓	850	KB-08-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓
4	↓	920	KB-09-1.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
5	↓	925	KB-09-4.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
6	↓	935	KB-09-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓
7	↓	1005	KB-10-2.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
8	↓	1015	KB-10-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓
9	↓	1045	KB-11-1.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
10	↓	1050	KB-11-3.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
11	↓	1100	KB-11-GW ***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓
12	↓	1120	KB-12-1.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
13	↓	1125	KB-12-3.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
14	↓	1135	KB-12-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓
15	↓	1235	KB-22-1.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
16	↓	1240	KB-22-3.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
17	↓	1250	KB-22-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓
18	↓	1315	KB-06-0.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
19	↓	1320	KB-06-2.0	Soil	1	Tube	↓	↓	↓	↓	↓	↓
20	↓	1330	KB-06-GW***	Water	8	Amber VOA poly	↓	↓	↓	↓	↓	↓

*please Filter prior to Analyses

** LAB to Filter & Acidify metals Samples prior to Analyses

*** All VOAs Are Unpreserved EXCEPT FOR TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/16/02 1615	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
		[signature]

Instructions/Remarks: FAX Results TO: STEVE WALKER 925 484 5838 SEND EDD TO: ccostello@kleinfelder.com

Send Results To: KLEINFELDER 7133 KOLL CENTER PARKWAY SUITE 100 PLEASANTON, CA 94566 (510) 925 484-1700 Attn.

M-60 White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy

CHAIN OF CUSTODY [redacted] No. 2653

[redacted]ECT N[redacted]

L.P. NO. (P.O. NO.)	PROJECT	RECEIVING LAB:
46 / INV	Rolls Royce Test Facility	McCampbell Analytical

SAMPLERS: (Signature/Number) [signature]

INSTRUCTIONS/REMARKS: STD 5 DAY TAT

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	TPH J, TPHd + mo w/ silica gel (8015)	TPH J TPHd + mo w/o silica gel (8015)	TPHg (8015)	VOCs (8260)	Title 22 metals (6010)	Organic Lead						INSTRUCTIONS/REMARKS
1	7/16/02	1355	KB-05-0.0	Soil	1	tube	X	X	X	X	X	X						
2	↓	1400	KB-05-2.0	Soil	1	tube	X	X	X	X	X	X						
3		1405	KB-05-GW***	WATER	8	Amber VOA poly	X	X	X	X	X	X						
4			Trip Blank	water	1	voa				X								
5																		
6																		
7																		
8																		
9																		*please Filter prior to Analyses
10																		
11																		** LAB to Filter & Acidify
12																		metals Samples prior to Analysis
13																		
14																		*** All Voas Are Unpreserved
15																		Except For Trip Blank
16																		
17																		
18																		
19																		
20																		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/16/02 1615	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
		[signature]

Instructions/Remarks:
FAX Results to: STEVE WALKER 925 484 5838
SEND EDD to: ccostello@KLEINFELDER.com

Send Results To:
KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
~~(510)~~ 925 484-1700
Attn

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF COUSTODY

№ 2654

McCampbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Reported: 08/01/02
	Client P.O.:	Date Completed: 08/13/02

August 13, 2002

Dear Steve:

Enclosed are:

1). the results of **18** samples from your **#17646/Inv;Rolls Royce Test Facility project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/23/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0207234

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	KB-23-0.0	S	ND	1	116
002A	KB-24-0.0	S	ND	1	114
003A	KB-24-2.0	S	ND	1	110
004A	KB-24-GW	W	ND	1	104
005A	KB-25-0.0	S	ND	1	117
006A	KB-25-2.0	S	ND	1	118
007A	KB-25-GW	W	ND,i	1	106
008A	KB-13-0.0	S	5.7,b	1	-#
009A	KB-13-2.0	S	92,g	1	96.8
010A	KB-13-GW	W	590,g,h,i	1	94.3
011A	KB-113-GW	W	500,g,i	1	95.8
012A	KB-14-0.0	S	ND	1	112
013A	KB-14.GW	W	150,g,i	1	103
014A	KB-15-0.0	S	ND	1	115
015A	KB-15-GW	W	1200,g,i	1	117
016A	KB-16-0.0	S	ND	1	109
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	µg/L	
		S	1.0	mg/Kg	

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/23/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0207234

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
017A	KB-18-0.0	S	ND	1	106

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

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Kleinfelder Inc.	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
7133 Koll Center Pkwy, #100		Date Received: 07/17/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/20/02

Diesel (C10-23), Oil (C18+) and Jet Fuel (C9-C18) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550C Analytical methods: SW8015C Work Order: 0207234

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
001A	KB-23-0.0	S	23,g	190	ND<20	20	85.1
002A	KB-24-0.0	S	2.9,g	25	ND	1	97.3
003A	KB-24-2.0	S	13,g	120	ND	1	98.0
004B	KB-24-GW	W	14,000,g,b	29,000	2300	1	102
004E	KB-24-GW (F)	W	160,b,g	450	ND	1	92.1
005A	KB-25-0.0	S	6.9,g	88	ND<5.0	5	102
006A	KB-25-2.0	S	ND<200,g	3100	ND<200	200	---#
007B	KB-25-GW	W	4500,g,i	23,000	1000	20	110
007E	KB-25-GW (F)	W	130,b,g,i	320	ND	1	92.9
008A	KB-13-0.0	S	72,b,g	300	14	5	97.7
009A	KB-13-2.0	S	140,a/m	66	170	1	97.2
010B	KB-13-GW	W	39,000,k/a,g,h,i	26,000	39,000	10	111
010E	KB-13-GW (F)	W	9900,a,h,i	1100	11,000	1	103
011B	KB-113-GW	W	8200,a,g,i	5300	8300	1	97.3
011D	KB-113-GW (F)	W	1900,a,g,i	880	1900	1	112
012A	KB-14-0.0	S	7.9,g,b	89	2.2	1	93.4
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	250	50	µg/L	
		S	1.0	5.0	1.0	mg/Kg	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/18/02-07/20/02

Diesel (C10-23), Oil (C18+) and Jet Fuel (C9-C18) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0207234

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	TPH(jf)	DF	% SS
013B	KB-14.GW	W	56,000,g,b,h,i	82,000	13,000	10	---#
013E	KB-14.GW (F)	W	3200,g,b,i	4500	750	1	100
014A	KB-15-0.0	S	60,b,g	180	13	5	95.1
015B	KB-15-GW	W	110,000,d,b,g,i	52,000	200,000	20	---#
015E	KB-15-GW (F)	W	5300,d,b,g,i	2200	4800	1	97.1
016A	KB-16-0.0	S	63,g,b	180	12	1	101
017A	KB-18-0.0	S	77,c/m	190	17	1	96.6

