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Alameda County Environmental Health

Site Investigation Report for the Eastern Portion of AOC #2 and AOCs #3 through #9
ACEH Case #RO0002952 and
Geotracker Global ID #SL0600101555
Hanson Aggregates Radum Facility
3000 Busch Road
Pleasanton, Alameda County, California

October 26, 2007 001-09567-02

Prepared for Hanson Aggregates Northern California 3000 Busch Road Pleasanton, California 94566

> Prepared by LFR Inc. 1900 Powell Street, 12<sup>th</sup> Floor Emeryville, California 94608



October 26, 2007

Mr. Jerry Wickham Alameda County Health Care Services Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Subject: Site Investigation Report for the Eastern Portion of AOC #2 and AOCs #3

through #9, ACEH Case #RO0002952 and Geotracker Global

ID #SL0600101555, Hanson Aggregates Radum Facility, 3000 Busch Road

Pleasanton, Alameda County, California

Dear Mr. Wickham:

The enclosed "Site Investigation Report for the Eastern Portion of AOC #2 and AOCs #3 through #9, ACEH Case #RO0002952 and Geotracker Global ID#SL0600101555, Hanson Aggregates Radum Facility, 3000 Busch Road Pleasanton, Alameda County, California" ("the SI Report") was prepared by LFR Inc. (LFR) on behalf of Hanson Aggregates Northern California ("Hanson") for the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California ("the Site"). This report presents the findings of additional subsurface investigations conducted during July 2007 by LFR to further characterize the extent of contamination in specific areas of concern (AOCs) at the Site. The scope of work for the investigations conducted was described in a work plan that was submitted to Alameda County Environmental Health (ACEH) on May 16, 2007, and was approved by ACEH on June 22, 2007.

The investigations completed during July 2007 included advancing temporary soil borings to collect depth-discrete soil samples and grab groundwater samples in AOCs #2, #3, #7, and #8, and shallow sediment samples and a composite surface-water sample from the storm-water retention pond in AOC #6. In addition, four existing groundwater monitoring wells were located, purged, and sampled. This report includes an overview of environmental conditions, a summary of previous investigations conducted by LFR and other consultants, and a description of the field investigations completed during July 2007, and presents and discusses the results of the investigations.

As required, this report will be submitted electronically via the Alameda County Environmental Cleanup Oversight Program FTP website, and via the Regional Water Quality Control Board's Geotracker electronic submittal system.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report are true and correct to the best of my knowledge. If you have any questions or comments concerning this SI Report, please call me at (925) 426-4170 or Katrin Schliewen of LFR at (510) 652-4500.

Site Investigation Report for the Eastern Portion of AOC #2 and AOCs #3 through #9, ACEH Case #RO0002952 and Geotracker Global ID#SL0600101555, Hanson Aggregates Radum Facility, 3000 Busch Road Pleasanton, Alameda County, California October 26, 2007
Page 2 of 2

Sincerely,

Lee W. Cover

**Environmental Manager** 

Hanson Aggregates Northern California

Lee W. an

Attachment



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## **CERTIFICATIONS**

LFR Inc. has prepared this Site Investigation Report on behalf of Hanson Aggregates Northern California in a manner consistent with the level of care and skill ordinarily exercised by professional geologists and environmental scientists. This report was prepared under the technical direction of the undersigned California Professional Geologist.



fat fall.

October 26, 2007

Katrin M. Schliewen, P.G.

Date

Senior Hydrogeologist

California Professional Geologist No. 7808

PL

October 26, 2007

Ron Goloubow Senior Associate Geologist Date

## **EXECUTIVE SUMMARY**

This Site Investigation Report presents the findings of the additional investigations conducted at the Hanson Aggregates Radum Facility ("the Site") during July 2007. The purpose of the investigations was to further characterize the extent of affected soil and groundwater in areas of concern (AOCs) #2, #4, #6, #7, and #8. The environmental investigations were conducted according to the scope of work described in the May 16, 2007 "Work Plan for Additional Site Characterization at the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California," which was submitted to Alameda County Environmental Health (ACEH) and subsequently approved by ACEH on June 22, 2007, with certain modifications. Additional investigations are currently being conducted at AOC #1 (the former hot mix asphalt plant; ACEH Case Number RO0002941) under a separate scope of work, and the results of that investigation will be submitted to ACEH under separate cover on November 30, 2007.

The July 2007 investigations consisted of advancing a total of 16 temporary soil borings to depths ranging from approximately from 10 to 70 feet below ground surface. The purposes of the soil borings were to collect soil samples for lithologic logging and to collect depth-discrete soil samples and grab groundwater samples for laboratory analyses. Shallow sediment and surface-water samples were collected from the storm water retention pond for laboratory analyses. In addition, samples were collected from four existing groundwater monitoring wells for laboratory analyses. All analytical results were compared to the Environmental Screening Levels (ESLs) for soil or water beneath commercial/industrial land use areas published by the Regional Water Quality Control Board. The investigation and analytical results are presented and discussed in this report.

The analytical results of the soil and groundwater samples collected during the recent investigations have substantiated that the primary compounds of concern in soil and groundwater at the Site are total petroleum hydrocarbons (TPH) as diesel (TPHd) and TPH as motor oil (TPHmo). With a few exceptions, no other organic compounds were detected in soil and water samples collected, including TPH as gasoline (TPHg); volatile organic compounds (VOCs); benzene, toluene, ethylbenzene, and total xylenes (BTEX); fuel oxygenates; lead scavengers; semivolatile organic compounds (SVOCs); pesticides; and polychlorinated biphenyls (PCBs).

VOCs were detected in one grab groundwater sample at concentrations below the ESLs. The metals arsenic, cobalt, and chromium were detected in several samples at concentrations that exceeded the ESLs; however, these concentrations are within ranges published for naturally occurring metals detected in soils in the San Francisco Bay Area.

Results from these investigations, evaluated in conjunction with results from previous investigations, indicate that AOCs #2, #6, and #7 have been sufficiently characterized and that no additional investigations are warranted for these areas. Additional

subsurface investigations may be required to confirm an elevated TPHmo concentration detected in a grab groundwater sample collected from one soil boring at AOC #3. However, soil and grab groundwater samples collected from nearby sample locations (at AOC #3) indicate that this area has not been significantly affected by petroleum hydrocarbons.

LFR Inc. (LFR) does recommend that additional subsurface investigations be conducted at AOC #8 (SS-123 area), to further characterize the lateral extent of petroleum-affected groundwater to the south in the SS-123 area. Previous consultants have concluded that groundwater in this area may be perched; this has not been confirmed. LFR also recommends re-sampling existing groundwater monitoring well 3S/1E 10D8, located north of Lake I, to confirm the SVOC and dissolved mercury concentrations detected in the groundwater sample collected from this well.

## 1.0 INTRODUCTION

This Site Investigation Report presents the results and findings of additional subsurface investigations conducted by LFR Inc. (LFR) on behalf of Hanson Aggregates Northern California ("Hanson") to confirm and further assess the extent of affected soil and groundwater in areas previously identified as areas of concern (AOCs) at the Hanson Aggregates Radum Facility, located at 3000 Busch Road, Pleasanton, California ("the Site"; Figure 1). To facilitate the investigation of environmental conditions at the Site, LFR has subdivided the approximately 1,000-acre Site into nine AOC, as illustrated on Figure 2. The scope of work for the investigations conducted at the Site was described in the "Work Plan for Additional Site Characterization at the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California," submitted to Alameda County Environmental Health (ACEH) on May 16, 2007 ("the Work Plan"). The Work Plan was approved by ACEH on June 22, 2007, with modifications to the scope of work including advancing additional soil borings, collecting additional samples, and conducting additional analyses. ACEH is the regulatory agency overseeing the environmental characterization of the Site under ACEH case number #RO0002952 (Geotracker Global ID #SL0600101555).

In accordance with the scope of work in the Work Plan and as approved by ACEH, LFR conducted investigations that included collecting soil, sediment, surface-water, and groundwater samples at locations in the eastern portion of AOC #2 and in AOCs #3, #6, #7, and #8 (Figure 2). As described further below, no additional investigations were necessary in the western portion of AOC #2 and at AOCs #4, #5, and #9, and the report of the investigations planned to be conducted in AOC #1 (the former hot mix asphalt plant area) will be completed under a separate scope of work. In addition, in anticipation of a property transfer from Hanson to Legacy Partners ("Legacy"), LFR collected groundwater samples from existing groundwater monitoring wells owned by Alameda County Flood Control and Water Conservation District Zone 7 ("Zone 7") and located on the Site. Results for samples collected from existing groundwater monitoring wells are also presented in this report.

This report summarizes field activities performed at the Site during July 12 through 25, 2007, and presents and discusses results from these field activities. This report is organized as follows.

- Section 2.0 presents a description of the Site, the site history and potential environmental impacts, a summary of previous environmental investigations conducted at the Site, and an overview of regulatory oversight to date.
- Section 3.0 describes the methodology of the investigations conducted.
- Section 4.0 presents the results of the environmental investigations conducted to confirm or further characterize the extent of contamination previously identified in various AOCs of the Site.

- Section 5.0 describes the methodology to sample existing deep groundwater monitoring wells and presents the results of the well sampling.
- Section 6.0 presents the conclusions and recommendations developed based on the results of the environmental investigations and well sampling.
- Section 7.0 defines LFR's professional limitations.
- Section 8.0 provides a reference list of primary documents related to environmental investigations conducted at the Site to date.

# 2.0 SITE HISTORY OF POTENTIAL ENVIRONMENTAL IMPACTS AND PREVIOUS INVESTIGATIONS

# 2.1 Site Description and History

The Site is located at 3000 Busch Road, Pleasanton, California, and consists of approximately 1,050 acres located partly within the city limits of Pleasanton and partly within an unincorporated area of Alameda County (Figures 1 and 2). Approximately two-thirds of the Site consist of large ponds or lakes, namely Lake I, Lake H, and Cope Pond, created during historical aggregate mining operations (Figure 2). The remaining approximately 320 acres of the Site (generally the southern third) consist of developable land. As described in the Phase I Environmental Site Assessment (ESA) by ENV America Inc. (ENV 2006a), several buildings remain on the Site, including Hanson offices, a minimally used heavy equipment maintenance shop and two warehouses, an idle truck maintenance shop currently occupied and used by the City of Pleasanton garbage company, and several smaller structures including temporary trailers and a lube shed associated with the heavy equipment maintenance shop. Structures previously associated with the historical mining and aggregate product manufacturing, including the former hot mix asphalt and concrete batch plants, have been removed from the Site. Partial structures, including concrete foundations and miscellaneous debris, remain within the former hot mix asphalt plant area in the southwestern corner of the Site (AOC #1; Figure 2).

As described in ENV's Phase I ESA report, mining of sand and gravel in the Livermore-Amador Valley began prior to 1900. Mining operations for aggregate resources at the Site were begun in 1938 by Kaiser Sand and Gravel. Reportedly, as sections of the property were mined out, the former mining pits were used for storage and/or as disposal ponds for water (from dewatering of new pits) and fine-grained sediments (silt and sand) washed out of the aggregate material. In addition, some mining pits were likely backfilled with debris and mine waste, as is evident from debris encountered during drilling. Hanson purchased the property in 1991 and continued mining operations until 2001. Mining was discontinued at that time due to lack of available aggregate materials.

Within the former mining operations areas (e.g., the former hot mix asphalt and concrete batch plants), several former underground storage tanks (USTs) were used to store fuel products, including gasoline, diesel, or used or new motor oil. As described below, historical mining and aggregate processing operations at the Site (in particular in the former hot mix asphalt plant area) have resulted in localized petroleum hydrocarbon-affected soil and groundwater beneath the Site.

# 2.2 Regional and Site Geology and Hydrogeology

### 2.2.1 Regional Geology and Hydrogeology

The regional geology and hydrogeology summarized in this section are based on information provided in the most recent Zone 7 Annual Report for the Groundwater Management Program (Zone 7 2007). The Hanson Radum property is located in the Livermore-Amador Valley, an east-west trending valley surrounded by north-south trending faults and hills that are part of the Diablo Range. The Site lies within the Main Basin of the Livermore-Amador Valley Groundwater Basin and, more specifically, within the Amador Sub-Basin (Zone 7 2007).

The regional geology consists primarily of alluvial deposits (fan, stream, and lake) that range in thickness from a few feet at the margins to almost 800 feet in the west-central portions of the valley (Zone 7 2007). The alluvial deposits consist primarily of gravels and sands and are underlain by the Livermore Formation, which consists of relatively less permeable clayey gravels and sands, and silts and clays. Two major aquifer zones have been identified: the "Upper Aquifer Zone" and the "Lower Aquifer Zone." The Upper Aquifer Zone is generally unconfined and consists of unconsolidated coarse-grained alluvial sediments (primarily sandy gravel and sandy clayey gravel) encountered beneath surficial clays and between approximately 20 to 40 feet below ground surface (bgs) and 80 to 150 feet bgs. Permeable sediments encountered beneath the Upper Aquifer Zone and the underlying clay aquitard are grouped into the Lower Aquifer Zone, which is semi-confined to confined.

## 2.2.2 Site Geology and Hydrogeology

Subsurface investigations conducted by LFR during July 2007 have encountered unconsolidated sediments consisting predominantly of clays and silts with gravel and intervals of coarser-grained gravels and sands. Because of the historical activities at the Site, some areas may consist of native sediments while others may consist of fill material. The locations of the former aggregate mining pits are not well defined. In certain areas, including the SS-123 area (AOC #8), concrete or cement material was encountered during drilling (at approximately between 10 and 30 feet bgs), indicating that historical mining pits likely were located in this area and subsequently filled by debris from the former mining operations.

With the exception of the SS-123 area (AOC #8), groundwater beneath the Site has generally been encountered approximately between 45 and 65 feet bgs. During the July 2007 subsurface investigations summarized in this report, groundwater was encountered approximately between 65 and 70 feet in temporary soil borings located in AOCs #2, #3, and #7. During a previous investigation conducted in AOC #1 in November 2006, groundwater was encountered in temporary soil borings approximately between 45 and 55 feet bgs. The difference in depth to groundwater between the July 2007 and the November 2006 investigations may accurately define differences in the depth to groundwater in the different areas of the Site, or may reflect seasonal variations. During the July 2007 investigations, depth to groundwater also was measured in four existing groundwater monitoring wells to be approximately between 53 and 57 feet below the top of the well casing (TOC), which is equivalent to approximately 50 to 54 feet bgs assuming 3-foot well risers. However, these four monitoring wells have well screens deeper than 170 feet bgs and possibly are not monitoring the same shallow groundwater encountered in the temporary soil borings that were advanced to a maximum depth of 75 feet bgs.

In the SS-123 area, groundwater was encountered between 25 and 30 feet bgs during LFR's investigations in July 2007 and ENV's investigations conducted between February and May 2007. ENV has concluded that this represents a perched groundwater zone; however, the presence of a perched groundwater zone in this area has not been confirmed.

The local groundwater flow direction and gradient beneath the Site currently is not known. New shallow groundwater monitoring wells were installed in AOC #1 in October 2007. Water-level elevations measured at these new wells will be used to assess the local groundwater flow direction and gradient in the southwestern portion of the Site.

# 2.3 Summary of PECs/RECs and Previous Environmental Site Investigations

Several subsurface investigations have been conducted at the Site to date by various consultants, including Baseline Environmental Consulting ("Baseline"), ENV, Brown & Caldwell (B&C), and LFR. The investigations conducted by Baseline were conducted on behalf of Hanson during 1991 and 1995 and predominantly were associated with the removal of former USTs. ENV completed several investigations on behalf of Legacy during 2006 and 2007, including a Phase I ESA and a Phase II ESA, and additional subsurface sampling in randomly selected locations. These investigations were conducted as part of Legacy's due diligence work prior to entering into a purchase agreement with Hanson for the Site. B&C completed three investigations on behalf of Hanson during 2006 and 2007, including a Phase I ESA, a limited Phase II ESA, and a subsurface investigation to assess soil and groundwater quality near two former USTS removed from approximately north of the idle truck maintenance shop in 2003. Based on the results of the B&C subsurface investigations, regulatory closure for these two former USTs was granted in June 2007.

LFR conducted an additional Phase II subsurface investigation in the former hot mix asphalt plant area (AOC #1) in November 2006 on behalf of Hanson to confirm previous findings by ENV and to further characterize the extent of suspected petroleum hydrocarbon contamination. Based on the results of LFR's November 2006 investigation, Hanson reported to ACEH the presence of elevated concentrations of petroleum hydrocarbons in soil and groundwater beneath the former hot mix asphalt plant area. Because of the large number of individual investigations conducted at the Site by various consultants, ACEH requested that a single document be prepared presenting a summary of all potential or recognized environmental concerns (PECs or RECs) on a site-wide basis.

On May 16, 2007, LFR submitted the Work Plan, which included a summary of the history of the Site and a detailed summary of site-wide environmental conditions based on results from investigations conducted by LFR and other consultants (LFR 2007a). To facilitate the data review and to focus future proposed investigations at the Site, LFR defined the nine AOCs that contained one or more PECs or RECs. In order to identify a PEC or REC, LFR compared all available analytical results to the Environmental Screening Levels (ESLs) for commercial/industrial land use areas developed by the Regional Water Quality Control Board (RWQCB 2005). Concentrations were considered elevated, and a PEC or REC was identified, based on whether analytical results exceeded the ESLs. The nine AOCs are shown on Figure 2 and are described below.

- AOC #1 Former Hot Mix Asphalt Plant Area (investigation being conducted during October 2007 and results will be presented under separate cover)
- AOC #2 Idle Truck Maintenance Area
- AOC #3 Heavy Equipment Maintenance and Wash Rack Area, and PEC Identified by Temporary Soil Boring EB-35
- AOC #4 Former Concrete Batch Plant Area
- AOC #5 Former Mining Operations Area
- AOC #6 Storm-Water Retention Pond
- AOC #7 PEC Identified by Temporary Soil Boring SS-31
- AOC #8 PEC Identified by Temporary Soil Boring SS-123
- AOC #9 Vulcan Materials Company Storm-Water Runoff Area

The following sections present a brief overview of known site conditions in each of the AOCs based on the more detailed information presented in the Work Plan. Site maps were prepared for each individual AOC and were presented in the Work Plan. The individual site maps have been updated for this report to include results from the subsurface investigations completed recently by ENV (ENV 2007c) and by LFR (reported herein). Figures 3 through 7 present updated detailed maps of AOCs #2, #3, #6, #7, and #8, respectively. In agreement with ACEH and as described below,

PECs/RECs within AOC #1 have been further characterized under a separate scope of work and the results of that investigation will be presented under separate cover. As such, a site plan for AOC #1 and detailed site description and history are not included in this report.

#### 2.3.1 AOC #2: Idle Truck Maintenance Area

The former idle truck maintenance area is located in the west-central portion of the Site (AOC #2; Figures 2 and 3). The eastern portion of AOC #2 contains several structures, including the idle truck maintenance shop currently used by the Pleasanton Garbage Service Inc. and several trailers. Approximately seven former USTs have been removed from this AOC; these have been investigated and closed to the satisfaction of regulatory oversight agencies. An inactive 640-foot-deep water supply well owned by Zone 7, well 3E/1S 15F3, also known as well Kaiser #6, is located southwest of the idle truck maintenance shop and was sampled by ENV in February 2007 (sample name W-1; Figure 3).

The western portion of AOC #2 contains the idle truck maintenance yard and mostly undeveloped areas. Based on previous investigations, a PEC was identified near the northeastern corner of the maintenance yard during the Phase II ESA by ENV, based on the analytical results from soil samples collected from temporary soil boring EB-31. Former boring EB-31 was advanced by ENV reportedly because a former "waste pit" or disposal pond existed in this portion of the Site (ENV 2006b). Analytical results identified that the soil sample collected from approximately 10 feet bgs slightly exceeded the ESL for total petroleum hydrocarbons (TPH) as diesel (TPHd). Other soil samples collected from above and below the 10-foot interval did not exceed the ESLs.

LFR recommended that this PEC and data gap identified by the results from former soil boring EB-31 be further characterized laterally.

# 2.3.2 AOC #3: Heavy Equipment Maintenance and Wash Rack Area, and PEC Identified by Temporary Soil Boring EB-35

The heavy equipment maintenance area and soil boring EB-35 are located in the north-central portion of the Site (AOC #3; Figures 2 and 4). This area encompasses several existing buildings and/or structures that were identified as PECs or RECs in the Work Plan, such as a heavy equipment maintenance shop and two warehouses (no longer significantly in use), the lube shed associated with the maintenance shop, a truck wash rack, sump, and associated oil-water separator, and two aboveground waste oil tanks. In addition, one active transformer located approximately at the northwestern corner of the building housing the Hanson offices was identified. Former soil boring EB-35 was advanced in a vacant area approximately 2,000 feet northeast of the Hanson offices as part of ENV's random sampling program (ENV 2007a). Although elevated concentrations of TPH were detected in shallow soil samples collected in the vicinity of

former boring EB-35, no known or suspected historical activities were reported to have taken place in this portion of the Site.

Following a review of subsurface investigations conducted by B&C and ENV, LFR identified only two PECs in AOC #3. Two soil samples collected from approximately 2 and 2.5 feet bgs near the northeastern corner of the lube shed resulted in TPHd concentrations that exceeded the ESL. Also, the soil samples collected from approximately 2 feet bgs from former soil boring EB-35 contained TPHd and TPH as motor oil (TPHmo) at concentrations above the ESLs. In the Work Plan, LFR recommended that additional subsurface investigations be conducted to further characterize the lateral extent of petroleum hydrocarbons in shallow soil in the vicinity of former soil borings B-1 and EB-35.

#### 2.3.3 AOC #4: Former Concrete Batch Plant Area

The former concrete batch plant was located in the southwestern portion of the (AOC #4; Figure 2). The concrete batch plant was operated until 2004 when the majority of the equipment was removed. No structures remain from these operations, although four broken aboveground plastic tanks remain that likely contained plasticizers. One former diesel UST was removed in 1995, and confirmation sampling resulted in the receipt of a UST case closure letter from a regulatory agency (ACEH 1998). As discussed in the Work Plan, subsurface investigations conducted by ENV confirmed the former concrete batch plant operations did not significantly affect the subsurface and LFR did not identify any data gaps. Therefore, no additional subsurface investigations were proposed in the Work Plan.

## 2.3.4 AOC #5: Former Mining Operations Area

The former mining operations area was located in the central portion of the Site (AOC #5; Figure 2). Mining operations were conducted until 2004, when the majority of the equipment was removed. All that remains in this area are concrete slabs, large piles of broken concrete, and areas of bare earth. As discussed in the Work Plan, subsurface investigations conducted by ENV confirmed that the former mining operations area did not significantly affect the subsurface and LFR did not identify any data gaps. Therefore, no additional subsurface investigations were proposed in the Work Plan.

#### 2.3.5 AOC #6: Storm-Water Retention Pond

The storm-water retention pond is located along the western boundary of the Site on the northern side of Busch Road adjacent to the Kiewit property (AOC #6; Figures 2 and 5). According to Hanson, the source of the water to this pond is surface runoff water diverted from the Kiewit property, the Pleasanton Garbage Service Inc. operations, and the Hanson property. There are three large-diameter (approximately 12- to 20-inch-diameter) pipes visible that appear to discharge water from these properties into the

pond; one pipe is located near the southwestern corner of the pond and two pipes are located near the southeastern corner of the pond.

ENV reported that sediment and surface-water samples collected from this pond in 1992 contained detectable concentrations of petroleum hydrocarbons (ENV 2006a). Surface-water and sediment samples subsequently were collected from the storm-water retention pond by ENV and B&C in 2006. Analytical results from one of the sediment samples and from the one surface-water sample, both collected near the southeastern corner of the pond by B&C, contained TPHd and TPHmo concentrations that exceeded the ESLs. In the Work Plan, LFR recommended that additional shallow sediment and surface-water samples be collected to confirm these results.

#### 2.3.6 AOC #7: PEC Identified by Temporary Soil Boring SS-31

Temporary soil boring SS-31 was advanced by ENV approximately near the southeastern corner of Lake I (AOC #7; Figures 2 and 6), as part of its subsurface investigations conducted in randomly selected locations (ENV 2007a). LFR is not aware of any historical mining operations in this portion of the Site. The soil samples collected from approximately 2 and 40 feet bgs from former boring SS-31 contained TPHd and TPHmo concentrations that exceeded the ESLs. Based on these results, LFR recommended that four temporary soil borings be advanced in step-out locations to collect additional soil samples to characterize the lateral and vertical extent of petroleum hydrocarbon-affected soil in this area. Because the deepest soil sample collected contained elevated concentrations of TPH, in the Work Plan LFR also recommended the collection and analysis of grab groundwater samples in this area.

## 2.3.7 AOC #8: PEC Identified by Temporary Soil Boring SS-123

As part of its subsurface investigations conducted in randomly selected locations, ENV advanced temporary soil boring SS-123 in the area located between the Vulcan Materials Company (VMC) property and the former mining operations area (AOC #8; Figures 2 and 7; ENV 2007a). LFR is not aware of any historical mining operations that may have taken place in this portion of the Site. Analytical results for soil samples collected from former soil boring SS-123 in January 2007 indicated the presence of petroleum hydrocarbon-affected soil at depths of approximately 20 to 40 feet bgs. Based on these results, ENV advanced four additional temporary soil borings located approximately 25 feet to the north, east, south, and west of soil boring SS-123 in March 2007. Analytical results from soil and grab groundwater samples contained TPHd and TPHmo at concentrations that exceeded the ESLs in soil samples collected from approximately between 2 and 30 feet bgs, and in grab groundwater samples collected from approximately 30 feet bgs in each of the four soil borings.

Based on the results of the March 2007 investigation, ENV concluded that the groundwater encountered approximately between 25 to 30 feet bgs represented a perched groundwater interval (ENV 2007b), and that additional characterization was

necessary. ENV proposed to conduct a third investigation in May 2007, consisting of additional step-out temporary soil boring locations.

When LFR submitted the Work Plan to ACEH on May 16, 2007, the results of ENV's third investigation conducted during May 2007 in this area were not available. LFR did not make any recommendations for additional investigations in the Work Plan, pending the results of ENV's investigation. Subsequently, a draft summary report presenting the results from ENV's third investigation was made available to LFR on July 3, 2007, and LFR later obtained a copy of the final report dated June 2007 from the ACEH on-line document library (ENV 2007c).

According to ENV's June 2007 report, four temporary soil borings were advanced in locations stepping out approximately 125 feet to the east, south, west, and north of the original SS-123 location (Figure 5). Former soil borings SS-123(E) through SS-123(H) were advanced to depths of approximately 30 to 35 feet bgs. Elevated TPHd and TPHmo concentrations were detected in a depth-discrete soil sample collected from approximately 5 feet bgs in former soil boring SS-123(G) located farthest west. Elevated TPHd concentrations were detected in the soil samples collected from approximately 15 feet bgs from former soil borings SS-123(H), located to the north, and SS-123(E), located to the east. No other soil samples collected from the three soil borings advanced by ENV at locations to the west, north, and east contained elevated hydrocarbon concentrations. In addition, grab groundwater samples collected from former soil borings SS-123(E), SS-123(G), and SS-123(H) did not contain TPHd concentrations above the ESL, and TPHmo was not detected above the laboratory reporting limit. Based on these results, the lateral and vertical extents of hydrocarbon contamination have been sufficiently characterized to the west, north, and east of former boring SS-123.

Of the four step-out locations advanced by ENV, only the southernmost soil boring (SS-123(F)) contained elevated petroleum hydrocarbons in soil samples and in the grab groundwater sample. Soil samples collected from approximately 5, 10, 15, and 20 feet bgs contained TPHd concentrations that exceeded the ESL and the 5-foot soil sample contained TPHmo at a concentration that exceeded the ESL. The grab groundwater sample contained TPHd and TPHmo at concentrations that exceeded the ESL (Figure 5; ENV 2007c).

Based on ENV's draft results, LFR planned to advance four additional temporary soil borings in the vicinity of former soil boring SS-123 during the July 2007 site-wide investigations, to further assess the lateral extent of petroleum-affected soil and groundwater in this area. Three soil boring locations were identified as step-out locations from former soil boring SS-123(F). One soil boring location was selected to be approximately adjacent to the original soil boring SS-123, in order to collect continuous core samples and create a more detailed soil boring log (ENV collected soil samples at approximately every 10 feet), and to collect a grab groundwater sample (ENV did not collect a grab groundwater sample from former boring SS-123). LFR

planned to collect depth-discrete soil samples and grab groundwater samples from each soil boring.

## 2.3.8 AOC #9: Vulcan Materials Company Storm-Water Runoff Area

The VMC property is located adjacent to the Site and to the east and is an active aggregate mining and product facility. The VMC runoff area is located along the southeastern edge of the Site (AOC #9; Figure 2). According to the Phase II ESA report by ENV, previous reports indicated that surface-water runoff from the VMC property onto the Site has occurred in the past (ENV 2006b). Reportedly, a berm was installed between the VMC property and the Site to control surface-water runoff; the current condition of this berm could not be determined by LFR or Hanson.

ENV collected three shallow soil samples from the VMC storm-water runoff area during September 2006, approximately where surface-water runoff may have taken place. Analytical results showed that TPHd was slightly elevated in one of the soil samples; however, the soil samples collected approximately upgradient and downgradient from this soil sample did not contain significant TPHd or TPHmo concentrations. No data gaps were identified and LFR did not recommend any additional investigations for this area.

# 2.4 Regulatory Determinations

Based on its review of documentation and reports of environmental investigations conducted by various consultants on behalf of Hanson and Legacy, ACEH issued a letter to Hanson on March 16, 2007, requesting that a work plan be prepared to propose a scope of work for additional site-wide characterization investigations. ACEH requested that the work plan include:

- A detailed site history
- A description of current conditions and PECs or RECs
- An improved presentation of available analytical data
- Copies of relevant reports or documents not previously provided to ACEH, in particular regarding environmental investigations conducted at the neighboring Kiewit property and case closure letters from regulatory agencies for former USTs
- A scope of work for additional characterization investigations

LFR prepared and submitted the May 16, 2007 Work Plan to ACEH, addressing ACEH's requests. In the Work Plan, LFR included a summary of the various PECs and RECs on a site-wide basis, a comprehensive summary of all available analytical data, individual site maps presenting analytical data and site features and at appropriate scales, and a scope of work for additional characterization investigations (LFR 2007a). On June 20, 2007, a project planning meeting was held at the ACEH offices with

ACEH, Hanson, LFR, and Nuquest on behalf of Hanson, Legacy, and ENV, and AIG Environmental on behalf of Legacy, to discuss current site conditions, the Work Plan and proposed scope of work, and the anticipated property transfer for the majority of the Hanson property to Legacy. During this meeting, two areas were highlighted as being of primary environmental concern, namely the deep soil contamination in the northern portion of the former hot mix asphalt plant area and in the vicinity of former soil boring SS-123.

ACEH subsequently approved the Work Plan in a letter dated June 22, 2007, and provided technical comments consisting primarily of requests for advancing certain proposed soil borings deeper and conducting additional analyses on soil and/or groundwater samples collected from specific locations (ACEH 2007c). ACEH agreed with LFR that no additional investigations would be required in the western portion of AOC #2, and in AOCs #4, #5, and #9.

#### 2.4.1 Property Transfer and New Case Number

In anticipation of the property transfer between Hanson and Legacy, the Radum property has been divided into two primary parcels. Investigations and summary reports are now being conducted separately for the two primary areas of the Site.

It is LFR's understanding that Hanson has retained the portion of the property delineated by the Lot Line Adjustment, the approximately 15-acre area defined as Parcel 1, and the small, irregularly shaped area located south of the Kiewit property, and that the rest of the Site has been transferred to Legacy. In anticipation of the planned property transfer from Hanson to Legacy, Hanson requested that ACEH assign a new Spills, Leaks, Investigations, and Cleanups (SLIC) case number to the portion of the property transferred to Legacy (LFR 2007b). ACEH approved this request (ACEH 2007d), and currently there exist two SLIC case numbers for the Site, defined as follows:

ACEH SLIC case number RO0002941 and Geotracker Global ID SLT19719376 refer to the approximately 15-acre Parcel 1 and the small area south of the Kiewit property, including AOC #1 and the western portion AOC #2.

ACEH SLIC case number RO0002952 and Geotracker Global ID SL0600101555 refer to the rest of the Hanson Radum property, including the eastern portion of AOC #2 and AOCs #3 through #9.

## 2.4.2 Investigation and Reporting Schedule

In accordance with the Work Plan and ACEH technical comments outlined in its June 22, 2007 letter, LFR conducted subsurface investigations in the eastern portion of AOC #2, and in AOCs #3, #6, #7, and #8, during July 2007. The results on these

investigations are summarized and discussed in this report, which has been transmitted to ACEH on October 26, 2007.

The subsurface investigations proposed to be conducted in the former hot mix asphalt plant area (AOC #1) and in the irregularly shaped area south of the Kiewit property were completed during October 2007. As approved by ACEH via e-mail on October 9, 2007, LFR will submit a summary report presenting results from these investigations on November 30, 2007.

# 2.5 Investigation Objectives

The primary objective of the subsurface investigations proposed in the Work Plan is to further characterize the lateral and/or vertical extent of petroleum hydrocarbons in soil and/or groundwater in AOCs #2, #3, #6, #7, and #8. Below is a summary of the investigations proposed to fill the data gaps.

- AOC #2 Idle truck maintenance area: advance three temporary soil borings near former boring EB-31 to characterize the lateral extent of TPHd in soil and to assess groundwater quality in this area of the Site.
- AOC #3 Heavy equipment maintenance and wash rack area, and former soil boring EB-35 area: advance one temporary soil boring near former boring B-1 to characterize the lateral and vertical extent of TPHd in soil and to evaluate whether groundwater has been affected in this area, and advance four temporary soil borings in the vicinity of former boring EB-35 to assess the lateral extent of TPHd and TPHmo in soil.
- AOC #6 Storm-water retention pond: collect sediment and surface-water samples from the pond to confirm previous TPHd and TPHmo results.
- AOC #7 Former soil boring SS-31 area: advance four temporary soil borings near former boring SS-31 to characterize the lateral and vertical extent of TPHd and TPHmo in soil and to assess groundwater quality in this area of the Site.
- AOC #8 Former soil boring SS-123 area: advance four temporary soil borings in the vicinity of former boring SS-123 to assess the lateral and vertical extent of TPHd and TPHmo in soil and groundwater in this area of the Site.

## 3.0 INVESTIGATION METHODOLOGY

## 3.1 Pre-Field Activities

#### 3.1.1 Permitting

LFR applied for and received the appropriate soil boring drilling permit from Zone 7. Based on the drilling locations, no other permits were required for the proposed activities. A copy of the approved soil boring permit is included in Appendix A.

## 3.1.2 Subsurface Utility Clearance

LFR notified Underground Service Alert (USA) to identify any public underground utilities located in the vicinity of the proposed soil boring locations. LFR did not receive any utility alerts from USA. LFR also subcontracted a private underground utility locator to clear all proposed soil boring locations using geophysical and pipe/cable location methods. All proposed soil boring locations were cleared satisfactorily. Due to the extreme hardness of the surface soil and the presence of gravel in the upper 5 feet of soil, the temporary soil borings could not be started using hand-auger techniques as was proposed in the Work Plan as an additional precaution against encountering utilities during drilling.

## 3.1.3 Health and Safety Plan

A Health and Safety Plan (HSP) previously prepared by LFR for the subsurface investigations conducted at the former hot mix asphalt plant area in November 2006 was revised to address health and safety concerns specific to the planned field activities.

Health and safety tailgate meetings were conducted before beginning fieldwork each day, and fieldwork was monitored according to the HSP to ensure that appropriate health and safety procedures were followed during the field investigations. In addition, in accordance with standard Hanson Radum facility operations, LFR and LFR's subcontractors attended on-site health and safety training conducted by a Hanson representative.

# 3.2 Temporary Soil Borings

A total of 16 temporary soil borings was advanced to depths ranging approximately from 10 to 70 feet bgs in AOCs #2, #3, #7, and #8, as described below.

#### 3.2.2 Soil Boring Advancement and Soil and Grab Groundwater Sampling Procedures

# **Drilling and Lithologic Logging**

LFR subcontracted HEW Drilling Co., Inc., of Palo Alto, California, a state-certified drilling subcontractor, to advance the 16 temporary soil borings using hollow-stem auger (HSA) drilling technology using a CME-75 drill rig and an 8-inch-diameter HSA (although a larger drill rig and HSA were used to advance several soil borings in the SS-123 area, as explained in Section 3.2.3). The drilling and soil and grab groundwater sampling activities were completed during July 16 through 24, 2007. During drilling, continuous soil cores were collected for lithologic evaluation and field screening. LFR collected depth-discrete soil samples for laboratory analyses from intervals where field screening and field observations indicated the possible presence of petroleum hydrocarbons or other contaminants in the soil. Where no indication of contamination was observed in the soil cores, LFR collected depth-discrete soil samples at approximately 5-foot intervals, until groundwater was first encountered or to a target depth, depending on the soil boring location.

Field boring logs were prepared for each soil boring location, and lithologic and field screening results were recorded on the field boring logs. Field boring logs were prepared by an LFR field geologist based on visual lithologic soil logging procedures and the Unified Soil Classification System (ASTM D2488-00). All boring logs were reviewed, edited, and signed by a California Professional Geologist.

All downhole drilling and sampling equipment was appropriately cleaned with high-pressure hot water (steam cleaned) before use at each drilling location. After soil and groundwater samples were collected, each borehole was abandoned by sealing it with a mixture of cement and bentonite ("grout") from the bottom up to the ground surface using a tremie pipe if groundwater was present, or directly from the ground surface if no groundwater was present. Waste soil generated during drilling was placed on plastic tarps on the ground surface near each temporary soil boring and will be disposed of as necessary during future land development activities.

#### Soil Sampling

LFR attempted to collect continuous soil cores using California split-spoon-type samples driven in approximately 18-inch intervals. This was conducted variably, depending on soil conditions, in soil borings EB-35(A) through EB-35(D), B-1(A), EB-31(A), EB-31(C), and SS-31(A). The coarse-grained nature of the soils (typically gravels) made this sampling method difficult to nearly impossible in certain locations. Therefore, LFR switched to collecting 5-foot continuous cores during HSA drilling where necessary. The continuous coring resulted in somewhat poorer soil core recovery in certain soil borings. Where the California split-spoon sampler was used, soil cores were collected in brass tube liners. Where continuous coring methods were

used, soil samples selected for laboratory analyses were transferred from the core barrel to brass tube liners.

Depth-discrete soil samples were selected for laboratory analyses based on the potential presence of contaminants, in particular petroleum hydrocarbons, as apparent from field screening using a photoionization detector (PID) or from visual/olfactory evaluation of the soil cores. All soil samples selected to be submitted for laboratory analyses were properly labeled with the boring identification number and depth interval, the time and date of collection, and the initials of the sampler. Soil samples were stored in icechilled coolers that were submitted to the analytical laboratory under strict chain-of-custody protocols on a daily basis.