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	50	µg/L
	S	1.0	5.0	1.0	mg/Kg

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all TCLP / STLC / SPLP extracts in ug/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-001A
Client ID	KB-23-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	90.5	%SS2:	110
%SS3:	98.4		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-002A
Client ID	KB-24-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	96.8	%SS2:	106
%SS3:	94.5		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-003A
Client ID	KB-24-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	101	%SS2:	107
%SS3:	92.9		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-005A
Client ID	KB-25-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	98.5	%SS2:	109
%SS3:	94.6		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-006A
Client ID	KB-25-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	98.0	%SS2:	109
%SS3:	94.5		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
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	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-008A
Client ID	KB-13-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<500	10	50	Benzene	ND<50	10	5.0
Bromobenzene	ND<50	10	5.0	Bromochloromethane	ND<50	10	5.0
Bromodichloromethane	ND<50	10	5.0	Bromoform	ND<50	10	5.0
Bromomethane	ND<50	10	5.0	2-Butanone (MEK)	ND<100	10	10
n-Butyl benzene	ND<50	10	5.0	sec-Butyl benzene	ND<50	10	5.0
tert-Butyl benzene	ND<50	10	5.0	Carbon Disulfide	ND<50	10	5.0
Carbon Tetrachloride	ND<50	10	5.0	Chlorobenzene	ND<50	10	5.0
Chloroethane	ND<50	10	5.0	2-Chloroethyl Vinyl Ether	ND<100	10	10
Chloroform	ND<50	10	5.0	Chloromethane	ND<50	10	5.0
2-Chlorotoluene	ND<50	10	5.0	4-Chlorotoluene	ND<50	10	5.0
Dibromochloromethane	ND<50	10	5.0	1,2-Dibromo-3-chloropropane	ND<50	10	5.0
1,2-Dibromoethane (EDB)	ND<50	10	5.0	Dibromomethane	ND<50	10	5.0
1,2-Dichlorobenzene	ND<50	10	5.0	1,3-Dichlorobenzene	ND<50	10	5.0
1,4-Dichlorobenzene	ND<50	10	5.0	Dichlorodifluoromethane	ND<50	10	5.0
1,1-Dichloroethane	ND<50	10	5.0	1,2-Dichloroethane (1,2-DCA)	ND<50	10	5.0
1,1-Dichloroethene	ND<50	10	5.0	cis-1,2-Dichloroethene	ND<50	10	5.0
trans-1,2-Dichloroethene	ND<50	10	5.0	1,2-Dichloropropane	ND<50	10	5.0
1,3-Dichloropropane	ND<50	10	5.0	2,2-Dichloropropane	ND<50	10	5.0
1,1-Dichloropropene	ND<50	10	5.0	cis-1,3-Dichloropropene	ND<50	10	5.0
trans-1,3-Dichloropropene	ND<50	10	5.0	Ethylbenzene	ND<50	10	5.0
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	1300	10	5.0
Iodomethane (Methyl iodide)	ND<100	10	10	4-Isopropyl toluene	ND<50	10	5.0
Isopropylbenzene	ND<50	10	5.0	4-Methyl-2-pentanone (MIBK)	ND<50	10	5.0
Methylene chloride	ND<50	10	5.0	Methyl-t-butyl ether (MTBE)	ND<50	10	5.0
Naphthalene	ND<50	10	5.0	n-Propyl benzene	ND<50	10	5.0
Styrene	ND<50	10	5.0	1,1,1,2-Tetrachloroethane	ND<50	10	5.0
1,1,2,2-Tetrachloroethane	ND<50	10	5.0	Tetrachloroethene	ND<50	10	5.0
Toluene	ND<50	10	5.0	1,2,3-Trichlorobenzene	ND<50	10	5.0
1,2,4-Trichlorobenzene	ND<50	10	5.0	1,1,1-Trichloroethane	ND<50	10	5.0
1,1,2-Trichloroethane	ND<50	10	5.0	Trichloroethene	ND<50	10	5.0
Trichlorofluoromethane	ND<50	10	5.0	1,2,3-Trichloropropane	ND<50	10	5.0
1,2,4-Trimethylbenzene	ND<50	10	5.0	1,3,5-Trimethylbenzene	ND<50	10	5.0
Vinyl Acetate	ND<500	10	50	Vinyl Chloride	ND<50	10	5.0
Xylenes	ND<50	10	5.0				

Surrogate Recoveries (%)

%SS1:	94.5	%SS2:	99.8
%SS3:	104		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-009A
Client ID	KB-13-2.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<95	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	23	1.0	10
n-Butyl benzene	62	1.0	5.0	sec-Butyl benzene	6.8	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	12	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	92	1.0	5.0	n-Propyl benzene	5.7	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	50	1.0	5.0	1,3,5-Trimethylbenzene	39	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	18	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	97.6	%SS2:	95.2
%SS3:	113		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-012A
Client ID	KB-14-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	95.8	%SS2:	104
%SS3:	95.8		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-014A
Client ID	KB-15-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	29	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	99.9	%SS2:	104
%SS3:	98.8		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-016A
Client ID	KB-16-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	ND	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	95.1	%SS2:	105
%SS3:	100		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/20/02-07/24/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-017A
Client ID	KB-18-0.0
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<95	1.0	50	Benzene	ND	1.0	5.0
Bromobenzene	ND	1.0	5.0	Bromochloromethane	ND	1.0	5.0
Bromodichloromethane	ND	1.0	5.0	Bromoform	ND	1.0	5.0
Bromomethane	ND	1.0	5.0	2-Butanone (MEK)	16	1.0	10
n-Butyl benzene	ND	1.0	5.0	sec-Butyl benzene	ND	1.0	5.0
tert-Butyl benzene	ND	1.0	5.0	Carbon Disulfide	ND	1.0	5.0
Carbon Tetrachloride	ND	1.0	5.0	Chlorobenzene	ND	1.0	5.0
Chloroethane	ND	1.0	5.0	2-Chloroethyl Vinyl Ether	ND	1.0	10
Chloroform	ND	1.0	5.0	Chloromethane	ND	1.0	5.0
2-Chlorotoluene	ND	1.0	5.0	4-Chlorotoluene	ND	1.0	5.0
Dibromochloromethane	ND	1.0	5.0	1,2-Dibromo-3-chloropropane	ND	1.0	5.0
1,2-Dibromoethane (EDB)	ND	1.0	5.0	Dibromomethane	ND	1.0	5.0
1,2-Dichlorobenzene	ND	1.0	5.0	1,3-Dichlorobenzene	ND	1.0	5.0
1,4-Dichlorobenzene	ND	1.0	5.0	Dichlorodifluoromethane	ND	1.0	5.0
1,1-Dichloroethane	ND	1.0	5.0	1,2-Dichloroethane (1,2-DCA)	ND	1.0	5.0
1,1-Dichloroethene	ND	1.0	5.0	cis-1,2-Dichloroethene	ND	1.0	5.0
trans-1,2-Dichloroethene	ND	1.0	5.0	1,2-Dichloropropane	ND	1.0	5.0
1,3-Dichloropropane	ND	1.0	5.0	2,2-Dichloropropane	ND	1.0	5.0
1,1-Dichloropropene	ND	1.0	5.0	cis-1,3-Dichloropropene	ND	1.0	5.0
trans-1,3-Dichloropropene	ND	1.0	5.0	Ethylbenzene	ND	1.0	5.0
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	5.0
Iodomethane (Methyl iodide)	ND	1.0	10	4-Isopropyl toluene	ND	1.0	5.0
Isopropylbenzene	ND	1.0	5.0	4-Methyl-2-pentanone (MIBK)	ND	1.0	5.0
Methylene chloride	ND	1.0	5.0	Methyl-t-butyl ether (MTBE)	ND	1.0	5.0
Naphthalene	ND	1.0	5.0	n-Propyl benzene	ND	1.0	5.0
Styrene	ND	1.0	5.0	1,1,1,2-Tetrachloroethane	ND	1.0	5.0
1,1,2,2-Tetrachloroethane	ND	1.0	5.0	Tetrachloroethene	ND	1.0	5.0
Toluene	ND	1.0	5.0	1,2,3-Trichlorobenzene	ND	1.0	5.0
1,2,4-Trichlorobenzene	ND	1.0	5.0	1,1,1-Trichloroethane	ND	1.0	5.0
1,1,2-Trichloroethane	ND	1.0	5.0	Trichloroethene	ND	1.0	5.0
Trichlorofluoromethane	ND	1.0	5.0	1,2,3-Trichloropropane	ND	1.0	5.0
1,2,4-Trimethylbenzene	ND	1.0	5.0	1,3,5-Trimethylbenzene	ND	1.0	5.0
Vinyl Acetate	ND	1.0	50	Vinyl Chloride	ND	1.0	5.0
Xylenes	ND	1.0	5.0				

Surrogate Recoveries (%)

%SS1:	95.4	%SS2:	105
%SS3:	90.2		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc.	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
7133 Koll Center Pkwy, #100		Date Received: 07/17/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/31/02
	Client P.O.:	Date Analyzed: 07/20/02-07/31/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-004C
Client ID	KB-24-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	10	5.0	Benzene	ND<5.0	10	0.5
Bromobenzene	ND<5.0	10	0.5	Bromochloromethane	ND<5.0	10	0.5
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5
Bromomethane	ND<5.0	10	0.5	2-Butanone (MEK)	ND<10	10	1.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	2-Chloroethyl Vinyl Ether	ND<10	10	1.0
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5
2-Chlorotoluene	ND<5.0	10	0.5	4-Chlorotoluene	ND<5.0	10	0.5
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	10	0.5
1,2-Dibromoethane (EDB)	ND<5.0	10	0.5	Dibromomethane	ND<5.0	10	0.5
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5
1,3-Dichloropropane	ND<5.0	10	0.5	2,2-Dichloropropane	ND<5.0	10	0.5
1,1-Dichloropropene	ND<5.0	10	0.5	cis-1,3-Dichloropropene	ND<5.0	10	0.5
trans-1,3-Dichloropropene	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	ND<5.0	10	0.5
Iodomethane (Methyl iodide)	ND<10	10	1.0	4-Isopropyl toluene	ND<5.0	10	0.5
Isopropylbenzene	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Acetate	ND<50	10	5.0	Vinyl Chloride	ND<5.0	10	0.5
Xylenes	ND<5.0	10	0.5				

Surrogate Recoveries (%)

%SS1:	105	%SS2:	103
%SS3:	108		

Comments: k

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/31/02
	Client P.O.:	Date Analyzed: 07/20/02-07/31/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-007C
Client ID	KB-25-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	10	5.0	Benzene	ND<5.0	10	0.5
Bromobenzene	ND<5.0	10	0.5	Bromochloromethane	ND<5.0	10	0.5
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5
Bromomethane	ND<5.0	10	0.5	2-Butanone (MEK)	ND<10	10	1.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	2-Chloroethyl Vinyl Ether	ND<10	10	1.0
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5
2-Chlorotoluene	ND<5.0	10	0.5	4-Chlorotoluene	ND<5.0	10	0.5
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	10	0.5
1,2-Dibromoethane (EDB)	ND<5.0	10	0.5	Dibromomethane	ND<5.0	10	0.5
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5
1,3-Dichloropropane	ND<5.0	10	0.5	2,2-Dichloropropane	ND<5.0	10	0.5
1,1-Dichloropropene	ND<5.0	10	0.5	cis-1,3-Dichloropropene	ND<5.0	10	0.5
trans-1,3-Dichloropropene	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	ND<5.0	10	0.5
Iodomethane (Methyl iodide)	ND<10	10	1.0	4-Isopropyl toluene	ND<5.0	10	0.5
Isopropylbenzene	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Acetate	ND<50	10	5.0	Vinyl Chloride	ND<5.0	10	0.5
Xylenes	ND<5.0	10	0.5				

Surrogate Recoveries (%)

%SS1:	104	%SS2:	102
%SS3:	107		

Comments: k

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc.	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
7133 Koll Center Pkwy, #100		Date Received: 07/17/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/31/02
	Client P.O.:	Date Analyzed: 07/20/02-07/31/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-010C
Client ID	KB-13-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	10	5.0	Benzene	ND<5.0	10	0.5
Bromobenzene	ND<5.0	10	0.5	Bromochloromethane	ND<5.0	10	0.5
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5
Bromomethane	ND<5.0	10	0.5	2-Butanone (MEK)	ND<10	10	1.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	2-Chloroethyl Vinyl Ether	ND<10	10	1.0
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5
2-Chlorotoluene	ND<5.0	10	0.5	4-Chlorotoluene	ND<5.0	10	0.5
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	10	0.5
1,2-Dibromoethane (EDB)	ND<5.0	10	0.5	Dibromomethane	ND<5.0	10	0.5
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5
1,3-Dichloropropane	ND<5.0	10	0.5	2,2-Dichloropropane	ND<5.0	10	0.5
1,1-Dichloropropene	ND<5.0	10	0.5	cis-1,3-Dichloropropene	ND<5.0	10	0.5
trans-1,3-Dichloropropene	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	ND<5.0	10	0.5
Iodomethane (Methyl iodide)	ND<10	10	1.0	4-Isopropyl toluene	ND<5.0	10	0.5
Isopropylbenzene	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Acetate	ND<50	10	5.0	Vinyl Chloride	ND<5.0	10	0.5
Xylenes	ND<5.0	10	0.5				