#### **Grab Groundwater Sampling**

Ten of the 16 temporary soil borings were advanced until groundwater was first encountered to collect grab groundwater samples. After drilling was completed, a temporary well casing consisting of a polyvinyl chloride (PVC) well screen and casing was placed through the HSA and the HSA was raised approximately 3 to 5 feet to allow groundwater to enter the borehole. Grab groundwater samples were collected using clean, disposable bailers lowered into the PVC casing and gently pouring the groundwater from the bailer into the appropriate clean, laboratory-supplied sample containers. The sample containers were properly labeled with the boring identification number, the time and date of collection, and the initials of the sampler. Groundwater samples were stored in ice-chilled coolers along with the soil samples, and were submitted to the analytical laboratory under strict chain-of-custody protocols on a daily basis.

Grab groundwater samples were successfully collected from each location where grab groundwater samples were proposed to be collected, although most soil borings needed to be advanced deeper than anticipated. Based on previous investigations conducted at the former hot mix asphalt plant, groundwater was anticipated to be encountered between approximately 50 and 55 feet bgs. During the drilling conducted site-wide in July 2007, however, borings were advanced to approximately 70 feet bgs in order to encounter sufficient groundwater for sampling, with the exception of the area near former soil boring SS-123 where groundwater previously had been encountered at approximately 30 feet bgs.

#### 3.2.3 Temporary Soil Boring Locations and Target Depths

The locations of temporary soil borings advanced by LFR in AOCs #2, #3, #7, and #8 during July 16 though 24, 2007 are shown on Figures 3, 4, 6, and 7, respectively. Sample locations and target depths are described below.

#### Idle Truck Maintenance Area (AOC #2)

LFR advanced at total of three temporary soil borings in the idle truck maintenance area (AOC #2), in the vicinity of former soil boring EB-31, which was located approximately northeast of the idle truck maintenance yard. Soil borings EB-31(A) through EB-31(C) were advanced to further characterize the lateral and vertical extent of elevated TPHd and TPHmo concentrations detected in a soil sample previously collected from approximately 10 feet bgs in former boring EB-31. The three new soil borings were located approximately 15 feet southeast, southwest, and north, respectively, of former boring EB-31 (Figure 3). Soil borings EB-31(A) and EB-31(C) were advanced to approximately 20 feet bgs, and soil boring EB-31(B) was advanced to approximately 70 feet bgs until groundwater was first encountered. In each soil boring, depth-discrete soil samples were collected for laboratory analyses from approximately every 5 feet to approximately 20 feet bgs and analyzed for TPHd and TPHmo. A grab groundwater sample was collected from boring EB-31(B) and analyzed for TPHd; TPHmo; TPH as gasoline (TPHg); volatile organic compounds (VOCs); benzene, toluene, ethylbenzene, and total xylenes (BTEX); fuel oxygenates; and lead scavengers (Table 1).

# Heavy Equipment Maintenance and Wash Rack Area, and PEC Identified by Former Soil Boring EB-35 (AOC #3)

Five temporary soil borings were advanced in AOC #3 (Figure 4). One soil boring (B-1(A)) was located approximately 18 feet north of former soil boring B-1 near the lube shed, and was advanced to approximately 70 feet bgs to collect a grab groundwater sample.

Four soil borings (EB-35(A) though EB-35(D)) were advanced surrounding former soil boring EB-35, to further characterize the lateral and vertical extent of elevated TPHd concentrations detected in soil samples collected from approximately 2 feet bgs in these two areas (Figure 4). These four borings were located approximately 25 feet to the east, south, west, and north of former boring EB-35 and were advanced to approximately 10 or 11 feet bgs.

Continuous soil cores were collected from each temporary soil boring for lithologic logging, and depth-discrete soil samples were collected for laboratory analyses from approximately 5 and 10 feet bgs in each soil boring and were analyzed for TPHd, TPHmo, TPHg, polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), and metals concentrations. An additional soil sample was collected from approximately 35 feet bgs (based on field screening results) at boring B-1(A) and analyzed for TPHd and TPHmo. A grab groundwater sample was collected from boring B-1(A) and was analyzed for TPHd, TPHmo, TPHg, VOCs, BTEX, fuel oxygenates, and lead scavengers (Table 1).

#### **PEC Identified by Former Soil Boring SS-31 (AOC #7)**

AOC #7 was defined by elevated petroleum hydrocarbon concentrations detected in soil samples collected from former soil boring SS-31 (Figure 6). LFR advanced four temporary soil borings approximately surrounding former soil boring SS-31 to further characterize the lateral and vertical extent of elevated TPHd and TPHmo concentrations previously detected in soil samples from approximately 2 and 40 feet bgs. Soil borings SS-31(A) through SS-31(D) were located approximately 75 feet to the west, north, east, and south, respectively (Figure 6). Each soil boring was advanced to approximately 70 feet bgs to collect grab groundwater samples. Depth-discrete samples were collected for laboratory analyses from the four soil borings from approximately every 5 feet from ground surface to approximately 30 feet bgs, and then approximately every 10 feet bgs until groundwater was encountered. An additional depth-discrete soil sample was collected from the 52- to 53-foot interval in boring SS-31(A) based on the field screening results. All soil samples were analyzed for TPHd, TPHmo, TPHg, BTEX compounds, fuel oxygenates, and lead scavengers. In addition, the 5- and 10foot samples were analyzed for pesticides, PCBs, SVOCs, and metals concentrations (Table 1).

Grab groundwater samples were collected from each of the four soil borings and analyzed for TPHd, TPHmo, TPHg, VOCs, BTEX, fuel oxygenates, and lead scavengers (Table 1).

#### **PEC Identified by Former Soil Boring SS-123 (AOC #8)**

AOC #8 was defined by elevated petroleum hydrocarbon concentrations detected in soil samples collected from the initial former soil boring SS-123 (Figure 7). As described in Section 2.3.7, ENV subsequently advanced a total of eight soil borings in step-out locations from former boring SS-123 to investigate the nature and extent of potential petroleum hydrocarbon contamination in this area. Based on ENV's results, LFR proposed to advance three soil borings in step-out locations from former soil boring SS-123(F) and one temporary soil boring adjacent to the original former boring SS-123.

Soil boring SS-123(AA) was advanced approximately adjacent to former boring SS-123, to approximately 20 feet bgs to collect a continuous soil core and a grab groundwater sample, neither of which was collected from the original soil boring SS-123. In addition, based on ENV's conclusion that a perched zone of groundwater exists in the SS-123 area, LFR attempted to confirm the presence of perched groundwater. Soil boring SS-123(AA) was drilled using a relatively powerful HSA drilling rig (CME-95 instead of standard CME-75) and large-diameter HSA (16-inch diameter instead of standard 8-inch). LFR intended to advance the 16-inch-diameter HSA into a relatively less permeable interval, possibly beneath the perched groundwater zone, and then continue drilling deeper using the 8-inch-diameter HSA advanced inside the 16-inch-diameter HSA, which would serve as a temporary casing sealing the perched groundwater from deeper groundwater zones. However, the

suspected perched groundwater could not be adequately sealed from entering the borehole using the 16-inch-diameter HSAs; therefore, the presence of a perched groundwater zone could not be confirmed using this drilling method.

Soil borings SS-123(F1), SS-123(F2), and SS-123(F3) were advanced as step-out locations to former soil boring SS-123(F), and were located approximately 75 feet to the east, south, and west, respectively. Soil borings SS-123(F1) through SS-123(F3) were advanced to approximately 30 feet bgs. Continuous soil cores were collected and depth-discrete soil samples were collected from approximately every 5 feet until a grab groundwater sample could be collected from the first encountered groundwater.

# 3.3 Surface Sediment and Water Samples from the Storm-Water Retention Pond

LFR collected a total of four surface-sediment samples and one composite surface-water sample from the storm-water retention pond (AOC #6; Figure 5). LFR subcontracted NRC Environmental Services (NRC) of Alameda, California, to assist in collecting the samples from within the storm-water retention pond on July 13, 2007. NRC provided a boat that was lowered into the pond and from which two of the four sediment samples were collected from beneath the water using a potable dredge to collect the composite surface-water sample. The sediment collected using the dredge was placed in clean, laboratory-provided sample containers. The two sediment samples collected from the wet sediment above the surface water were collected by pushing clean sample containers into the sediment. The four sediment samples were collected approximately in line and approximately at 50-foot intervals between the southeastern corner of the pond and approximately the center of the pond. The southeasternmost sediment sample was collected approximately below the outflow of two large diameter pipes that appear to direct surface-water runoff from the Hanson and Kiewit properties into the pond.

The composite surface-water sample was collected by compositing surface water from approximately the southeastern and southwestern corners of the pond, approximately beneath the outflow of the two large-diameter pipes leading into the pond in the southeastern corner and one large-diameter pipe leading into the pond in the southwestern corner of the pond. The surface-water samples were collected directly into clean, laboratory-provided sample containers. All samples were placed in ice-chilled coolers, which were submitted to the analytical laboratory under strict chain-of-custody protocols on a daily basis.

The four storm-water sediment samples were analyzed for TPHd, TPHmo, and metal concentrations while the composite surface-water sample was analyzed for TPHd, TPHmo, TPHg, VOCs, BTEX, fuel oxygenates, lead scavenger compounds, and metals concentrations (Table 1).

# 3.4 Laboratory Analyses

All soil and water samples selected for laboratory analyses were submitted to Curtis & Tompkins, Ltd. (C&T), a California-certified analytical laboratory located in Berkeley, California. All samples were analyzed for TPHd and TPHmo by U.S. Environmental Protection Agency (EPA) Method 8015 (after undergoing silica gel cleanup). Selected samples were analyzed variably for the following analyses: TPHg by EPA Method 8015 (soil and sediment samples) or EPA Method 8260 (groundwater and surface-water samples); VOCs, BTEX, fuel oxygenates, and lead scavengers by EPA Method 8260; pesticides by EPA Method 8081; PCBs by EPA Method 8082; SVOCs by EPA Method 8270; and metals (CAM 17 by EPA Method 6010). Table 1 presents a sample matrix that summarizes the laboratory analyses conducted from individual soil, groundwater, sediment, and surface-water samples.

## 3.5 Field Documentation

Field activities were documented using the appropriate forms for HSP tailgate meetings, field boring logs, sample labels, and chain-of-custody forms. Forms will be kept on file at LFR and will be available upon request.

# 3.6 Land Survey of Sample Locations

After all samples were collected, LFR subcontracted a licensed land surveyor to survey the location of individual temporary soil borings and the approximate location of the sediment and surface-water samples collected from the storm-water retention pond. All sample locations from the July 2007 field investigations presented on Figures 3 through 7 are based on the land survey results.

## 4.0 RESULTS OF ADDITIONAL SITE-WIDE CHARACTERIZATION

Results from investigations conducted in AOCs #2, #4, #7, and #8 and in the storm water retention pond (AOC #6) during July 2007 are summarized and discussed below. All analytical results are summarized in Tables 2 through 14, based on laboratory-certified analytical reports included in Appendix B. Soil boring logs for temporary soil borings are included in Appendix C. Analytical results for TPHd, TPHmo, and TPHg are presented on Figures 3 through 7.

All analytical results were compared to RWQCB ESLs for shallow or deep soils beneath commercial/industrial land use areas (RWQCB 2005). The ESLs are included in the summary tables. Compounds detected at concentrations that exceed the ESLs are highlighted in the tables and on the figures.

In general, the primary compounds detected in soil samples are TPHd and TPHmo. No other organic compounds, including TPHg, VOCs, BTEX, fuel oxygenates, lead

scavengers, SVOCs, pesticides, PCBs, or SVOCs, were detected in any soil or sediment samples. Although several metals were detected, only arsenic, cobalt, and chromium were detected at concentrations that exceeded the ESLs. One or more of these three metals were detected in shallow samples collected from AOCs #3, #6, and #7. However, the detected concentrations of these three metals are well within the reported ranges for naturally occurring metals for the San Francisco Bay Area, based on the report entitled "Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory (LBNL)," prepared by LBNL in June 2002. Based on the LBNL study, natural background ranges for arsenic, cobalt, and chromium in San Francisco Bay Area soils can be defined as follows (arithmetic mean plus or minus the standard deviation):

• Arsenic: 0.1 to 10.9 milligrams per kilogram (mg/Kg)

Cobalt: 9.2 to 18.8 mg/KgChromium: 32 to 84 mg/Kg

Similarly, the primary compounds detected in grab groundwater samples are TPHd and TPHmo. With one exception, TPHg, BTEX, fuel oxygenates, and lead scavengers were not detected above laboratory reporting limits; toluene was detected in one grab groundwater sample at a concentration below the ESL. Several VOCs were detected in a grab groundwater sample collected from AOC #8, but none of these concentrations exceeded the ESLs. Several metals were detected in the surface-water sample, but no concentrations exceeded the ESLs.

# 4.1 Idle Truck Maintenance Area (AOC #2)

Predominantly fine-grained sediments (silts and clays) were encountered in soil borings EB-31(A), EB-31(B), and EB-31(C) (Figure 3). In soil boring EB-31(B), fine-grained sediments were encountered to approximately 62 feet bgs, below which relatively coarse-grained sediments (clayey gravel with sand) were encountered to the total depth of the soil boring (approximately 70 feet bgs). No evidence of petroleum-affected soil or groundwater was identified during drilling of these three soil borings.

TPHd and TPHmo were detected in several soil samples at concentrations significantly below their respective ESLs (100 mg/Kg for TPHd and 1,000 mg/Kg for TPHmo; Table 2A and Figure 3). All concentrations of TPHd and TPHmo were qualified by the laboratory, indicating that the hydrocarbons detected in the soil samples did not resemble TPHd or TPHmo; as noted by the laboratory, hydrocarbons detected generally were heavier than TPHd and lighter than TPHmo. Heavier hydrocarbons such as TPHmo typically consist of longer carbon chain hydrocarbons (C10 to C24) while lighter hydrocarbons such as TPHd typically consist of shorter chain hydrocarbons (C24 to C36). The laboratory qualifiers indicate that the detected concentrations do not resemble standards for TPHd and TPHmo.

At soil boring EB-31(B), groundwater was first encountered between 65 and 70 feet bgs. After drilling was completed, the depth to groundwater was measured at approximately 64.8 feet bgs. Continuous soil cores were collected from soil boring EB-31(B) from the ground surface to approximately 21.5 feet bgs, after which sediments were logged from auger cuttings because recovery was poor and continuous soil sampling was not required (the primary objective for drilling deeper than approximately 20 feet bgs at this location was to collect a grab groundwater sample). Petroleum hydrocarbons, VOCs including BTEX, fuel oxygenates, and lead scavenger compounds were not detected above the laboratory reporting limits in samples collected in this area (Tables 8A, 8B, and 9).

Based on the results from soil borings EB-31(A), EB-31(B), and EB-31(C), this area has been sufficiently characterized laterally and vertically. The potential petroleum hydrocarbon contamination identified in the 10-foot samples from former soil boring EB-31 appears to be limited to a localized area and depth. Groundwater does not appear to have been affected by petroleum hydrocarbons detected in soil in this area.

# 4.2 Heavy Equipment Maintenance and Wash Rack Area, and PEC Identified by Former Soil Boring EB-35 (AOC #3)

#### 4.2.1 Wash Rack and Lube Shed Area

Soil boring B-1(A) was advanced in the vicinity of the lube shed to a total depth of 70 feet bgs (Figure 4). Predominantly fine-grained sediments (clays) were encountered from approximately 3 to 34 feet bgs. Predominantly coarser-grained sediments (sands and gravels) were encountered between 34 feet bgs and the total depth of the boring (70 feet bgs). No evidence of petroleum-affected soil was identified during drilling, with the exception of a slightly elevated PID reading at approximately 35 feet bgs. Only TPHmo was detected in the depth-discrete soil samples collected from boring B-1(A), in the sample collected from approximately 9.5 feet bgs at a low concentration just above the laboratory reporting limit. Several metals were detected above laboratory reporting limits, but none were detected at concentrations above the ESLs.

A grab groundwater sample was collected from soil boring B-1(A) at approximately 68 feet bgs. TPHmo was detected in this sample at a concentration of 1,100 micrograms per liter ( $\mu$ g/L), slightly above the ESL of 1,000  $\mu$ g/L for TPHmo (Table 8A and Figure 4). The laboratory qualified the TPHmo result, stating that "hydrocarbons heavier than TPHmo contributed to the result." TPHd was detected at a concentration of 76  $\mu$ g/L, and that result was also qualified by the laboratory; the TPHd detection was below the ESL for TPHd (100  $\mu$ g/L; Table 8A). The only VOC detected in the grab groundwater sample was acetone, which was detected at a concentration of 10  $\mu$ g/L. This concentration is well below the ESL of 1,500  $\mu$ g/L for acetone (Table 9). Because acetone is a common laboratory contaminant and has not been detected in any other samples collected, this low acetone concentration may be associated with laboratory contamination. No other compounds were detected above

laboratory reporting limits for the grab groundwater sample collected from soil boring B-1(A) (Tables 8A, 8B, and 9).

## 4.2.2 PEC Identified by Former Soil Boring EB-35

In the four soil borings (EB35(A), EB35(B), EB35(C), and (EB35(D)) advanced in the vicinity of former boring EB-35, primarily gravels and/or sands were encountered from ground surface to approximately 3 to 5 feet bgs (Figure 4). Sediments below approximately 3 to 5 feet bgs were comprised of fine-grained material (silts and clays) to the total depth of the soil borings. In each soil boring except for EB-35(C), a black petroleum product was observed between approximately 2.5 and 4 feet bgs. The product was observed to be dry, similar to asphalt concrete, with a trace of oil (see soil boring log in Appendix C). It is assumed that this petroleum product is the same material that was sampled at soil boring EB-35 from approximately 2 feet bgs, which resulted in TPHd and TPHmo concentrations that exceeded the ESLs (Figure 4). TPHd and TPHmo were detected in the soil samples collected from approximately 5 feet bgs in borings EB-35(A), EB-35(B), and EB-35(D) (Table 2A and Figure 4). TPHd concentrations ranged from 38 to 160 mg/Kg, and TPHmo concentrations ranged from 540 to 3,600 mg/Kg. Only the 5-foot sample from boring EB-35(B) contained TPHd and TPHmo concentrations that exceeded the ESLs. All results were qualified by the laboratory as containing heavier hydrocarbons than the standards for TPHd and TPHmo.

TPHd and TPHmo were not detected above laboratory reporting limits in any of the soil samples collected from approximately 10 feet bgs, with the exception TPHmo detected at a low qualified concentration of 5.2 mg/Kg in a sample collected from boring EB-35(A) (Table 2A and Figure 4).

A grab groundwater sample was collected from former boring EB-35 by ENV in January 2007 from approximately 68 feet bgs. TPHd, TPHmo, and TPHg were not detected above laboratory reporting limits (Figure 4).

In general, analytical results for soil samples collected from soil borings EB-35(A) through EB-35(D) indicate that the lateral extent of petroleum-affected soil may extend farther south than the location of soil boring EB-35(B). However, the petroleum-affected soil appears to be limited to shallow soil (approximately less than 4 or 5 feet bgs), the petroleum product appears to be dry and not mobile, and groundwater quality has not been affected. LFR does not recommend that any additional subsurface investigations be conducted in this area. It is LFR's understanding that this property will be developed for commercial/industrial land use by Legacy. LFR recommends that, if affected soil is identified during the redevelopment of this area, the material should be removed as necessary.

# 4.3 PEC Identified by Former Soil Boring SS-31 (AOC #7)

Predominantly fine-drained sediments (clays and some silts) were encountered from ground surface to approximately 41 to 43 feet bgs in soil borings SS 31(C) and SS-31(D), to approximately 50 feet bgs in boring SS-31(B), and to approximately 65 feet bgs in boring SS-31(A) (Figure 6). Relatively coarser-grained sediments (gravels and some sands) were encountered below the fine-grained sediment to the total depth of each soil boring. Groundwater was encountered at approximately 66 feet bgs at each soil boring location. Visual observations identified the potential presence of petroleum hydrocarbons in soil samples from only soil boring SS-31(A), between approximately 52 and 53 feet bgs; however, the PID did not register a response. At soil boring SS-31(C), elevated PID readings were noted during field screening of the soil cores collected from the ground surface to approximately 35 feet bgs; however, no visual or olfactory evidence of petroleum-affected soil was noted. It is possible that the PID instrument was responding to organic matter that may have been present in the sediment or that the PID was malfunctioning.

TPHd and/or TPHmo were detected at low concentrations (approximately less than 35 mg/Kg for TPHd and less than 160 mg/Kg for TPHmo) in one soil sample collected from boring SS-31(A) (from approximately 2 feet bgs), in all soil samples collected from boring SS-31(B), and in three samples collected from borings SS-31(C) and SS-31(D) (Table 2A and Figure 6). Except for metals, no other compounds analyzed were detected above laboratory reporting limits for the soil samples collected from these soil borings (Tables 2A, 2B, 3, 4, 5, and 6). Several metals were detected above laboratory reporting limits; however, only three metals (arsenic, cobalt, and chromium) were detected at concentrations that exceeded the ESLs for these metals (Table 7). As noted in Section 4.0, the detected concentrations are well within the ranges of natural background concentrations for soils in the San Francisco Bay area.

The grab groundwater samples collected from each of the four soil borings did not contain any compounds above their laboratory reporting limits (Tables 8A, 8B, and 9).

Based on the field investigation and analytical results, the lateral and vertical extent of potential petroleum contamination previously identified in two samples collected from former soil boring SS-31 appears limited in extent to the immediate vicinity of former boring SS-31. It should be noted that the two soil samples from former boring SS-31, in which elevated TPHd and TPHmo concentrations were detected from approximately 2 and 40 feet bgs, resulted in nearly identical TPHd and TPHmo concentrations, and that the three soil samples collected from approximately 10, 20, and 30 feet bgs did not contain TPHd or TPHmo above laboratory reporting limits other than low concentrations of TPHd and TPHmo detected in the 10-foot sample. These results raise the question as to whether a field or a laboratory error could explain the presence of TPHd and TPHmo in the sample collected from 40 feet bgs. In any event, the analytical results from the 37 depth-discrete soil samples and the four grab groundwater samples collected from soil borings SS-312(A) through SS-31(D) confirm that, if there is any potential hydrocarbon contamination in this area, it is limited in extent both

vertically and laterally. LFR does not recommend any additional subsurface investigations for the vicinity of former soil boring SS-31.

# 4.4 PEC Identified by Former Soil Boring SS-123 (AOC #8)

### 4.4.1 Temporary Soil Boring SS-123(AA)

Soil boring SS-123(AA) was located approximately adjacent to the original soil boring SS-123 (Figure 7) and was advanced to approximately 20 feet bgs. Continuous soil cores were collected although soil recovery was less than 50% from ground surface to approximately 10 feet bgs. LFR encountered predominantly fine-grained sediment (clay or silt) from just below ground surface to the total depth of the soil boring. Petroleum hydrocarbon material described as hard black asphalt concrete (asphalt bound with gravel and sand, pieces up to 2-1/2 inches in diameter, no odor) was observed at approximately 7.5, 12.5, and 15.5 feet bgs. In addition, concrete material was encountered between approximately 14.5 and 15 feet bgs. Groundwater was encountered at approximately 16 feet bgs during drilling and was measured to be at approximately 15.6 feet bgs after the total depth of 20 feet bgs was reached.

Depth-discrete soil samples were collected from soil boring SS-123(AA) for TPHd and TPHmo analyses from approximately 5.5, 7.5, 10.5, and 15.5 feet bgs, and from 18 feet bgs, which was below the apparent water table. A grab groundwater sample also was collected from this soil boring for TPHd and TPHmo analyses. TPHd and TPHmo were detected in each of the soil samples, but only the soil sample collected from approximately 18 feet bgs (below the water table) contained TPHd and TPHmo at concentrations above the ESLs (Table 2A and Figure 7). The grab groundwater sample collected from this soil boring also contained TPHd and TPHmo at concentrations that exceeded the ESLs for TPHd and TPHmo (Table 8A).

#### 4.4.2 Temporary Soil Borings SS-123(F1) through SS-123(F3)

Soil borings SS-123(F1), SS-123(F2), and SS-123(F3) were located approximately 75 feet east, south, and west, respectively, of former boring SS-123(F) (Figure 7). These three soil borings were advanced to approximately 30 feet bgs. As noted on the soil boring logs in Appendix C, significant intervals of concrete or cement materials were encountered in each of the three soil borings. Depth-discrete soil samples and a grab groundwater sample were collected from each soil boring and analyzed for TPHd and TPHmo (Table 1). The grab groundwater samples also were analyzed for TPHg, VOCs, BTEX, fuel oxygenates, and lead scavengers (Table 1).

In soil boring SS-123(F1), concrete or cement material was encountered (and mostly ground to powder during drilling) between approximately 9 and 15 feet bgs and again between approximately 18 and 25 feet bgs. Fine-grained sediments were encountered from ground surface to approximately 9 feet bgs (gravelly silt) and from approximately 25 feet bgs to the total depth of the boring (clay). No evidence of petroleum

hydrocarbon was observed during field screening. Depth to groundwater was measured to be approximately 21 feet bgs after drilling was completed. Depth-discrete soil samples for laboratory analyses were collected from approximately 5 and 15 feet bgs, and a grab groundwater sample was collected.

In soil boring SS-123(F2), silty gravel and gravelly silt were encountered from ground surface to approximately 15 feet bgs, and mostly concrete or cement material was encountered from approximately 16.5 feet bgs to the total depth of the boring, resulting in relatively poor sample recovery (less than 25%). No evidence of petroleum hydrocarbon was observed during field screening. Depth to groundwater was measured to be approximately 26 feet bgs after drilling was completed. Depth-discrete soil samples were collected from 6, 10, 17, and 21 feet bgs, and a grab groundwater sample was collected.

In soil boring SS-123(F3), predominantly fine-grained sediments were encountered (clays or silts). Concrete or cement material was identified between approximately 7 and 10 feet bgs, a significantly shorter interval than was encountered in nearby soil borings SS-123(F1) and SS-123(F2). The depth to groundwater was measured at approximately 27 feet bgs after drilling was completed. Depth-discrete soil samples were collected from approximately 5, 10, 15, 20, and 25 feet bgs, and a grab groundwater sample was collected.

With one exception, TPHd and TPHmo were detected above laboratory reporting limits in all soil and grab groundwater samples collected from soil borings SS-123(F1) through SS-123(F3) (Table 2A). These compounds were not detected in the soil sample collected from approximately 20 feet bgs from boring SS-123(F3). For soil samples, all reported TPHd and TPHmo concentrations were below the ESLs (Table 2A).

For grab groundwater samples, the reported TPHd and TPHmo concentrations exceeded the ESLs only in the grab groundwater sample collected from boring SS-123(F2) (Table 8A). Other than TPHd and TPHmo, several VOCs were detected at low concentrations ranging between the detection limit to 4.6  $\mu$ g/L in the grab groundwater sample collected from boring SS-123(F2) (Tables 8A and 9). None of these VOC concentrations exceeded the ESLs, and no other compounds were detected. The VOCs detected in the grab groundwater sample from boring SS-123(F2) are associated with the elevated TPHd and TPHmo concentrations detected in this sample.

### 4.4.3 Investigation Results for the SS-123 Area

A review of analytical results for the SS-123 area shows that the lateral extent of petroleum-affected soil has been adequately characterized to the north, east, south, and west (Figure 7). The lateral extent of petroleum-affected groundwater has been adequately characterized to the west, north, and east, but not to the south. The analytical results for the grab groundwater sample collected from the southernmost soil boring, SS-123(F2), indicate the presence of TPHd and TPHmo concentrations that exceed the ESLs. Additional step-out grab groundwater sample locations will be

necessary to further characterize the extent of petroleum-affected groundwater to the south of former boring SS-123(F2).

The potential source of the petroleum hydrocarbon in groundwater in this area has not been characterized. ENV has concluded that the source of contamination in this area is a historical mining pit that was filled in with debris and sediment. In addition, ENV also concluded that the groundwater encountered in the SS-123 area is perched on relatively less permeable fill material or sediment. All investigations conducted in the SS-123 area have shown that groundwater is encountered at significantly shallower depths than in other areas of the Site. However, the presence of a perched groundwater interval has not been confirmed by investigations conducted to date.

# **4.5** Surface Sediment and Water Samples from the Storm-Water Retention Pond (AOC #6)

Analytical results for the four sediment samples (SED1 through SED4) collected from the storm-water retention pond are summarized in Tables 2A and 7, and sample locations are presented on Figure 5. TPHd and TPHmo were detected in each sediment sample, with the exception of the southeasternmost sediment sample (SED-1) in which TPHd was not detected above laboratory reporting limits (Figure 5). Only sample SED-3 contained a TPHd concentration that was equivalent to the ESL and therefore was highlighted in Table 2A as exceeding the ESL. Several metals were detected above the laboratory reporting limits, but, with only one exception, detected concentrations were below the ESL. Cobalt was detected in sample SED-4 at a concentration of 10 mg/Kg, which is equivalent to the ESL. As noted in Section 4.0, the concentration of cobalt detected in this sample is within the range of natural background concentrations for soil in the San Francisco Bay Area.

Analytical results for the composite surface-water sample (PW-2) are presented in Tables 8A, 8B, 9, and 10 and Figure 5. No petroleum hydrocarbons or VOCs were detected above laboratory reporting limits in the surface-water sample. Four metals were detected, but all at concentrations significantly less than the ESLs.

Based on the analytical results for the sediment and surface-water samples collected by LFR, there does not appear to be a significant impact to the storm-water retention pond from storm-water runoff from nearby properties. The elevated TPHd and TPHmo concentrations detected in the sediment and the pond water samples previously collected by B&C (Figure 5; B&C 2006b) were not confirmed. LFR does not recommend any additional investigations for the storm-water retention pond area.

## 5.0 SAMPLING OF EXISTING GROUNDWATER MONITORING WELLS

## 5.1 Wells Sampled and Sampling Methodology

### 5.1.1 Well TW-5

In accordance with the scope of work described in the Work Plan, LFR searched for missing groundwater monitoring well 3S/1E 14D1 (also known as well TW-5), reportedly installed approximately near the southwestern corner of Cope Pond. The date of installation and well construction information has not been included in the records kept by Zone 7. Zone 7 records indicate that the well could not be located in 1984 and was located in 2003. Verbally, Zone 7 stated that the well could not be found. According to Zone 7 records, this well is reported to be 103 feet deep.

LFR successfully located well TW-5 on July 12, 2007, during a site reconnaissance effort. The well was found to be in good condition with a 2-inch-diameter PVC well casing inside a 4-inch-square metal above-grade protective well box. LFR measured the depth to groundwater in the well to be 53.2 feet TOC and the total depth of the well to be approximately 110.7 feet TOC. On July 12, 2007, LFR purged and sampled well TW-5 using a disposable bailer. Purge water was disposed of on the ground surface in the vicinity of the well. Water-quality parameters were monitored during well purging and were recording on a field sheet (Appendix D). Purging was completed once water-quality parameters stabilized and at least three casing volumes were removed. Approximately 28 gallons of groundwater were purged from the well, equivalent to approximately three casing volumes. Groundwater samples collected from the well using the disposable bailer were poured into clean, laboratory-provided sample containers, properly labeled, and placed into an ice-chilled cooler for transport to the laboratory under chain-of-custody protocol. The samples were analyzed by C&T for TPHd, TPHmo, TPHg, VOCs, BTEX, fuel oxygenates, and lead scavengers.

### 5.1.2 Additional Monitoring Wells Sampled

On July 12, 2007, Hanson received a request from ENV (on behalf of Legacy) to collect samples from four existing wells (monitoring or water supply) located on or near the Hanson property. LFR, Hanson, and ENV together identified four existing groundwater monitoring wells to be sampled, namely: 3S/1E 14D1, 3S/1E 10D8, 3S/1E 10K2, and 3S/1E 10N3 (Figure 8). ENV requested that samples from each well be analyzed for TPHd, TPHmo, TPHg, VOCs, BTEX, fuel oxygenates, lead scavengers, SVOCs, and dissolved metals. One of the wells requested to be sampled was TW-5 (3S/1E 14D1), which LFR had already sampled. Fortunately, LFR had collected sufficient sample volume to request the laboratory to analyze the samples for the additional compounds requested by ENV.

At Hanson's request, LFR coordinated with Zone 7 to identify and gain access to the remaining three groundwater monitoring wells proposed to be sampled. LFR

subcontracted Blaine Tech Environmental Services ("Blaine Tech"), an environmental field services consultant from San Jose, California, to purge the three remaining groundwater monitoring wells on July 25, 2007. A summary of known or estimated well details is provided in the table below.

Well ID	Approximate Location	Well Diameter (inches)	Total Depth (Zone 7 Records) (feet bgs)	Well Screen Interval (Zone 7 Records) (feet bgs)	Depth to Groundwater on July 12 or July 25, 2007 (feet TOC)
3S/1E 14D1 (TW-5)	Southwestern corner of Cope Pond	2	103	Unknown	53.20
3S/1E 10D8	North of Lake	2	215	190 – 210	56.32
3S/1E 10K2	Northwestern corner of Cope Pond	4	590.6	Unknown	55.50
3S/1E 10N3	South of Lake	2	195	170 - 190	56.80

Blaine Tech used a 2-inch-diameter Rediflo electric submersible pump in the 2-inch-diameter wells and a 2-inch-diameter Grunfos pump in the 4-inch-diameter well to purge approximately three casing volumes from each of the three wells. Water-quality parameters were monitored and recorded on field sheets (Appendix D). Purging was completed once water-quality parameters stabilized and at least three casing volumes were removed. Purge water was temporarily contained in a plastic tank (estimated to be 500 gallons) on a trailer and was them disposed of in Cope Pond, in agreement with Zone 7 and Hanson. Approximately 75 gallons of purge water were removed from well 3S/1E 10D8, 1,043 gallons from well 3S/1E 10K2, and 64.5 gallons from well 3S/1E 10N3. After purging was completed at each well, groundwater samples were collected using a single-use disposal bailer. At ENV's request, a blind duplicate groundwater sample was collected from well 3S/1E 10K2. The blind duplicate sample was labeled "MW-10." As an additional quality assurance/quality control (QA/QC) measure, a trip blank sample was collected and analyzed for selected VOCs.

Groundwater samples were poured into clean, laboratory-provided sample containers, properly labeled, and placed into an ice-chilled cooler for transport to the laboratory under chain-of-custody protocol. The samples were analyzed by C&T for TPHd, TPHmo, TPHg, VOCs, BTEX, fuel oxygenates and lead scavengers, SVOCs, and dissolved metals.

## 5.2 Analytical Results

Analytical results for groundwater samples collected from the four existing groundwater monitoring wells are summarized in Tables 11A, 11B, 12, 13, and 14. Analytical results for TPHd, TPHmo, and TPHg also are presented on Figure 8.

Petroleum hydrocarbon-related compounds were not detected above laboratory reporting limits in any of the groundwater monitoring wells sampled, including TPHd, TPHmo, TPHg, BTEX, fuel oxygenates, and lead scavengers. In addition, VOCs were not detected in any of the groundwater samples, although the VOC bromomethane was detected at an estimated concentration below the laboratory reporting limit in the trip blank sample (Table 12). Because this compound was not detected in any of the groundwater samples, no QA/QC problems were noted. The groundwater sample collected from well 3S/1E 10D8 did contain a low concentration of one SVOC; bis(2-ethylhexyl)phthalate was detected at a concentration of 25  $\mu$ g/L. This concentration exceeded the ESL for this compound (4 µg/L). Bis(2-ethylhexyl)phthalate is a plasticizer commonly associated with PVC and other plastics. This compound also is a known laboratory contaminant. The laboratory did not identify any evidence of laboratory contamination from this compound during the period that these groundwater samples were analyzed. The well casing for well 3S/1E 10D8 is made of PVC. It is possible that the presence of this SVOC may be due to the well casing and/or to the plastic tubing or fittings used to purge the well. Because no known use of plasticizers is associated with facilities and manufacturing processes historically present at the Site, it is assumed that this detection is not associated with historical industries. LFR recommends the re-sampling of this well to confirm this SVOC detection.

A few dissolved metals were detected above laboratory report limits, although, with only one exception, none of the detections exceeded the ESLs (Table 14). Dissolved mercury was detected in the groundwater sample collected from well 3S/1E 10D8 at a concentration of 0.63  $\mu$ g/L, which is above the ESL for mercury (0.012  $\mu$ g/L). No potential source of mercury has been identified, and mercury was not detected in any of the other groundwater samples. LFR also recommends the re-sampling of this well to confirm this detection.

## 6.0 SUMMARY AND RECOMMENDATIONS

## 6.1 Summary

The investigations conducted during July 2007 consisted of advancing a total of 16 temporary soil borings in AOCs #2, #4, #7, and #8, to depths ranging from approximately 10 to 70 feet bgs. The soil borings were advanced to collect continuous cores for lithologic logging and depth discrete soil samples and grab groundwater samples for laboratory analyses. Shallow sediment and surface-water samples were collected from the storm-water retention pond in AOC #6 for laboratory analyses. In

addition, four existing groundwater monitoring wells were sampled for laboratory analyses. All investigation and analytical results were presented and discussed in this report.

The primary compounds of concern at the Site are TPHd and TPHmo. No other organic compounds were detected, including TPHg, VOCs, BTEX, fuel oxygenates, lead scavengers, SVOCs, pesticides, PCBs, and SVOCs, in any soil samples collected from soil borings or samples collected from the storm-water retention pond. With one exception, none of these compounds were detected in any grab groundwater samples collected from the soil borings. Several VOCs were detected in one grab groundwater sample collected from the SS-123 area; however, concentrations were low and well below the ESLs.

Several metals were detected in soil or water samples, although only arsenic, cobalt, and chromium were detected in soil samples at concentrations that exceeded the ESLs. However, the metals concentrations that exceeded the ESLs are well within the concentration ranges published for naturally occurring metals detected in soils in the San Francisco Bay Area (LBNL 2002).

Groundwater samples collected from the existing monitoring wells did not contain organic compounds detected at concentrations above laboratory limits, with the exception of one SVOC. The compound bis(2-thylhexyl)phthalate was detected in one groundwater well sample at a concentration that exceeded the ESL. This compound is a known laboratory contaminant and a plasticizer commonly associated with PVC and other plastics. This same sample also contained dissolved mercury at a concentration greater than the ESL.

## 6.1 Recommendations

Results from investigations conducted by LFR during July 2007, evaluated in conjunction with results from previous investigations, indicate that AOCs #2, #6, and #7 have been sufficiently characterized. LFR does not recommend any additional investigations be conducted in these areas.

Additional subsurface investigations may be required in AOC #3 to confirm the analytical results for the grab groundwater sample collected from soil boring B-1(A) in which TPHmo was detected at a concentrations that exceeded the ESL. However, soil samples and a grab groundwater sample collected from less than 200 feet away from soil boring B-1(A) indicate that the petroleum hydrocarbon-affected soil (or groundwater) at this AOC is not a widespread problem.