Surrogate Recoveries (%)

%SS1:	104	%SS2:	102
%SS3:	104		

Comments: k

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/31/02
	Client P.O.:	Date Analyzed: 07/20/02-07/31/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0207234

Lab ID	0207234-011C
Client ID	KB-113-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	10	5.0	Benzene	ND<5.0	10	0.5
Bromobenzene	ND<5.0	10	0.5	Bromochloromethane	ND<5.0	10	0.5
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5
Bromomethane	ND<5.0	10	0.5	2-Butanone (MEK)	ND<10	10	1.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	2-Chloroethyl Vinyl Ether	ND<10	10	1.0
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5
2-Chlorotoluene	ND<5.0	10	0.5	4-Chlorotoluene	ND<5.0	10	0.5
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	10	0.5
1,2-Dibromoethane (EDB)	ND<5.0	10	0.5	Dibromomethane	ND<5.0	10	0.5
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5
1,3-Dichloropropane	ND<5.0	10	0.5	2,2-Dichloropropane	ND<5.0	10	0.5
1,1-Dichloropropene	ND<5.0	10	0.5	cis-1,3-Dichloropropene	ND<5.0	10	0.5
trans-1,3-Dichloropropene	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	ND<5.0	10	0.5
Iodomethane (Methyl iodide)	ND<10	10	1.0	4-Isopropyl toluene	ND<5.0	10	0.5
Isopropylbenzene	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Acetate	ND<50	10	5.0	Vinyl Chloride	ND<5.0	10	0.5
Xylenes	ND<5.0	10	0.5				

Surrogate Recoveries (%)

%SS1:	103	%SS2:	102
%SS3:	108		

Comments: k

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/31/02
	Client P.O.:	Date Analyzed: 07/20/02-07/31/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-013C
Client ID	KB-14.GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	10	5.0	Benzene	ND<5.0	10	0.5
Bromobenzene	ND<5.0	10	0.5	Bromochloromethane	ND<5.0	10	0.5
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5
Bromomethane	ND<5.0	10	0.5	2-Butanone (MEK)	ND<10	10	1.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	2-Chloroethyl Vinyl Ether	ND<10	10	1.0
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5
2-Chlorotoluene	ND<5.0	10	0.5	4-Chlorotoluene	ND<5.0	10	0.5
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	10	0.5
1,2-Dibromoethane (EDB)	ND<5.0	10	0.5	Dibromomethane	ND<5.0	10	0.5
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5
1,3-Dichloropropane	ND<5.0	10	0.5	2,2-Dichloropropane	ND<5.0	10	0.5
1,1-Dichloropropene	ND<5.0	10	0.5	cis-1,3-Dichloropropene	ND<5.0	10	0.5
trans-1,3-Dichloropropene	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	ND<5.0	10	0.5
Iodomethane (Methyl iodide)	ND<10	10	1.0	4-Isopropyl toluene	ND<5.0	10	0.5
Isopropylbenzene	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Acetate	ND<50	10	5.0	Vinyl Chloride	ND<5.0	10	0.5
Xylenes	ND<5.0	10	0.5				

Surrogate Recoveries (%)

%SS1:	102	%SS2:	104
%SS3:	110		

Comments: k

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/31/02
	Client P.O.:	Date Analyzed: 07/20/02-07/31/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-015C
Client ID	KB-15-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<50	10	5.0	Benzene	ND<5.0	10	0.5
Bromobenzene	ND<5.0	10	0.5	Bromochloromethane	ND<5.0	10	0.5
Bromodichloromethane	ND<5.0	10	0.5	Bromoform	ND<5.0	10	0.5
Bromomethane	ND<5.0	10	0.5	2-Butanone (MEK)	ND<10	10	1.0
n-Butyl benzene	ND<5.0	10	0.5	sec-Butyl benzene	ND<5.0	10	0.5
tert-Butyl benzene	ND<5.0	10	0.5	Carbon Disulfide	ND<5.0	10	0.5
Carbon Tetrachloride	ND<5.0	10	0.5	Chlorobenzene	ND<5.0	10	0.5
Chloroethane	ND<5.0	10	0.5	2-Chloroethyl Vinyl Ether	ND<10	10	1.0
Chloroform	ND<5.0	10	0.5	Chloromethane	ND<5.0	10	0.5
2-Chlorotoluene	ND<5.0	10	0.5	4-Chlorotoluene	ND<5.0	10	0.5
Dibromochloromethane	ND<5.0	10	0.5	1,2-Dibromo-3-chloropropane	ND<5.0	10	0.5
1,2-Dibromoethane (EDB)	ND<5.0	10	0.5	Dibromomethane	ND<5.0	10	0.5
1,2-Dichlorobenzene	ND<5.0	10	0.5	1,3-Dichlorobenzene	ND<5.0	10	0.5
1,4-Dichlorobenzene	ND<5.0	10	0.5	Dichlorodifluoromethane	ND<5.0	10	0.5
1,1-Dichloroethane	ND<5.0	10	0.5	1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	0.5
1,1-Dichloroethene	ND<5.0	10	0.5	cis-1,2-Dichloroethene	ND<5.0	10	0.5
trans-1,2-Dichloroethene	ND<5.0	10	0.5	1,2-Dichloropropane	ND<5.0	10	0.5
1,3-Dichloropropane	ND<5.0	10	0.5	2,2-Dichloropropane	ND<5.0	10	0.5
1,1-Dichloropropene	ND<5.0	10	0.5	cis-1,3-Dichloropropene	ND<5.0	10	0.5
trans-1,3-Dichloropropene	ND<5.0	10	0.5	Ethylbenzene	ND<5.0	10	0.5
Hexachlorobutadiene	ND<50	10	5.0	2-Hexanone	ND<5.0	10	0.5
Iodomethane (Methyl iodide)	ND<10	10	1.0	4-Isopropyl toluene	ND<5.0	10	0.5
Isopropylbenzene	ND<5.0	10	0.5	4-Methyl-2-pentanone (MIBK)	ND<5.0	10	0.5
Methylene chloride	ND<5.0	10	0.5	Methyl-t-butyl ether (MTBE)	ND<5.0	10	0.5
Naphthalene	ND<5.0	10	0.5	n-Propyl benzene	ND<5.0	10	0.5
Styrene	ND<5.0	10	0.5	1,1,1,2-Tetrachloroethane	ND<5.0	10	0.5
1,1,2,2-Tetrachloroethane	ND<5.0	10	0.5	Tetrachloroethene	ND<5.0	10	0.5
Toluene	ND<5.0	10	0.5	1,2,3-Trichlorobenzene	ND<5.0	10	0.5
1,2,4-Trichlorobenzene	ND<5.0	10	0.5	1,1,1-Trichloroethane	ND<5.0	10	0.5
1,1,2-Trichloroethane	ND<5.0	10	0.5	Trichloroethene	ND<5.0	10	0.5
Trichlorofluoromethane	ND<5.0	10	0.5	1,2,3-Trichloropropane	ND<5.0	10	0.5
1,2,4-Trimethylbenzene	ND<5.0	10	0.5	1,3,5-Trimethylbenzene	ND<5.0	10	0.5
Vinyl Acetate	ND<50	10	5.0	Vinyl Chloride	ND<5.0	10	0.5
Xylenes	ND<5.0	10	0.5				