LFR recommends that additional subsurface investigations be conducted in AOC #8 (SS-123 area) to further characterize the lateral extent of petroleum-affected groundwater south of soil boring SS-123(F2). Based on the results of the soil and groundwater samples collected in the SS-123 area, soil and groundwater quality has

been sufficiently characterized laterally to the west, north, and east. Previous consultants have concluded that groundwater in this area may be perched; the presence of a perched groundwater zone has not been confirmed.

To confirm the SVOC and dissolved mercury concentrations detected in the groundwater sample collected from existing monitoring well 3S/1E 10D8 located north of Lake I, LFR recommends re-sampling the well.

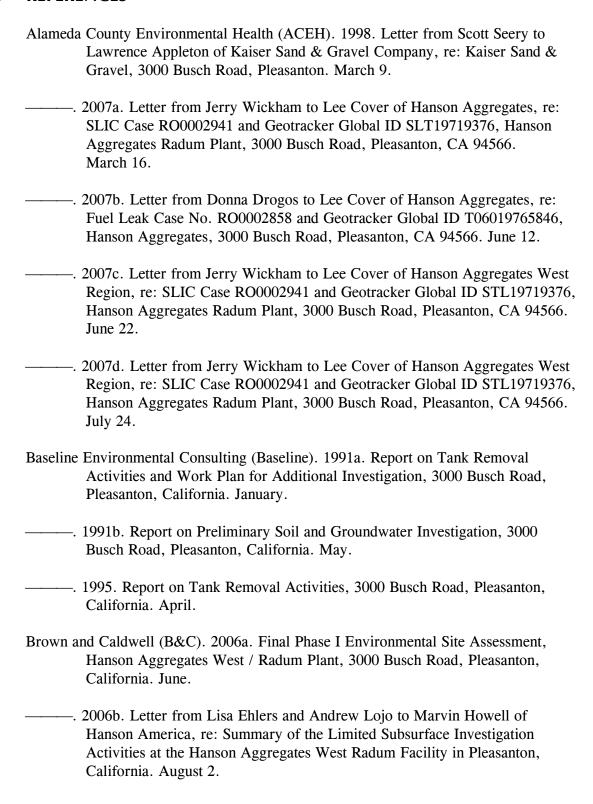
## 7.0 LIMITATIONS

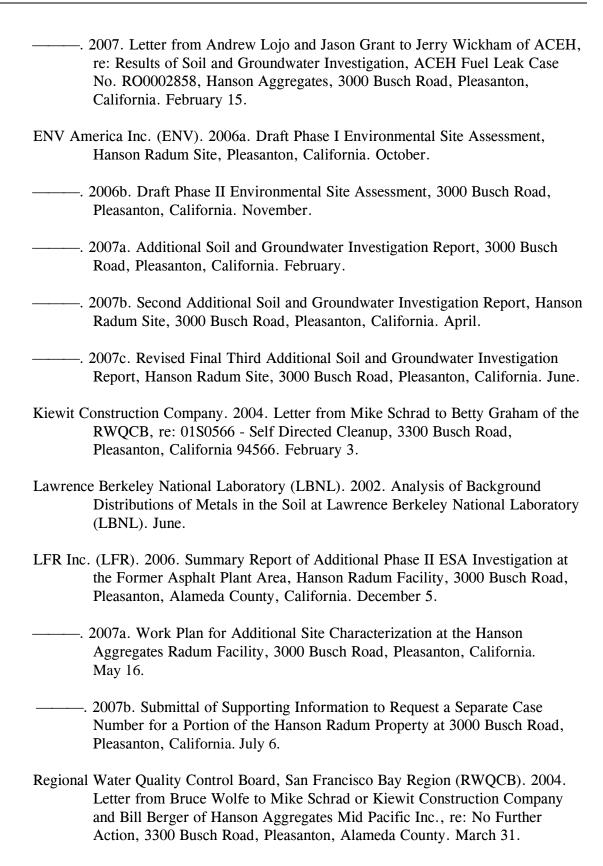
The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that LFR relied upon any information prepared by other parties not under contract to LFR, LFR makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when LFR's investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the Site may vary from those at the locations where data were collected. LFR's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in environmental investigation conclusions cannot reasonably be achieved.

LFR, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

## 8.0 REFERENCES





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—. 2007. Annual Report for the Groundwater Management Program, 2006 Water

Year, June 14.

Table 1 - Sample Matrix
Samples from Temporary Soil Borings, Storm-Water Pond, and Existing Groundwater Monitoring Wells
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample Location	Sample ID	Date Sampled	Sample top (feet bgs)	Interval bottom (feet bgs)	Matrix	TPHd / TPHmo	TPHg	VOCs	BTEX		Lead Scav	Pest	PCBs	SVOCs	Metal
Depth Discrete	Soil Samples from Te	mporary Soil Be	orings												
AOC 3	B-1(A)-4.5	7/17/2007	4	4.5	soil	X	X	-	-	-	-	-	X	X	X
AOC 3	B-1(A)-9.5	7/17/2007	9	9.5	soil	X	X	-	-	-	-	-	X	X	X
AOC 3	B-1(A)-35	7/17/2007	34.5	35	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	B-1(A)-36.5	7/17/2007	36	36.5	soil	-	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(A)-5.5	7/17/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(A)-10.5	7/17/2007	10	10.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(A)-15.5	7/17/2007	15	15.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(A)-20.5	7/17/2007	20	20.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(B)-5.5	7/16/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(B)-10.5	7/16/2007	10	10.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(B)-15.5	7/16/2007	15	15.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(B)-20.5	7/16/2007	20	20.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(C)-5	7/16/2007	4.5	5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(C)-10.5	7/16/2007	10	10.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(C)-15.5	7/16/2007	15	15.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 2	EB-31(C)-20	7/16/2007	20	20.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(A)-3	7/17/2007	2.5	3	soil	-	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(A)-4	7/17/2007	3.5	4	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(A)-9.5	7/17/2007	9	9.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(B)-2.5	7/17/2007	2	2.5	soil	-	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(B)-5	7/17/2007	4.5	5	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(B)-9	7/17/2007	8.5	9	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(C)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(C)-5.5	7/18/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(C)-10.5	7/18/2007	10	10.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(D)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(D)-5.5	7/18/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 3	EB-35(D)-9.5	7/18/2007	9	9.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 7	SS-31(A)-5.5	7/18/2007	5	5.5	soil	X	X	-	X	X	X	X	X	X	X
AOC 7	SS-31(A)-10.5	7/18/2007	10	10.5	soil	X	X	-	X	X	X	X	X	X	X
AOC 7	SS-31(A)-15.5	7/18/2007	15	15.5	soil	X	X	-	X	X	X	-	-	-	-

Table 1 - Sample Matrix
Samples from Temporary Soil Borings, Storm-Water Pond, and Existing Groundwater Monitoring Wells
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample	Sample ID	Date	Sample	Interval	Matrix	TPHd /	TPHg	VOCs	BTEX			Pest	<b>PCBs</b>	<b>SVOCs</b>	Metal
Location		Sampled	top (feet bgs)	bottom (feet bgs)		TPHmo				Ox	Scav				
AOC 7	SS-31(A)-20.5	7/18/2007	20	20.5	soil	Х	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-25.5	7/18/2007	25	25.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-30.5	7/18/2007	30	30.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-40.5	7/19/2007	40	40.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-50.5	7/19/2007	50	50.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-52.5	7/19/2007	52	52.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-60.5	7/19/2007	60	60.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(A)-65.5	7/19/2007	65	65.5	soil	-	-	-	-	-	-	-	-	-	-
AOC 7	SS-31(B)-5.5	7/19/2007	5	5.5	soil	X	X	-	X	X	X	X	X	X	X
AOC 7	SS-31(B)-10.5	7/19/2007	10	10.5	soil	X	X	-	X	X	X	X	X	X	X
AOC 7	SS-31(B)-15.5	7/19/2007	15	15.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(B)-20.5	7/19/2007	20	20.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(B)-25.5	7/19/2007	25	25.5	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(B)-30.5	7/19/2007	30	30.5	soil	X	X	_	X	X	X	_	-	-	_
AOC 7	SS-31(B)-40	7/19/2007	39.5	40	soil	X	X	_	X	X	X	_	-	-	-
AOC 7	SS-31(B)-50	7/19/2007	49.5	50	soil	X	X	-	X	X	X	-	-	-	-
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	X	X	_	X	X	X	_	-	-	_
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	X	X	_	X	X	X	X	X	X	X
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	X	X	_	X	X	X	X	X	X	X
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	X	X	_	X	X	X	_	_	-	_
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	X	X	_	X	X	X	_	_	-	_
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	_	_	_	_	-	_	_	-	-	_
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	X	X	_	X	X	X	X	X	X	X
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	X	X	_	X	X	X	X	X	X	X
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	X	X	_	X	X	X	_	-	_	_
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	X	X	_	X	X	X	_	_	-	_
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	X	X	_	X	X	X	_	_	_	_
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	X	X	_	X	X	X	_	_	_	_

Table 1 - Sample Matrix
Samples from Temporary Soil Borings, Storm-Water Pond, and Existing Groundwater Monitoring Wells
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample Location	Sample ID	Date Sampled	Sample top (feet bgs)	Interval bottom (feet bgs)	Matrix	TPHd / TPHmo	TPHg	VOCs	ВТЕХ	Fuel Ox	Lead Scav	Pest	PCBs	SVOCs	Metals
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	X	X	-	Х	X	X	-	-	-	-
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	X	X		X	X	X	-	-	-	-
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	X	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	X	-	-	-	-	-	-	-	-	-
Sediment Sampl	les from Storm-Water R	Retention Pond													
AOC 6	SED-1	7/13/2007	0	0.5	soil	X	-	-	-	-	-	-	-	-	X
AOC 6	SED-2	7/13/2007	0	0.5	soil	X	-	-	-	-	-	-	-	-	X
AOC 6	SED-3	7/13/2007	0	0.5	soil	X	-	-	-	-	-	-	-	-	X
AOC 6	SED-4	7/13/2007	0	0.5	soil	X	-	-	-	-	-	-	-	-	X

Table 1 - Sample Matrix
Samples from Temporary Soil Borings, Storm-Water Pond, and Existing Groundwater Monitoring Wells
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample Location	Sample ID	Date Sampled	Sample top (feet bgs)	Interval bottom (feet bgs)	Matrix	TPHd / TPHmo	TPHg	VOCs	BTEX		Lead Scav	Pest	PCBs	SVOCs	Metals
Grab Groundwa	ter Samples from Temp	oorary Soil Bo	prings												
AOC 3	B-1(A)-GGW	7/18/2007	~ 67.6	~ 67.6	water	X	X	X	X	X	X	-	-	-	-
AOC 2	EB-31(B)-GGW	7/16/2007	~ 64.8	~ 64.8	water	X	X	X	X	X	X	-	-	-	-
AOC 7	SS-31(A)-GGW	7/19/2007	~ 65.2	~ 65.2	water	X	X	X	X	X	X	-	-	-	-
AOC 7	SS-31(B)-GGW	7/20/2007	~ 66	~ 66	water	X	X	X	X	X	X	-	-	-	-
AOC 7	SS-31(C)-GGW	7/20/2007	~ 66	~ 66	water	X	X	X	X	X	X	-	-	-	-
AOC 7	SS-31(D)-GGW	7/23/2007	~ 66.8	~ 66.8	water	X	X	X	X	X	X	-	-	-	-
AOC 8	SS-123(AA)-GGW	7/24/2007	~15.7	~15.7	water	X	X	X	X	X	X	-	-	-	-
AOC 8	SS-123(F1)-GGW	7/23/2007	~ 20.8	~ 20.8	water	X	X	X	X	X	X	-	-	-	-
AOC 8	SS-123(F2)-GGW	7/24/2007	~ 25.8	~ 25.8	water	X	X	X	X	X	X	-	-	-	-
AOC 8	SS-123(F3)-GGW	7/24/2007	~ 26.9	~ 26.9	water	X	X	X	X	X	X	-	-	-	-
Grab Surface Wo	ater Sample from Storn	n-Water Reter	tion Pond												
AOC 6	PW-2	7/13/2007	surface	surface	water	X	X	X	X	X	X	-	-	-	X
Groundwater Sa	mples from Monitoring	Wells													
3S/1E 14D1	TW-5	7/12/2007	~ 50	~ 50	water	X	X	X	X	X	X	-	-	X	X
3S/1E 10D8	3S/1E 10D8	7/25/2007	~ 200	~ 200	water	X	X	X	X	X	X	-	-	X	X
3S/1E 10K2	3S/1E 10K2	7/25/2007	~ 300	~ 300	water	X	X	X	X	X	X	-	-	X	X
3S/1E 10K2	MW-10 *	7/25/2007	~ 300	~ 300	water	X	X	X	X	X	X	_	-	X	X
3S/1E 10N3	3S/1E 10N3	7/25/2007	~ 180	~ 180	water	X	X	X	X	X	X	_	-	X	X
Trip Blank	TB-072507	7/25/2007	na	na	water	X	X	X	X	X	X	-	-	X	X

**Notes:** TPHd = total petroleum hydrocarbons as diesel by EPA Method 8015 (after silica gel cleanup) AOC = area of concern TPHmo = total petroleum hydrocarbons as motor oil by EPA Method 8015 (after silica gel cleanup) feet bgs = feet below ground surface TPHg = total petroleum hydrocarbons as gasoline by EPA Method 8015 (soil) and 8260 (water) "  $\sim$  " = approximate sample depth VOCs = volatile organic compounds by EPA Method 8260 "1" = analyzed BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260 "-" = not analyzed Fuel Ox = fuel oxygenates by EPA Method 8260na = not applicable Lead Scav = lead scavengers by EPA Method 8260 \* MW-10 = blind duplicate of 3S/1E 10K2 Pest = organochlorine pesticides by EPA Method 8081 PCBs = polychlorinated biphenyls by EPA Method 8082

SVOCs = semivolatile organic compounds by EPA Method 8270

Metals = CAM17 metals (total concentrations in soil samples; dissolved concentrations in water samples) by EPA Method 6010

(Concentrations reported in milligrams per kilogram (mg/Kg) or micrograms per kilogram (ug/Kg), as noted)

Sample	Sample ID	Date	Sample	Interval	Matrix	Total Pet	roleum Hydro	ocarbons		ВТ	EX compou	nds	
Location		Sampled	top (feet bgs)	bottom (feet bgs)		TPHd (mg/Kg)	TPHmo (mg/Kg)	TPHg (mg/Kg)	B (ug/Kg)	T (ug/Kg)	E (ug/Kg)	m,p-X (ug/Kg)	o-X (ug/Kg)
AOC 3	B-1(A)-4.5	7/17/2007	4	4.5	soil	<1	<5	<1	-	-	-	-	-
AOC 3	B-1(A)-9.5	7/17/2007	9	9.5	soil	<1	7.4 H	< 0.94	-	-	-	-	-
AOC 3	B-1(A)-35	7/17/2007	34.5	35	soil	<1	< 5	-	-	-	-	-	-
AOC 3	B-1(A)-36.5	7/17/2007	36	36.5	soil	-	-	-	-	-	-	-	-
AOC 2	EB-31(A)-5.5	7/17/2007	5	5.5	soil	1.3 HY	16 H	-	-	-	-	-	-
AOC 2	EB-31(A)-10.5	7/17/2007	10	10.5	soil	14 HY	170 H	-	-	-	-	-	-
AOC 2	EB-31(A)-15.5	7/17/2007	15	15.5	soil	< 0.99	< 5	-	-	-	-	-	-
AOC 2	EB-31(A)-20.5	7/17/2007	20	20.5	soil	<1	< 5	-	-	-	-	-	-
AOC 2	EB-31(B)-5.5	7/16/2007	5	5.5	soil	1 HYZ	< 5	-	-	-	-	-	-
AOC 2	EB-31(B)-10.5	7/16/2007	10	10.5	soil	1.9 HYZ	< 5	-	-	-	-	-	-
AOC 2	EB-31(B)-15.5	7/16/2007	15	15.5	soil	< 0.99	5.4 HL	-	-	-	-	-	-
AOC 2	EB-31(B)-20.5	7/16/2007	20	20.5	soil	2.3 HYZ	10 HL	-	-	-	-	-	-
AOC 2	EB-31(C)-5	7/16/2007	4.5	5	soil	8.2 HYZ	87 HL	-	-	-	-	-	-
AOC 2	EB-31(C)-10.5	7/16/2007	10	10.5	soil	2.3 HYZ	< 5	-	-	-	-	-	-
AOC 2	EB-31(C)-15.5	7/16/2007	15	15.5	soil	1.5 HYZ	< 5	-	-	-	-	-	-
AOC 2	EB-31(C)-20.5	7/16/2007	20	20.5	soil	<1	< 5	-	-	-	-	-	-
AOC 3	EB-35(A)-3	7/17/2007	2.5	3	soil	-	-	-	-	-	-	-	-
AOC 3	EB-35(A)-4	7/17/2007	3.5	4	soil	48 HY	540 H	-	-	-	-	-	-
AOC 3	EB-35(A)-9.5	7/17/2007	9	9.5	soil	<1	5.2 H	-	-	-	-	-	-
AOC 3	EB-35(B)-2.5	7/17/2007	2	2.5	soil			-	-	-	-	-	-
AOC 3	EB-35(B)-5	7/17/2007	4.5	5	soil	160 HY	3,600 H	-	-	-	-	-	-
AOC 3	EB-35(B)-9	7/17/2007	8.5	9	soil	< 0.99	< 5	-	-	-	-	-	-
AOC 3	EB-35(C)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-	-
AOC 3	EB-35(C)-5.5	7/18/2007	5	5.5	soil	<1	< 5	-	-	-	-	-	-
AOC 3	EB-35(C)-10.5	7/18/2007	10	10.5	soil	<1	< 5	-	-	-	-	-	-
AOC 3	EB-35(D)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-	-
AOC 3	EB-35(D)-5.5	7/18/2007	5	5.5	soil	38 HY	810 H	-	-	-	-	-	-
AOC 3	EB-35(D)-9.5	7/18/2007	9	9.5	soil	< 0.99	< 5	-	-	-	-	-	-
AOC 7	SS-31(A)-5.5	7/18/2007	5	5.5	soil	< 0.99	5.9 H	<1	< 4.9	< 4.9	< 4.9	< 4.9	<4.9
AOC 7	SS-31(A)-10.5	7/18/2007	10	10.5	soil	<1	< 5	< 0.94	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
AOC 7	SS-31(A)-15.5	7/18/2007	15	15.5	soil	< 0.99	< 5	< 1.1	< 4.8	<4.8	< 4.8	<4.8	<4.8

(Concentrations reported in milligrams per kilogram (mg/Kg) or micrograms per kilogram (ug/Kg), as noted)

Sample	Sample ID	Date	Sample	Interval	Matrix	Total Pet	roleum Hydr	ocarbons		ВТ	EX compou		
Location		Sampled	top (feet bgs	bottom ) (feet bgs)		TPHd (mg/Kg)	TPHmo (mg/Kg)	TPHg (mg/Kg)	B (ug/Kg)	T (ug/Kg)	E (ug/Kg)	m,p-X (ug/Kg)	o-X (ug/Kg)
AOC 7	SS-31(A)-20.5	7/18/2007	20	20.5	soil	<1	< 5	<1	<4.6	<4.6	<4.6	<4.6	<4.6
AOC 7	SS-31(A)-25.5	7/18/2007	25	25.5	soil	<1	< 5	< 1	<4.8	<4.8	<4.8	<4.8	<4.8
AOC 7	SS-31(A)-30.5	7/18/2007	30	30.5	soil	< 0.99	< 5	< 0.98	< 5	< 5	< 5	< 5	< 5
AOC 7	SS-31(A)-40.5	7/19/2007	40	40.5	soil	<1	< 5	< 1	< 4.8	<4.8	< 4.8	< 4.8	<4.8
AOC 7	SS-31(A)-50.5	7/19/2007	50	50.5	soil	< 0.99	< 5	< 0.97	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6
AOC 7	SS-31(A)-52.5	7/19/2007	52	52.5	soil	< 0.99	< 5	< 0.99	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
AOC 7	SS-31(A)-60.5	7/19/2007	60	60.5	soil	<1	< 5	< 1	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(A)-65.5	7/19/2007	65	65.5	soil	-	-	-	-	-	-	-	-
AOC 7	SS-31(B)-5.5	7/19/2007	5	5.5	soil	2.6 HYZ	11 H	< 1	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
AOC 7	SS-31(B)-10.5	7/19/2007	10	10.5	soil	<b>6.2 HYZ</b>	75 HL	< 0.99	<4.8	<4.8	<4.8	< 4.8	<4.8
AOC 7	SS-31(B)-15.5	7/19/2007	15	15.5	soil	1.2 YZ	6.3 H	< 0.96	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
AOC 7	SS-31(B)-20.5	7/19/2007	20	20.5	soil	6.4 YZ	< 5	< 1	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6
AOC 7	SS-31(B)-25.5	7/19/2007	25	25.5	soil	27 YZ	< 5	< 0.97	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8
AOC 7	SS-31(B)-30.5	7/19/2007	30	30.5	soil	32 YZ	<b>5.4 HLZ</b>	< 0.97	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(B)-40	7/19/2007	39.5	40	soil	21 YZ	< 5	< 1	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(B)-50	7/19/2007	49.5	50	soil	17 YZ	160 YZ	< 1	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	9.2 YZ	< 5	< 0.99	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	2 HYZ	< 5	< 1	< 5	< 5	< 5	< 5	< 5
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	<1	< 5	< 1	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	< 0.99	< 5	< 0.98	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	2.3 YZ	< 5	< 0.97	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	<1	< 5	< 1	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	< 1	< 5	< 1	< 4.8	< 4.8	< 4.8	< 4.8	<4.8
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	<1	< 5	< 1	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	< 0.99	< 5	< 0.99	< 5	< 5	< 5	< 5	< 5
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	5.7 YZ	< 5	< 1.1	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	-	-	-	-	-	-	-	-
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	< 0.99	< 5	< 0.96	< 4.8	<4.8	<4.8	< 4.8	<4.8
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	1.7 HYZ	9.4 HL	< 0.96	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	3.2 YZ	< 5	< 0.98	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	< 0.99	< 5	< 0.98	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	< 0.99	< 5	<1	< 5	< 5	< 5	< 5	< 5
	01(2) =0				5522								•

(Concentrations reported in milligrams per kilogram (mg/Kg) or micrograms per kilogram (ug/Kg), as noted)

Sample	Sample ID	Date	Sampl	e Interval	Matrix	Total Petr	oleum Hydr	ocarbons		ВТ	EX compou	nds	
Location		Sampled	top (feet bg:	bottom s) (feet bgs)		TPHd (mg/Kg)	TPHmo (mg/Kg)	TPHg (mg/Kg)	B (ug/Kg)	T (ug/Kg)	E (ug/Kg)	m,p-X (ug/Kg)	o-X (ug/Kg)
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	<1	< 5	< 0.99	<4.7	<4.7	<4.7	<4.7	<4.7
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	<1	< 5	<1	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	<1	< 5	< 0.95	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	< 0.99	< 5	<1	< 5	< 5	< 5	< 5	< 5
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	1.6 HY	15 H	-	-	-	-	-	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	89 HY	810 H	-	-	-	-	-	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	1.9 HYZ	11 H	-	-	-	-	-	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	39 HY	450 H	-	-	-	-	-	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	170 HY	1,500 H	-	-	-	-	-	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	14 HY	110 HL	-	-	-	-	-	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	20 HY	46 HL	-	-	-	-	-	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	54 HY	430 HL	-	-	-	-	-	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	35 HY	290 HL	-	-	-	-	-	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	27 HY	120 HL	-	-	-	-	-	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	10 HY	29 HL	-	-	-	-	-	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	83 HY	970 H	-	-	-	-	-	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	3.3 HY	39 H	-	-	-	-	-	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	19 HY	270 H	-	-	-	-	-	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	<1	< 5	-	-	-	-	-	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	1.5 HYZ	8.2 H	-	-	-	-	-	-
AOC 6	SED-1	7/13/2007	0	0.5	soil	<1	7.1 H	-	-	-	-	-	-
AOC 6	SED-2	7/13/2007	0	0.5	soil	13 HY	130 H	-	-	-	-	-	-
AOC 6	SED-3	7/13/2007	0	0.5	soil	100 HY	650 HL	-	-	-	-	-	-
AOC 6	SED-4	7/13/2007	0	0.5	soil	50 HY	300 HL	-	-	-	-	-	-
ESLs				shallow or	deep soils	100	1,000	100	44	2,900	3,300	2,300	2,300

(Concentrations reported in milligrams per kilogram (mg/Kg) or micrograms per kilogram (ug/Kg), as noted)

Sample Sample ID	Date	Sample Inte	val Matrix	Total Pe	troleum Hydi	rocarbons		ВТ	EX compou	nds	
Location	Sampled	top bot	tom	TPHd	<b>TPHmo</b>	TPHg	В	T	E	m,p-X	o-X
		(feet bgs) (feet	bgs)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)

#### Notes:

feet bgs = feet below ground surface

mg/Kg = milligrams per kilogram

ug/Kg = micrograms per kilogram

TPHd = total petroleum hydrocarbons as diesel

TPHmo = total petroleum hydrocarbons as motor oil

TPHg = total petroleum hydrocarbons as gasoline

BTEX = benzene, toluene, ethylbenzene, and total xylenes

B = benzene

T = toluene

E = ethylbenzene

m,p-X = m,p-xylenes

o-X = o-xylenes

**bold** indicates that the compound was detected above the laboratory reporting limit.

**1,500 H** boxed values exceed the respective ESL.

"<" = not detected above the laboratory report given

"-" = sample not analyzed

H = heavier hydrocarbons contributed to the quantitation

L = lighter hydrocarbons contributed to the quantitation

Y = sample exhibites chromatographic pattern which does not resemble standard

Z = sample exhibits unknown single peak or peaks

(Concentrations reported in micrograms per kilograms (ug/Kg))

Sample	Sample ID	Date	Sample	Interval	Matrix		Fu	el Oxygena	tes		Lead Sca	avengers
Location	•	Sampled	top (feet bgs)	bottom (feet bgs)		MTBE (ug/Kg)	TAME (ug/Kg)	DIPE (ug/Kg)	ETBE (ug/Kg)	TBA (ug/Kg)	EDB (ug/Kg)	EDC (ug/Kg)
AOC 3	B-1(A)-4.5	7/17/2007	4	4.5	soil	-	-	-	_	-	-	_
AOC 3	B-1(A)-9.5	7/17/2007	9	9.5	soil	-	-	-	-	-	-	-
AOC 3	B-1(A)-35	7/17/2007	34.5	35	soil	-	-	-	-	-	-	-
AOC 3	B-1(A)-36.5	7/17/2007	36	36.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(A)-5.5	7/17/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(A)-10.5	7/17/2007	10	10.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(A)-15.5	7/17/2007	15	15.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(A)-20.5	7/17/2007	20	20.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(B)-5.5	7/16/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(B)-10.5	7/16/2007	10	10.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(B)-15.5	7/16/2007	15	15.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(B)-20.5	7/16/2007	20	20.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(C)-5	7/16/2007	4.5	5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(C)-10.5	7/16/2007	10	10.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(C)-15.5	7/16/2007	15	15.5	soil	-	-	-	-	-	-	-
AOC 2	EB-31(C)-20.5	7/16/2007	20	20.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(A)-3	7/17/2007	2.5	3	soil	-	-	-	-	_	-	-
AOC 3	EB-35(A)-4	7/17/2007	3.5	4	soil	-	-	-	-	-	-	-
AOC 3	EB-35(A)-9.5	7/17/2007	9	9.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(B)-2.5	7/17/2007	2	2.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(B)-5	7/17/2007	4.5	5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(B)-9	7/17/2007	8.5	9	soil	-	-	-	-	-	-	-
AOC 3	EB-35(C)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(C)-5.5	7/18/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(C)-10.5	7/18/2007	10	10.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(D)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(D)-5.5	7/18/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 3	EB-35(D)-9.5	7/18/2007	9	9.5	soil	-	-	-	-	-	-	-
AOC 7	SS-31(A)-5.5	7/18/2007	5	5.5	soil	< 4.9	< 4.9	<4.9	< 4.9	<98	<4.9	<4.9
AOC 7	SS-31(A)-10.5	7/18/2007	10	10.5	soil	< 4.7	< 4.7	< 4.7	< 4.7	< 94	< 4.7	< 4.7

(Concentrations reported in micrograms per kilograms (ug/Kg))

Sample	Sample ID	Date	Sample	Interval	Matrix		Fu	el Oxygena	tes		Lead Sc	avengers
Location	•	Sampled	top (feet bgs)	bottom (feet bgs)		MTBE (ug/Kg)	TAME (ug/Kg)	DIPE (ug/Kg)	ETBE (ug/Kg)	TBA (ug/Kg)	EDB (ug/Kg)	EDC (ug/Kg)
AOC 7	SS-31(A)-15.5	7/18/2007	15	15.5	soil	<4.8	<4.8	<4.8	<4.8	<96	<4.8	<4.8
AOC 7	SS-31(A)-20.5	7/18/2007	20	20.5	soil	< 4.6	< 4.6	< 4.6	< 4.6	< 93	< 4.6	< 4.6
AOC 7	SS-31(A)-25.5	7/18/2007	25	25.5	soil	< 4.8	< 4.8	< 4.8	< 4.8	< 96	<4.8	<4.8
AOC 7	SS-31(A)-30.5	7/18/2007	30	30.5	soil	< 5	< 5	< 5	< 5	< 100	< 5	< 5
AOC 7	SS-31(A)-40.5	7/19/2007	40	40.5	soil	< 4.8	< 4.8	< 4.8	< 4.8	< 96	<4.8	<4.8
AOC 7	SS-31(A)-50.5	7/19/2007	50	50.5	soil	< 4.6	< 4.6	< 4.6	< 4.6	<93	< 4.6	< 4.6
AOC 7	SS-31(A)-52.5	7/19/2007	52	52.5	soil	< 4.7	< 4.7	< 4.7	< 4.7	< 94	< 4.7	< 4.7
AOC 7	SS-31(A)-60.5	7/19/2007	60	60.5	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 89	< 4.5	< 4.5
AOC 7	SS-31(A)-65.5	7/19/2007	65	65.5	soil	-	_	-	-	-	-	-
AOC 7	SS-31(B)-5.5	7/19/2007	5	5.5	soil	< 4.7	< 4.7	< 4.7	< 4.7	< 94	< 4.7	< 4.7
AOC 7	SS-31(B)-10.5	7/19/2007	10	10.5	soil	< 4.8	< 4.8	< 4.8	< 4.8	< 96	< 4.8	< 4.8
AOC 7	SS-31(B)-15.5	7/19/2007	15	15.5	soil	< 4.8	< 4.8	< 4.8	< 4.8	< 96	< 4.8	< 4.8
AOC 7	SS-31(B)-20.5	7/19/2007	20	20.5	soil	< 4.6	< 4.6	< 4.6	< 4.6	< 93	< 4.6	< 4.6
AOC 7	SS-31(B)-25.5	7/19/2007	25	25.5	soil	< 4.8	< 4.8	< 4.8	< 4.8	< 96	< 4.8	< 4.8
AOC 7	SS-31(B)-30.5	7/19/2007	30	30.5	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 89	< 4.5	< 4.5
AOC 7	SS-31(B)-40	7/19/2007	39.5	40	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 89	< 4.5	< 4.5
AOC 7	SS-31(B)-50	7/19/2007	49.5	50	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 89	< 4.5	< 4.5
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	< 4.9	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	< 5	< 5	< 5	< 5	< 100	< 5	< 5
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 91	< 4.5	< 4.5
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 91	< 4.5	< 4.5
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	< 4.9	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	< 4.9	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	< 4.8	< 4.8	< 4.8	< 4.8	< 96	< 4.8	<4.8
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	< 4.9	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	< 5	< 5	< 5	< 5	< 100	< 5	< 5
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	< 4.9	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	-	-	-	-	-	-	-
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	< 4.8	< 4.8	< 4.8	< 4.8	<96	<4.8	<4.8
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	< 4.7	< 4.7	< 4.7	< 4.7	< 94	< 4.7	< 4.7
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	< 4.5	< 4.5	< 4.5	< 4.5	<91	< 4.5	< 4.5
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	< 4.6	< 4.6	< 4.6	< 4.6	<93	< 4.6	< 4.6

(Concentrations reported in micrograms per kilograms (ug/Kg))

Sample	Sample ID	Date	Sample	Interval	Matrix		Fu	el Oxygena	tes		Lead Sca	avengers
Location		Sampled	top (feet bgs)	bottom (feet bgs)		MTBE (ug/Kg)	TAME (ug/Kg)	DIPE (ug/Kg)	ETBE (ug/Kg)	TBA (ug/Kg)	EDB (ug/Kg)	EDC (ug/Kg)
			(leet bgs)	(leet bgs)		(ug/Kg)	(ug/Kg)	(ug/kg)	(ug/kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	< 5	< 5	< 5	< 5	< 100	< 5	< 5
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	< 4.7	< 4.7	< 4.7	< 4.7	< 94	< 4.7	< 4.7
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	< 4.9	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	< 4.5	< 4.5	< 4.5	< 4.5	< 91	< 4.5	< 4.5
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	< 5	< 5	< 5	< 5	< 100	< 5	< 5
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	-	-	-	-	-	-	-
AOC 6	SED-1	7/13/2007	0	0.5	soil	-	-	-	-	-	-	-
AOC 6	SED-2	7/13/2007	0	0.5	soil	-	-	-	-	-	-	-
AOC 6	SED-3	7/13/2007	0	0.5	soil	-	-	-	-	-	-	-
AOC 6	SED-4	7/13/2007	0	0.5	soil	-	-	-	-	-	-	-
ESLs				shallow or	deep soils	23	-	-	-	73	0.33	4.5

(Concentrations reported in micrograms per kilograms (ug/Kg))

Sample Sa	ample ID	Date	Sample	Interval	Matrix		Fu	el Oxygenat	tes		Lead Sca	avengers
Location		Sampled	top	bottom		MTBE	<b>TAME</b>	DIPE	ETBE	TBA	EDB	EDC
			(feet bgs)	(feet bgs)		(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)	(ug/Kg)

#### Notes:

feet bgs = feet below ground surface

ug/Kg = micrograms per kilogram

MTBE = methyl tert-butyl ether

TAME = tert-amyl methyl ether (methyl tert-amyl ether)

DIPE = diisopropyl ether (isopropyl ether)

ETBE = ethyl tert-butyl ether

TBA = tert-butyl alcohol

EDB = 1,2-dibromoethane (ethylene dibromide)

EDC = 1,2-dichloroethane

"<" = not detected above the laboratory report given

"-" = sample not analyzed or ESL not established

Table 3 - Summary of Analytical Results of Volatile Organic Compounds Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