Surrogate Recoveries (%)

%SS1:	102	%SS2:	103
%SS3:	104		

Comments: k

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content; k) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/10/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/20/02-07/23/02
	Client P.O.:	Date Analyzed: 07/20/02-07/23/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207234

Lab ID	0207234-018A
Client ID	Trip Blank
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	ND	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	101	%SS2:	101
%SS3:	108		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

low surrogate recovery due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-08/01/02

CAM / CCR 17 Metals*

Lab ID	0207234-001A	0207234-002A	0207234-003A	0207234-005A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-23-0.0	KB-24-0.0	KB-24-2.0	KB-25-0.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207234

Dilution Factor	1	1	1	1	1	1
Antimony	ND	12	2.7	ND	2.5	NA
Barium	180	340	510	170	2.5	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	0.91	6.4	2.8	0.77	0.5	NA
Chromium	48	71	34	63	0.5	NA
Cobalt	13	12	6.7	12	2.0	NA
Copper	36	230	120	55	2.0	NA
Lead	91	500	760	95	3.0	NA
Molybdenum	ND	ND	ND	5.6	2.0	NA
Nickel	77	54	26	73	2.0	NA
Silver	ND	ND	ND	ND	1.0	NA
Vanadium	35	35	33	38	2.0	NA
Zinc	150	2100	1200	160	1.0	NA
%SS:	106	108	106	101		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	10	11	8.1	4.5	2.5	NA
Selenium	ND<5.0	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	1	1	1	1	1
Mercury	0.24	0.52	0.33	0.15	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-08/01/02

CAM / CCR 17 Metals*

Lab ID	0207234-006A	0207234-008A	0207234-009A	0207234-012A	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-25-2.0	KB-13-0.0	KB-13-2.0	KB-14-0.0		
Matrix	S	S	S	S	S	W
Extraction Type	TTLC	TTLC	TTLC	TTLC	TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207234

Dilution Factor	1	1	1	1	1	1
Antimony	ND	ND	3.2	ND	2.5	NA
Barium	170	490	940	730	2.5	NA
Beryllium	ND	ND	ND	ND	0.5	NA
Cadmium	1.1	10	4.8	11	0.5	NA
Chromium	24	69	120	49	0.5	NA
Cobalt	6.3	15	12	8.2	2.0	NA
Copper	57	200	13,000	170	2.0	NA
Lead	240	1700	4200	2400	3.0	NA
Molybdenum	ND	10	5.8	3.9	2.0	NA
Nickel	33	72	210	33	2.0	NA
Silver	ND	ND	ND	3.8	1.0	NA
Vanadium	19	31	13	21	2.0	NA
Zinc	350	1200	4500	1700	1.0	NA
%SS:	103	104	109	102		

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1	1	1	1
Arsenic	3.6	10	ND<5.0	4.3	2.5	NA
Selenium	ND	ND	ND	ND	2.5	NA
Thallium	ND	ND	ND	ND	2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	5	1	5	1	1
Mercury	ND	1.8	0.35	1.5	0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

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Kleinfelder Inc.	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
7133 Koll Center Pkwy, #100		Date Received: 07/17/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/19/02-08/01/02

CAM / CCR 17 Metals*

Lab ID	0207234-014A	0207234-016A	0207234-017A		Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-15-0.0	KB-16-0.0	KB-18-0.0			
Matrix	S	S	S		S	W
Extraction Type	TTLC	TTLC	TTLC		TTLC(mg/Kg)	mg/L

ICP Metals, Concentration*

Analytical Method: 6010C | Extraction Method: SW3050B | Work Order: 0207234

Dilution Factor	1	1	1		1	1
Antimony	ND	ND	ND		2.5	NA
Barium	55	190	190		2.5	NA
Beryllium	ND	ND	ND		0.5	NA
Cadmium	6.3	23	12		0.5	NA
Chromium	19	59	29		0.5	NA
Cobalt	3.3	7.2	3.1		2.0	NA
Copper	36	110	220		2.0	NA
Lead	110	260	160		3.0	NA
Molybdenum	ND	7.1	ND		2.0	NA
Nickel	18	43	30		2.0	NA
Silver	ND	ND	ND		1.0	NA
Vanadium	6.3	25	16		2.0	NA
Zinc	180	570	610		1.0	NA
%SS:	102	96.9	110			

GFAA Metals, Concentration*

Analytical Method: SW7010 | Extraction Method: SW3050B

Dilution Factor	1	1	1		1	1
Arsenic	ND	ND<5.0	ND<5.0		2.5	NA
Selenium	ND	ND	ND		2.5	NA
Thallium	ND	ND	ND		2.5	NA

Cold Vapor Metals, Concentration*

Analytical Method: SW7471B | Extraction Method: SW7471B

Dilution Factor	1	10	5		1	1
Mercury	73	4.2	2.3		0.06	NA
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/23/02

CAM / CCR 17 Metals*

Lab ID	0207234-004D	0207234-007D	0207234-010D	0207234-013D	Reporting Limit for DF =1; ND means not detected above the reporting limit	
Client ID	KB-24-GW	KB-25-GW	KB-13-GW	KB-14.GW		
Matrix	W	W	W	W	q	w
Extraction Type	DISS.	DISS.	DISS.	DISS.	mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207234

Dilution Factor	1	1	1	1	1	1
Barium	0.80	0.51	0.37	0.48	NA	0.05
Beryllium	ND	ND	ND	ND	NA	0.004
Cadmium	ND	0.0055	ND	ND	NA	0.005
Chromium	ND	ND	ND	ND	NA	0.02
Cobalt	ND	ND	ND	ND	NA	0.05
Copper	ND	ND	ND	ND	NA	0.05
Molybdenum	ND	ND	ND	ND	NA	0.05
Nickel	ND	ND	ND	ND	NA	0.05
Silver	ND	ND	ND	ND	NA	0.01
Vanadium	ND	ND	ND	ND	NA	0.05
Zinc	0.050	0.86	ND	ND	NA	0.05
%SS:	N/A	N/A	N/A	N/A		