AOC 3   B-1(A)-4.5   7/17/2007   4   4.5   soil   AOC 3   B-1(A)-9.5   7/17/2007   9   9.5   soil   AOC 3   B-1(A)-35   7/17/2007   34.5   35   soil   AOC 3   B-1(A)-36.5   7/17/2007   36   36.5   soil   AOC 2   EB-31(A)-5.5   7/17/2007   5   5.5   soil   AOC 2   EB-31(A)-10.5   7/17/2007   10   10.5   soil   AOC 2   EB-31(A)-15.5   7/17/2007   15   15.5   soil   AOC 2   EB-31(A)-20.5   7/17/2007   15   15.5   soil   AOC 2   EB-31(A)-20.5   7/17/2007   20   20.5   soil   AOC 2   EB-31(B)-5.5   7/16/2007   5   5.5   soil   AOC 2   EB-31(B)-5.5   7/16/2007   5   5.5   soil   AOC 2   EB-31(B)-15.5   7/16/2007   10   10.5   soil   AOC 2   EB-31(B)-15.5   7/16/2007   10   10.5   soil   AOC 2   EB-31(B)-15.5   7/16/2007   15   15.5   soil   AOC 2   EB-31(B)-20.5   7/16/2007   20   20.5   soil   AOC 2   EB-31(C)-5   7/16/2007   4.5   5   soil   AOC 2   EB-31(C)-10.5   7/16/2007   4.5   5   soil   AOC 2   EB-31(C)-15.5   7/16/2007   15   15.5   soil   AOC 2   EB-31(C)-20.5   7/16/2007   15   15.5   soil   AOC 2   EB-31(C)-20.5   7/16/2007   20   20.5   soil   AOC 2   EB-31(C)-20.5   7/16/2007   20   20.5   soil   AOC 3   EB-35(A)-3   7/17/2007   2.5   3   soil   AOC 3   EB-35(A)-9   7/17/2007   2.5   3   soil   AOC 3   EB-35(B)-5   7/17/2007   2   2.5   soil   AOC 3   EB-35(B)-5   7/17/2007   2   2.5   soil   AOC 3   EB-35(B)-5   7/17/2007   4.5   5   soil   AOC 3   EB-35(B)-5   7/17/2007   4.5   5   soil   AOC 3   EB-35(B)-5   7/17/2007   2   2.5   soil   AOC 3   EB-35(B)-5   7/17/2007   5   5.5   soil   AOC 3   EB-35(C)-2.5   7/18/2007   5   5.5   soil   AOC 3   EB-35(C)-5.5   7/18/2007   5   5.5   soil   AOC 3   EB-35(C)-5.5   7/18/2007   5   5.5   soil   AOC 3   EB-35(D)-5.5   7/18/2007   5   5.5   soil   A	- - - - - - - - - - - - - -
AOC 3 B-1(A)-4.5 7/17/2007 4 4.5 soil AOC 3 B-1(A)-9.5 7/17/2007 9 9.5 soil AOC 3 B-1(A)-35 7/17/2007 34.5 35 soil AOC 3 B-1(A)-36.5 7/17/2007 36 36.5 soil AOC 2 EB-31(A)-5.5 7/17/2007 5 5.5 soil AOC 2 EB-31(A)-15.5 7/17/2007 10 10.5 soil AOC 2 EB-31(A)-15.5 7/17/2007 15 15.5 soil AOC 2 EB-31(A)-15.5 7/17/2007 20 20.5 soil AOC 2 EB-31(B)-5.5 7/16/2007 5 5.5 soil AOC 2 EB-31(B)-10.5 7/16/2007 10 10.5 soil AOC 2 EB-31(B)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(B)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(B)-15.5 7/16/2007 10 10.5 soil AOC 2 EB-31(B)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(B)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-10.5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-15.5 7/16/2007 20 20.5 soil AOC 2 EB-31(C)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 10 10.5 soil AOC 3 EB-35(A)-4 7/17/2007 20 20.5 soil AOC 3 EB-35(A)-9 7/17/2007 20 20.5 soil AOC 3 EB-35(A)-9 7/17/2007 2.5 3 soil AOC 3 EB-35(B)-2.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	- - - - - - - - - - - - -
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AOC 2 EB-31(B)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(B)-20.5 7/16/2007 20 20.5 soil AOC 2 EB-31(C)-5 7/16/2007 4.5 5 soil AOC 2 EB-31(C)-10.5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	- - - -
AOC 2 EB-31(B)-20.5 7/16/2007 20 20.5 soil AOC 2 EB-31(C)-5 7/16/2007 4.5 5 soil AOC 2 EB-31(C)-10.5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	- - - -
AOC 2 EB-31(C)-5 7/16/2007 4.5 5 soil AOC 2 EB-31(C)-10.5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-5 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 5 5.5 soil	- - -
AOC 2 EB-31(C)-10.5 7/16/2007 10 10.5 soil AOC 2 EB-31(C)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil  AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	- - -
AOC 2 EB-31(C)-15.5 7/16/2007 15 15.5 soil AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil  AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 9 9.5 soil	-
AOC 2 EB-31(C)-20.5 7/16/2007 20 20.5 soil  AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil  AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil  AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil  AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil  AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil  AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil  AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil  AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil  AOC 3 EB-35(C)-5.5 7/18/2007 10 10.5 soil  AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil  AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil  AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil  AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil  AOC 3 EB-35(D)-2.5 7/18/2007 9 9.5 soil	-
AOC 3 EB-35(A)-3 7/17/2007 2.5 3 soil AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 9 9.5 soil	
AOC 3 EB-35(A)-4 7/17/2007 3.5 4 soil AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	-
AOC 3 EB-35(A)-9.5 7/17/2007 9 9.5 soil AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-9.5 7/18/2007 9 9.5 soil	-
AOC 3 EB-35(B)-2.5 7/17/2007 2 2.5 soil AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	-
AOC 3 EB-35(B)-5 7/17/2007 4.5 5 soil AOC 3 EB-35(B)-9 7/17/2007 8.5 9 soil AOC 3 EB-35(C)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(C)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(C)-10.5 7/18/2007 10 10.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 2 2.5 soil AOC 3 EB-35(D)-2.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-5.5 7/18/2007 9 9.5 soil	-
AOC 3       EB-35(B)-9       7/17/2007       8.5       9       soil         AOC 3       EB-35(C)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(C)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(C)-10.5       7/18/2007       10       10.5       soil         AOC 3       EB-35(D)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(D)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(D)-9.5       7/18/2007       9       9.5       soil	-
AOC 3       EB-35(C)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(C)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(C)-10.5       7/18/2007       10       10.5       soil         AOC 3       EB-35(D)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(D)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(D)-9.5       7/18/2007       9       9.5       soil	-
AOC 3       EB-35(C)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(C)-10.5       7/18/2007       10       10.5       soil         AOC 3       EB-35(D)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(D)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(D)-9.5       7/18/2007       9       9.5       soil	-
AOC 3       EB-35(C)-10.5       7/18/2007       10       10.5       soil         AOC 3       EB-35(D)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(D)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(D)-9.5       7/18/2007       9       9.5       soil	-
AOC 3       EB-35(D)-2.5       7/18/2007       2       2.5       soil         AOC 3       EB-35(D)-5.5       7/18/2007       5       5.5       soil         AOC 3       EB-35(D)-9.5       7/18/2007       9       9.5       soil	-
AOC 3 EB-35(D)-5.5 7/18/2007 5 5.5 soil AOC 3 EB-35(D)-9.5 7/18/2007 9 9.5 soil	-
AOC 3 EB-35(D)-9.5 7/18/2007 9 9.5 soil	-
	-
	-
AOC 7 SS-31(A)-5.5 7/18/2007 5 5.5 soil	ND
AOC 7 SS-31(A)-10.5 7/18/2007 10 10.5 soil	ND
AOC 7 SS-31(A)-15.5 7/18/2007 15 15.5 soil	ND
AOC 7 SS-31(A)-20.5 7/18/2007 20 20.5 soil	ND
AOC 7 SS-31(A)-25.5 7/18/2007 25 25.5 soil	ND
AOC 7 SS-31(A)-30.5 7/18/2007 30 30.5 soil	ND
AOC 7 SS-31(A)-40.5 7/19/2007 40 40.5 soil	ND
AOC 7 SS-31(A)-50.5 7/19/2007 50 50.5 soil	ND
AOC 7 SS-31(A)-52.5 7/19/2007 52 52.5 soil	ND
AOC 7 SS-31(A)-60.5 7/19/2007 60 60.5 soil	ND
AOC 7 SS-31(A)-65.5 7/19/2007 65 65.5 soil	-
AOC 7 SS-31(B)-5.5 7/19/2007 5 5.5 soil	ND
AOC 7 SS-31(B)-10.5 7/19/2007 10 10.5 soil	ND
AOC 7 SS-31(B)-15.5 7/19/2007 15 15.5 soil	
AOC 7 SS-31(B)-20.5 7/19/2007 20 20.5 soil	ND
AOC 7 SS-31(B)-25.5 7/19/2007 25 25.5 soil	ND ND
AOC 7 SS-31(B)-30.5 7/19/2007 30 30.5 soil	ND ND ND
AOC 7 SS-31(B)-40 7/19/2007 39.5 40 soil	ND ND ND ND
AOC 7 SS-31(B)-50 7/19/2007 49.5 50 soil	ND ND ND

Table 3 - Summary of Analytical Results of Volatile Organic Compounds Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample Location	Sample ID	Date Sampled	Sample top	Interval bottom	Matrix	VOCs *
		-	(feet bgs)	(feet bgs)		
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	ND
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	ND
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	ND
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	ND
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	ND
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	ND
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	ND
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	ND
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	-
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	ND
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	ND
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	ND
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	ND
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	ND
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	ND
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	ND
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	-
AOC 6	SED-1	7/13/2007	0	0.5	soil	-
AOC 6	SED-2	7/13/2007	0	0.5	soil	-
AOC 6	SED-3	7/13/2007	0	0.5	soil	-
AOC 6	SED-4	7/13/2007	0	0.5	soil	-

VOCs = volatile organic compounds

feet bgs = feet below ground surface

<sup>\*</sup> No VOCs were detected above their respective laboratory limits in any of these samples.

<sup>&</sup>quot;-" = sample not analyzed

Table 4 - Summary of Analytical Results of Semivolatile Organic Compounds Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample	Sample ID	Date	Sample	Interval	Matrix	SVOCs *
Location		Sampled	top	bottom		
			(feet bgs)	(feet bgs)		
AOC 3	B-1(A)-4.5	7/17/2007	4	4.5	soil	ND
AOC 3	B-1(A)-9.5	7/17/2007	9	9.5	soil	ND
AOC 3	B-1(A)-35	7/17/2007	34.5	35	soil	_
AOC 3	B-1(A)-36.5	7/17/2007	36	36.5	soil	-
AOC 2	EB-31(A)-5.5	7/17/2007	5	5.5	soil	-
AOC 2	EB-31(A)-10.5	7/17/2007	10	10.5	soil	-
AOC 2	EB-31(A)-15.5	7/17/2007	15	15.5	soil	-
AOC 2	EB-31(A)-20.5	7/17/2007	20	20.5	soil	-
AOC 2	EB-31(B)-5.5	7/16/2007	5	5.5	soil	-
AOC 2	EB-31(B)-10.5	7/16/2007	10	10.5	soil	-
AOC 2	EB-31(B)-15.5	7/16/2007	15	15.5	soil	_
AOC 2	EB-31(B)-20.5	7/16/2007	20	20.5	soil	-
AOC 2	EB-31(C)-5	7/16/2007	4.5	5	soil	-
AOC 2	EB-31(C)-10.5	7/16/2007	10	10.5	soil	-
AOC 2	EB-31(C)-15.5	7/16/2007	15	15.5	soil	-
AOC 2	EB-31(C)-20.5	7/16/2007	20	20.5	soil	-
AOC 3	EB-35(A)-3	7/17/2007	2.5	3	soil	_
AOC 3	EB-35(A)-4	7/17/2007	3.5	4	soil	-
AOC 3	EB-35(A)-9.5	7/17/2007	9	9.5	soil	-
AOC 3	EB-35(B)-2.5	7/17/2007	2	2.5	soil	-
AOC 3	EB-35(B)-5	7/17/2007	4.5	5	soil	-
AOC 3	EB-35(B)-9	7/17/2007	8.5	9	soil	_
AOC 3	EB-35(C)-2.5	7/18/2007	2	2.5	soil	_
AOC 3	EB-35(C)-5.5	7/18/2007	5	5.5	soil	_
AOC 3	EB-35(C)-10.5	7/18/2007	10	10.5	soil	_
AOC 3	EB-35(D)-2.5	7/18/2007	2	2.5	soil	_
AOC 3	EB-35(D)-5.5	7/18/2007	5	5.5	soil	_
AOC 3	EB-35(D)-9.5	7/18/2007	9	9.5	soil	-
AOC 7	SS-31(A)-5.5	7/18/2007	5	5.5	soil	ND
AOC 7	SS-31(A)-10.5	7/18/2007	10	10.5	soil	ND
AOC 7	SS-31(A)-15.5	7/18/2007	15	15.5	soil	-
AOC 7	SS-31(A)-20.5	7/18/2007	20	20.5	soil	-
AOC 7	SS-31(A)-25.5	7/18/2007	25	25.5	soil	-
AOC 7	SS-31(A)-30.5	7/18/2007	30	30.5	soil	-
AOC 7	SS-31(A)-40.5	7/19/2007	40	40.5	soil	-
AOC 7	SS-31(A)-50.5	7/19/2007	50	50.5	soil	-
AOC 7	SS-31(A)-52.5	7/19/2007	52	52.5	soil	-
AOC 7	SS-31(A)-60.5	7/19/2007	60	60.5	soil	-
AOC 7	SS-31(A)-65.5	7/19/2007	65	65.5	soil	-
AOC 7	SS-31(B)-5.5	7/19/2007	5	5.5	soil	ND
AOC 7	SS-31(B)-10.5	7/19/2007	10	10.5	soil	ND
AOC 7	SS-31(B)-15.5	7/19/2007	15	15.5	soil	-
AOC 7	SS-31(B)-20.5	7/19/2007	20	20.5	soil	_
AOC 7	SS-31(B)-25.5	7/19/2007	25	25.5	soil	_
AOC 7	SS-31(B)-30.5	7/19/2007	30	30.5	soil	_
AOC 7	SS-31(B)-40	7/19/2007	39.5	40	soil	_
AOC 7	SS-31(B)-50	7/19/2007	49.5	50	soil	

Table 4 - Summary of Analytical Results of Semivolatile Organic Compounds Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample	Sample ID	Date	Sample	Interval	Matrix	SVOCs *
Location		Sampled	top	bottom		
			(feet bgs)	(feet bgs)		
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	-
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	-
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	-
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	-
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	-
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	-
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	-
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	-
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	-
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	-
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	-
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	-
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	-
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	-
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	-
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	-
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	-
AOC 6	SED-1	7/13/2007	0	0.5	soil	-
AOC 6	SED-2	7/13/2007	0	0.5	soil	-
AOC 6	SED-3	7/13/2007	0	0.5	soil	-
AOC 6	SED-4	7/13/2007	0	0.5	soil	-

SVOCs = semivolatile organic compounds

feet bgs = feet below ground surface

<sup>\*</sup> No SVOCs were detected above their respective laboratory limits in any of these samples.

<sup>&</sup>quot;-" = sample not analyzed

Table 5 - Summary of Analytical Results of Organochlorine Pesticides Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample	Sample ID	Date	Sample	Interval	Matrix	Organochlorine
Location		Sampled	top	bottom		Pesticides *
			(feet bgs)	(feet bgs)		
AOC 3	B-1(A)-4.5	7/17/2007	4	4.5	soil	<u>-</u>
AOC 3	B-1(A)-9.5	7/17/2007	9	9.5	soil	_
AOC 3	B-1(A)-35	7/17/2007	34.5	35	soil	_
AOC 3	B-1(A)-36.5	7/17/2007	36	36.5	soil	-
AOC 2	EB-31(A)-5.5	7/17/2007	5	5.5	soil	-
AOC 2	EB-31(A)-10.5	7/17/2007	10	10.5	soil	-
AOC 2	EB-31(A)-15.5	7/17/2007	15	15.5	soil	-
AOC 2	EB-31(A)-20.5	7/17/2007	20	20.5	soil	-
AOC 2	EB-31(B)-5.5	7/16/2007	5	5.5	soil	-
AOC 2	EB-31(B)-10.5	7/16/2007	10	10.5	soil	-
AOC 2	EB-31(B)-15.5	7/16/2007	15	15.5	soil	-
AOC 2	EB-31(B)-20.5	7/16/2007	20	20.5	soil	-
AOC 2	EB-31(C)-5	7/16/2007	4.5	5	soil	-
AOC 2	EB-31(C)-10.5	7/16/2007	10	10.5	soil	-
AOC 2	EB-31(C)-15.5	7/16/2007	15	15.5	soil	-
AOC 2	EB-31(C)-20.5	7/16/2007	20	20.5	soil	-
AOC 3	EB-35(A)-3	7/17/2007	2.5	3	soil	-
AOC 3	EB-35(A)-4	7/17/2007	3.5	4	soil	-
AOC 3	EB-35(A)-9.5	7/17/2007	9	9.5	soil	-
AOC 3	EB-35(B)-2.5	7/17/2007	2	2.5	soil	-
AOC 3	EB-35(B)-5	7/17/2007	4.5	5	soil	-
AOC 3	EB-35(B)-9	7/17/2007	8.5	9	soil	-
AOC 3	EB-35(C)-2.5	7/18/2007	2	2.5	soil	-
AOC 3	EB-35(C)-5.5	7/18/2007	5	5.5	soil	-
AOC 3	EB-35(C)-10.5	7/18/2007	10	10.5	soil	-
AOC 3	EB-35(D)-2.5	7/18/2007	2	2.5	soil	-
AOC 3	EB-35(D)-5.5	7/18/2007	5	5.5	soil	-
AOC 3	EB-35(D)-9.5	7/18/2007	9	9.5	soil	-
AOC 7	SS-31(A)-5.5	7/18/2007	5	5.5	soil	ND
AOC 7	SS-31(A)-10.5	7/18/2007	10	10.5	soil	ND
AOC 7	SS-31(A)-15.5	7/18/2007	15	15.5	soil	-
AOC 7	SS-31(A)-20.5	7/18/2007	20	20.5	soil	-
AOC 7	SS-31(A)-25.5	7/18/2007	25	25.5	soil	-
AOC 7	SS-31(A)-30.5	7/18/2007	30	30.5	soil	-
AOC 7	SS-31(A)-40.5	7/19/2007	40	40.5	soil	-
AOC 7	SS-31(A)-50.5	7/19/2007	50	50.5	soil	-
AOC 7	SS-31(A)-52.5	7/19/2007	52	52.5	soil	-
AOC 7	SS-31(A)-60.5	7/19/2007	60	60.5	soil	-
AOC 7	SS-31(A)-65.5	7/19/2007	65	65.5	soil	-
AOC 7	SS-31(B)-5.5	7/19/2007	5	5.5	soil	ND
AOC 7	SS-31(B)-10.5	7/19/2007	10	10.5	soil	ND
AOC 7	SS-31(B)-15.5	7/19/2007	15	15.5	soil	-
AOC 7	SS-31(B)-20.5	7/19/2007	20	20.5	soil	-
AOC 7	SS-31(B)-25.5	7/19/2007	25	25.5	soil	-
AOC 7	SS-31(B)-30.5	7/19/2007	30	30.5	soil	-
AOC 7	SS-31(B)-40	7/19/2007	39.5	40	soil	-
AOC 7	SS-31(B)-50	7/19/2007	49.5	50	soil	-

Table 5 - Summary of Analytical Results of Organochlorine Pesticides Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample	Sample ID	Date	Sample	Interval	Matrix	Organochlorine
Location		Sampled	top	bottom		Pesticides *
			(feet bgs)	(feet bgs)		
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	-
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	-
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	-
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	-
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	-
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	-
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	-
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	-
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	-
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	-
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	-
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	-
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	-
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	-
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	-
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	-
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	-
AOC 6	SED-1	7/13/2007	0	0.5	soil	-
AOC 6	SED-2	7/13/2007	0	0.5	soil	-
AOC 6	SED-3	7/13/2007	0	0.5	soil	-
AOC 6	SED-4	7/13/2007	0	0.5	soil	-

feet bgs = feet below ground surface

st No organochlorine pesticides were detected above their respective laboratory limits in any of these samples.

<sup>&</sup>quot;-" = sample not analyzed

Table 6 - Summary of Analytical Results of Polychlorinated Biphenyls Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample	Sample ID	Date	Sample	Interval	Matrix	PCBs *
Location		Sampled	top	bottom		
			(feet bgs)	(feet bgs)		
AOC 3	B-1(A)-4.5	7/17/2007	4	4.5	soil	ND
AOC 3	B-1(A)-9.5	7/17/2007	9	9.5	soil	ND
AOC 3	B-1(A)-35	7/17/2007	34.5	35	soil	-
AOC 3	B-1(A)-36.5	7/17/2007	36	36.5	soil	-
AOC 2	EB-31(A)-5.5	7/17/2007	5	5.5	soil	-
AOC 2	EB-31(A)-10.5	7/17/2007	10	10.5	soil	-
AOC 2	EB-31(A)-15.5	7/17/2007	15	15.5	soil	-
AOC 2	EB-31(A)-20.5	7/17/2007	20	20.5	soil	-
AOC 2	EB-31(B)-5.5	7/16/2007	5	5.5	soil	-
AOC 2	EB-31(B)-10.5	7/16/2007	10	10.5	soil	-
AOC 2	EB-31(B)-15.5	7/16/2007	15	15.5	soil	-
AOC 2	EB-31(B)-20.5	7/16/2007	20	20.5	soil	-
AOC 2	EB-31(C)-5	7/16/2007	4.5	5	soil	-
AOC 2	EB-31(C)-10.5	7/16/2007	10	10.5	soil	-
AOC 2	EB-31(C)-15.5	7/16/2007	15	15.5	soil	-
AOC 2	EB-31(C)-20.5	7/16/2007	20	20.5	soil	-
AOC 3	EB-35(A)-3	7/17/2007	2.5	3	soil	-
AOC 3	EB-35(A)-4	7/17/2007	3.5	4	soil	-
AOC 3	EB-35(A)-9.5	7/17/2007	9	9.5	soil	-
AOC 3	EB-35(B)-2.5	7/17/2007	2	2.5	soil	-
AOC 3	EB-35(B)-5	7/17/2007	4.5	5	soil	-
AOC 3	EB-35(B)-9	7/17/2007	8.5	9	soil	-
AOC 3	EB-35(C)-2.5	7/18/2007	2	2.5	soil	-
AOC 3	EB-35(C)-5.5	7/18/2007	5	5.5	soil	-
AOC 3	EB-35(C)-10.5	7/18/2007	10	10.5	soil	_
AOC 3	EB-35(D)-2.5	7/18/2007	2	2.5	soil	-
AOC 3	EB-35(D)-5.5	7/18/2007	5	5.5	soil	-
AOC 3	EB-35(D)-9.5	7/18/2007	9	9.5	soil	-
AOC 7	SS-31(A)-5.5	7/18/2007	5	5.5	soil	ND
AOC 7	SS-31(A)-10.5	7/18/2007	10	10.5	soil	ND
AOC 7	SS-31(A)-15.5	7/18/2007	15	15.5	soil	-
AOC 7	SS-31(A)-20.5	7/18/2007	20	20.5	soil	-
AOC 7	SS-31(A)-25.5	7/18/2007	25	25.5	soil	-
AOC 7	SS-31(A)-30.5	7/18/2007	30	30.5	soil	-
AOC 7	SS-31(A)-40.5	7/19/2007	40	40.5	soil	-
AOC 7	SS-31(A)-50.5	7/19/2007	50	50.5	soil	-
AOC 7	SS-31(A)-52.5	7/19/2007	52	52.5	soil	-
AOC 7	SS-31(A)-60.5	7/19/2007	60	60.5	soil	-
AOC 7	SS-31(A)-65.5	7/19/2007	65	65.5	soil	-
AOC 7	SS-31(B)-5.5	7/19/2007	5	5.5	soil	ND
AOC 7	SS-31(B)-10.5	7/19/2007	10	10.5	soil	ND
AOC 7	SS-31(B)-15.5	7/19/2007	15	15.5	soil	-
AOC 7	SS-31(B)-20.5	7/19/2007	20	20.5	soil	-
AOC 7	SS-31(B)-25.5	7/19/2007	25	25.5	soil	-
AOC 7	SS-31(B)-30.5	7/19/2007	30	30.5	soil	-
AOC 7	SS-31(B)-40	7/19/2007	39.5	40	soil	-
AOC 7	SS-31(B)-50	7/19/2007	49.5	50	soil	_

Table 6 - Summary of Analytical Results of Polychlorinated Biphenyls Detected in Soil Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Sample Location	Sample ID	Date Sampled	Sample top	Interval bottom	Matrix	PCBs *
			(feet bgs)	(feet bgs)		
AOC 7	SS-31(B)-60.5	7/19/2007	60	60.5	soil	-
AOC 7	SS-31(C)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(C)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(C)-15.5	7/20/2007	15	15.5	soil	-
AOC 7	SS-31(C)-19.5	7/20/2007	19	19.5	soil	-
AOC 7	SS-31(C)-25.5	7/20/2007	25	25.5	soil	-
AOC 7	SS-31(C)-30	7/20/2007	29.5	30	soil	-
AOC 7	SS-31(C)-40	7/20/2007	39.5	40	soil	-
AOC 7	SS-31(C)-51	7/20/2007	50.5	51	soil	-
AOC 7	SS-31(C)-60.5	7/20/2007	60	60.5	soil	-
AOC 7	SS-31(C)-67.5	7/20/2007	67	67.5	soil	-
AOC 7	SS-31(D)-5.5	7/20/2007	5	5.5	soil	ND
AOC 7	SS-31(D)-10.5	7/20/2007	10	10.5	soil	ND
AOC 7	SS-31(D)-15	7/20/2007	14.5	15	soil	-
AOC 7	SS-31(D)-19.5	7/20/2007	19	19.5	soil	-
AOC 7	SS-31(D)-25	7/23/2007	24.5	25	soil	-
AOC 7	SS-31(D)-30	7/23/2007	29.5	30	soil	-
AOC 7	SS-31(D)-40	7/23/2007	39.5	40	soil	-
AOC 7	SS-31(D)-50.5	7/23/2007	50	50.5	soil	-
AOC 7	SS-31(D)-60.5	7/23/2007	60	60.5	soil	-
AOC 8	SS-123(AA)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(AA)-7.5	7/24/2007	7	7.5	soil	-
AOC 8	SS-123(AA)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(AA)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(AA)-18	7/24/2007	17.5	18	soil	-
AOC 8	SS-123(F1)-5.5	7/23/2007	5	5.5	soil	-
AOC 8	SS-123(F1)-15.5	7/23/2007	15	15.5	soil	-
AOC 8	SS-123(F2)-6	7/23/2007	5.5	6	soil	-
AOC 8	SS-123(F2)-11.5	7/23/2007	11	11.5	soil	-
AOC 8	SS-123(F2)-16.5	7/23/2007	16	16.5	soil	-
AOC 8	SS-123(F2)-21	7/24/2007	20.5	21	soil	-
AOC 8	SS-123(F3)-5.5	7/24/2007	5	5.5	soil	-
AOC 8	SS-123(F3)-10.5	7/24/2007	10	10.5	soil	-
AOC 8	SS-123(F3)-15.5	7/24/2007	15	15.5	soil	-
AOC 8	SS-123(F3)-20.5	7/24/2007	20	20.5	soil	-
AOC 8	SS-123(F3)-25.5	7/24/2007	25	25.5	soil	-
AOC 6	SED-1	7/13/2007	0	0.5	soil	-
AOC 6	SED-2	7/13/2007	0	0.5	soil	-
AOC 6	SED-3	7/13/2007	0	0.5	soil	-
AOC 6	SED-4	7/13/2007	0	0.5	soil	-

PCBs = polychlorinated biphenyls

feet bgs = feet below ground surface

"-" = sample not analyzed

<sup>\*</sup> No organochlorine pesticides were detected above their respective laboratory limits in any of these samples.

(Concentrations reported in millgrams per kilogram (mg/Kg))

Sample Sample ID	Date	Sample	Interval	Matrix								Tot	al Meta	ıls (mg/	Kg)						
Location	Sampled	top (feet bgs)	bottom (feet bgs)		Ag	As	Ва	Be	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Sb	Se	Tİ	V	Zn
AOC 3 B-1(A)-4.5	7/17/2007	4	4.5	soil	< 0.25		160	0.2				28	0.026		60	8.8		< 0.5		23	51
AOC 3 B-1(A)-9.5	7/17/2007	9	9.5	soil	< 0.25	4.6	160	0.3	< 0.25	13	56	26	0.023	0.41	85	8	< 0.5	< 0.5	< 0.5	29	54
AOC 3 B-1(A)-35	7/17/2007	34.5	35	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 B-1(A)-36.5	7/17/2007	36	36.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(A)-5.5	7/17/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(A)-10.5	7/17/2007	10	10.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(A)-15.5	7/17/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(A)-20.5	7/17/2007	20	20.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(B)-5.5	7/16/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(B)-10.5	7/16/2007	10	10.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(B)-15.5	7/16/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(B)-20.5	7/16/2007	20	20.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(C)-5	7/16/2007	4.5	5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(C)-10.5	7/16/2007	10	10.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(C)-15.5	7/16/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 2 EB-31(C)-20.5	7/16/2007	20	20.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(A)-3	7/17/2007	2.5	3	soil	_	-	_	-	-	_	_	_	-	-	-	_	-	-	_	-	_
AOC 3 EB-35(A)-4	7/17/2007	3.5	4	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(A)-9.5	7/17/2007	9	9.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(B)-2.5	7/17/2007	2	2.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(B)-5	7/17/2007	4.5	5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(B)-9	7/17/2007	8.5	9	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(C)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(C)-5.5	7/18/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(C)-10.5	7/18/2007	10	10.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(D)-2.5	7/18/2007	2	2.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(D)-5.5	7/18/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 3 EB-35(D)-9.5	7/18/2007	9	9.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(A)-5.5	7/18/2007	5	5.5	soil	< 0.25	8.3	260	0.4	< 0.25	9.8	27	35	0.13	< 0.2	40	6.9	0.95	< 0.5	< 0.5	39	46
AOC 7 SS-31(A)-10.5	7/18/2007	10	10.5	soil	< 0.25	5.5	170	0.5	< 0.25	15	72	46	0.055	0.41	100	10	1.6	< 0.5	< 0.5	35	70
AOC 7 SS-31(A)-15.5	7/18/2007	15	15.5	soil	_	-	_	_	-	-	-	_	-	-	_	_	-	_	_	-	-
AOC 7 SS-31(A)-20.5	7/18/2007	20	20.5	soil	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AOC 7 SS-31(A)-25.5	7/18/2007	25	25.5	soil	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

(Concentrations reported in millgrams per kilogram (mg/Kg))

Sample Sample ID	Date	Sample	Interval	Matrix								Tot	al Meta	als (mg/	Kg)						
Location	Sampled	top	bottom		Ag	As	Ba	Be	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Sb	Se	ΤI	V	Zn
		(feet bgs)	(feet bgs)																		
AOC 7 SS-31(A)-30.	.5 7/18/2007	30	30.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AOC 7 SS-31(A)-40.	5 7/19/2007	40	40.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(A)-50.	5 7/19/2007	50	50.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(A)-52.	.5 7/19/2007	52	52.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(A)-60.	.5 7/19/2007	60	60.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(A)-65.	.5 7/19/2007	65	65.5	soil	-		-	-	-			-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(B)-5.5	7/19/2007	5	5.5	soil	< 0.25		180	0.4	< 0.25	16	65	34	0.072		100	11	1.6	< 0.5	< 0.5	34	63
AOC 7 SS-31(B)-10.	5 7/19/2007	10	10.5	soil	< 0.25	5.6	150	0.4	< 0.25	12	59	28	0.052	< 0.2	90	8.2	1.8	< 0.5	< 0.5	32	53
AOC 7 SS-31(B)-15.	5 7/19/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(B)-20.	5 7/19/2007	20	20.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(B)-25.	5 7/19/2007	25	25.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(B)-30.	5 7/19/2007	30	30.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(B)-40	7/19/2007	39.5	40	soil	-	-	-	-	-	-	_	-	-	_	-	-	_	-	-	-	-
AOC 7 SS-31(B)-50	7/19/2007	49.5	50	soil	-	-	-	_	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(B)-60.	5 7/19/2007	60	60.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(C)-5.5	7/20/2007	5	5.5	soil	< 0.25	7.3	260	0.4	< 0.25	8.2	22	18	0.089	< 0.2	28	5.2	< 0.5	< 0.5	< 0.5	35	38
AOC 7 SS-31(C)-10.	5 7/20/2007	10	10.5	soil	< 0.25	6.3	270	0.4	< 0.25	12	44	25	0.091	< 0.2	<b>71</b>	6.4	< 0.5	< 0.5	< 0.5	36	45
AOC 7 SS-31(C)-15.	5 7/20/2007	15	15.5	soil	-	-	-	_	-	_	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(C)-19.	5 7/20/2007	19	19.5	soil	-	-	-	_	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(C)-25.	5 7/20/2007	25	25.5	soil	-	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-	-
AOC 7 SS-31(C)-30	7/20/2007	29.5	30	soil	_	_	_	_	_	_	_	_	-	_	_	_	_	-	_	_	-
AOC 7 SS-31(C)-40	7/20/2007	39.5	40	soil	_	_	_	_	_	_	_	_	-	_	_	_	_	-	_	_	-
AOC 7 SS-31(C)-51	7/20/2007	50.5	51	soil	_	_	_	_	_	_	_	_	-	_	_	_	_	-	_	_	-
AOC 7 SS-31(C)-60.	5 7/20/2007	60	60.5	soil	_	_	_	_	_	_	_	_	-	_	_	_	_	-	_	_	-
AOC 7 SS-31(C)-67.		67	67.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7 SS-31(D)-5.5	7/20/2007	5	5.5	soil	< 0.25	5	270	0.4	< 0.25	9.7	39	22	0.058	< 0.2	63	4.6	< 0.5	< 0.5	< 0.5	30	38
AOC 7 SS-31(D)-10.	.5 7/20/2007	10	10.5	soil	< 0.25	6	330	0.4	< 0.25	5 11	38	25	0.087	< 0.2	57	6.6	< 0.5	< 0.5	< 0.5	36	45
AOC 7 SS-31(D)-15	7/20/2007	14.5	15	soil	_	-	_	_	_	_	_	_	-	_	_	_	_	-	_	_	-
AOC 7 SS-31(D)-19.	.5 7/20/2007	19	19.5	soil	-	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_
AOC 7 SS-31(D)-25	7/23/2007	24.5	25	soil	-	_	_	_	_	_	_	_	_	-	_	_	_	-	_	_	_
AOC 7 SS-31(D)-30	7/23/2007	29.5	30	soil	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AOC 7 SS-31(D)-40	7/23/2007	39.5	40	soil	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AOC 7 SS-31(D)-50.		50	50.5	soil	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AOC 7 SS-31(D)-60.		60	60.5	soil	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

(Concentrations reported in millgrams per kilogram (mg/Kg))

Sample Sample ID	Date	Sample	Interval	Matrix								Tot	al Met	als (mg	/Kg)						
Location	Sampled	top	bottom		Ag	As	Ва	Be	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Sb	Se	ΤI	V	Zn
		(feet bgs)	) (feet bgs)	)	J								Ü								
AOC 8 SS-123(AA)-5.5	7/24/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(AA)-7.5	7/24/2007	7	7.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(AA)-10.5	7/24/2007	10	10.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(AA)-15.5	7/24/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(AA)-18	7/24/2007	17.5	18	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F1)-5.5	7/23/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F1)-15.5	7/23/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F2)-6	7/23/2007	5.5	6	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F2)-11.5	7/23/2007	11	11.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F2)-16.5	7/23/2007	16	16.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F2)-21	7/24/2007	20.5	21	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F3)-5.5	7/24/2007	5	5.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F3)-10.5	7/24/2007	10	10.5	soil	-	-	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-
AOC 8 SS-123(F3)-15.5	7/24/2007	15	15.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F3)-20.5	7/24/2007	20	20.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8 SS-123(F3)-25.5	7/24/2007	25	25.5	soil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 6 SED-1	7/13/2007	0	0.5	soil	< 0.25	3.6	120	0.3	< 0.25	9	43	23	0.04	0.26	64	5	< 0.5	< 0.5	< 0.5	23	42
AOC 6 SED-2	7/13/2007	0	0.5	soil	< 0.25	2.9	96	0.2	< 0.25	7.5	37	20	0.053	0.41	55	5.6	< 0.5	< 0.5	< 0.5	19	47
AOC 6 SED-3	7/13/2007	0	0.5	soil	< 0.25	2.9	120	0.3	< 0.25	8.6	44	32	0.065	0.58	67	8.5	< 0.5	< 0.5	< 0.5	22	70
AOC 6 SED-4	7/13/2007	0	0.5	soil	< 0.25	3.4	140	0.3	< 0.25	10	49	33	0.051	0.33	<b>76</b>	7.6	0.57	< 0.5	< 0.5	25	59
ESLs	shallo	w soils (le	ess than 10	feet bgs)	40	5.5	1,500	8	7.4	10	58	230	10	40	150	750	40	10	13	200	600
ESLs		,	er than 10 f	· ·			2,500		38	10		5,000	98	3,600	1,000	750	280	3,400	47	5,000	5,000

(Concentrations reported in millgrams per kilogram (mg/Kg))

Sample Sample ID	Total Metals (mg/Kg)																	
Location	Sampled top	bottom	Ag	As	Ва	Be	Cd	Co Cr	Cu	Hg	Mo	Ni	Pb	Sb	Se	Tl	V	Zn
Notes:		_																
Ag = silver	Cr = Chromium	Sb = Antimony																
As = arsenic	Cu = Copper	Se = Selenium																
Ba = barium	Hg = Mercury	Tl = Thallium																
Be = beryllium	Mo = Molybdenum	V = Vanadium																
Cd = cadmium	Ni = Nickel $Zn = Zinc$																	
Co = cobalt	Pb = Lead																	
feet bgs = feet below ground s																		

mg/Kg = milligrams per kilogram

bold indicates that the compound was detected above the laboratory reporting limi

boxed values exceed the respective ESL.

<sup>&</sup>quot;<" = not detected above the laboratory report given

<sup>&</sup>quot;-" = sample not analyzed or ESL not established

(Concentrations reported in milligrams per liter (ug/L))

Sample	Sample ID	troleum Hydr	ocarbons		BTEX compounds								
Location	•	Sampled	Sample Depth (feet bgs)		TPHd (ug/L)	TPHmo (ug/L)	TPHg (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	m,p-X (ug/L)	o-X (ug/L)	
AOC 3	B-1(A)-GGW	7/18/2007	~ 67.6	water	79 HY	1,100 H	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 2	EB-31(B)-GGW	7/16/2007	~ 64.8	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 7	SS-31(A)-GGW	7/19/2007	~ 65.2	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 7	SS-31(B)-GGW	7/20/2007	~ 66	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 7	SS-31(C)-GGW	7/20/2007	~ 66	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 7	SS-31(D)-GGW	7/23/2007	~ 66.8	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 8	SS-123(AA)-GGW	7/24/2007	~15.7	water	340 HY	2,400 HL	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 8	SS-123(F1)-GGW	7/23/2007	~ 20.8	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 8	SS-123(F2)-GGW	7/24/2007	~ 25.8	water	990 HY	4,000 HL	< 50	< 0.5	2.2	< 0.5	< 0.5	< 0.5	
AOC 8	SS-123(F3)-GGW	7/24/2007	~ 26.9	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
AOC 6	PW-2	7/13/2007	surface	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
ESLs					100	100	100	1	40	30	20	20	

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per literB = benzeneTPHd = total petroleum hydrocarbons as dieselT = tolueneTPHmo = total petroleum hydrocarbons as motor oilE = ethylbenzeneTPHg = total petroleum hydrocarbons as gasolinem,p-X = m,p-xylenesBTEX = benzene, toluene, ethylbenzene, and total xyleneso-X = o-xylenes

bold indicates that the compound was detected above the laboratory reporting limit.

boxed values exceed the respective ESL.

H = heavier hydrocarbons contributed to the quantitation

Y = sample exhibits chromatographic pattern that does not resemble standard

L = lighter hydrocarbons contributed to the quantitation

<sup>&</sup>quot; < " = not detected above the laboratory report given

(Concentrations reported in milligrams per liter (ug/L))

Sample	Sample ID Date Approximate Matrix Fuel Oxygenates									Lead Sca	avengers
Location		Sampled	Sample Depth (feet bgs)		MTBE (ug/L)	TAME (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TBA (ug/L)	EDB (ug/L)	EDC (ug/L)
AOC 3	B-1(A)-GGW	7/18/2007	~ 67.6	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 2	EB-31(B)-GGW	7/16/2007	~ 64.8	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 7	SS-31(A)-GGW	7/19/2007	~ 65.2	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 7	SS-31(B)-GGW	7/20/2007	~ 66	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 7	SS-31(C)-GGW	7/20/2007	~ 66	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 7	SS-31(D)-GGW	7/23/2007	~ 66.8	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 8	SS-123(AA)-GGW	7/24/2007	~15.7	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 8	SS-123(F1)-GGW	7/23/2007	~ 20.8	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 8	SS-123(F2)-GGW	7/24/2007	~ 25.8	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 8	SS-123(F3)-GGW	7/24/2007	~ 26.9	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
AOC 6	PW-2	7/13/2007	surface	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
ESLs					2	-	-	-	12	0.05	0.5

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

MTBE = methyl tert-butyl ether

TAME = tert-amyl methyl ether (methyl tert-amyl ether)

DIPE = diisopropyl ether (isopropyl ether)

ETBE = ethyl tert-butyl ether

TBA = tert-butyl alcohol

EDB = 1,2-dibromoethane (ethylene dibromide)

EDC = 1,2-dichloroethane

<sup>&</sup>quot;<" = not detected above the laboratory report given

<sup>&</sup>quot;-" = ESL not established

# Table 9 - Summary of Analytical Results of Volatile Organic Compounds Detected in Groundwater and Surface-Water Samples Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in milligrams per liter (ug/L))

Sample Sample ID Location	Date Sampled	Approximate Sample Depth	epth Acetone Carbon Disulfide para-Isopropyl Toluene		Naphthalene		•		
		(feet bgs)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
AOC 3 B-1(A)-GGW	7/18/2007	~ 67.6	water	10	< 0.5	< 0.5	<2	< 0.5	< 0.5
AOC 2 EB-31(B)-GGW	7/16/2007	~ 64.8	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 7 SS-31(A)-GGW	7/19/2007	~ 65.2	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 7 SS-31(B)-GGW	7/20/2007	~ 66	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 7 SS-31(C)-GGW	7/20/2007	~ 66	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 7 SS-31(D)-GGW	7/23/2007	~ 66.8	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 8 SS-123(AA)-GGW	7/24/2007	~ 15.7	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 8 SS-123(F1)-GGW	7/23/2007	~ 20.8	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 8 SS-123(F2)-GGW	7/24/2007	~ 25.8	water	< 10	0.5	0.7	4.6	2.2	0.7
AOC 8 SS-123(F3)-GGW	7/24/2007	~ 26.9	water	< 10	< 0.5	< 0.5	< 2	< 0.5	< 0.5
AOC 6 PW-2	7/13/2007	surface	water	< 10	< 0.5	< 0.5	<2	< 0.5	< 0.5
ESLs				1,500	-	-	17	40	-

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

**bold** indicates that the compound was detected above the laboratory reporting limit.

<sup>\*</sup> No other VOCs were detected above their respective laboratory limits in these samples.

<sup>&</sup>quot;<" = not detected above the laboratory report given

<sup>&</sup>quot;-" = ESL not established

# Table 10 - Summary of Analytical Results of CAM17 Metals Detected in Groundwater and Surface-Water Sample Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in micrograms per liter (ug/L))

Sample	Sample ID	Date	Approximate	Matrix							Dis	solve	d Meta	ls (ug	/L)						
Location		Sampled	Sample Depth (feet bgs)		Ag	As	Ва	Be	Cd	Co	Cr	Cu	Hg	Мо	Ni	Pb	Sb	Se	Tİ	V	Zn
AOC 3	B-1(A)-GGW	7/18/2007	~ 67.6	water	_	-	-	-	-	_	_	-	-	-	_	-	-	_	-	_	_
AOC 2	EB-31(B)-GGW	7/16/2007	~ 64.8	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7	SS-31(A)-GGW	7/19/2007	~ 65.2	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7	SS-31(B)-GGW	7/20/2007	~ 66	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7	SS-31(C)-GGW	7/20/2007	~ 66	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 7	SS-31(D)-GGW	7/23/2007	~ 66.8	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(AA)-GGW	7/24/2007	~15.7	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F1)-GGW	7/23/2007	~ 20.8	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F2)-GGW	7/24/2007	~ 25.8	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 8	SS-123(F3)-GGW	7/24/2007	~ 26.9	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AOC 6	PW-2	7/13/2007	surface	filtrate	< 5	5.5	170	<2	<5	<5	<5	<5	< 0.2	<5	6	<3	< 10	< 10	< 10	<5	24
ESLs					0.19	36	1,000	2.7	1.1	3	50	3.1	0.012	35	8.2	2.5	6	5	2	15	81

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

bold indicates that the compound was detected above the laboratory reporting limit.

Cr = ChromiumAg = SilverSb = AntimonyCu = CopperSe = Selenium As = ArsenicBa = Barium Hg = Mercury T1 = Thallium Mo = MolybdenumBe = Beryllium V = Vanadium Cd = CadmiumNi = Nickel Zn = ZincCo = CobaltPb = Lead

<sup>&</sup>quot;-" = sample not analyzed

<sup>&</sup>quot; < " = not detected above the laboratory report given

## Table 11A - Summary of Analytical Results of Petroleum Hydrocarbons and Associated Compounds Detected in Samples from Groundwater Monitoring Wells Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in milligrams per liter (ug/L))

Sample	Sample ID	Date	Approximate	Matrix	Total Pet	Total Petroleum Hydrocarbons			ВТ	EX compou	nds	
Location		Sampled	Sample Depth (feet bgs)		TPHd (ug/L)	TPHmo (ug/L)	TPHg (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	m,p-X (ug/L)	o-X (ug/L)
3S/1E 14D1	TW-5	7/12/2007	~ 50	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3S/1E 10D8	3S/1E 10D8	7/25/2007	~ 200	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3S/1E 10K2	3S/1E 10K2	7/25/2007	~ 300	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3S/1E 10K2	MW-10	7/25/2007	~ 300	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3S/1E 10N3	3S/1E 10N3	7/25/2007	~ 180	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trip Blank	TB-072507	7/25/2007	na	water	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ESLs					100	100	100	1	40	30	20	20

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

MW-10 = blind duplicate of 3S/1E 10K2

TPHd = total petroleum hydrocarbons as diesel

TPHmo = total petroleum hydrocarbons as motor oil

TPHg = total petroleum hydrocarbons as gasoline

BTEX = benzene, toluene, ethylbenzene, and total xylenes

B = benzene

T = toluene

E = ethylbenzene

m,p-X = m,p-xylenes

o-X = o-xylenes

<sup>&</sup>quot;<" = not detected above the laboratory report given

<sup>&</sup>quot;-" = sample not analyzed or ESL not established

# Table11B - Summary of Analytical Results of Petroleum Hydrocarbons and Associated Compounds Detected in Samples from Groundwater Monitoring Wells Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in milligrams per liter (ug/L))

Sample Location	Sample ID	Date Sampled	Approximate Sample Depth (feet bgs)	Matrix	MTBE (ug/L)	TAME (ug/L)	uel Oxygenat DIPE (ug/L)	es ETBE (ug/L)	TBA (ug/L)	Lead Sca EDB (ug/L)	avengers EDC (ug/L)
3S/1E 14D1	TW-5	7/12/2007	~ 50	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
3S/1E 10D8	3S/1E 10D8	7/25/2007	~ 200	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
3S/1E 10K2	3S/1E 10K2	7/25/2007	~ 300	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
3S/1E 10K2	MW-10	7/25/2007	~ 300	water	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5
3S/1E 10N3	3S/1E 10N3	7/25/2007	~ 180	water	< 0.5	< 0.5	< 0.5	< 0.5	<10	< 0.5	< 0.5
Trip Blank	TB-072507	7/25/2007	na	water	< 0.5	-	-	-	-	< 0.5	< 0.5
ESLs					5	-	-	-	12	0.05	0.5

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

MW-10 = blind duplicate of 3S/1E 10K2

MTBE = methyl tert-butyl ether

TAME = tert-amyl methyl ether (methyl tert-amyl ether)

DIPE = diisopropyl ether (isopropyl ether)

ETBE = ethyl tert-butyl ether

TBA = tert-butyl alcohol

EDB = ethylene dibromide (1,2-dibromoethane)

EDC = 1,2-dichloroethane

"<" = not detected above the laboratory report given

<sup>&</sup>quot;-" = sample not analyzed or ESL not established

# Table 12 - Summary of Analytical Results of Volatile Organic Compounds Detected in Samples from Groundwater Monitoring Wells Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in milligrams per liter (ug/L))

Sample Location	Sample ID	Date Sampled	Approximate Sample Depth (feet bgs)	Matrix	Volatile Organic Compounds * Bromomethane (ug/L)
3S/1E 14D1	TW-5	7/12/2007	~ 50	water	<1
3S/1E 10D8	3S/1E 10D8	7/25/2007	~ 200	water	<1
3S/1E 10K2	3S/1E 10K2	7/25/2007	~ 300	water	<1
3S/1E 10K2	MW-10	7/25/2007	~ 300	water	<1
3S/1E 10N3	3S/1E 10N3	7/25/2007	~ 180	water	<1
Trip Blank	TB-072507	7/25/2007	na	water	0.6 J
ESLs					9.8

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

MW-10 = blind duplicate of 3S/1E 10K2

VOCs = volatile organic compounds

**bold** indicates that the compound was detected above the laboratory reporting limit.

<sup>\*</sup> No other VOCs were detected above their respective laboratory limits in these samples.

<sup>&</sup>quot;<" = not detected above the laboratory report given

<sup>&</sup>quot;J" = estimated value below the laboratory reporting limit

# Table 13 - Summary of Analytical Results of Semivolatile Organic Compounds Detected in Samples from Groundwater Monitoring Wells Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in milligrams per liter (ug/L))

Sample Location	Sample ID	Date Sampled	Approximate Sample Depth (feet bgs)	Matrix	Semi-Volatile Organic Compounds * bis(2-Ethylhexyl)phthalate (ug/L)
3S/1E 14D1	TW-5	7/12/2007	~ 50	water	<9.4
3S/1E 10D8	3S/1E 10D8	7/25/2007	~ 200	water	25
3S/1E 10K2	3S/1E 10K2	7/25/2007	~ 300	water	< 9.4
3S/1E 10K2	MW-10	7/25/2007	~ 300	water	< 9.4
3S/1E 10N3	3S/1E 10N3	7/25/2007	~ 180	water	<9.4
Trip Blank	TB-072507	7/25/2007	na	water	-
ESLs					4

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

MW-10 = blind duplicate of 3S/1E 10K2

SVOCs = semivolatile organic compounds

bold indicates that the compound was detected above the laboratory reporting limit.

boxed values exceed the respective ESL.

<sup>\*</sup> No other SVOCs were detected above their respective laboratory limits in these samples.

<sup>&</sup>quot;<" = not detected above the laboratory report given

<sup>&</sup>quot;-" = sample not analyzed

# Table 14 - Summary of Analytical Results of CAM 17 Metals Detected in Samples from Groundwater Monitoring Wells Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in micrograms per liter (ug/L))

Sample	Sample ID	Date	Approximate	Matrix									l Meta								<del></del>
Location		Sampled	Sample Depth (feet bgs)		Ag	As	Ва	Be	Cd	Со	Cr	Cu	Hg	Mo	Ni	Pb	Sb	Se	TI	V	Zn
3S/1E 14D1	TW-5	7/12/2007	~ 50	filtrate	< 5	< 5	280	<2	< 5	< 5	< 5	< 5	< 0.2	< 5	<5	<3	< 10	<10	< 10	< 5	30
3S/1E 10D8	3S/1E 10D8	7/25/2007	~ 200	filtrate	< 1	1.2	370	< 1	< 1	< 1	6.3	<1	0.63	1.2	1.3	< 1	< 1	< 1	<1	3.4	8
3S/1E 10K2	3S/1E 10K2	7/25/2007	~ 300	filtrate	<1	< 1	230	< 1	< 1	< 1	7.6	<1	< 0.2	<1	<1	<1	<1	<1	<1	1.5	< 5
3S/1E 10K2	MW-10	7/25/2007	~ 300	filtrate	< 1	< 1	230	< 1	< 1	<1	7.8	< 1	< 0.2	< 1	<1	< 1	< 1	<1	< 1	1.6	< 5
3S/1E 10N3	3S/1E 10N3	7/25/2007	~ 180	filtrate	<1	< 1	260	<1	<1	<1	2.6	<1	< 0.2	<1	<1	<1	<1	<1	<1	1.4	< 5
Trip Blank	TB-072507	7/25/2007	na	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ESLs					0.19	36	1,000	2.7	1.1	3	50	3.1	0.012	35	8.2	2.5	6	5	2	15	81

#### Notes:

feet bgs = feet below ground surface

ug/L = micrograms per liter

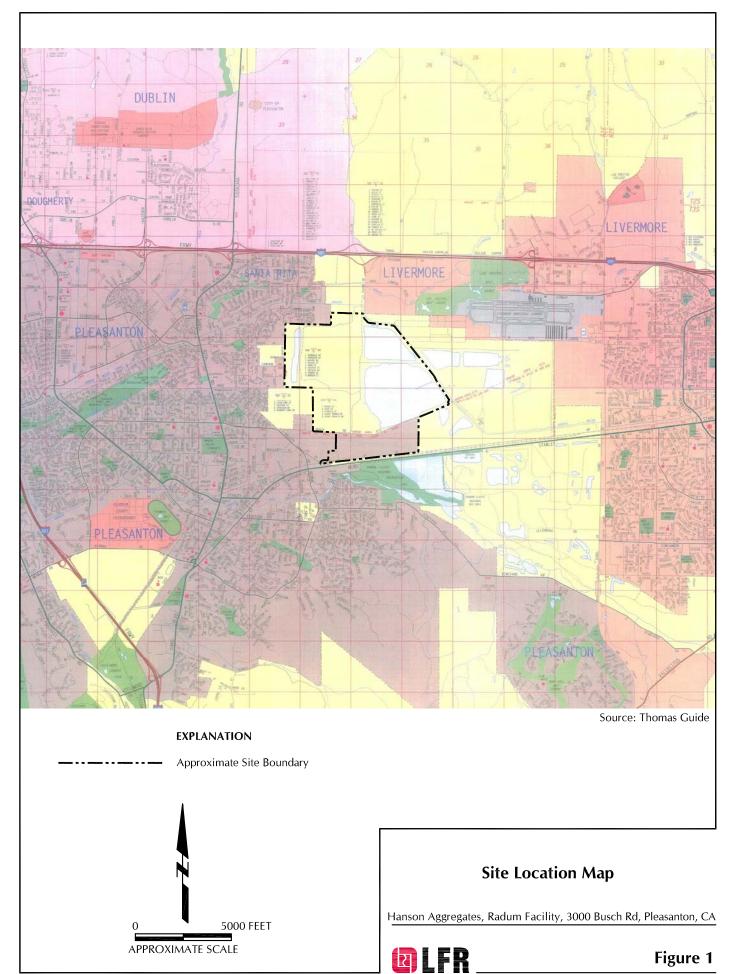
MW-10 = blind duplicate of 3S/1E 10K2

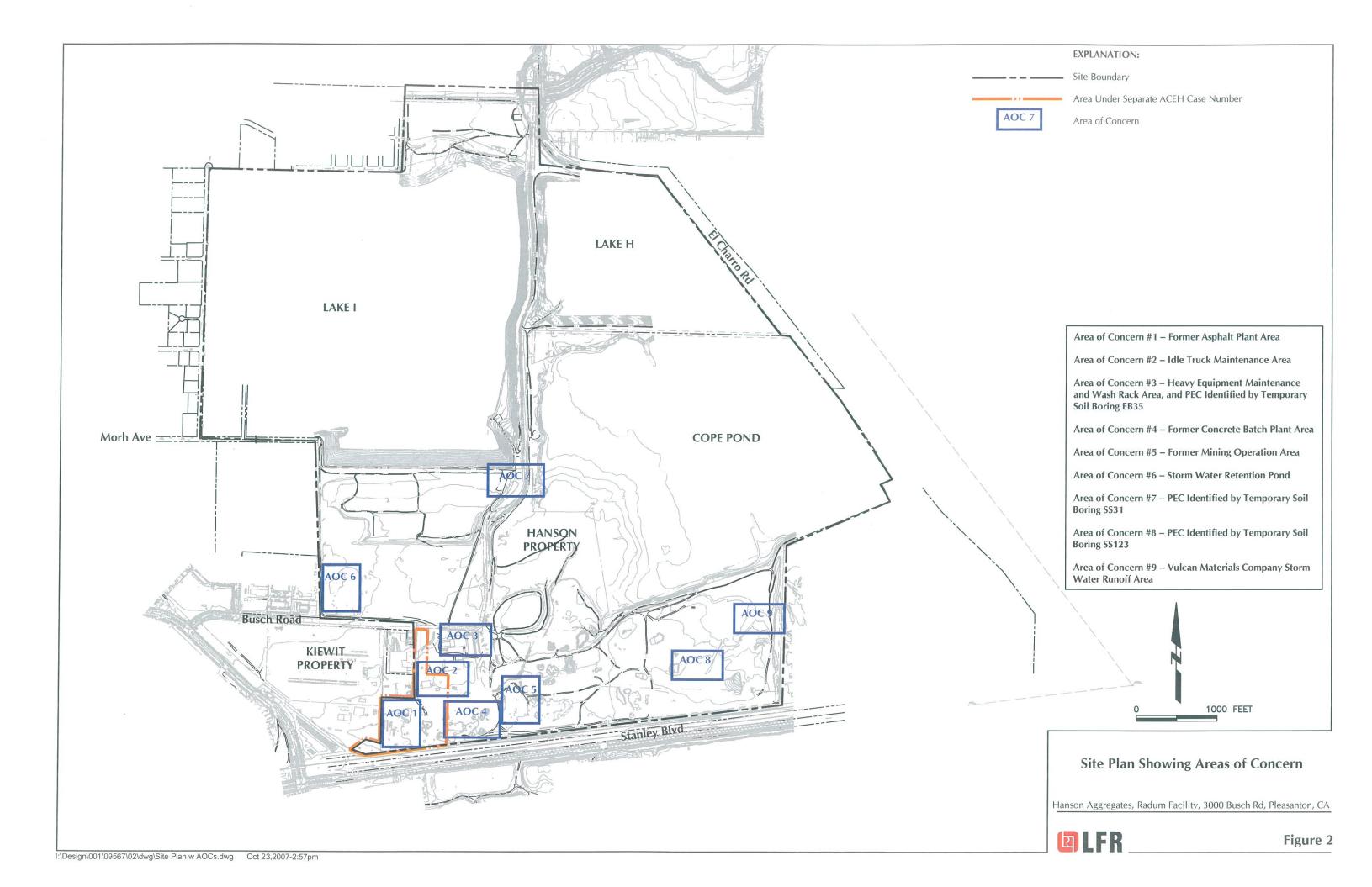
"<" = not detected above the laboratory report given

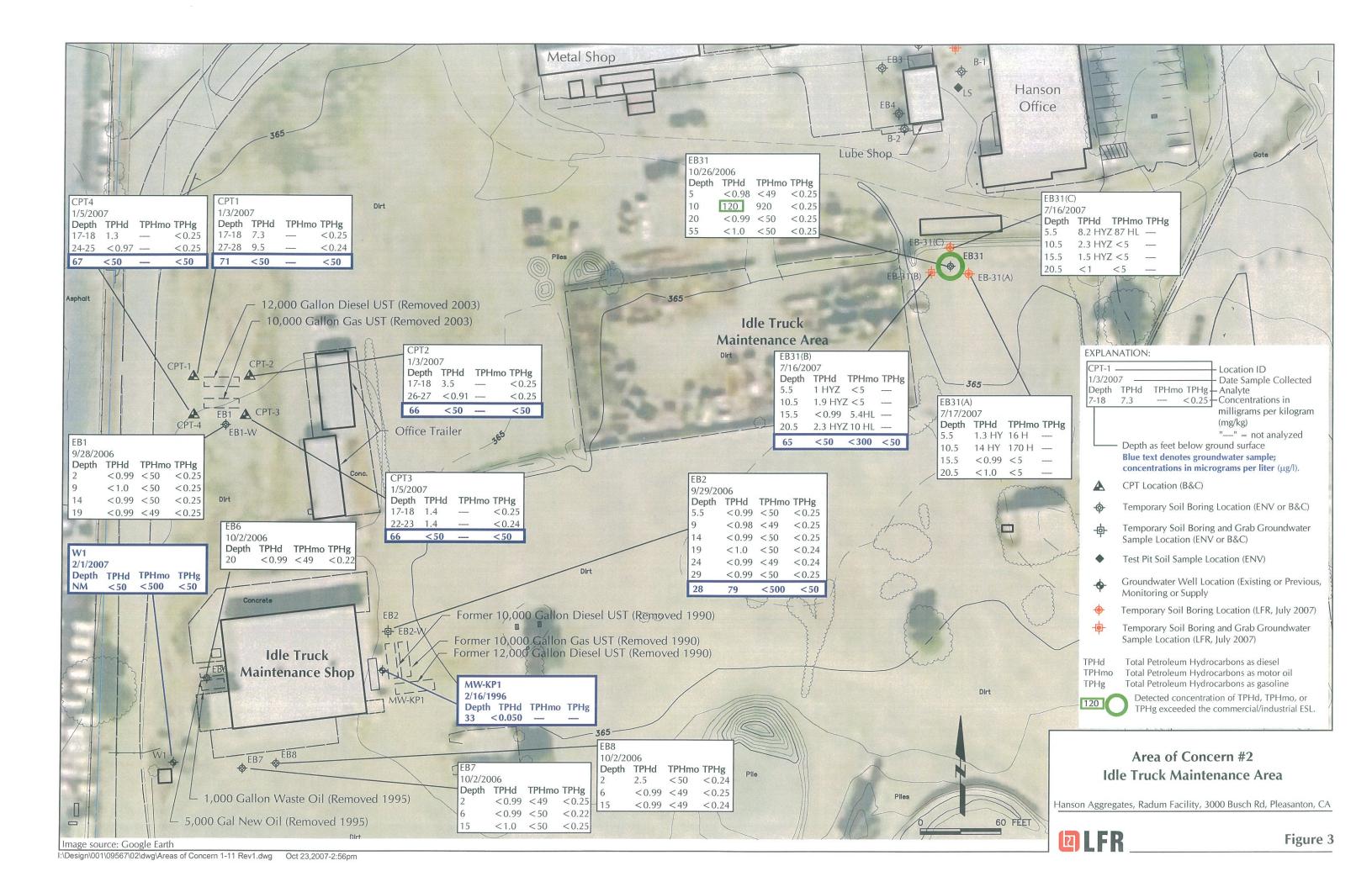
bold indicates that the compound was detected above the laboratory reporting limit.

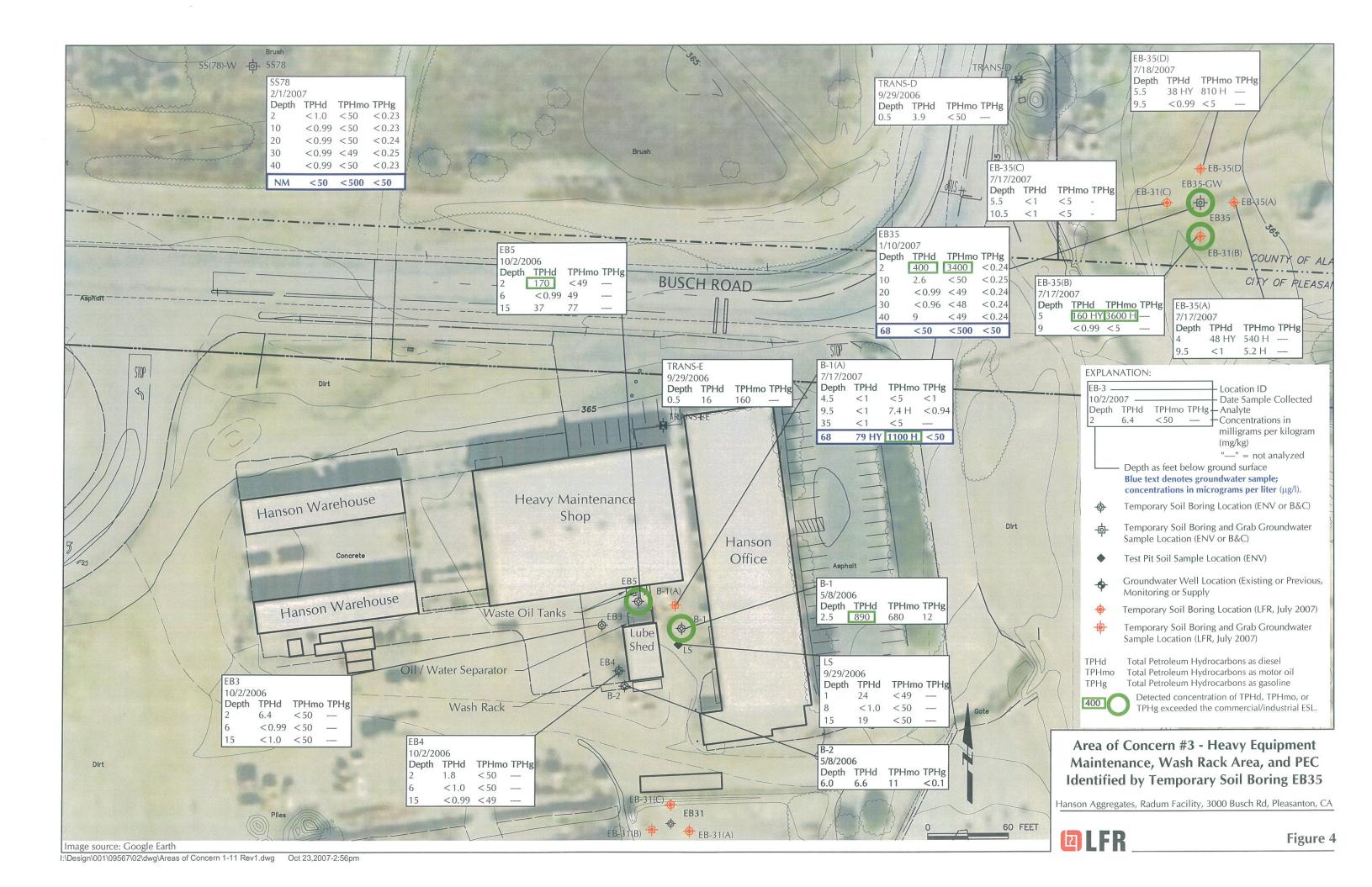
0.63	boxed values exceed the respective ESL.					
Ag = Silver	Cr = Chromium	Sb = Antimony				
As = Arsenic	Cu = Copper	Se = Selenium				
Ba = Barium	Hg = Mercury	Tl = Thallium				
Be = Beryllium	Mo = Molybdenum	V = Vanadium				
Cd = Cadmium	Ni = Nickel	Zn = Zinc				
Co = Cobalt	Pb = Lead					

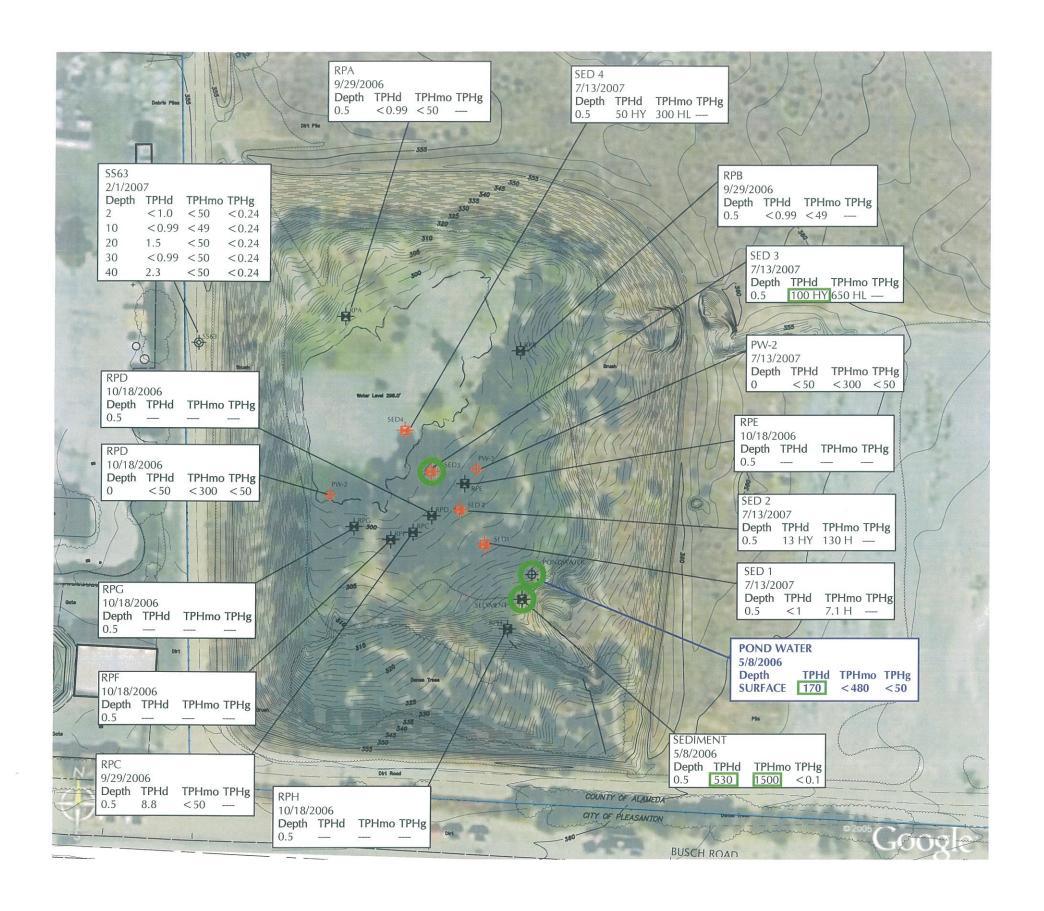
<sup>&</sup>quot;-" = sample not analyzed

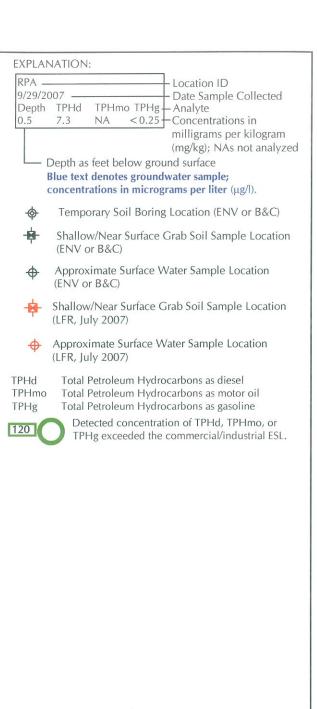


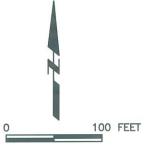








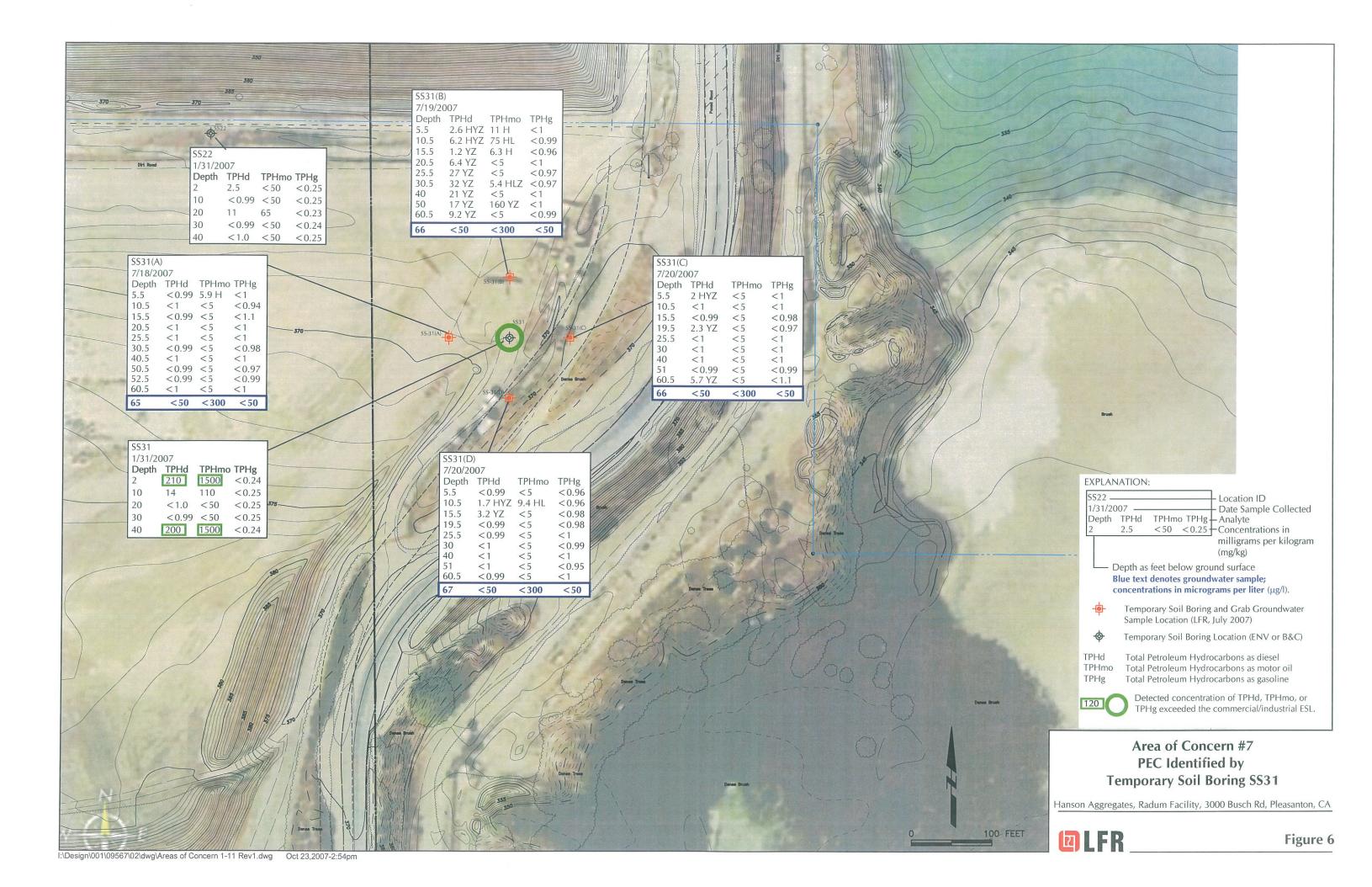


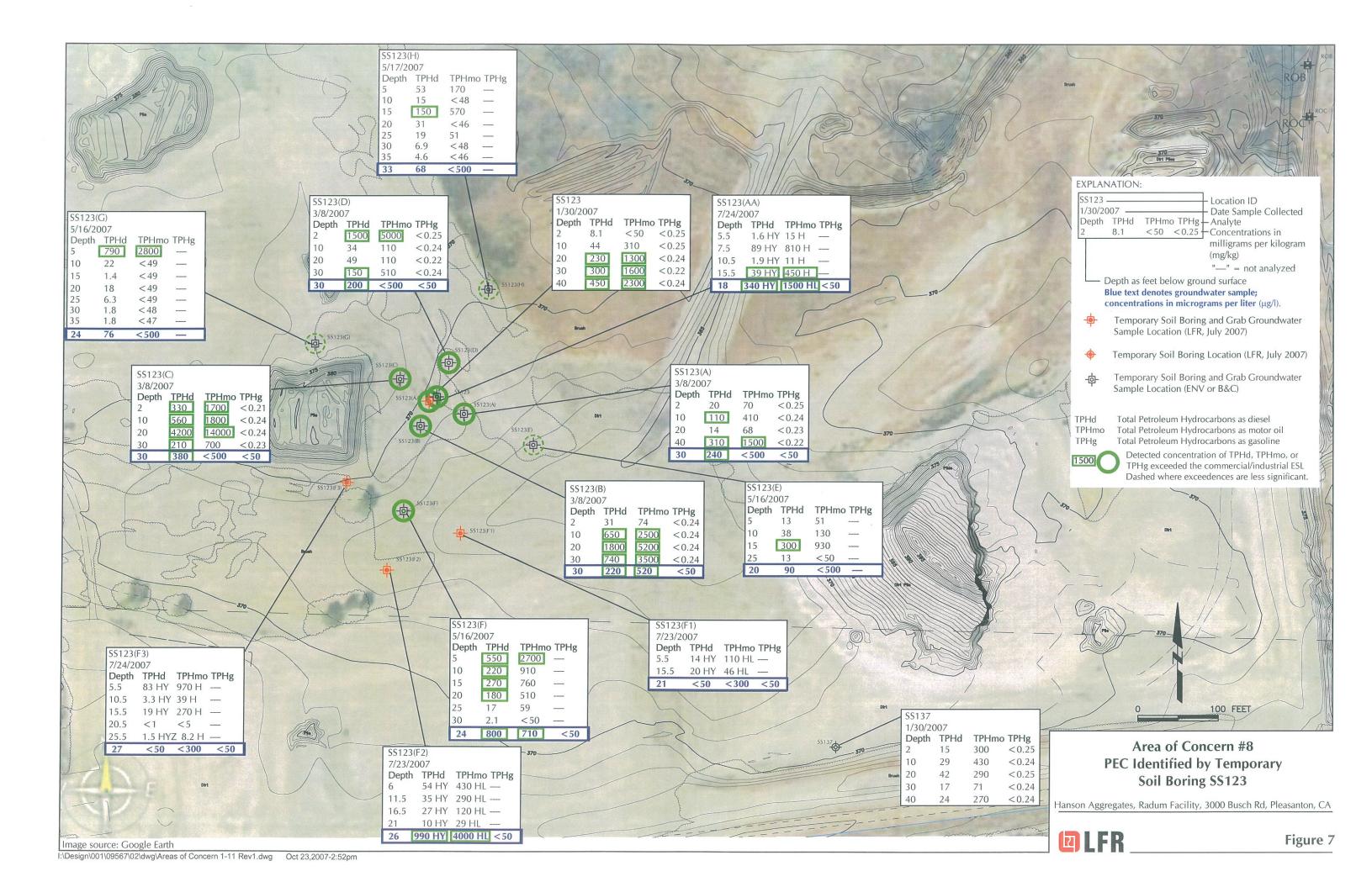


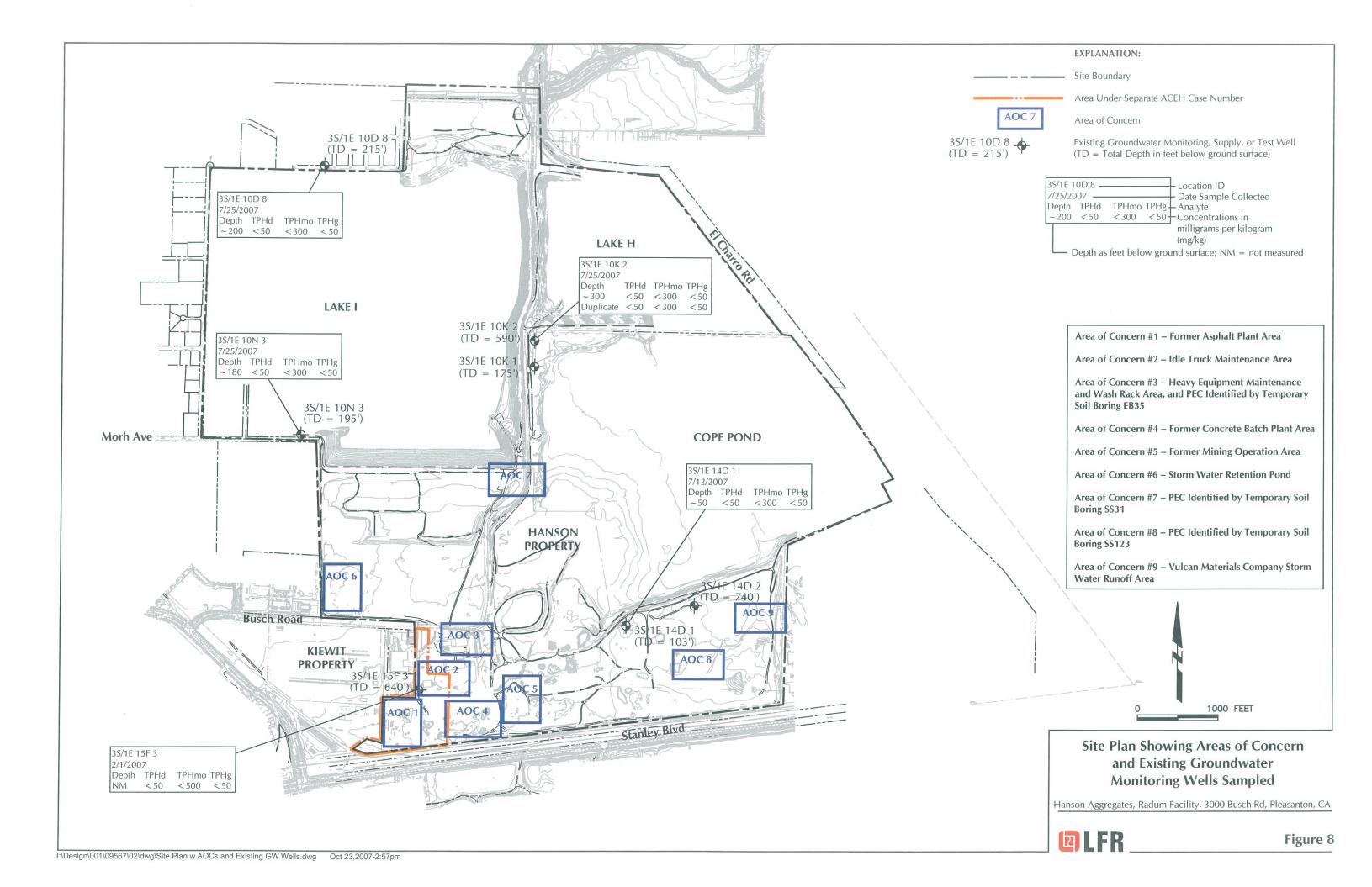
## Area of Concern #6 Storm-Water Retention Pond

Hanson Aggregates, Radum Facility, 3000 Busch Rd, Pleasanton, CA









## **APPENDIX A**

**Soil Boring Permit** 

# NAGEN

### **ZONE 7 WATER AGENCY**

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

#### DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE FOR OFFICE USE LOCATION OF PROJECT Former Plant, Hanson-Radun PERMIT NUMBER 27122 WELL NUMBER Busch Pleasanton. APN California Coordinates Source ft .Accuracy\* PERMIT CONDITIONS CCN ft CCF APN (Circled Permit Requirements Apply) CLIENT Name **GENERAL** A permit application should be submitted so as to arrive at the City Pleasanton Zone 7 office five days prior to proposed starting date. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and Fax 510 - 65 Address 1900 location sketch for geotechnical projects. Phone 510 - 5 City Eneryville Permit is void if project not begun within 90 days of approval Zip9U608 B. WATER SUPPLY WELLS TYPE OF PROJECT Minimum surface seal thickness is two inches of cement Well Construction Geotechnical Investigation grout placed by tremie. Cathodic Protection General Minimum seal depth is 50 feet for municipal and industrial wells Water Supply Contamination or 20 feet for domestic and irrigation wells unless a lesser depth Monitoring Well Destruction is specially approved. An access port at least 0.5 inches in diameter is required PROPOSED WELL USE on the wellhead for water level measurements. New Domestic · · Irrigation A sample port is required on the discharge pipe near the Municipal Remediation wellhead. Industrial Groundwater Monitoring GROUNDWATER MONITORING WELLS Dewatering Other ..... **PIEZOMETERS** 1. Minimum surface seal thickness is two inches of cement grout DRILLING METHOD placed by tremie. · · Air Rotary Hollow Stem Auger Mud Rotary Minimum seal depth for monitoring wells is the maximum depth Direct Push · · Cable Tool Other practicable or 20 feet. GEOTECHNICAL. Backfill bore hole with compacted cuttings or DRILLING COMPANY HEW heavy bentonite and upper two feet with compacted material. In DRILLER'S LICENSE NO. 604 areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings. WELL PROJECTS CATHODIC. Fill hole above anode zone with concrete placed by Drill Hole Diameter in Maximum Casing Diameter Depth in WELL DESTRUCTION. See attached.
SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after the Surface Seal Depth ft. Number completion of permitted work the well installation report including all SOIL BORINGS soil and water laboratory analysis results Number of Borings flwill large from Maximum Hole Diameter Depth\_6 7-116 **ESTIMATED STARTING DATE** ESTIMATED COMPLETION DATE 7/24/200 Date 7/13/07 Approved I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 78-68 APPLICANT'S Date 7-9-07 SIGNATURE

INCLUDING

Katrin Schliewen

## **APPENDIX B**

**Laboratory Certified Analytical Reports** 



## Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

#### Laboratory Job Number 195976

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

Sample ID	<u>Lab ID</u>
PW-2	195976-001
SED-1	195976-002
SED-2	195976-003
SED-3	195976-004
SED-4	195976-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/25/2007</u>

Signature: Operations Manager

NELAP # 01107CA

Date: <u>07/25/2007</u>



#### CASE NARRATIVE

Laboratory number: 195976

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/13/07 Samples Received: 07/13/07

This hardcopy data package contains sample and QC results for four soil samples and one water sample, requested for the above referenced project on 07/13/07. The samples were received cold and intact. All data were e-mailed to Larry Lapuyade on 07/23/07.

#### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Soil:

Matrix spikes were not reported for this analysis because the parent sample required a dilution that would have diluted out the spikes. No other analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B):

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7471A) Soil:

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7470A) Filtrate:

No analytical problems were encountered.



	Total Extr	actable Hydrocar	rbons	
Lab #:	195976	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	PW-2	Sampled:	07/13/07	
Matrix:	Water	Received:	07/13/07	
Units:	ug/L	Prepared:	07/17/07	
Diln Fac:	1.000	Analyzed:	07/20/07	
Batch#:	127341			

Type: SAMPLE Cleanup Method: EPA 3630C

SAMPLE 195976-001

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	108	61-134

Type: BLANK Cleanup Method: EPA 3630C

Lab ID: QC396668

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

ND= Not Detected RL= Reporting Limit

Page 1 of 1 26.0



Total Extractable Hydrocarbons					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC396669	Batch#:	127341		
Matrix:	Water	Prepared:	07/17/07		
Units:	ug/L	Analyzed:	07/20/07		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,469	99	58-130

Surrogate	%REC	Limits
Hexacosane	107	61-134

Page 1 of 1 27.0



Total Extractable Hydrocarbons						
Lab #:	195976	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3520C			
Project#:	001-09567-01	Analysis:	EPA 8015B			
Field ID:	ZZZZZZZZZZ	Batch#:	127341			
MSS Lab ID:	195966-005	Sampled:	07/12/07			
Matrix:	Water	Received:	07/13/07			
Units:	ug/L	Prepared:	07/17/07			
Diln Fac:	1.000	Analyzed:	07/19/07			

Type: MS Lab ID: QC396670

Analyte	MSS Result	Spiked	Result	%REC Limits
Diesel C10-C24	338,000	2,500	258,900 >LR	-3166 NM 57-134

Surrogate	%REC	Limits
Hexacosane	115	61-134

Type: MSD Lab ID: QC396671

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	143,100 >LR	-7797 NM	1 57-134	NC	32

Surrogate	%REC	Limits
Hexacosane	115	61-134

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Page 1 of 1 28.0



Total Extractable Hydrocarbons					
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum SHAKER TABLE EPA 8015B		
Matrix: Units: Basis: Batch#:	Soil mg/Kg as received 127278	Sampled: Received: Prepared:	07/13/07 07/13/07 07/16/07		

Field ID: SED-1 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/20/07
Lab ID: 195976-002 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	7.1 н	5.0	

Field ID: SED-2 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/20/07
Lab ID: 195976-003 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	13 H Y	1.0	
Motor Oil C24-C36	130 н	5.0	

Surrogate	%REC	Limits	
Hexacosane	93	40-127	

Field ID: SED-3 Diln Fac: 3.000
Type: SAMPLE Analyzed: 07/21/07
Lab ID: 195976-004 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	100 н ү	3.0	
Motor Oil C24-C36	650 H L	15	

Surrogate	%REC	Limits
Hexacosane	83	40-127

Field ID: SED-4 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/20/07
Lab ID: 195976-005 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	50 н Ү	0.99	
Motor Oil C24-C36	300 H L	5.0	

Surrogate	%REC	Limits
Hexacosane	74	40-127

H= Heavier hydrocarbons contributed to the quantitation

Page 1 of 2

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons				
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum SHAKER TABLE EPA 8015B	
Matrix: Units: Basis: Batch#:	Soil mg/Kg as received 127278	Sampled: Received: Prepared:	07/13/07 07/13/07 07/16/07	

BLANK QC396381 1.000 Type: Lab ID: Analyzed: 07/17/07 Cleanup Method: EPA 3630C

Diln Fac:

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Hexacosane	114	40-127	

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit



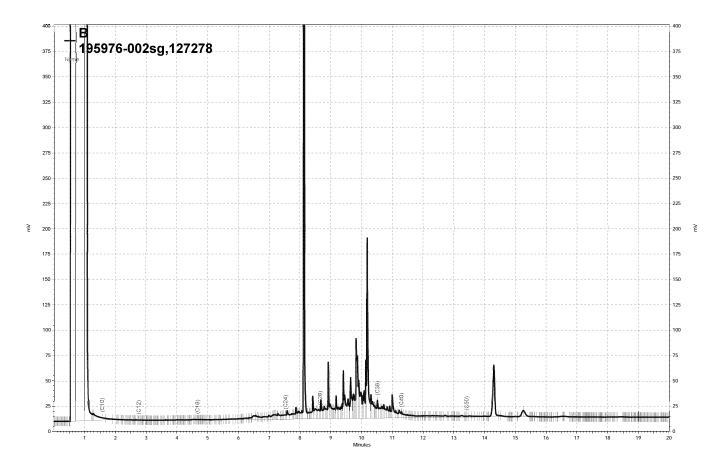
Total Extractable Hydrocarbons					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC396382	Batch#:	127278		
Matrix:	Soil	Prepared:	07/16/07		
Units:	mg/Kg	Analyzed:	07/17/07		
Basis:	as received				

Cleanup Method: EPA 3630C

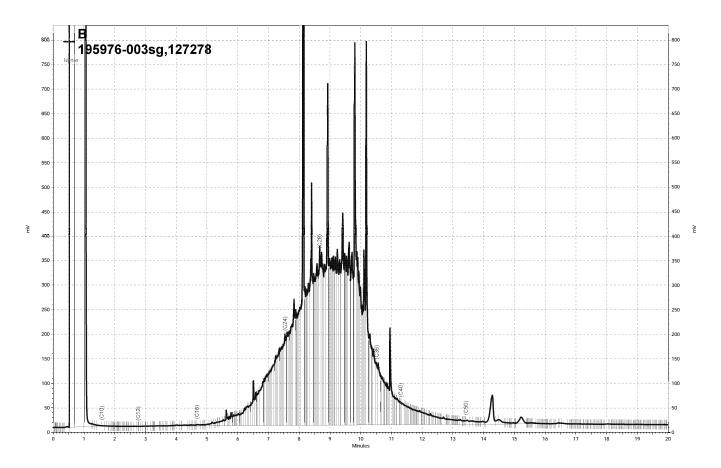
Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.79	50.26	101	58-127

Surrogate	%REC	Limits
Hexacosane	105	40-127

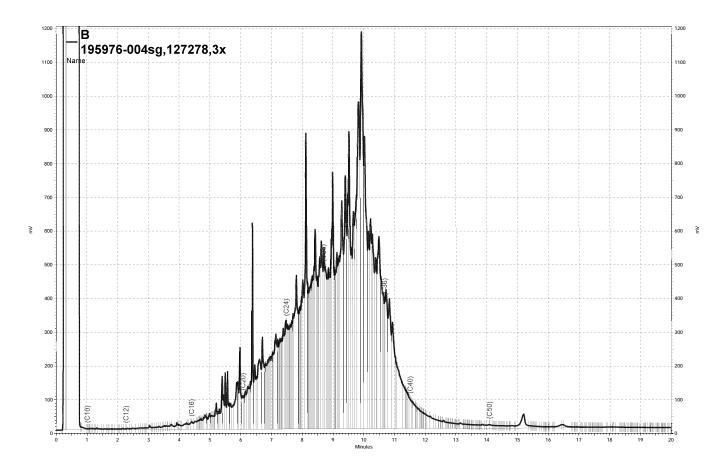
Page 1 of 1 25.0



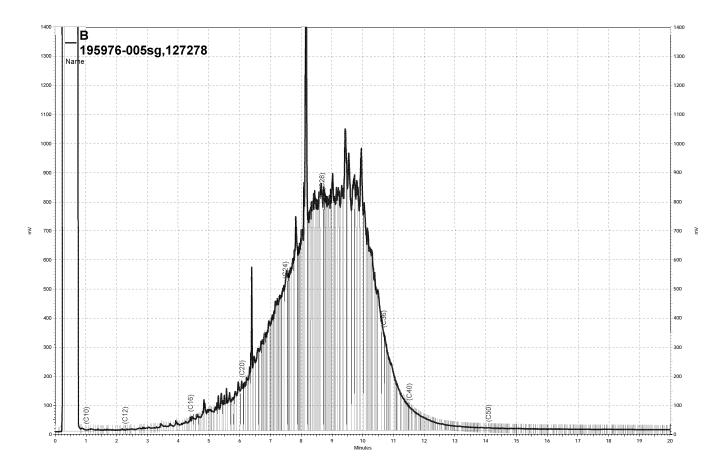
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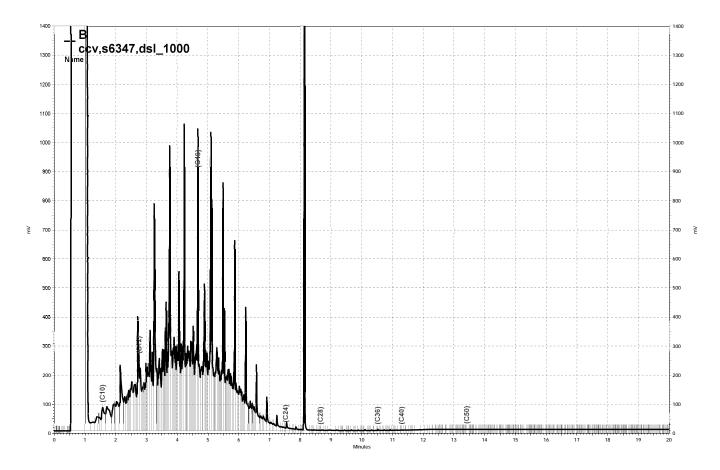
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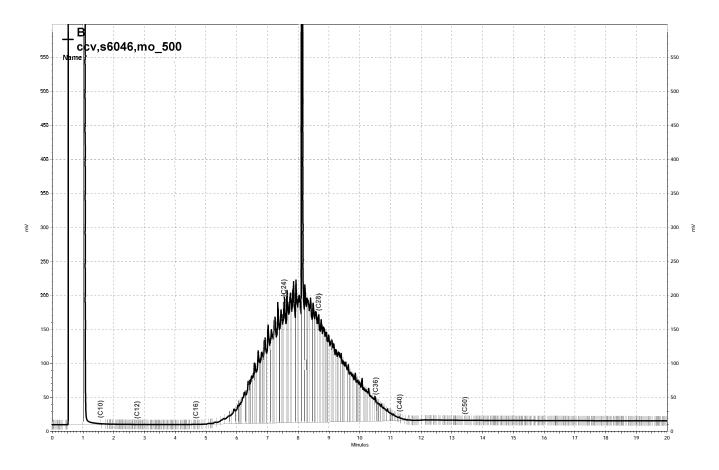
\Lims\gdrive\ezchrom\Projects\GC14B\Data\201b034, B



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\\Lims\gdrive\ezchrom\Projects\GC15B\Data\201b022, B



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\201b021, B



Gasoline by GC/MS					
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Prep: Analysis:	EPA 5030B EPA 8260B		
Field ID: Lab ID: Matrix: Units: Diln Fac:	PW-2 195976-001 Water ug/L 1 000	Batch#: Sampled: Received: Analyzed:	127216 07/13/07 07/13/07 07/13/07		

Analyte	Result	RT.
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
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ND= Not Detected RL= Reporting Limit Page 1 of 2



	Gasoline	by GC/MS	
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Prep: Analysis:	EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	PW-2 195976-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127216 07/13/07 07/13/07 07/13/07

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	97	80-120	
Bromofluorobenzene	99	80-122	



Gasoline by GC/MS				
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Prep: Analysis:	EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396077 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127216 07/13/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	(	Gasoline by GC/MS		
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Prep: Analysis:	EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396077 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127216 07/13/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-123	
1,2-Dichloroethane-d4	95	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	100	80-122	



	Ga	soline by GC/MS		
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Prep: Analysis:	EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127216 07/13/07	

Type: BS Lab ID: QC396078

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	150.0	157.5	105	68-132
Isopropyl Ether (DIPE)	30.00	25.77	86	65-120
Ethyl tert-Butyl Ether (ETBE)	30.00	29.99	100	75-124
Methyl tert-Amyl Ether (TAME)	30.00	32.54	108	77-120
1,1-Dichloroethene	30.00	32.29	108	80-132
Benzene	30.00	30.15	100	80-120
Trichloroethene	30.00	28.88	96	80-120
Toluene	30.00	31.17	104	80-120
Chlorobenzene	30.00	30.69	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-123
1,2-Dichloroethane-d4	95	79-134
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-122

Type: BSD Lab ID: QC396079

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	150.0	167.4	112	68-132	6	20
Isopropyl Ether (DIPE)	30.00	27.39	91	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	30.00	30.87	103	75-124	3	20
Methyl tert-Amyl Ether (TAME)	30.00	33.64	112	77-120	3	20
1,1-Dichloroethene	30.00	34.57	115	80-132	7	20
Benzene	30.00	31.40	105	80-120	4	20
Trichloroethene	30.00	29.60	99	80-120	2	20
Toluene	30.00	32.85	110	80-120	5	20
Chlorobenzene	30.00	31.73	106	80-120	3	20

Surrogate %RE	:C	Limits
Dibromofluoromethane 96		80-123
1,2-Dichloroethane-d4 96		79-134
Toluene-d8 100		80-120
Bromofluorobenzene 96		80-122



	Gasoline by GC/MS					
Lab #:	195976	Prep:	EPA 5030B			
Client:	LFR Levine Fricke	Analysis:	EPA 8260B			
Project#:	001-09567-01					
Matrix:	Water	Batch#:	127216			
Units:	ug/L	Analyzed:	07/13/07			
Diln Fac:	1.000					

Type: BS Lab ID: QC396080

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,500	1,352	90	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-123
1,2-Dichloroethane-d4	95	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-122

Type: BSD Lab ID: QC396081

	Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gas	soline C7-C12	1,500	1,320	88	70-130	2	20

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	94	80-122	



California Title 26 Metals				
Lab #:	195976	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SED-1	Diln Fac:	1.000	
Lab ID:	195976-002	Sampled:	07/13/07	
Matrix:	Soil	Received:	07/13/07	
Units:	mg/Kg	Analyzed:	07/17/07	
Basis:	as received			

Analyte	Result	RL	Batch# Pr	repared	Prep	Analysis
Antimony	ND	0.50	127301 07	7/16/07	EPA 3050B	EPA 6010B
Arsenic	3.6	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Barium	120	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Beryllium	0.26	0.10	127301 07	7/16/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Chromium	43	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Cobalt	9.0	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Copper	23	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Lead	5.0	0.15	127301 07	7/16/07	EPA 3050B	EPA 6010B
Mercury	0.040	0.020	127316 07	7/17/07	METHOD	EPA 7471A
Molybdenum	0.26	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Nickel	64	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127301 07	7/16/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127301 07	7/16/07	EPA 3050B	EPA 6010B
Vanadium	23	0.25	127301 07	7/16/07	EPA 3050B	EPA 6010B
Zinc	42	1.0	127301 07	7/16/07	EPA 3050B	EPA 6010B



California Title 26 Metals				
Lab #:	195976	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SED-2	Diln Fac:	1.000	
Lab ID:	195976-003	Sampled:	07/13/07	
Matrix:	Soil	Received:	07/13/07	
Units:	mg/Kg	Analyzed:	07/17/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	ND	0.50	127301 07/16/07 EF	PA 3050B	EPA 6010B
Arsenic	2.9	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Barium	96	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Beryllium	0.21	0.10	127301 07/16/07 EF	PA 3050B	EPA 6010B
Cadmium	ND	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Chromium	37	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Cobalt	7.5	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Copper	20	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Lead	5.6	0.15	127301 07/16/07 EF	PA 3050B	EPA 6010B
Mercury	0.053	0.020	127316 07/17/07 ME	ETHOD	EPA 7471A
Molybdenum	0.41	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Nickel	55	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Selenium	ND	0.50	127301 07/16/07 EF	PA 3050B	EPA 6010B
Silver	ND	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Thallium	ND	0.50	127301 07/16/07 EF	PA 3050B	EPA 6010B
Vanadium	19	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Zinc	47	1.0	127301 07/16/07 EF	PA 3050B	EPA 6010B



California Title 26 Metals				
Lab #:	195976	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SED-3	Diln Fac:	1.000	
Lab ID:	195976-004	Sampled:	07/13/07	
Matrix:	Soil	Received:	07/13/07	
Units:	mg/Kg	Analyzed:	07/17/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	ND	0.50	127301 07/16/07 EF	A 3050B	EPA 6010B
Arsenic	2.9	0.25	127301 07/16/07 EF	A 3050B	EPA 6010B
Barium	120	0.25	127301 07/16/07 EF	A 3050B	EPA 6010B
Beryllium	0.28	0.10	127301 07/16/07 EF	PA 3050B	EPA 6010B
Cadmium	ND	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Chromium	44	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Cobalt	8.6	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Copper	32	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Lead	8.5	0.15	127301 07/16/07 EF	PA 3050B	EPA 6010B
Mercury	0.065	0.020	127316 07/17/07 ME	THOD	EPA 7471A
Molybdenum	0.58	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Nickel	67	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Selenium	ND	0.50	127301 07/16/07 EF	PA 3050B	EPA 6010B
Silver	ND	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Thallium	ND	0.50	127301 07/16/07 EF	PA 3050B	EPA 6010B
Vanadium	22	0.25	127301 07/16/07 EF	PA 3050B	EPA 6010B
Zinc	70	1.0	127301 07/16/07 EF	A 3050B	EPA 6010B

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California Title 26 Metals				
Lab #:	195976	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SED-4	Diln Fac:	1.000	
Lab ID:	195976-005	Sampled:	07/13/07	
Matrix:	Soil	Received:	07/13/07	
Units:	mg/Kg	Analyzed:	07/17/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	0.57	0.50	127301 07/16/07 E	EPA 3050B	EPA 6010B
Arsenic	3.4	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Barium	140	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Beryllium	0.31	0.10	127301 07/16/07 E	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Chromium	49	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Cobalt	10	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Copper	33	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Lead	7.6	0.15	127301 07/16/07 E	EPA 3050B	EPA 6010B
Mercury	0.051	0.020	127316 07/17/07 N	METHOD	EPA 7471A
Molybdenum	0.33	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Nickel	76	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127301 07/16/07 E	EPA 3050B	EPA 6010B
Silver	ND	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127301 07/16/07 E	EPA 3050B	EPA 6010B
Vanadium	25	0.25	127301 07/16/07 E	EPA 3050B	EPA 6010B
Zinc	59	1.0	127301 07/16/07 E	EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	ıls	
Lab #:	195976	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3050B	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC396506	Batch#:	127301	
Matrix:	Soil	Prepared:	07/16/07	
Units:	mg/Kg	Analyzed:	07/17/07	
Basis:	as received			

Analyte	Result	RL	
Antimony	ND	0.50	
Arsenic	ND	0.25	
Barium	ND	0.25	
Beryllium	ND	0.10	
Cadmium	ND	0.25	
Chromium	ND	0.25	
Cobalt	ND	0.25	
Copper	ND	0.25	
Lead	ND	0.15	
Molybdenum	ND	0.25	
Nickel	ND	0.25	
Selenium	ND	0.50	
Silver	ND	0.25	
Thallium	ND	0.50	
Vanadium	ND	0.25	
Zinc	ND	1.0	



California Title 26 Metals				
Lab #: Client: Project#:	195976 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3050B EPA 6010B	
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Batch#: Prepared: Analyzed:	127301 07/16/07 07/17/07	

Type: BS Lab ID: QC396507

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	95.47	95	80-120
Arsenic	50.00	49.53	99	80-120
Barium	100.0	98.42	98	80-120
Beryllium	2.500	2.528	101	80-120
Cadmium	10.00	9.816	98	80-120
Chromium	100.0	95.87	96	80-120
Cobalt	25.00	23.45	94	80-120
Copper	12.50	12.33	99	80-120
Lead	100.0	94.94	95	80-120
Molybdenum	20.00	20.25	101	80-120
Nickel	25.00	23.43	94	80-120
Selenium	50.00	47.77	96	80-120
Silver	10.00	9.547	95	80-120
Thallium	50.00	48.84	98	80-120
Vanadium	25.00	24.20	97	80-120
Zinc	25.00	24.38	98	80-120

Type: BSD Lab ID: QC396508

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	96.71	97	80-120	1	20
Arsenic	50.00	50.97	102	80-120	3	20
Barium	100.0	100.1	100	80-120	2	20
Beryllium	2.500	2.577	103	80-120	2	20
Cadmium	10.00	9.956	100	80-120	1	20
Chromium	100.0	97.81	98	80-120	2	20
Cobalt	25.00	23.84	95	80-120	2	20
Copper	12.50	12.56	101	80-120	2	20
Lead	100.0	96.64	97	80-120	2	20
Molybdenum	20.00	20.67	103	80-120	2	20
Nickel	25.00	23.85	95	80-120	2	20
Selenium	50.00	49.16	98	80-120	3	20
Silver	10.00	9.798	98	80-120	3	20
Thallium	50.00	49.31	99	80-120	1	20
Vanadium	25.00	24.64	99	80-120	2	20
Zinc	25.00	24.94	100	80-120	2	20



14.1

Batch QC Report

	California	Title 26 Metals	1
Lab #:	195976	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3050B
Project#:	001-09567-01	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZ	Batch#:	127301
MSS Lab ID:	195907-001	Sampled:	07/11/07
Matrix:	Soil	Received:	07/11/07
Units:	mg/Kg	Prepared:	07/16/07
Basis: Diln Fac:	as received 1.000	Analyzed:	07/17/07

Type: MS Lab ID: QC396509

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	0.6657	99.01	38.85	39	1-129
Arsenic	14.34	49.50	59.38	91	72-120
Barium	91.91	99.01	191.5	101	49-138
Beryllium	0.3453	2.475	2.653	93	80-120
Cadmium	3.969	9.901	12.90	90	72-120
Chromium	15.09	99.01	103.1	89	63-122
Cobalt	6.420	24.75	26.93	83	61-120
Copper	17.97	12.38	29.61	94	59-137
Lead	9.150	99.01	93.33	85	55-122
Molybdenum	0.6441	19.80	16.78	81	66-120
Nickel	28.05	24.75	45.48	70	45-139
Selenium	0.05165	49.50	44.00	89	73-120
Silver	<0.05150	9.901	9.120	92	53-120
Thallium	0.2400	49.50	43.05	86	64-120
Vanadium	23.23	24.75	45.99	92	55-139
Zinc	95.99	24.75	122.8	108	49-140

Type: MSD Lab ID: QC396510

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	94.34	36.30	38	1-129	2	23
Arsenic	47.17	55.52	87	72-120	3	20
Barium	94.34	164.6	77	49-138	13	23
Beryllium	2.358	2.503	91	80-120	2	20
Cadmium	9.434	12.64	92	72-120	1	20
Chromium	94.34	97.60	87	63-122	1	20
Cobalt	23.58	24.80	78	61-120	4	23
Copper	11.79	27.54	81	59-137	5	20
Lead	94.34	90.88	87	55-122	2	26
Molybdenum	18.87	16.44	84	66-120	3	20
Nickel	23.58	39.23	47	45-139	13	26
Selenium	47.17	43.06	91	73-120	3	20
Silver	9.434	8.723	92	53-120	0	22
Thallium	47.17	42.37	89	64-120	3	20
Vanadium	23.58	42.39	81	55-139	6	20
Zinc	23.58	114.1	77 NM	49-140	6	23



California Title 26 Metals							
Lab #:	195976	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	METHOD				
Project#:	001-09567-01	Analysis:	EPA 7471A				
Analyte:	Mercury	Basis:	as received				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC396569	Batch#:	127316				
Matrix:	Soil	Prepared:	07/17/07				
Units:	mg/Kg	Analyzed:	07/17/07				

Result	RL	
ND	0.020	



California Title 26 Metals							
Lab #:	195976	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	METHOD				
Project#:	001-09567-01	Analysis:	EPA 7471A				
Analyte:	Mercury	Diln Fac:	1.000				
Matrix:	Soil	Batch#:	127316				
Units:	mg/Kg	Prepared:	07/17/07				
Basis:	as received	Analyzed:	07/17/07				

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC396570	0.5000	0.4840	97	80-120		
BSD	QC396571	0.5000	0.4740	95	80-120	2	20



	Californ	nia Title 26 Meta	als	
Lab #:	195976	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Diln Fac:	1.000	
Field ID:	ZZZZZZZZZ	Batch#:	127316	
MSS Lab ID:	195902-001	Sampled:	07/11/07	
Matrix:	Soil	Received:	07/11/07	
Units:	mg/Kg	Prepared:	07/17/07	
Basis:	as received	Analyzed:	07/17/07	

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC396573	<0.005759	0.5000	0.5070	101	67-143		
MSD	QC396574		0.4032	0.3919	97	67-143	4	23



Dissolved California Title 26 Metals							
Lab #:	195976	Project#:	001-09567-01				
Client:	LFR Levine Fricke	Location:	Hanson Radum				
Field ID:	PW-2	Diln Fac:	1.000				
Lab ID:	195976-001	Sampled:	07/13/07				
Matrix:	Filtrate	Received:	07/13/07				
Units:	ug/L						

Analyte	Result	RL	Batch#	Prepared	Analyzed		Prep	Ar	nalysis
Antimony	ND	10	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Arsenic	5.5	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Barium	170	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Beryllium	ND	2.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Cadmium	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Chromium	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Cobalt	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Copper	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Lead	ND	3.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Mercury	ND	0.20	127273	07/16/07	07/16/07	METH	OD	EPA	7470A
Molybdenum	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Nickel	6.0	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Selenium	ND	10	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Silver	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Thallium	ND	10	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Vanadium	ND	5.0	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B
Zinc	24	20	127328	07/17/07	07/17/07	EPA	3010A	EPA	6010B

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Dissolved California Title 26 Metals					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	METHOD		
Project#:	001-09567-01	Analysis:	EPA 7470A		
Analyte:	Mercury	Diln Fac:	1.000		
Type:	BLANK	Batch#:	127273		
Lab ID:	QC396356	Prepared:	07/16/07		
Matrix:	Filtrate	Analyzed:	07/16/07		
Units:	ug/L				

Result	RL	
ND	0.20	



Dissolved California Title 26 Metals					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	METHOD		
Project#:	001-09567-01	Analysis:	EPA 7470A		
Analyte:	Mercury	Batch#:	127273		
Matrix:	Filtrate	Prepared:	07/16/07		
Units:	ug/L	Analyzed:	07/16/07		
Diln Fac:	1.000				

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC396357	5.000	5.180	104	80-120		
BSD	QC396358	5.000	4.980	100	80-120	4	20



Dissolved California Title 26 Metals					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	METHOD		
Project#:	001-09567-01	Analysis:	EPA 7470A		
Analyte:	Mercury	Batch#:	127273		
Field ID:	PW-2	Sampled:	07/13/07		
MSS Lab ID:	195976-001	Received:	07/13/07		
Matrix:	Filtrate	Prepared:	07/16/07		
Units:	ug/L	Analyzed:	07/16/07		
Diln Fac:	1.000				

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC396360	<0.02083	5.000	5.510	110	80-123		
MSD	QC396361		5.000	5.560	111	80-123	1	20



Dissolved California Title 26 Metals					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3010A		
Project#:	001-09567-01	Analysis:	EPA 6010B		
Type:	BLANK	Diln Fac:	1.000		
Lab ID:	QC396613	Batch#:	127328		
Matrix:	Water	Prepared:	07/17/07		
Units:	ug/L	Analyzed:	07/17/07		

Analyte	Result	RL	
Antimony	ND	10	
Arsenic	ND	5.0	
Barium	ND	5.0	
Beryllium	ND	2.0	
Cadmium	ND	5.0	
Chromium	ND	5.0	
Cobalt	ND	5.0	
Copper	ND	5.0	
Lead	ND	3.0	
Molybdenum	ND	5.0	
Nickel	ND	5.0	
Selenium	ND	10	
Silver	ND	5.0	
Thallium	ND	10	
Vanadium	ND	5.0	
Zinc	ND	20	

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Dissolved California Title 26 Metals					
Lab #:	195976	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3010A		
Project#:	001-09567-01	Analysis:	EPA 6010B		
Matrix:	Water	Batch#:	127328		
Units:	ug/L	Prepared:	07/17/07		
Diln Fac:	1.000	Analyzed:	07/17/07		

Type: BS Lab ID: QC396614

Analyte	Spiked	Result	%REC	Limits
Antimony	500.0	490.2	98	80-120
Arsenic	100.0	98.40	98	80-120
Barium	2,000	1,969	98	80-120
Beryllium	50.00	53.58	107	80-120
Cadmium	50.00	50.37	101	80-120
Chromium	200.0	192.8	96	80-120
Cobalt	500.0	480.3	96	80-120
Copper	250.0	231.8	93	80-120
Lead	100.0	97.59	98	80-120
Molybdenum	400.0	385.3	96	80-120
Nickel	500.0	488.5	98	80-120
Selenium	100.0	100.6	101	80-120
Silver	50.00	48.79	98	80-120
Thallium	100.0	102.1	102	80-120
Vanadium	500.0	488.3	98	80-120
Zinc	500.0	505.7	101	80-120

Type: BSD Lab ID: QC396615

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	493.8	99	80-120	1	20
Arsenic	100.0	98.72	99	80-120	0	20
Barium	2,000	1,993	100	80-120	1	20
Beryllium	50.00	54.31	109	80-120	1	20
Cadmium	50.00	50.87	102	80-120	1	20
Chromium	200.0	195.3	98	80-120	1	20
Cobalt	500.0	487.2	97	80-120	1	20
Copper	250.0	234.7	94	80-120	1	20
Lead	100.0	98.50	98	80-120	1	20
Molybdenum	400.0	389.1	97	80-120	1	20
Nickel	500.0	494.7	99	80-120	1	20
Selenium	100.0	102.1	102	80-120	1	20
Silver	50.00	49.84	100	80-120	2	20
Thallium	100.0	103.2	103	80-120	1	20
Vanadium	500.0	496.4	99	80-120	2	20
Zinc	500.0	512.3	102	80-120	1	20



	Dissolved	California Title 26	Metals	
Lab #:	195976	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3010A	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Field ID:	ZZZZZZZZZZ	Batch#:	127328	
MSS Lab ID:	195996-001	Sampled:	07/16/07	
Matrix:	Water	Received:	07/16/07	
Units:	ug/L	Prepared:	07/17/07	
Diln Fac:	1.000	Analyzed:	07/17/07	

Type: MS Lab ID: QC396616

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	4.239	500.0	528.3	105	78-122
Arsenic	10.22	100.0	116.2	106	79-128
Barium	116.7	2,000	2,050	97	80-120
Beryllium	0.4010	50.00	55.29	110	80-122
Cadmium	<0.3555	50.00	50.10	100	80-121
Chromium	34.56	200.0	227.3	96	80-120
Cobalt	1.742	500.0	479.6	96	80-120
Copper	120.4	250.0	372.8	101	80-120
Lead	<1.150	100.0	89.51	90	70-120
Molybdenum	7.493	400.0	404.6	99	80-120
Nickel	25.49	500.0	502.3	95	78-120
Selenium	3.711	100.0	111.0	107	78-132
Silver	1.955	50.00	53.72	104	72-123
Thallium	<1.131	100.0	92.49	92	72-120
Vanadium	45.42	500.0	550.1	101	80-120
Zinc	107.6	500.0	614.0	101	80-124

Type: MSD Lab ID: QC396617

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	531.6	105	78-122	1	20
Arsenic	100.0	116.5	106	79-128	0	20
Barium	2,000	2,078	98	80-120	1	20
Beryllium	50.00	55.40	110	80-122	0	20
Cadmium	50.00	49.91	100	80-121	0	20
Chromium	200.0	228.0	97	80-120	0	20
Cobalt	500.0	481.3	96	80-120	0	20
Copper	250.0	375.2	102	80-120	1	20
Lead	100.0	90.49	90	70-120	1	20
Molybdenum	400.0	408.8	100	80-120	1	20
Nickel	500.0	504.2	96	78-120	0	20
Selenium	100.0	113.7	110	78-132	2	20
Silver	50.00	54.61	105	72-123	2	20
Thallium	100.0	92.63	93	72-120	0	20
Vanadium	500.0	550.1	101	80-120	0	20
Zinc	500.0	619.3	102	80-124	1	20



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

### Laboratory Job Number 196019

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

Sample ID	<u>Lab ID</u>
EB-31(B)-GGW	196019-001
EB-31(B)-5.5	196019-002
EB-31(B)-10.5	196019-003
EB-31(B)-15.5	196019-004
EB-31(B)-20.5	196019-005
EB-31(C)-5	196019-006
EB-31(C)-10.5	196019-007
EB-31(C)-15.5	196019-008
EB-31(C)-20	196019-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/26/2007</u>

Date: <u>07/25/2007</u>

Signature:

Operations Manager

NELAP # 01107CA



### CASE NARRATIVE

Laboratory number: 196019

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/16/07 Samples Received: 07/16/07

This hardcopy data package contains sample and QC results for eight soil samples and one water sample, requested for the above referenced project on 07/16/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/23/07.

#### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B) Soil:

No analytical problems were encountered.

### Volatile Organics by GC/MS (EPA 8260B):

No analytical problems were encountered.