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1	1	1	1	1	1
Antimony	ND	0.00665	ND	ND	NA	0.006
Arsenic	ND	ND	0.00812	0.00839	NA	0.005
Lead	0.0067	0.011	0.0053	ND	NA	0.005
Selenium	ND	ND	ND	ND	NA	0.005
Thallium	ND	ND	ND	ND	NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1	1	1	1	1	1
Mercury	ND	ND	ND	ND	NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/17/02-07/23/02

CAM / CCR 17 Metals*

					Reporting Limit for DF =1; ND means not detected above the reporting limit	
Lab ID	0207234-015D					
Client ID	KB-15-GW					
Matrix	W				q	W
Extraction Type	DISS.				mg/kg	DISS.(mg/L)

ICP Metals, Concentration*

Analytical Method: E200.7 Extraction Method: E200.7 Work Order: 0207234

Dilution Factor	1				1	1
Barium	0.38				NA	0.05
Beryllium	ND				NA	0.004
Cadmium	ND				NA	0.005
Chromium	ND				NA	0.02
Cobalt	ND				NA	0.05
Copper	ND				NA	0.05
Molybdenum	ND				NA	0.05
Nickel	ND				NA	0.05
Silver	ND				NA	0.01
Vanadium	ND				NA	0.05
Zinc	ND				NA	0.05
%SS:	N/A					

GFAA Metals, Concentration*

Analytical Method: E200.9 Extraction Method: E200.9

Dilution Factor	1				1	1
Antimony	ND				NA	0.006
Arsenic	ND<0.010,z				NA	0.005
Lead	ND				NA	0.005
Selenium	ND				NA	0.005
Thallium	ND				NA	0.005

Cold Vapor Metals, Concentration*

Analytical Method: E245.1 Extraction Method: E245.1

Dilution Factor	1				1	1
Mercury	ND				NA	0.0008
Comments						

* water samples are reported in mg/L, soil/sludge/solid/product samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / DISTLC / SPLP extracts in mg/L.

ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipes - As, Se, Tl); 7471B (Hg).

DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; z) reporting limit raised due to matrix interference.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #17646/Inv;Rolls Royce Test Facility	Date Sampled: 07/17/02
		Date Received: 07/17/02
	Client Contact: Steve Walker	Date Extracted: 07/17/02
	Client P.O.:	Date Analyzed: 07/23/02-07/26/02

Organic Lead*

Extraction method: CA T22 CPT11 APPD XI | Analytical methods: CA T22 CPT11 APPD XI | Work Order: 0207234

Lab ID	Client ID	Matrix	Lead	DF
0207234-001A	KB-23-0.0	S	0.90	1
0207234-002A	KB-24-0.0	S	ND	1
0207234-003A	KB-24-2.0	S	0.90	1
0207234-004D	KB-24-GW	W	ND	1
0207234-005A	KB-25-0.0	S	ND	1
0207234-006A	KB-25-2.0	S	1.1	13
0207234-007D	KB-25-GW	W	ND	1
0207234-008A	KB-13-0.0	S	3.0	1
0207234-009A	KB-13-2.0	S	1.6	1
0207234-010D	KB-13-GW	W	0.019	1
0207234-012A	KB-14-0.0	S	2.6	100
0207234-013D	KB-14.GW	W	ND	1
0207234-014A	KB-15-0.0	S	1.2	1
0207234-015D	KB-15-GW	W	ND	1
0207234-016A	KB-16-0.0	S	1.0	1
0207234-017A	KB-18-0.0	S	ND	1
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	0.005	mg/L
		S	0.5	mg/Kg

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0207234

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 2983 Spiked Sample ID: 0207218-001A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	0.60	90.5	88.4	2.34	103	105	2.19	80	120
MTBE	ND	0.10	85.5	94.3	9.80	93.9	87	7.57	80	120
Benzene	ND	0.10	87	86	1.13	109	107	2.38	80	120
Toluene	ND	0.10	92.5	91.9	0.608	113	112	1.31	80	120
Ethylbenzene	ND	0.10	95	95.4	0.478	110	110	0.456	80	120
Xylenes	ND	0.30	95	95	0	103	110	6.25	80	120
%SS:	106	100	98.4	99.8	1.43	113	109	4.10	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S WorkOrder: 0207234

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 3018 Spiked Sample ID: 0207234-014A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	0.60	110	100	9.16	88	88.6	0.613	80	120
MTBE	ND	0.10	100	97	3.40	81.9	88.3	7.47	80	120
Benzene	ND	0.10	106	100	5.84	86.4	85.7	0.740	80	120
Toluene	ND	0.10	113	108	4.66	91.3	90.6	0.724	80	120
Ethylbenzene	ND	0.10	111	105	5.90	93.7	93.3	0.432	80	120
Xylenes	ND	0.30	110	103	6.25	94.3	94.3	0	80	120
%SS:	115	100	110	104	4.92	101	101	0.194	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207234

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 3013 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	N/A	60	N/A	N/A	N/A	92.1	91.8	0.258	80	120
MTBE	N/A	10	N/A	N/A	N/A	85.9	87.8	2.22	80	120
Benzene	N/A	10	N/A	N/A	N/A	88	86.4	1.89	80	120
Toluene	N/A	10	N/A	N/A	N/A	91.9	90.4	1.65	80	120
Ethylbenzene	N/A	10	N/A	N/A	N/A	94.3	92.8	1.60	80	120
Xylenes	N/A	30	N/A	N/A	N/A	94.7	94	0.707	80	120
%SS:	N/A	100	N/A	N/A	N/A	97.7	98	0.315	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0207234

EPA Method: SW8015C Extraction: SW3550C BatchID: 2987 Spiked Sample ID: 0207213-022A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	ND	150	94.9	95.5	0.644	104	104	0.560	70	130
%SS:	ND	100	105	107	1.06	104	105	0.824	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0207234

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 2998	Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	112	104	7.97	70	130
%SS:	N/A	100	N/A	N/A	N/A	112	103	8.71	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: S WorkOrder: 0207234

EPA Method: SW8260B Extraction: SW5030B BatchID: 2985 Spiked Sample ID: 0207213-022A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	N/A	50	N/A	N/A	N/A	101	103	1.13	70	130
Chlorobenzene	N/A	50	N/A	N/A	N/A	121	120	0.269	70	130
1,1-Dichloroethene	N/A	50	N/A	N/A	N/A	92	92.8	0.910	70	130
Methyl-t-butyl ether (MTBE)	N/A	50	N/A	N/A	N/A	108	106	1.90	70	130
Toluene	N/A	50	N/A	N/A	N/A	108	107	0.855	70	130
Trichloroethene	N/A	50	N/A	N/A	N/A	92.7	91.8	1.03	70	130
%SS1:	N/A	100	N/A	N/A	N/A	95.3	94.4	0.955	70	130
%SS2:	N/A	100	N/A	N/A	N/A	101	101	0.373	70	130
%SS3:	N/A	100	N/A	N/A	N/A	95.4	96.5	1.07	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MMS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8260B