Total Extractable Hydrocarbons					
Lab #:	196019	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	EB-31(B)-GGW	Sampled:	07/16/07		
Matrix:	Water	Received:	07/16/07		
Units:	ug/L	Prepared:	07/17/07		
Diln Fac:	1.000	Analyzed:	07/20/07		
Batch#:	127341				

Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: SAMPLE 196019-001

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	91	61-134

Type: BLANK Cleanup Method: EPA 3630C

Lab ID: QC396668

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

ND= Not Detected RL= Reporting Limit



Total Extractable Hydrocarbons					
Lab #:	196019	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC396669	Batch#:	127341		
Matrix:	Water	Prepared:	07/17/07		
Units:	ug/L	Analyzed:	07/20/07		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,469	99	58-130

Surrogate	%REC	Limits
Hexacosane	107	61-134



Total Extractable Hydrocarbons					
Lab #:	196019	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZ	Batch#:	127341		
MSS Lab ID:	195966-005	Sampled:	07/12/07		
Matrix:	Water	Received:	07/13/07		
Units:	ug/L	Prepared:	07/17/07		
Diln Fac:	1.000	Analyzed:	07/19/07		

Type: MS Lab ID: QC396670

Analyte	MSS Result	Spiked	Result	%REC Limits
Diesel C10-C24	338,000	2,500	258,900 >LR	-3166 NM 57-134

Surrogate	%REC	Limits
Hexacosane	115	61-134

Type: MSD Lab ID: QC396671

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	143,100 >LR	-7797 NM	1 57-134	NC	32

Surrogate	%REC	Limits
Hexacosane	115	61-134

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference



Total Extractable Hydrocarbons Lab #: 196019 Hanson Radum Location: SHAKER TABLE Client: Prep: LFR Levine Fricke 001-09567-01 Project#: Analysis: EPA 8015B Matrix: Soil Batch#: 127346 07/16/07 Sampled: Units: mq/Kq Basis: as received Received: 07/16/07 Diln Fac: 1.000 Prepared: 07/17/07

Field ID: EB-31(B)-5.5 Analvzed: 07/20/07 Cleanup Method: EPA 3630C SAMPLE Type: Lab ID: 196019-002

Analyte Result Diesel C10-C24 1.0 H Y Z 0.99 Motor Oil C24-C36 ND 5.0

Surrogate %REC Limits Hexacosane 73 40-127

Field ID: EB-31(B)-10.5Analyzed: 07/20/07 Cleanup Method: EPA 3630C Type: SAMPLE

Lab ID: 196019-003

Analyte Result RL0.99 Diesel C10-C24 1.9 H Y Z Motor Oil C24-C36 ND 5.0

Surrogate Limits Hexacosane

Field ID: EB-31(B)-15.5Analyzed: 07/20/07 SAMPLE Cleanup Method: EPA 3630C Type:

Lab ID: 196019-004

Result Analyte RL0.99 Diesel C10-C24 ND Motor Oil C24-C36 5.4 H L 5.0

Surrogate %REC Limits Hexacosane 96 40-127

Field ID: EB-31(B)-20.5Analyzed: 07/19/07 Cleanup Method: EPA 3630C SAMPLE Type:

Lab ID: 196019-005

Result Analyte 2.3 H Y Z 10 H L Diesel C10-C24 Motor Oil C24-C36 5.0

Surrogate Limits %REC Hexacosane 40-127

 $\mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196019 Lab #: Location: Hanson Radum SHAKER TABLE Client: LFR Levine Fricke Prep: Project#: 001-09567-01 Analysis: EPA 8015B Matrix: Soil Batch#: 127346 07/16/07 Units: mg/Kg Sampled: Basis: as received Received: 07/16/07 1.000 07/17/07 Diln Fac: Prepared:

Field ID: EB-31(C)-5 Analyzed: 07/19/07 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196019-006

Analyte	Result	RL	
Diesel C10-C24	8.2 H Y Z	0.99	
Motor Oil C24-C36	87 H L	5.0	

Field ID: EB-31(C)-10.5 Analyzed: 07/19/07 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196019-007

Analyte	Result	RL	
Diesel C10-C24	2.3 H Y Z	1.0	
Motor Oil C24-C36	ND	5.0	

Field ID: EB-31(C)-15.5 Analyzed: 07/19/07 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196019-008

Analyte	Result	RL	
Diesel C10-C24	1.5 H Y Z	0.99	
Motor Oil C24-C36	ND	5.0	

	Surrogate	%REC	Limits
Нех	exacosane	83	40-127

Field ID: EB-31(C)-20 Analyzed: 07/19/07 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196019-009

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	97	40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit
Page 2 of 3

1430 2 01 0



Total Extractable Hydrocarbons				
Lab #:	196019	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Matrix:	Soil	Batch#:	127346	
Units:	mg/Kg	Sampled:	07/16/07	
Basis:	as received	Received:	07/16/07	
Diln Fac:	1.000	Prepared:	07/17/07	

Type: Lab ID: BLANK QC396685 Analyzed: 07/18/07 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Hexacosane	97	40-127	

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons				
Lab #:	196019	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC396686	Batch#:	127346	
Matrix:	Soil	Prepared:	07/17/07	
Units:	mg/Kg	Analyzed:	07/18/07	
Basis:	as received			

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.87	47.98	96	58-127

Surrogate	%REC	Limits
Hexacosane	100	40-127

Page 1 of 1 9.0



Total Extractable Hydrocarbons					
Lab #:	196019	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Batch#:	127346		
MSS Lab ID:	195992-005	Sampled:	07/13/07		
Matrix:	Soil	Received:	07/16/07		
Units:	mg/Kg	Prepared:	07/17/07		
Basis:	as received	Analyzed:	07/18/07		
Diln Fac:	5.000				

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC396687

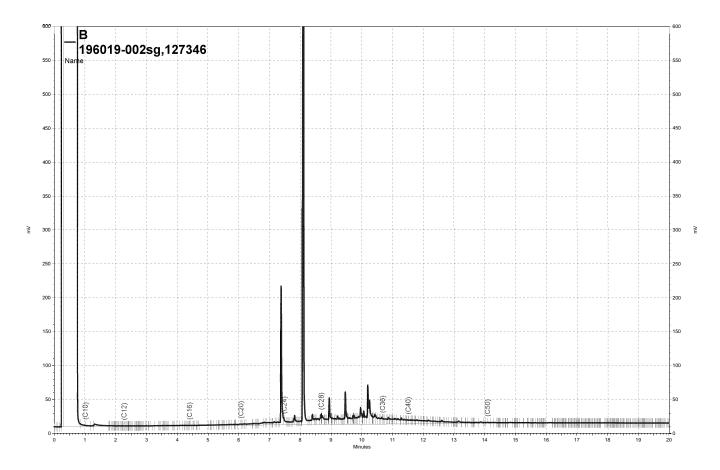
Analyte	MSS Result	Spiked	Result	%REC Limits
Diesel C10-C24	1,389	49.95	1,631	485 NM 29-147

Surrogate	%REC	Limits
Hexacosane	51	40-127

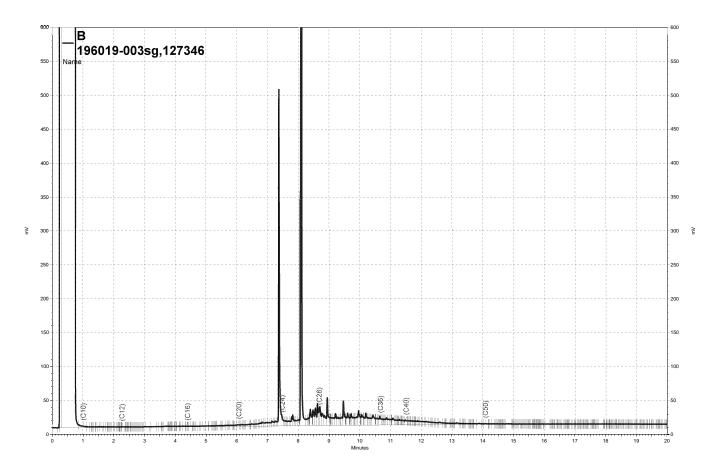
Type: MSD Cleanup Method: EPA 3630C

Lab ID: QC396688

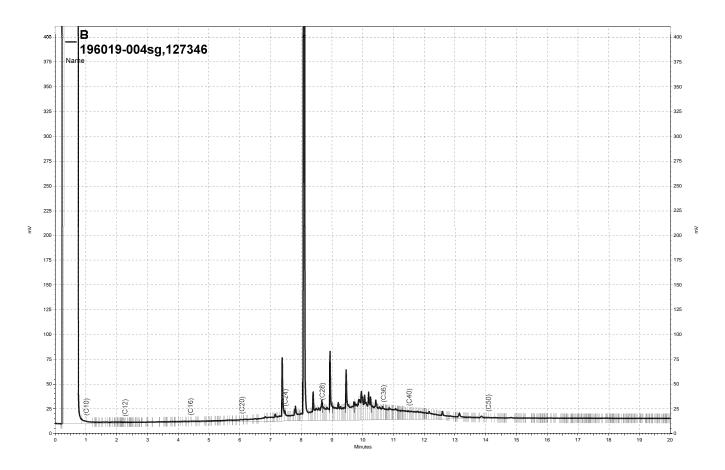
Analyte	Spiked	Result	%REC Limits RPD Lim
Diesel C10-C24	49.90	1,650	524 NM 29-147 1 46



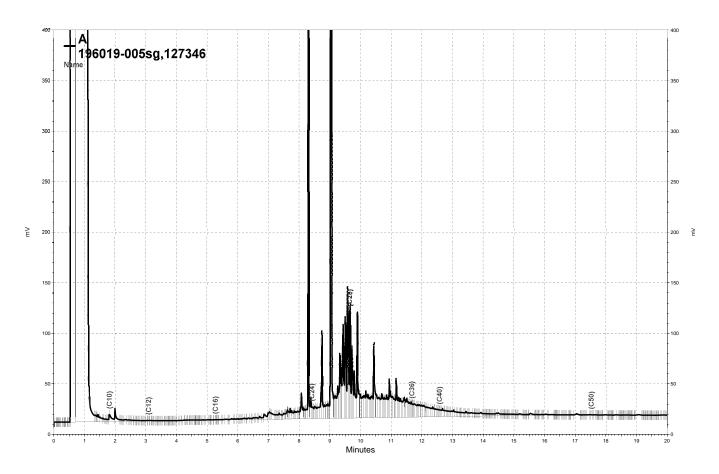
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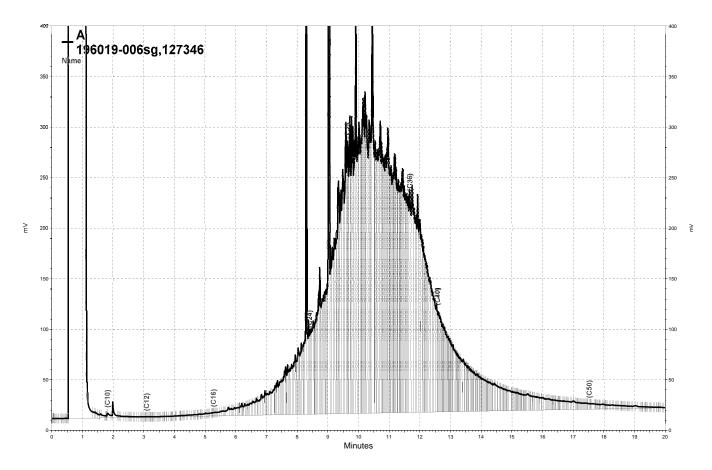
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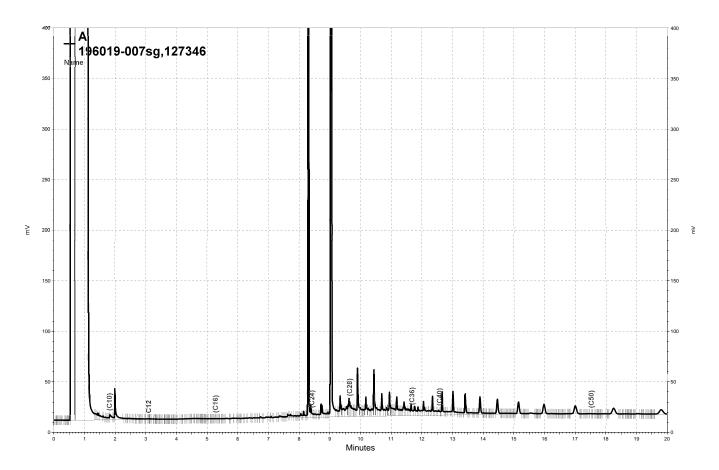
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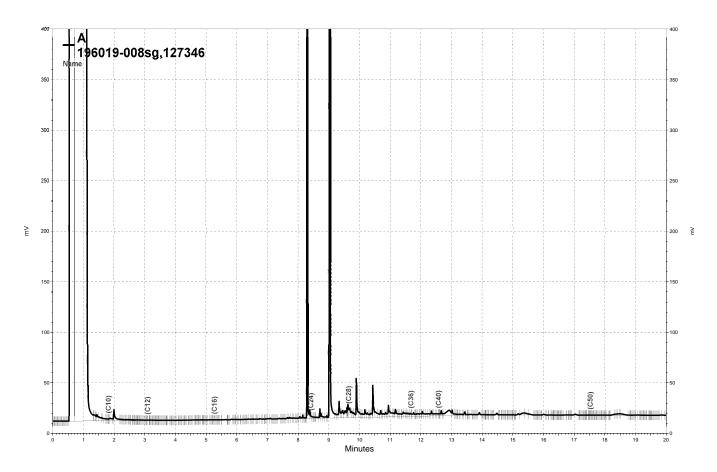
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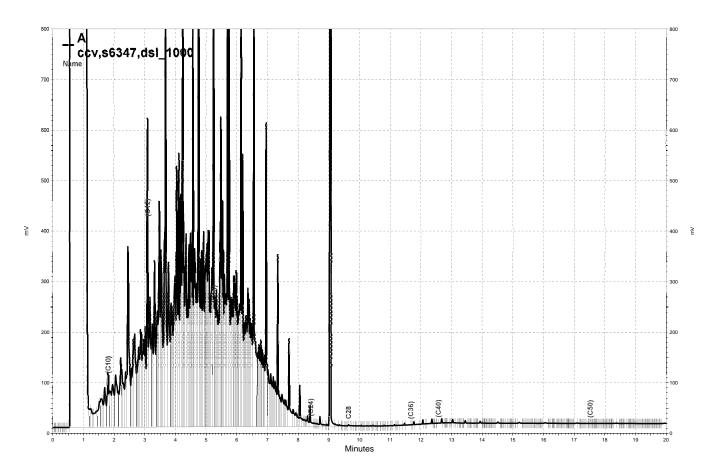
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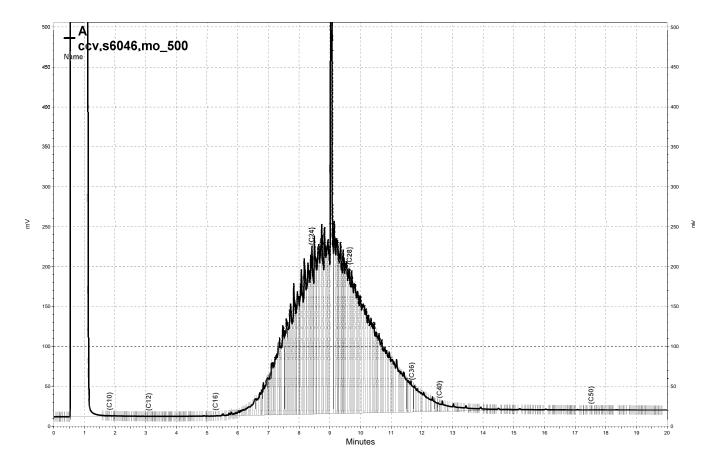
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	Gaso	oline by GC/MS		
Lab #: Client: Project#:	196019 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	EB-31(B)-GGW 196019-001 Water ug/L 1 000	Batcĥ#: Sampled: Received: Analyzed:	127360 07/16/07 07/16/07 07/18/07	

Analyte	Result	RT.
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND ND	0.5
Bromochloromethane	ND ND	0.5
1,1,1-Trichloroethane	ND ND	0.5
1,1-Dichloropropene	ND ND	0.5
Carbon Tetrachloride	ND ND	0.5
1,2-Dichloroethane	ND ND	0.5
Benzene	ND ND	0.5
Trichloroethene	ND ND	0.5
1,2-Dichloropropane	ND ND	0.5
Bromodichloromethane	ND ND	0.5
Dibromomethane	ND ND	0.5
4-Methyl-2-Pentanone	ND ND	10
cis-1,3-Dichloropropene	ND ND	0.5
Toluene	ND ND	0.5
trans-1,3-Dichloropropene	ND ND	0.5
1,1,2-Trichloroethane	ND ND	0.5
2-Hexanone	ND ND	10
1,3-Dichloropropane	ND ND	0.5
Tetrachloroethene	ND ND	0.5
Dibromochloromethane	ND ND	0.5
1,2-Dibromoethane	ND ND	0.5
Chlorobenzene	ND ND	0.5
1,1,1,2-Tetrachloroethane	ND ND	0.5
Ethylbenzene	ND ND	0.5
m,p-Xylenes	ND ND	0.5
o-Xylene	ND ND	0.5
Styrene	ND ND	0.5
Bromoform	ND ND	1.0
Isopropylbenzene	ND ND	0.5
1,1,2,2-Tetrachloroethane	ND ND	0.5
1,1,2,2-letraciiioroethalle 1,2,3-Trichloropropane	ND	0.5
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	Gasol	ine by GC/MS		
Lab #: Client: Project#:	196019 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	EB-31(B)-GGW 196019-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127360 07/16/07 07/16/07 07/18/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	97	80-123	
1,2-Dichloroethane-d4	97	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	100	80-122	

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Baccii ge itej		oline by GC/MS		
	Gas	office by GC/Ma		
Lab #:	196019	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Type: Lab ID:	BLANK	Diln Fac:	1.000	
Lab ID:	QC396744	Batch#:	127360	
Matrix:	Water	Analyzed:	07/18/07	
Units:	ug/L	-		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5



	(	Gasoline by GC/MS		
Lab #: Client: Project#:	196019 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396744 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127360 07/18/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	100	80-120	
Bromofluorobenzene	98	80-122	



	Gas	oline by GC/MS		
Lab #: Client: Project#:	196019 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127360 07/18/07	

Type: BS Lab ID: QC396745

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	137.5	110	68-132
Isopropyl Ether (DIPE)	25.00	25.20	101	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	28.31	113	75-124
Methyl tert-Amyl Ether (TAME)	25.00	29.88	120	77-120
1,1-Dichloroethene	25.00	29.27	117	80-132
Benzene	25.00	27.35	109	80-120
Trichloroethene	25.00	25.55	102	80-120
Toluene	25.00	28.26	113	80-120
Chlorobenzene	25.00	26.81	107	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	98	80-122	

Type: BSD Lab ID: QC396746

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	125.1	100	68-132	9	20
Isopropyl Ether (DIPE)	25.00	23.70	95	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	25.00	26.28	105	75-124	7	20
Methyl tert-Amyl Ether (TAME)	25.00	27.41	110	77-120	9	20
1,1-Dichloroethene	25.00	27.31	109	80-132	7	20
Benzene	25.00	25.83	103	80-120	6	20
Trichloroethene	25.00	23.96	96	80-120	6	20
Toluene	25.00	26.39	106	80-120	7	20
Chlorobenzene	25.00	25.47	102	80-120	5	20

Surrogate %	%REC	Limits
Dibromofluoromethane 97	7	80-123
1,2-Dichloroethane-d4 97	7	79-134
Toluene-d8 10	00	80-120
Bromofluorobenzene 96	6	80-122



Gasoline by GC/MS					
Lab #:	196019	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 5030B		
Project#:	001-09567-01	Analysis:	EPA 8260B		
Matrix:	Water	Batch#:	127360		
Units:	ug/L	Analyzed:	07/18/07		
Diln Fac:	1.000				

Type: BS Lab ID: QC396827

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,500	1,427	95	70-130

Surrogate	%REC	Limits
Dibromofluoromethane 9	96	80-123
1,2-Dichloroethane-d4	95	79-134
Toluene-d8	99	80-120
Bromofluorobenzene 9	97	80-122

Type: BSD Lab ID: QC396828

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,500	1,399	93	70-130	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-123
1,2-Dichloroethane-d4	97	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-122



	Gasolin	e by GC/MS	
Lab #: Client: Project#:	196019 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B
Field ID: MSS Lab ID: Matrix: Units: Diln Fac:	ZZZZZZZZZ 196040-002 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127360 07/17/07 07/17/07 07/19/07

Type: MS Lab ID: QC396910

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.579	125.0	124.4	99	69-137
Isopropyl Ether (DIPE)	<0.04032	25.00	25.43	102	69-120
Ethyl tert-Butyl Ether (ETBE)	<0.07412	25.00	27.36	109	78-127
Methyl tert-Amyl Ether (TAME)	<0.04870	25.00	28.79	115	79-120
1,1-Dichloroethene	<0.09386	25.00	27.83	111	80-139
Benzene	<0.2500	25.00	26.96	108	80-123
Trichloroethene	<0.1151	25.00	25.03	100	75-129
Toluene	<0.1338	25.00	27.15	109	80-122
Chlorobenzene	<0.1569	25.00	26.43	106	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	100	79-134
Toluene-d8	100	80-120
Bromofluorobenzene	97	80-122

Type: MSD Lab ID: QC396911

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	123.8	99	69-137	0	20
Isopropyl Ether (DIPE)	25.00	24.50	98	69-120	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	26.41	106	78-127	4	20
Methyl tert-Amyl Ether (TAME)	25.00	27.83	111	79-120	3	20
1,1-Dichloroethene	25.00	26.78	107	80-139	4	20
Benzene	25.00	26.47	106	80-123	2	20
Trichloroethene	25.00	24.48	98	75-129	2	20
Toluene	25.00	26.57	106	80-122	2	20
Chlorobenzene	25.00	26.07	104	80-120	1	20

%REC	Limits	
99	80-123	
97	79-134	
98	80-120	
98	80-122	
	99 97 98	99 80-123 97 79-134 98 80-120



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

### Laboratory Job Number 196042

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

Sample ID	<u>Lab ID</u>
EB - 31(A) - 5.5	196042-001
EB-31(A)-10.5	196042-002
EB-31(A)-15.5	196042-003
EB-31(A)-20.5	196042-004
B-1(A)-4.5	196042-005
B-1(A)-9.5	196042-006
B-1(A)-35	196042-007
B-1(A)-36.5	196042-008
EB-35(A)-3	196042-009
EB-35(A)-4	196042-010
EB-35(A)-9.5	196042-011
EB-35(B)-2.5	196042-012
EB-35(B)-5	196042-013
EB-35(B)-9	196042-014

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/30/2007</u>

Date: <u>07/30/200</u>7

Signature:

Operations Manager

NELAP # 01107CA



#### CASE NARRATIVE

Laboratory number: 196042

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/17/07 Samples Received: 07/17/07

This hardcopy data package contains sample and QC results for eleven soil samples, requested for the above referenced project on 07/17/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/24/07.

#### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

#### Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

#### Polychlorinated Biphenyls (PCBs) (EPA 8082):

Low surrogate recovery was observed for TCMX in the method blank for batch 127391; the corresponding decachlorobiphenyl surrogate recovery was within limits. No other analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7471A):

No analytical problems were encountered.



	Total Vol	latile Hydrocarbo	ons	
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Matrix:	Soil	Batch#:	127379	
Units:	mg/Kg	Sampled:	07/17/07	
Basis:	as received	Received:	07/17/07	
Diln Fac:	1.000			

Field ID: B-1(A)-4.5 Lab ID: 196042-005 Type: SAMPLE Analyzed: 07/19/07

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	118	70-132	
Bromofluorobenzene (FID)	128	66-138	

Field ID: B-1(A)-9.5 Lab ID: 196042-006 Type: SAMPLE Analyzed: 07/19/07

Analyte	Result	RL	
Gasoline C7-C12	ND	0.94	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	118	70-132
Bromofluorobenzene (FID)	124	66-138

Type: BLANK Analyzed: 07/18/07

Type: BLANK
Lab ID: QC396807

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	116	70-132	
Bromofluorobenzene (FID)	116	66-138	

ND= Not Detected RL= Reporting Limit

Page 1 of 1 2.0



	Total Vol	atile Hydrocarbo	ons	
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Type:	LCS	Basis:	as received	
Lab ID:	QC396809	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127379	
Units:	mg/Kg	Analyzed:	07/18/07	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.002	90	80-120

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	128	70-132	
Bromofluorobenzene (FID)	121	66-138	

Page 1 of 1 3.0



Total Volatile Hydrocarbons					
Lab #:	196042	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 5030B		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	B-1(A)-4.5	Diln Fac:	1.000		
MSS Lab ID:	196042-005	Batch#:	127379		
Matrix:	Soil	Sampled:	07/17/07		
Units:	mg/Kg	Received:	07/17/07		
Basis:	as received	Analyzed:	07/18/07		

Type: MS Lab ID: QC396810

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.2479	9.804	6.949	68	36-120

Surrogate	%REC	Surrogate	Limits
Trifluorotoluene (FID)	119	fluorotoluene (FID)	70-132
Bromofluorobenzene (FID)	114	mofluorobenzene (FID)	66-138

Type: MSD Lab ID: QC396811

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	10.42	7.440	69	36-120	1 29

Surrogate	%REC	Limits
Trifluorotoluene (FID)	122	70-132
Bromofluorobenzene (FID)	120	66-138



Total Extractable Hydrocarbons Hanson Radum SHAKER TABLE Lab #: 196042 Location: Client: LFR Levine Fricke Prep: 001-09567-01 EPA 8015B Project#: Analysis: 07/17/07 07/17/07 Matrix: Soil Sampled: Units: mg/Kg Received: Basis: as received

Field ID: EB-31(A)-5.5Batch#: 127373 Type: Prepared: 07/18/07 07/20/07 SAMPLE Lab ID: 196042-001 Analyzed: Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.3 н ү	1.0	
Motor Oil C24-C36	16 H	5.0	

127373 Batch#: Field ID: EB-31(A)-10.5Type: SAMPLE Prepared: 07/18/07 Lab ID: 196042-002 07/20/07 Analyzed: Diln Fac: 2.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	14 н у	2.0	
Motor Oil C24-C36	170 н	9.9	

Surrogate	%REC	Limits	
Hexacosane	91	40-127	

Field ID: Batch#: EB-31(A)-15.5127373 07/18/07 Type: SAMPLE Prepared: Lab ID: 196042-003 Analyzed: 07/21/07 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	98	40-127

H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected RL= Reporting Limit

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Total Extractable Hydrocarbons 196042 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: EPA 8015B 07/17/07 Project#: 001-09567-01 Matrix: Soil 07/17/07 Units: mg/Kg Received: Basis: as received

Field ID: EB-31(A)-20.5 Batch#: 127373
Type: SAMPLE Prepared: 07/18/07
Lab ID: 196042-004 Analyzed: 07/21/07
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

%REC	Limits
8.9	40-127
te	<b>ke</b> % <b>REC</b> 89

Field ID: B-1(A)-4.5 Batch#: 127373
Type: SAMPLE Prepared: 07/18/07
Lab ID: 196042-005 Analyzed: 07/21/07
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	74	40-127

Field ID: B-1(A)-9.5 Batch#: 127373
Type: SAMPLE Prepared: 07/18/07
Lab ID: 196042-006 Analyzed: 07/21/07
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	7.4 н	5.0	

Surrogate	%REC	Limits
Hexacosane	88	40-127

 $\mbox{\em H= Heavier}$  hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons 196042 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: EPA 8015B 07/17/07 Project#: 001-09567-01 Matrix: Soil 07/17/07 Units: mg/Kg Received: Basis: as received

Field ID: B-1(A)-35 Batch#: 127373

Type: SAMPLE Prepared: 07/18/07

Lab ID: 196042-007 Analyzed: 07/20/07

Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	92	40-127

Field ID: EB-35(A)-4 Batch#: 127373
Type: SAMPLE Prepared: 07/18/07
Lab ID: 196042-010 Analyzed: 07/20/07
Diln Fac: 3.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	48 H Y	3.0	
Motor Oil C24-C36	540 H	15	

Surrogate %REC Limit
xacosane 86 40-1

Field ID: EB-35(A)-9.5 Batch#: 127535
Type: SAMPLE Prepared: 07/23/07
Lab ID: 196042-011 Analyzed: 07/24/07
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	5.2 Н	5.0	

Surrogate	%REC	Limits
Hexacosane	85	40-127

H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196042 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: EPA 8015B 07/17/07 Project#: 001-09567-01 Matrix: Soil 07/17/07 Units: mg/Kg Received: Basis: as received

Field ID: EB-35(B)-5 Batch#: 127373
Type: SAMPLE Prepared: 07/18/07
Lab ID: 196042-013 Analyzed: 07/20/07
Diln Fac: 20.00 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	160 н ү	40	
Motor Oil C24-C36	3,600 Н	200	

Suri	rogate %REC	Limits
Hexacosane	DO	40-127

Field ID: EB - 35(B) - 9Batch#: 127373 Type: SAMPLE Prepared: 07/18/07 Lab ID: 196042-014 07/20/07 Analyzed: Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

	Surrogate %REC	Limits
Hexacosane	acosane 81	40-12

Type: BLANK Prepared: 07/18/07 Lab ID: QC396784 Analyzed: 07/20/07 Diln Fac: 1.000 Cleanup Method: EPA 3630C Batch#: 127373

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

	Surrogate	%REC	Limits	
Hexacos	sane	88	40-127	

H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons					
Lab #:	196042	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Matrix:	Soil	Sampled:	07/17/07		
Units:	mg/Kg	Received:	07/17/07		
Basis:	as received				

Prepared: Type: BLANK 07/23/07 Lab ID: Diln Fac: Analyzed: 07/24/07 Cleanup Method: EPA 3630C QC397580 1.000

Batch#: 127535

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	72	40-127

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out

ND= Not Detected

RL= Reporting Limit



	Total Ext	ractable Hydrocar	rbons
Lab #:	196042	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09567-01	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC396785	Batch#:	127373
Matrix:	Soil	Prepared:	07/18/07
Units:	mg/Kg	Analyzed:	07/21/07
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.88	42.07	84	58-127

Surrogate	%REC	Limits
Hexacosane	95	40-127

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Total Extractable Hydrocarbons				
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000	
MSS Lab ID:	196005-001	Batch#:	127373	
Matrix:	Soil	Sampled:	07/13/07	
Units:	mg/Kg	Received:	07/16/07	
Basis:	as received	Prepared:	07/18/07	

Type: MS Analyzed: 07/20/07
Lab ID: QC396786 Cleanup Method: EPA 3630C

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	45.11	49.90	83.96	78	29-147

Surrogate	%REC	Limits
Hexacosane	92	40-127

Type: MSD Analyzed: 07/24/07 Lab ID: QC396787 Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD :	Lim
Diesel C10-C24	49.94	63.87	38	29-147	27	46

Surrogate	%REC	Limits
Hexacosane	67	40-127



	Total Ext	ractable Hydrocar	rbons
Lab #:	196042	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09567-01	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC397581	Batch#:	127535
Matrix:	Soil	Prepared:	07/23/07
Units:	mg/Kg	Analyzed:	07/24/07
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.84	36.64	74	58-127

Surrogate	%REC	Limits
Hexacosane	78	40-127

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Total Extractable Hydrocarbons				
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZ	Batch#:	127535	
MSS Lab ID:	196124-006	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/20/07	
Units:	mg/Kg	Prepared:	07/23/07	
Basis:	as received	Analyzed:	07/24/07	
Diln Fac:	1.000			

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC397582

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.332	49.92	30.59	57	29-147

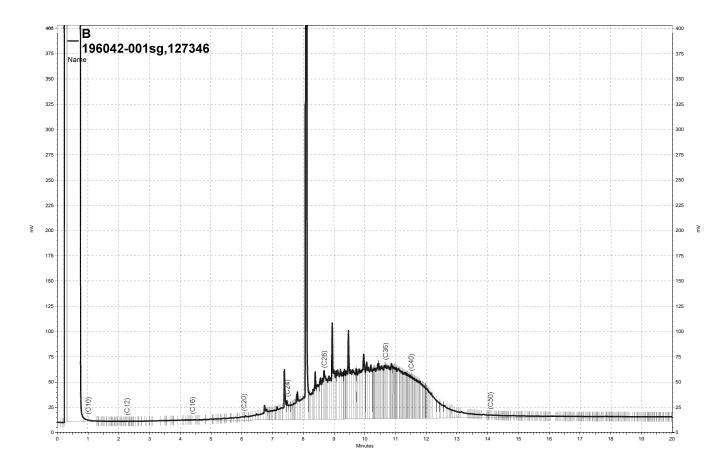
Surrogate	%REC	Limits
Hexacosane	57	40-127

Type: MSD Cleanup Method: EPA 3630C

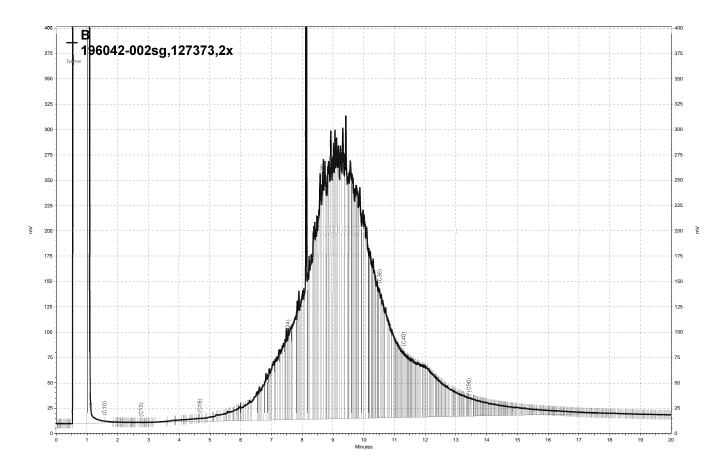
Lab ID: QC397583

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.88	40.57	77	29-147	28	46

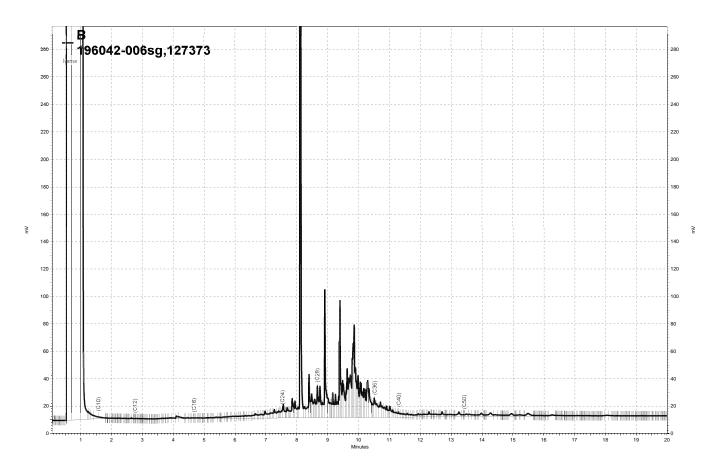
Surrogate	%REC	Limits	
Hexacosane	79	40-127	



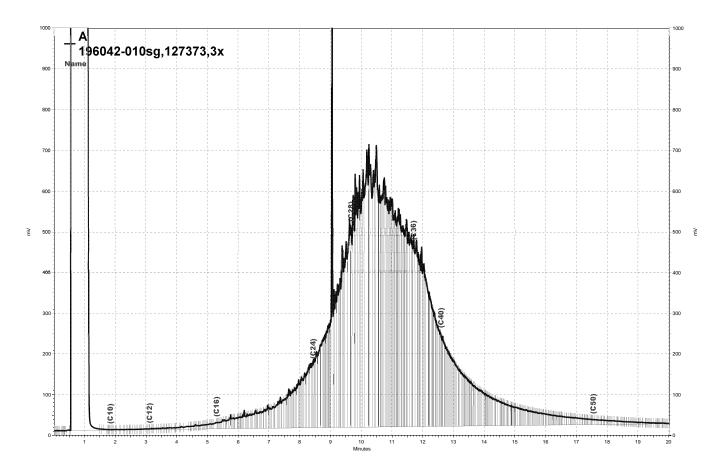
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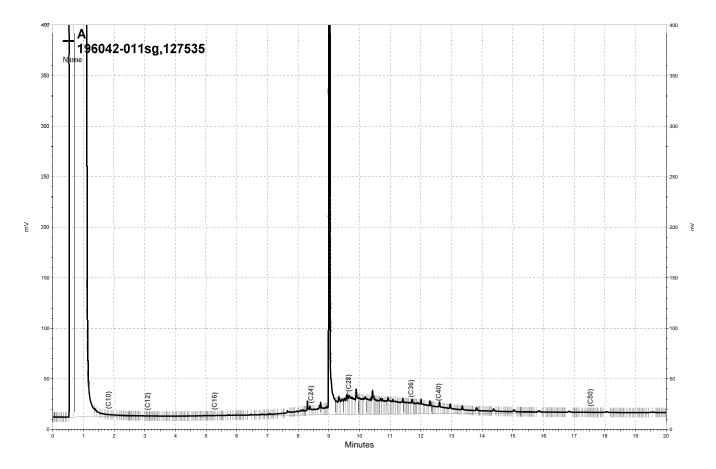
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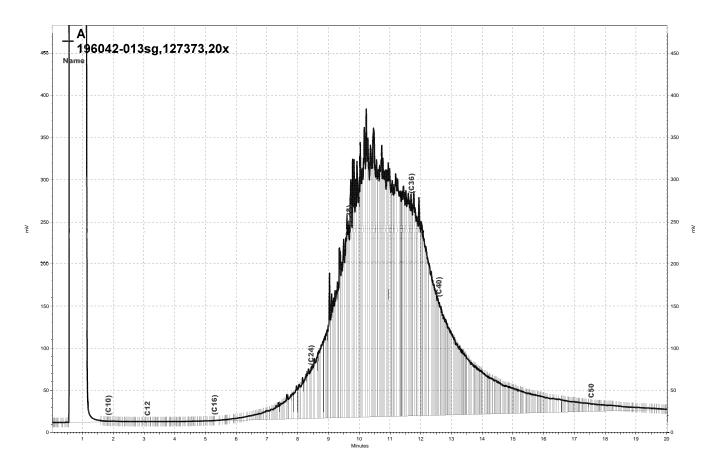
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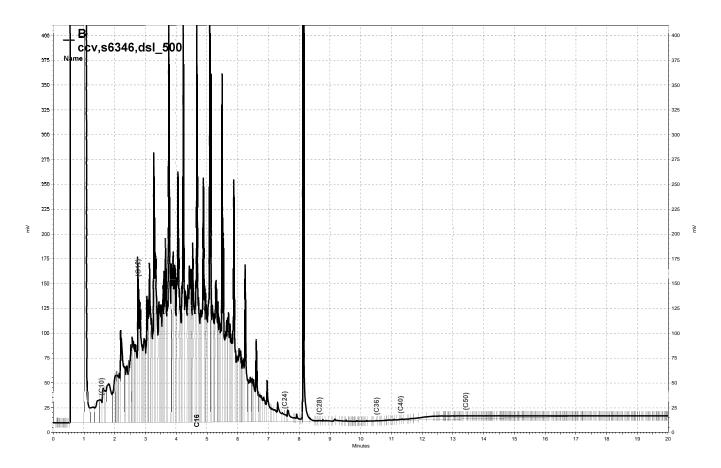
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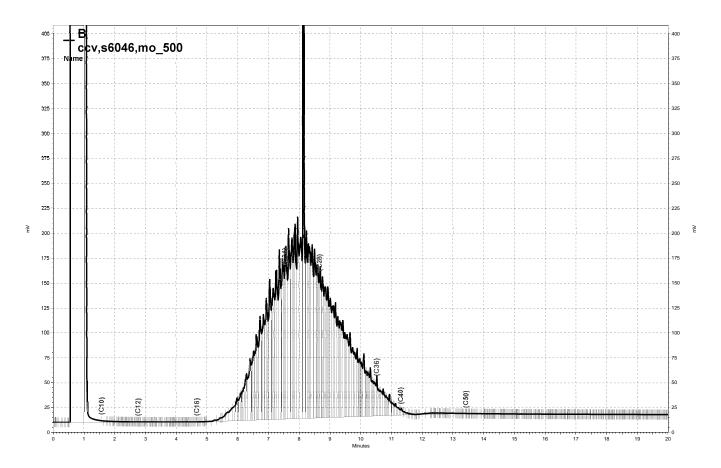
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	Semivolatile Organics by GC/MS					
Lab #: Client: Project#:	196042 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Field ID: Lab ID: Matrix: Units: Basis: Diln Fac:	B-1(A)-4.5 196042-005 Soil ug/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127357 07/17/07 07/17/07 07/18/07 07/19/07			