Matrix: S WorkOrder: 0207234

EPA Method: SW8260B Extraction: SW5030B BatchID: 3015 Spiked Sample ID: 0207234-008A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Benzene	ND	50	115	111	3.13	105	101	3.57	70	130
Chlorobenzene	ND	50	121	118	2.74	115	114	1.06	70	130
1,1-Dichloroethene	ND	50	101	98.2	2.89	92	90.6	1.59	70	130
Methyl-t-butyl ether (MTBE)	ND	50	110	105	5.03	105	104	1.59	70	130
Toluene	ND	50	112	109	3.10	106	104	1.71	70	130
Trichloroethene	ND	50	99.6	98.3	1.37	92.3	90.5	1.98	70	130
%SS1:	96.9	100	98.1	96.8	1.38	99.3	96.8	2.63	70	130
%SS2:	107	100	103	103	0.371	104	102	1.35	70	130
%SS3:	103	100	93.6	91.3	2.50	89	88	1.19	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MMS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: S WorkOrder: 0207234

EPA Method: SW8015C Extraction: SW3550C BatchID: 3017 Spiked Sample ID: 0207259-001A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	ND	150	104	107	2.98	93.5	102	8.19	70	130
%SS:	ND	100	94.6	97.2	2.76	94.4	103	8.28	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0207234

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 3021	Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	103	103	0.117	70	130
%SS:	N/A	100	N/A	N/A	N/A	104	103	0.0557	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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QC REPORT

CAM 17

Date: 07/19/02 **Extraction:** TTLC **Matrix:** Soil

Compound	Concentration: mg/kg				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 3010					Instrument	P-1 | AA	
Beryllium	ND	5.7	4.8	5.00	115	97	17.1
Selenium	ND	11.1	9.7	10.00	111	97	13.1
Molybdenum	ND	5.1	4.4	5.00	102	89	14.0
Silver	ND	0.46	0.43	0.50	93	87	6.6
Thallium	ND	11.1	10.4	10.00	111	104	6.9
Barium	ND	5.7	4.8	5.00	115	96	17.5
Nickel	ND	5.0	4.3	5.00	100	85	16.1
Arsenic	ND	8.9	9.2	10.00	89	92	3.5
Vanadium	ND	5.1	5.1	5.00	102	102	0.0
Surrogate1	ND	111.3	115.0	100.00	111	115	3.3
Zinc	ND	5.1	4.2	5.00	101	84	18.1
Copper	ND	4.8	4.5	5.00	97	90	7.3
Antimony	ND	4.9	4.2	5.00	98	84	15.1
Lead	ND	5.1	4.2	5.00	101	85	17.8
Cadmium	ND	5.7	4.8	5.00	115	96	17.5
Cobalt	ND	4.9	4.3	5.00	98	85	14.3
Mercury	ND	0.21	0.21	0.25	85	85	0.4
Chromium	ND	5.0	4.4	5.00	100	87	13.3

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC REPORT

CAM 17

Date: 07/16/02 **Extraction:** Dissolved **Matrix:** Water

Compound	Concentration: mg/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71502					Instrument	P-1 | AA	
Beryllium	ND	5.3	5.5	5.00	107	110	3.1
Selenium	ND	0.0109	0.0095	0.0100	109	95	13.2
Molybdenum	ND	4.7	4.8	5.00	95	96	0.7
Silver	ND	0.5	0.5	0.50	91	92	0.9
Thallium	ND	0.0102	0.0099	0.0100	102	99	2.5
Barium	ND	5.1	5.3	5.00	102	106	3.9
Nickel	ND	4.7	4.6	5.00	94	93	1.8
Arsenic	ND	0.0106	0.0092	0.0100	106	92	13.8
Vanadium	ND	4.8	5.0	5.00	95	99	4.4
Mercury	ND	0.00089	0.00092	0.00100	89	92	3.2
Zinc	ND	4.6	4.6	5.00	92	93	1.0
Copper	ND	4.9	5.2	5.00	98	105	6.7
Antimony	ND	0.0101	0.0094	0.0100	101	94	6.3
Lead	ND	0.0100	0.0102	0.0100	100	102	2.2
Cadmium	ND	4.7	5.2	5.00	93	104	10.7
Cobalt	ND	4.6	4.8	5.00	93	97	4.1
Chromium	ND	4.9	4.9	5.00	98	98	0.0

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$\text{RPD} = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

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http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR CA T22 CPT11 APPD XI

Matrix: S WorkOrder: 0207234

EPA Method: CA T22 CPT11 APP Extraction: CA T22 CPT11 BatchID: 2989 Spiked Sample ID: N/A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	4	N/A	N/A	N/A	100	101	0.381	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

PROJ NO	PROJECT NAME
17646/Inv	Rolls Royce Test Facility
LP NO / P.O. NO.:	SAMPLERS: (Signature/Number) Tom Burkhart

McCampbell Analytical

STD 5 DAY TAT

DATE MM DD YY	SAMPLE ID TIME HH MM SS	SAMPLE ID	NO OF CONTAINERS	ANALYSIS: TPH3 TPHd+mo (BOIL)* w/Silica gel	TPH3 TPHd+mo w/Silica gel (6015)	TPHg (8015)	VOCs (8260)	Title 22 metals (6010 7000)**	O/G and Lead	REMARKS
7/17/02	900	KB-23-0.0	1	X	X	X	X	X	X	
	940	KB-24-0.0	1	X	X	X	X	X	X	
	945	KB-24-2.0	1	X	X	X	X	X	X	
	950	KB-24-GW ***	8	X	X	X	X	X	X	
	1020	KB-25-0.0	1	X	X	X	X	X	X	
	1025	KB-25-2.0	1	X	X	X	X	X	X	
	1030	KB-25-GW ***	8	X	X	X	X	X	X	
	1055	KB-13-0.0	1	X	X	X	X	X	X	
	1100	KB-13-2.0	1	X	X	X	X	X	X	
	1105	KB-13-GW ***	8	X	X	X	X	X	X	* please Filter prior to Analyses
	1115	KB-113-GW ***	8	X	X	X	X			
	1155	KB-14-0.0	1	X	X	X	X	X	X	** Lab to Filter and Acidify
	1210	KB-14-GW ***	8	X	X	X	X	X	X	metals Samples prior to Analyses
	1230	KB-15-0.0	1	X	X	X	X	X	X	
	1240	KB-15-GW ***	8	X	X	X	X	X	X	*** All VOAs Are unpreserved
	1145	KB-16-0.0	1	X	X	X	X	X	X	EXCEPT FOR Trip BLANK
	1150	KB-18-0.0	1	X	X	X	X	X	X	
		Trip Blank	1			X				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Remarks

FAX RESULTS TO: STEVE WALLER 925 484 5838

SEND EDD TO: CCOSTELLO@KLEINFELDER.COM

Send Results To

KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
(510) 484-1700

M-60 White - Sampler Canary - Return Copy To Shipper Pink - Lab Copy

McCampbell Analytical Inc.
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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #1764/INV; Rolls Royce Test Facility	Date Sampled: 07/18/02
		Date Received: 07/18/02
	Client Contact: Steve Walker	Date Reported: 07/24/02
	Client P.O.:	Date Completed: 07/24/02

July 24, 2002

Dear Steve:

Enclosed are:

1). the results of 1 samples from your **#1764/INV; Rolls Royce Test Facility project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

AUG 1 2 REC'D

McCampbell Analytical Inc.

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http://www.mccampbell.com E-mail: main@mccampbell.com

Kleinfelder Inc.	Client Project ID: #1764/INV; Rolls Royce Test Facility	Date Sampled: 07/18/02
7133 Koll Center Pkwy, #100		Date Received: 07/18/02
Pleasanton, CA 94566	Client Contact: Steve Walker	Date Extracted: 07/22/02
	Client P.O.:	Date Analyzed: 07/22/02

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B   Analytical methods: SW8015Cm   Work Order: 0207250

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	KB-26-GW	W	ND	1	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

*water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, wipe samples in ug/wipe, and TCLP extracts in ug/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Kleinfelder Inc. 7133 Koll Center Pkwy, #100 Pleasanton, CA 94566	Client Project ID: #1764/INV; Rolls Royce Test Facility	Date Sampled: 07/18/02
		Date Received: 07/18/02
	Client Contact: Steve Walker	Date Extracted: 07/21/02
	Client P.O.:	Date Analyzed: 07/21/02

Volatiles Organics by P&T and GC/MS (Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0207250

Lab ID	0207250-001B
Client ID	KB-26-GW
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Benzene	ND	1.0	0.5
Bromobenzene	ND	1.0	0.5	Bromochloromethane	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	2-Butanone (MEK)	4.1	1.0	1.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Ethylbenzene	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	5.0	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	1.0	4-Isopropyl toluene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Naphthalene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

Surrogate Recoveries (%)

%SS1:	99.2	%SS2:	98.7
%SS3:	103		

Comments:

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in ug/kg, wipe samples in ug/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0207250

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 3028 Spiked Sample ID: 0207250-001A

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	94	95.4	1.45	106	106	0.339	80	120
MTBE	ND	10	103	113	9.03	97.7	94.3	3.56	80	120
Benzene	ND	10	105	102	2.47	114	106	7.04	80	120
Toluene	ND	10	110	107	2.40	113	109	3.91	80	120
Ethylbenzene	ND	10	107	103	3.52	118	111	6.18	80	120
Xylenes	ND	30	103	103	0	113	113	0	80	120
%SS:	104	100	107	105	1.08	103	101	1.59	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

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http://www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0207250

EPA Method: SW8260B Extraction: SW5030B BatchID: 3025 Spiked Sample ID: 0207246-005C

Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	1.273	10	89.7	84.8	4.91	99.5	104	4.58	70	130
Benzene	ND	10	110	107	2.83	102	103	0.748	70	130
Chlorobenzene	ND	10	119	117	2.24	107	108	1.04	70	130
1,1-Dichloroethene	ND	10	85.8	82.1	4.38	79.7	78.3	1.86	70	130
Toluene	ND	10	116	114	2.20	105	105	0.763	70	130
Trichloroethene	ND	10	76.8	74.4	3.20	71.9	72.2	0.389	70	130
%SS:	106	100	105	104	1.77	101	101	0.0552	70	130
%SS:	99.4	100	88.6	85.9	3.07	97.2	92.8	4.62	70	130
%SS:	103	100	102	101	1.15	101	101	0.394	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

KLEINFELDER 020 1250

PROJ NO	PROJECT NAME
17646/INV	ROLLS ROYCE TEST FACILITY
LP NO P.O. NO.)	SAMPLERS: (Signature/Number) Jeffrey D. Sala / 4842

DATE MM DD YY	SAMPLE I.D. TIME HR MM SS	SAMPLE I.D	NO OF CONTAINERS	ANALYSIS TPHG (8015) VOCs (8260)	REMARKS
7/18/02	1400	KB-26-GW	4	X X	VOAs ARE UNPRESERVED

MCCAMPBELL ANALYTICAL

STD 5 DAY TAT

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Jeffrey D. Sala	7/18/02 1616	J. Walker
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
J. Walker	7/18/02 1747	Melissa Valles

Remarks

FAX RESULTS TO: STEVE WALKER
(925) 484-5838

SEND EDD TO:
CCOSTELLO@KLEINFELDER.COM

Send Results To

KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
PLEASANTON, CA 94566
(510) 484-1700
925

M-60 White - Sample Canary - Return Copy Pink - Shipper

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0207250

Client:
Kleinfelder Inc.
7133 Koll Center Pkwy, #100
Pleasanton, CA 94566

TEL: (925) 484-1700
FAX: (484) 583-5838
ProjectNo: #1764/INV; Rolls
PO:

18-Jul-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					8021B/8015	SW8260B					
0207250-001	KB-26-GW	Water	7/18/02 2:00:00 PM		A	B					

Comments:

	Date/Time		Date/Time
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

KLEINFELDER

PROJ. NO	PROJECT NAME
1764/1MV	ROLLS ROYCE TEST FACILITY
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) Jeffrey D. Sala / 4842

DATE MM DD YY	SAMPLE I.D. TIME HH:MM:SS	SAMPLE I.D	NO. OF CON-TAINERS	ANALYSIS: TPHG (8015)	VOCs (8260)	REMARKS
7/18/02	1400	KB-26-GW	4	X	X	VOAs ARE UNPRESERVED

MCCAMPBELL ANALYTICAL

STD 5 DAY TAT

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Jeffrey D. Sala	7/18/02 1616	J. Walker
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
J. Walker	7/19/02 1747	Melissa Valles

Remarks

FAX RESULTS TO: STEVE WALKER
(925) 484-5838

SEND EDD TO:

CCOSTELLO@KLEINFELDER.COM

Send Results To

KLEINFELDER
7133 KOLL CENTER PARKWAY
SUITE 100
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(~~510~~) 484-1700
925

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