N-Nitrosodimethylamine   ND   330     Phenol   ND   330     bis(2-Chloroethyl)ether   ND   330     2-Chlorophenol   ND   330     1,3-Dichlorobenzene   ND   330     1,4-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     2-Metzhylphenol   ND   330     3-Metzhylphenol   ND   330     4-(Chloroethane   ND   330     N-Nitroso-di-n-propylamine   ND   330     N-Nitroso-di-n-propylamine   ND   330     NExachloroethane   ND   330     NExachloroethane   ND   330     NExtrophenol   ND   330     Senzoic acid   ND   330     Senzoic	Analyte	Result	RI.
Phenol   ND   330     Dis(2-Chlorophenol   ND   330     2-Chlorophenol   ND   330     1,3-Dichlorobenzene   ND   330     1,4-Dichlorobenzene   ND   330     1,4-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     1,2-Dichlorobenzene   ND   330     2-Methylphenol   ND   330     3-Methylphenol   ND   330     3-Methylnaphthalene   ND   360     3-Methyl			
bis(2-Chloropethyl)ether			
2-Chlorophenol			
1,3-Dichlorobenzene			
1,4-Dichlorobenzene			
Renzyl alcohol			
1,2-Dichlorobenzene			
2-Methylphenol			
bis(2-Chlorosisopropyl) ether			
4-Methylphenol			
N-Nitroso-di-n-propylamine   ND   330     Hexachloroethane   ND   330     Nitrobenzene   ND   330     Isophorone   ND   330     2-Nitrophenol   ND   660     2,4-Dinthylphenol   ND   330     Benzoic acid   ND   1,600     bis(2-Chloroethoxy)methane   ND   330     2,4-Dichlorophenol   ND   330     2,4-Dichlorophenol   ND   330     3,2,4-Tirichlorophenol   ND   330     3,2,4-Tirichlorophenol   ND   330     Naphthalene   ND   330     Hexachlorobutadiene   ND   330     4-Chloro-aniline   ND   330     4-Chloro-anethylphenol   ND   330     4-Chloro-anethylphenol   ND   330     4-Methylnaphthalene   ND   666     Hexachlorocylopentadiene   ND   660     2,4,5-Trichlorophenol   ND   330     2,4,5-Trichlorophenol   ND   330     2,4,5-Trichlorophenol   ND   330     2,1-Chloronaphthalene   ND   660     2,1-Chloronaphthalene   ND   660     2-Nitroaniline   ND   330     3-Nitroaniline   ND   330     3-Nitroaniline   ND   330     3-Nitroaniline   ND   660     4-Nitrophenol   ND   330     4-Chlorophenyl-phenylether   ND   330     4-Chlorophenyl-phenylether   ND   660     4-Chlorophenyl-phenylether   ND   660     4-Bromophenyl-phenylether   ND   330     Azobenzene   ND   330     Azobenzene   ND   330     Azbenzene   ND   330     Azbenzene   ND   330     Azbenzene   ND   330     Athracene   ND   660     Athracen			
Hexachloroethane			
Nitrobenzene	N-Nitroso-di-n-propylamine	ND	
Isophorone		ND	
2-Mitrophenol	Nitrobenzene	ND	330
2,4-pimethylphenol	Isophorone	ND	330
Benzoic acid   ND	2-Nitrophenol	ND	660
Benzoic acid	2,4-Dimethylphenol	ND	330
Dist(2-Chloroethoxy)methane		ND	1,600
2,4-Dichlorophenol		ND	
1,2,4-Trichlorobenzene			
Naphthalene			
4-Chloroaniline			
Hexachlorobutadiene			
4-Chloro-3-methylphenol       ND       330         2-Methylpaphthalene       ND       66         Hexachlorocyclopentadiene       ND       66         2,4,6-Trichlorophenol       ND       330         2,4,5-Trichlorophenol       ND       330         2-Chloronaphthalene       ND       330         2-Nitroaniline       ND       660         Dimethylphthalate       ND       330         Acenaphthylene       ND       66         2,6-Dinitrotoluene       ND       66         3-Nitroaniline       ND       66         Acenaphthene       ND       66         2,4-Dinitrophenol       ND       66         4-Nitrophenol       ND       330         Dibenzofuran       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       66         4-Chlorophenyl-phenylether       ND       330         4-Nitroaniline       ND       660         4-Nitroadiphenylamine       ND       660         N-Nitrosodiphenylamine       ND       330         N-Nitrosodiphenyl-phenylether       ND			
2-Methylnaphthalene			
Hexachlorocyclopentadiene			
2,4,6-Trichlorophenol ND 330 2,4,5-Trichlorophenol ND 330 2-Chloronaphthalene ND 330 2-Nitroaniline ND 660 Dimethylphthalate ND 330 Acenaphthylene ND 330 Acenaphthylene ND 330 A-Nitroaniline ND 666 2,6-Dinitrotoluene ND 330 A-Nitroaniline ND 660 Acenaphthene ND 660 2,4-Dinitrophenol ND 660 4-Nitrophenol ND 660 Dibenzofuran ND 330 2,4-Dinitrotoluene ND 330 Diethylphthalate ND 330 Fluorene ND 330 Fluorene ND 330 H-Nitroaniline ND 660 A-Chlorophenyl-phenylether ND 330 H-Nitroaniline ND 330 A-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 Azobenzene ND 330 Azobenzene ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 660 Phemanthrene ND 330 Pentachlorophenol ND 660 Phemanthrene ND 660 Phemanthrene ND 660 Phemanthrene ND 660 Phemanthrene ND 666			
2,4,5-Trichlorophenol       ND       330         2-Chloronaphthalene       ND       330         2-Nitroaniline       ND       660         Dimethylphthalate       ND       330         Acenaphtylene       ND       66         2,6-Dinitrotoluene       ND       660         2,6-Dinitrotoluene       ND       660         Acenaphthene       ND       660         2,4-Dinitrophenol       ND       660         4-Nitrophenol       ND       660         4-Nitrophenol       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       66         4-Chlorophenyl-phenylether       ND       330         4-Nitroaniline       ND       660         4-Nitrosodiphenylamine       ND       660         N-Nitrosodiphenylamine       ND       330         Azobenzene       ND       330         4-Bromophenyl-phenylether       ND       330         Pentachlorophenol       ND       660         Phenapheree       ND       660         Phenathrene       ND       660      <			
2-Chloronaphthalene ND 330 2-Nitroaniline ND 660 Dimethylphthalate ND 330 Acenaphthylene ND 666 2,6-Dinitrotoluene ND 330 3-Nitroaniline ND 660 Acenaphthene ND 660 Acenaphthene ND 660 4-Nitrophenol ND 660 4-Nitrophenol ND 330 2,4-Dinitrotoluene ND 330 2,4-Dinitrotoluene ND 330 2,4-Dinitrotoluene ND 330 Diethylphthalate ND 330 Fluorene ND 330 Fluorene ND 666 4-Chlorophenyl-phenylether ND 330 4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 Azobenzene ND 330 Azobenzene ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 330 Pentachlorophenol ND 660 Phenanthrene ND 666 Anthracene ND 666			
2-Nitroaniline       ND       660         Dimethylphthalate       ND       330         Acenaphthylene       ND       66         2,6-Dinitrotoluene       ND       330         3-Nitroaniline       ND       660         Acenaphthene       ND       66         2,4-Dinitrophenol       ND       660         4-Nitrophenol       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       330         4-Chlorophenyl-phenylether       ND       66         4-Chlorophenyl-phenylether       ND       660         4,6-Dinitro-2-methylphenol       ND       660         N-Nitrosodiphenylamine       ND       330         Azobenzene       ND       330         4-Bromophenyl-phenylether       ND       330         Hexachlorobenzene       ND       330         Pentachlorophenol       ND       66         Phenanthrene       ND       66         Anthracene       ND       66			
Dimethylphthalate         ND         330           Acenaphthylene         ND         66           2,6-Dinitrotoluene         ND         330           3-Nitroaniline         ND         660           Acenaphthene         ND         66           2,4-Dinitrophenol         ND         660           4-Nitrophenol         ND         330           2,4-Dinitrotoluene         ND         330           2,4-Dinitrotoluene         ND         330           Piethylphthalate         ND         330           Fluorene         ND         66           4-Chlorophenyl-phenylether         ND         660           4-Nitroaniline         ND         660           4,6-Dinitro-2-methylphenol         ND         660           N-Nitrosodiphenylamine         ND         330           Azobenzene         ND         330           4-Bromophenyl-phenylether         ND         330           Hexachlorobenzene         ND         330           Pentachlorophenol         ND         66           Phenanthrene         ND         66           Anthracene         ND         66			
Acenaphthylene ND 330 3-Nitroaniline ND 660 Acenaphthene ND 660 Acenaphthene ND 666 2,4-Dinitrophenol ND 660 4-Nitrophenol ND 660 Dibenzofuran ND 330 2,4-Dinitrotoluene ND 330 Diethylphthalate ND 330 Fluorene ND 66 4-Chlorophenyl-phenylether ND 330 Fluoraniline ND 660 4-Chorophenyl-phenylether ND 330 Azobenzene ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 Azobenzene ND 330 Hexachlorophenol ND 330 Hexachlorophenol ND 330 Hexachlorophenol ND 330 Hexachlorophenol ND 330 Henanthrene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 660 Anthracene ND 666 Anthracene ND 666 Anthracene			
2,6-Dinitrotoluene       ND       330         3-Nitroaniline       ND       660         Acenaphthene       ND       66         2,4-Dinitrophenol       ND       660         4-Nitrophenol       ND       330         2,4-Dinitrotoluene       ND       330         2,4-Dinitrotoluene       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       66         4-Chlorophenyl-phenylether       ND       330         4-Nitroaniline       ND       660         4,6-Dinitro-2-methylphenol       ND       660         N-Nitrosodiphenylamine       ND       330         Azobenzene       ND       330         4-Bromophenyl-phenylether       ND       330         Hexachlorobenzene       ND       330         Pentachlorophenol       ND       66         Phenanthrene       ND       66         Anthracene       ND       66	4 +		
3-Nitroaniline			
Acenaphthene       ND       66         2,4-Dinitrophenol       ND       660         4-Nitrophenol       ND       660         Dibenzofuran       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       66         4-Chlorophenyl-phenylether       ND       330         4-Nitroaniline       ND       660         4,6-Dinitro-2-methylphenol       ND       660         N-Nitrosodiphenylamine       ND       330         Azobenzene       ND       330         4-Bromophenyl-phenylether       ND       330         Hexachlorobenzene       ND       330         Pentachlorophenol       ND       66         Phenanthrene       ND       66         Anthracene       ND       66			
2,4-Dinitrophenol       ND       660         4-Nitrophenol       ND       660         Dibenzofuran       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       66         4-Chlorophenyl-phenylether       ND       330         4-Nitroaniline       ND       660         4,6-Dinitro-2-methylphenol       ND       660         N-Nitrosodiphenylamine       ND       330         Azobenzene       ND       330         4-Bromophenyl-phenylether       ND       330         Hexachlorobenzene       ND       330         Pentachlorophenol       ND       66         Phenanthrene       ND       66         Anthracene       ND       66			
4-Nitrophenol       ND       660         Dibenzofuran       ND       330         2,4-Dinitrotoluene       ND       330         Diethylphthalate       ND       330         Fluorene       ND       66         4-Chlorophenyl-phenylether       ND       330         4-Nitroaniline       ND       660         4,6-Dinitro-2-methylphenol       ND       660         N-Nitrosodiphenylamine       ND       330         Azobenzene       ND       330         4-Bromophenyl-phenylether       ND       330         Hexachlorobenzene       ND       330         Pentachlorophenol       ND       660         Phenanthrene       ND       66         Anthracene       ND       66			
Dibenzofuran ND 330 2,4-Dinitrotoluene ND 330 Diethylphthalate ND 330 Fluorene ND 66 4-Chlorophenyl-phenylether ND 330 4-Nitroaniline ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 330 Anthracene ND 660 Anthracene ND 660	2,4-Dinitrophenol	ND	
2,4-Dinitrotoluene ND 330 Diethylphthalate ND 330 Fluorene ND 66 4-Chlorophenyl-phenylether ND 330 4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 660 Anthracene ND 66	4-Nitrophenol	ND	
Diethylphthalate ND 330 Fluorene ND 66 4-Chlorophenyl-phenylether ND 330 4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 660 Anthracene ND 66	Dibenzofuran	ND	
Fluorene ND 66 4-Chlorophenyl-phenylether ND 330 4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 66 Anthracene ND 66	2,4-Dinitrotoluene	ND	
4-Chlorophenyl-phenylether ND 330 4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 666 Anthracene ND 66	Diethylphthalate	ND	330
4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 666 Anthracene ND 66	Fluorene	ND	66
4-Nitroaniline ND 660 4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 666 Anthracene ND 66	4-Chlorophenyl-phenylether	ND	330
4,6-Dinitro-2-methylphenol ND 660 N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 66 Anthracene ND 66			
N-Nitrosodiphenylamine ND 330 Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 66 Anthracene ND 66			
Azobenzene ND 330 4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 66 Anthracene ND 66	N-Nitrosodiphenvlamine		
4-Bromophenyl-phenylether ND 330 Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 66 Anthracene ND 66			
Hexachlorobenzene ND 330 Pentachlorophenol ND 660 Phenanthrene ND 66 Anthracene ND 66			
PentachlorophenolND660PhenanthreneND66AnthraceneND66			
Phenanthrene ND 66 Anthracene ND 66			
Anthracene ND 66			
	Di-n-butylphthalate	ND	330



	Semivolatile Organics by GC/MS					
Lab #: Client: Project#:	196042 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Field ID: Lab ID: Matrix: Units: Basis: Diln Fac:	B-1(A)-4.5 196042-005 Soil ug/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127357 07/17/07 07/17/07 07/18/07 07/19/07			

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	81	28-120
Phenol-d5	81	30-120
2,4,6-Tribromophenol	102	20-120
Nitrobenzene-d5	80	39-120
2-Fluorobiphenyl	81	44-120
Terphenyl-d14	82	39-120



	Semivolatile Organics by GC/MS					
Lab #:	196042	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Field ID:	B-1(A)-9.5	Batch#:	127357			
Lab ID:	196042-006	Sampled:	07/17/07			
Matrix:	Soil	Received:	07/17/07			
Units:	ug/Kg	Prepared:	07/18/07			
Basis:	as received	Analyzed:	07/19/07			
Diln Fac:	1.000	-				

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND ND	66	
4-Chloroaniline	ND ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND	330	
		330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND ND	66	
Fluorene	ND ND	330	
4-Chlorophenyl-phenylether		660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	



	Semivolatile Organics by GC/MS					
Lab #: Client: Project#:	196042 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Field ID: Lab ID: Matrix: Units: Basis:	B-1(A)-9.5 196042-006 Soil ug/Kg as received	Batch#: Sampled: Received: Prepared: Analyzed:	127357 07/17/07 07/17/07 07/18/07 07/19/07			
Basis: Diln Fac:	as received 1.000	Analyzea:	07/19/07			

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate %I	REC	Limits
2-Fluorophenol 78	}	28-120
Phenol-d5 76	,	30-120
2,4,6-Tribromophenol	4	20-120
Nitrobenzene-d5 74	ļ.	39-120
2-Fluorobiphenyl 80	)	44-120
Terphenyl-d14 82	2	39-120



Semivolatile Organics by GC/MS						
Lab #: Client:	196042 LFR Levine Fricke	Location: Prep:	Hanson Radum EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Type: Lab ID: Matrix: Units:	BLANK QC396734 Miscell. ug/Kg	Diln Fac: Batch#: Prepared: Analyzed:	1.000 127357 07/18/07 07/19/07			
Basis:	as received	-				

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	ļ
bis(2-Chloroethyl)ether	ND	330	ļ
2-Chlorophenol	ND	330	ļ
1,3-Dichlorobenzene	ND	330	ļ
1,4-Dichlorobenzene	ND	330	ļ
Benzyl alcohol	ND	330	ļ
1,2-Dichlorobenzene	ND	330	J
2-Methylphenol	ND	330	ļ
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,600	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	ļ
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND	66	
Fluorene			
4-Chlorophenyl-phenylether	ND	330 660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	



	Semivolat:	ile Organics by G	C/MS	
Lab #: Client: Project#:	196042 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C	
Type: Lab ID: Matrix:	BLANK QC396734 Miscell.	Diln Fac: Batch#: Prepared:	1.000 127357 07/18/07	
Units: Basis:	ug/Kg as received	Analyzed:	07/19/07	

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	83	28-120
Phenol-d5	81	30-120
2,4,6-Tribromophenol	92	20-120
Nitrobenzene-d5	82	39-120
2-Fluorobiphenyl	86	44-120
Terphenyl-d14	87	39-120



	Semivolati	ile Organics by G	GC/MS	
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC396735	Batch#:	127357	
Matrix:	Miscell.	Prepared:	07/18/07	
Units:	ug/Kg	Analyzed:	07/19/07	
Basis:	as received			

Analyte	Spiked	Result	%REC	Limits
Phenol	2,644	2,101	79	40-120
2-Chlorophenol	2,644	2,129	81	40-120
1,4-Dichlorobenzene	1,322	1,246	94	45-120
N-Nitroso-di-n-propylamine	1,322	981.1	74	34-120
1,2,4-Trichlorobenzene	1,322	1,239	94	45-120
4-Chloro-3-methylphenol	2,644	2,347	89	45-120
Acenaphthene	1,322	1,094	83	42-120
4-Nitrophenol	2,644	2,012	76	31-120
2,4-Dinitrotoluene	1,322	1,265	96	41-120
Pentachlorophenol	2,644	2,140	81	21-120
Pyrene	1,322	1,153	87	41-120

Surrogate	%REC	Limits
2-Fluorophenol	80	28-120
Phenol-d5	79	30-120
2,4,6-Tribromophenol	110	20-120
Nitrobenzene-d5	81	39-120
2-Fluorobiphenyl	82	44-120
Terphenyl-d14	88	39-120

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	Semivolatile	Organics by G	C/MS
Lab #:	196042	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8270C
Field ID:	ZZZZZZZZZ	Batch#:	127357
MSS Lab ID:	195937-001	Sampled:	07/10/07
Matrix:	Miscell.	Received:	07/12/07
Units:	ug/Kg	Prepared:	07/18/07
Basis:	as received	Analyzed:	07/26/07
Diln Fac:	1.000		

Type: MS Lab ID: QC396736

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<68.44	2,652	2,117	80	38-120
2-Chlorophenol	<71.23	2,652	2,095	79	38-120
1,4-Dichlorobenzene	<17.01	1,326	1,158	87	49-120
N-Nitroso-di-n-propylamine	<14.07	1,326	1,022	77	43-120
1,2,4-Trichlorobenzene	<15.20	1,326	1,176	89	47-120
4-Chloro-3-methylphenol	<70.50	2,652	2,312	87	44-120
Acenaphthene	<15.00	1,326	1,085	82	48-120
4-Nitrophenol	<84.53	2,652	2,089	79	30-120
2,4-Dinitrotoluene	<15.33	1,326	1,192	90	41-120
Pentachlorophenol	<67.07	2,652	1,866	70	13-120
Pyrene	<14.99	1,326	1,126	85	42-120

Surrogate	%REC	Limits
2-Fluorophenol	77	28-120
Phenol-d5	81	30-120
2,4,6-Tribromophenol	109	20-120
Nitrobenzene-d5	77	39-120
2-Fluorobiphenyl	80	44-120
Terphenyl-d14	84	39-120

Type: MSD Lab ID: QC396737

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,650	2,089	79	38-120	1	26
2-Chlorophenol	2,650	2,068	78	38-120	1	28
1,4-Dichlorobenzene	1,325	1,158	87	49-120	0	27
N-Nitroso-di-n-propylamine	1,325	992.3	75	43-120	3	28
1,2,4-Trichlorobenzene	1,325	1,206	91	47-120	3	26
4-Chloro-3-methylphenol	2,650	2,338	88	44-120	1	28
Acenaphthene	1,325	1,077	81	48-120	1	29
4-Nitrophenol	2,650	2,080	78	30-120	0	38
2,4-Dinitrotoluene	1,325	1,190	90	41-120	0	26
Pentachlorophenol	2,650	1,976	75	13-120	6	55
Pyrene	1,325	1,143	86	42-120	2	30

Surrogate	%REC	Limits
2-Fluorophenol	75	28-120
Phenol-d5	80	30-120
2,4,6-Tribromophenol	110	20-120
Nitrobenzene-d5	79	39-120
2-Fluorobiphenyl	80	44-120
Terphenyl-d14	84	39-120



	Polychlorinated	d Biphenyls	(PCBs)
Lab #:	196042	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	07/17/07
Units:	ug/Kg	Received:	07/17/07
Basis:	as received	Prepared:	07/18/07
Diln Fac:	1.000	Analyzed:	07/20/07
Batch#:	127391	Anaryzeu.	07/20/07

Field ID: B-1(A)-4.5Lab ID: 196042-005 SAMPLE Cleanup Method: EPA 3665A Type:

Analyte	Result	RL	
Aroclor-1016	ND	9.4	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.4	
Aroclor-1242	ND	9.4	
Aroclor-1248	ND	9.4	
Aroclor-1254	ND	9.4	
Aroclor-1260	ND	9.4	

Surrogate	%REC	Limits
TCMX	110	63-141
Decachlorobiphenyl	104	50-158

Lab ID: Field ID: B-1(A)-9.5196042-006 SAMPLÉ Cleanup Method: EPA 3665A Type:

Analyte	Result	RL	
Aroclor-1016	ND	9.5	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.5	
Aroclor-1242	ND	9.5	
Aroclor-1248	ND	9.5	
Aroclor-1254	ND	9.5	
Aroclor-1260	ND	9.5	

Surrogate	%REC	Limits
TCMX	104	63-141
Decachlorobiphenyl	96	50-158

Type: Lab ID: BLANK QC396893 Cleanup Method: EPA 3665A

Analyte	Result	RL	
Aroclor-1016	ND	9.5	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.5	
Aroclor-1242	ND	9.5	
Aroclor-1248	ND	9.5	
Aroclor-1254	ND	9.5	
Aroclor-1260	ND	9.5	

Surrogate	%REC	Limits
TCMX	50 *	63-141
Decachlorobiphenyl	54	50-158

\*= Value outside of QC limits; see narrative ND= Not Detected

RL= Reporting Limit



	Polychlorinated	Biphenyls (P	CBs)
Lab #:	196042	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC396928	Batch#:	127391
Matrix:	Soil	Prepared:	07/18/07
Units:	ug/Kg	Analyzed:	07/19/07
Basis:	as received		

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits
Aroclor-1232	165.0	155.6	94	68-138

Surrogate	%REC	Limits
TCMX	87	63-141
Decachlorobiphenyl	78	50-158



	Polychlorinated	Biphenyls (	PCBs)
Lab #:	196042	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	127391
MSS Lab ID:	196032-001	Sampled:	07/16/07
Matrix:	Soil	Received:	07/17/07
Units:	ug/Kg	Prepared:	07/18/07
Basis:	as received	Analyzed:	07/19/07
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3665A

Lab ID: QC396929

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1232	<1.324	165.0	169.1	103	72-140

Surrogate	%REC	Limits
TCMX	129	63-141
Decachlorobiphenyl	105	50-158

Type: MSD Cleanup Method: EPA 3665A

Lab ID: QC396930

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1232	165.9	173.4	104	72-140	2	27

Surrogate	%REC	Limits
TCMX	109	63-141
Decachlorobiphenyl	83	50-158



	Californ	nia Title 26 Meta	als	
Lab #:	196042	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	B-1(A)-4.5	Diln Fac:	1.000	
Lab ID:	196042-005	Sampled:	07/17/07	
Matrix:	Soil	Received:	07/17/07	
Units:	mg/Kg	Analyzed:	07/19/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	ND	0.50	127397 07/18/07	EPA 3050B	EPA 6010B
Arsenic	4.2	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Barium	160	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Beryllium	0.24	0.10	127397 07/18/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Chromium	40	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Cobalt	10	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Copper	28	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Lead	8.8	0.15	127397 07/18/07	EPA 3050B	EPA 6010B
Mercury	0.026	0.020	127412 07/19/07	METHOD	EPA 7471A
Molybdenum	0.59	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Nickel	60	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127397 07/18/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127397 07/18/07	EPA 3050B	EPA 6010B
Vanadium	23	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Zinc	51	1.0	127397 07/18/07	EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	als	
Lab #:	196042	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	B-1(A)-9.5	Diln Fac:	1.000	
Lab ID:	196042-006	Sampled:	07/17/07	
Matrix:	Soil	Received:	07/17/07	
Units:	mg/Kg	Analyzed:	07/19/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	ND	0.50	127397 07/18/07	EPA 3050B	EPA 6010B
Arsenic	4.6	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Barium	160	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Beryllium	0.32	0.10	127397 07/18/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Chromium	56	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Cobalt	13	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Copper	26	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Lead	8.0	0.15	127397 07/18/07	EPA 3050B	EPA 6010B
Mercury	0.023	0.020	127412 07/19/07	METHOD	EPA 7471A
Molybdenum	0.41	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Nickel	85	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127397 07/18/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127397 07/18/07	EPA 3050B	EPA 6010B
Vanadium	29	0.25	127397 07/18/07	EPA 3050B	EPA 6010B
Zinc	54	1.0	127397 07/18/07	EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	als	
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3050B	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC396917	Batch#:	127397	
Matrix:	Soil	Prepared:	07/18/07	
Units:	mg/Kg	Analyzed:	07/19/07	
Basis:	as received			

Analyte	Result	RL	
Antimony	ND	0.50	
Arsenic	ND	0.25	
Barium	ND	0.25	
Beryllium	ND	0.10	
Cadmium	ND	0.25	
Chromium	ND	0.25	
Cobalt	ND	0.25	
Copper	ND	0.25	
Lead	ND	0.15	
Molybdenum	ND	0.25	
Nickel	ND	0.25	
Selenium	ND	0.50	
Silver	ND	0.25	
Thallium	ND	0.50	
Vanadium	ND	0.25	
Zinc	ND	1.0	



California Title 26 Metals				
Lab #: Client: Project#:	196042 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3050B EPA 6010B	
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Batch#: Prepared: Analyzed:	127397 07/18/07 07/19/07	

Type: BS Lab ID: QC396918

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	98.24	98	80-120
Arsenic	50.00	49.44	99	80-120
Barium	100.0	99.57	100	80-120
Beryllium	2.500	2.589	104	80-120
Cadmium	10.00	10.02	100	80-120
Chromium	100.0	96.33	96	80-120
Cobalt	25.00	23.60	94	80-120
Copper	12.50	11.92	95	80-120
Lead	100.0	95.61	96	80-120
Molybdenum	20.00	20.26	101	80-120
Nickel	25.00	23.73	95	80-120
Selenium	50.00	49.54	99	80-120
Silver	10.00	9.388	94	80-120
Thallium	50.00	49.69	99	80-120
Vanadium	25.00	24.33	97	80-120
Zinc	25.00	24.51	98	80-120

Type: BSD Lab ID: QC396919

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	100.1	100	80-120	2	20
Arsenic	50.00	50.29	101	80-120	2	20
Barium	100.0	100.8	101	80-120	1	20
Beryllium	2.500	2.647	106	80-120	2	20
Cadmium	10.00	10.32	103	80-120	3	20
Chromium	100.0	99.28	99	80-120	3	20
Cobalt	25.00	24.33	97	80-120	3	20
Copper	12.50	12.26	98	80-120	3	20
Lead	100.0	98.65	99	80-120	3	20
Molybdenum	20.00	20.54	103	80-120	1	20
Nickel	25.00	24.51	98	80-120	3	20
Selenium	50.00	50.46	101	80-120	2	20
Silver	10.00	9.690	97	80-120	3	20
Thallium	50.00	50.80	102	80-120	2	20
Vanadium	25.00	25.06	100	80-120	3	20
Zinc	25.00	25.27	101	80-120	3	20



California Title 26 Metals				
Lab #: Client:	196042 LFR Levine Fricke	Location: Prep:	Hanson Radum EPA 3050B	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Field ID: MSS Lab ID: Matrix: Units: Basis: Diln Fac:	ZZZZZZZZZ 196050-001 Soil mg/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127397 07/18/07 07/18/07 07/18/07 07/19/07	

Type: MS Lab ID: QC396920

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	0.7560	93.46	60.48	64	1-129
Arsenic	3.191	46.73	48.89	98	72-120
Barium	47.75	93.46	135.5	94	49-138
Beryllium	0.1303	2.336	2.534	103	80-120
Cadmium	0.02568	9.346	9.094	97	72-120
Chromium	20.29	93.46	107.2	93	63-122
Cobalt	5.280	23.36	26.88	92	61-120
Copper	5.751	11.68	18.23	107	59-137
Lead	2.153	93.46	86.53	90	55-122
Molybdenum	0.7592	18.69	19.19	99	66-120
Nickel	26.09	23.36	48.75	97	45-139
Selenium	<0.07143	46.73	45.82	98	73-120
Silver	<0.01668	9.346	8.968	96	53-120
Thallium	<0.03151	46.73	43.46	93	64-120
Vanadium	25.51	23.36	49.28	102	55-139
Zinc	19.22	23.36	42.33	99	49-140

Type: MSD Lab ID: QC396921

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	99.01	61.81	62	1-129	4	23
Arsenic	49.50	50.13	95	72-120	3	20
Barium	99.01	151.1	104	49-138	7	23
Beryllium	2.475	2.632	101	80-120	2	20
Cadmium	9.901	9.524	96	72-120	1	20
Chromium	99.01	110.5	91	63-122	2	20
Cobalt	24.75	27.88	91	61-120	1	23
Copper	12.38	17.81	97	59-137	6	20
Lead	99.01	89.18	88	55-122	3	26
Molybdenum	19.80	19.38	94	66-120	5	20
Nickel	24.75	49.77	96	45-139	1	26
Selenium	49.50	46.95	95	73-120	3	20
Silver	9.901	9.437	95	53-120	1	22
Thallium	49.50	44.72	90	64-120	3	20
Vanadium	24.75	51.42	105	55-139	1	20
Zinc	24.75	43.22	97	49-140	1	23



California Title 26 Metals				
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Basis:	as received	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC396975	Batch#:	127412	
Matrix:	Soil	Prepared:	07/19/07	
Units:	mg/Kg	Analyzed:	07/19/07	

Result	RL	
ND	0.020	



California Title 26 Metals				
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127412	
Units:	mg/Kg	Prepared:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC396976	0.5000	0.4310	86	80-120		
BSD	QC396977	0.5000	0.4600	92	80-120	7	20



	Californ	nia Title 26 Meta	als	
Lab #:	196042	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Diln Fac:	1.000	
Field ID:	ZZZZZZZZZ	Batch#:	127412	
MSS Lab ID:	195907-001	Sampled:	07/11/07	
Matrix:	Soil	Received:	07/11/07	
Units:	mg/Kg	Prepared:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC396979	0.04151	0.4310	0.4431	93	67-143		
MSD	QC396980		0.4902	0.5441	103	67-143	9	23



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

## Laboratory Job Number 196066

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

Sample ID	<u>Lab ID</u>
$B-\overline{1(A)}-GGW$	196066-001
EB-35(C)-2.5	196066-002
EB-35(C)-5.5	196066-003
EB-35(C)-10.5	196066-004
EB-35(D)-5.5	196066-005
EB-35(D)-9.5	196066-006
SS-31(A)-5.5	196066-007
SS-31(A)-10.5	196066-008
SS-31(A)-15.5	196066-009
SS-31(A)-20.5	196066-010
SS-31(A)-25.5	196066-011
SS-31(A)-30.5	196066-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/31/2007</u>

Signature:

Operations Manager

Date: <u>07/31/2007</u>

NELAP # 01107CA



#### CASE NARRATIVE

Laboratory number: 196066

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/19/07 Samples Received: 07/19/07

This hardcopy data package contains sample and QC results for ten soil samples and one water sample, requested for the above referenced project on 07/19/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/26/07.

#### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Soil:

High surrogate recovery was observed for hexacosane in EB-35(D)-9.5 (lab # 196066-006); no target analytes were detected in the sample. No other analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B) Water:

No analytical problems were encountered.

## Volatile Organics by GC/MS (EPA 8260B) Soil:

No analytical problems were encountered.

#### Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

### Pesticides (EPA 8081A):

Responses exceeding the instrument's linear range were observed for decachlorobiphenyl in the MS/MSD for batch 127426; affected data was qualified with "b". High surrogate recoveries were observed for decachlorobiphenyl in the MS/MSD for batch 127426; the corresponding TCMX surrogate recoveries were within limits, and the parent sample was not a project sample. No other analytical problems were encountered.

## Polychlorinated Biphenyls (PCBs) (EPA 8082):

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7471A):

No analytical problems were encountered.



	Total Vol	atile Hydrocarbo	ons	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Matrix:	Soil	Batch#:	127425	
Units:	mg/Kg	Sampled:	07/18/07	
Basis:	as received	Received:	07/19/07	
Diln Fac:	1.000	Analyzed:	07/19/07	

Field ID: SS-31(A)-5.5 Lab ID: 196066-007

Type: SAMPLE

ſ	Anal	yte Result	RL	
ı	Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	93	70-132
Bromofluorobenzene (FID)	102	66-138

Field ID: SS-31(A)-10.5 Lab ID: 196066-008

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	0.94	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	70-132
Bromofluorobenzene (FID)	104	66-138

Field ID: SS-31(A)-15.5 Lab ID: 196066-009

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	1.1	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	99	70-132	
Bromofluorobenzene (FID)	107	66-138	

Field ID: SS-31(A)-20.5 Lab ID: 196066-010

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surroga	ite	%REC	Limits
Trifluorotoluene	(FID)	95	70-132
Bromofluorobenzen	e (FID)	104	66-138

ND= Not Detected RL= Reporting Limit



Total Volatile Hydrocarbons Hanson Radum EPA 5030B Lab #: 196066 Location: Client: LFR Levine Fricke Prep: 001-09567-01 Soil Analysis: Batch#: EPA 8015B 127425 Project#: Matrix: 07/18/07 Sampled: Units: mg/Kg as received 1.000 07/19/07 07/19/07 Basis: Received: Diln Fac: Analyzed:

Field ID: SS-31(A)-25.5Lab ID: 196066-011

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	93	70-132
Bromofluorobenzene (FID)	101	66-138

Field ID: SS-31(A)-30.5Lab ID: 196066-012

Type: SAMPLE

Analyt	e Result	RL	
Gasoline C7-C12	ND	0.98	

Surrogate	%REC	Limits		
Trifluorotoluene (FID)	95	70-132		
Bromofluorobenzene (FID)	106	66-138		

Type: BLANK Lab ID: QC397055

Analyte	Result	RL	
Gasoline C7-C12	ND	0.20	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	93	70-132
Bromofluorobenzene (FID)	96	66-138

ND= Not Detected RL= Reporting Limit

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Total Volatile Hydrocarbons					
Lab #:	196066	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 5030B		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Basis:	as received		
Lab ID:	QC397056	Diln Fac:	1.000		
Matrix:	Soil	Batch#:	127425		
Units:	mg/Kg	Analyzed:	07/19/07		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.942	99	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	70-132
Bromofluorobenzene (FID)	97	66-138

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	Total Volatile Hydrocarbons					
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8015B			
Field ID:	SS-31(A)-5.5	Diln Fac:	1.000			
MSS Lab ID:	196066-007	Batch#:	127425			
Matrix:	Soil	Sampled:	07/18/07			
Units:	mg/Kg	Received:	07/19/07			
Basis:	as received	Analyzed:	07/19/07			

Type: MS Lab ID: QC397057

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1189	10.10	10.70	105	36-120

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	110	70-132	
Bromofluorobenzene (FID)	108	66-138	

Type: MSD Lab ID: QC397058

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.901	9.789	98	36-120	7	29

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	70-132
Bromofluorobenzene (FID)	107	66-138



Total Extractable Hydrocarbons					
Lab #:	196066	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	B-1(A)-GGW	Batch#:	127482		
Matrix:	Water	Sampled:	07/18/07		
Units:	ug/L	Received:	07/19/07		
Diln Fac:	1.000	Prepared:	07/21/07		

 Type:
 SAMPLE
 Analyzed:
 07/24/07

 Lab ID:
 196066-001
 Cleanup Method:
 EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	79 Н Ү	50	
Motor Oil C24-C36	1,100 H	300	

Surrogate	%REC	Limits
Hexacosane	85	61-134

Type: BLANK Analyzed: 07/22/07 Lab ID: QC397291 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	105	61-134

ND= Not Detected

RL= Reporting Limit

H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard



Total Extractable Hydrocarbons						
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3520C			
Project#:	001-09567-01	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC397292	Batch#:	127482			
Matrix:	Water	Prepared:	07/21/07			
Units:	ug/L	Analyzed:	07/22/07			

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,192	88	58-130

Surrogate	%REC	Limits
Hexacosane	98	61-134

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	Total Extractable Hydrocarbons						
Lab #:	196066	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3520C				
Project#:	001-09567-01	Analysis:	EPA 8015B				
Field ID:	ZZZZZZZZZ	Batch#:	127482				
MSS Lab ID:	196040-002	Sampled:	07/17/07				
Matrix:	Water	Received:	07/17/07				
Units:	ug/L	Prepared:	07/21/07				
Diln Fac:	1.000	Analyzed:	07/23/07				

Type: MS Lab ID: QC397293

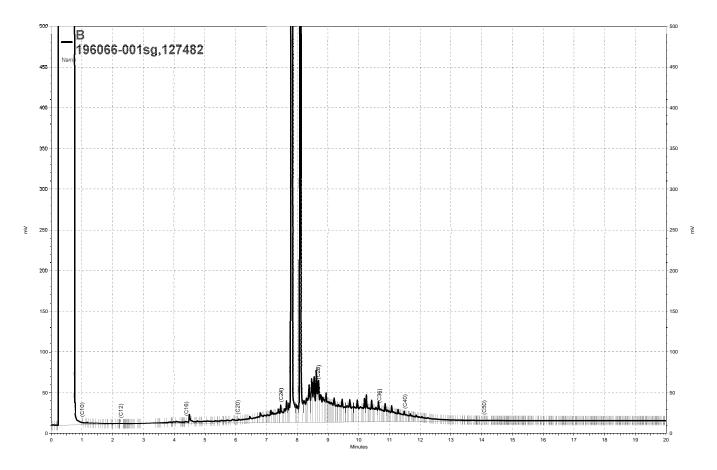
Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<15.44	2,500	2,261	90	57-134

Surrogate	СГ	Limits	
xacosane	6	51-134	

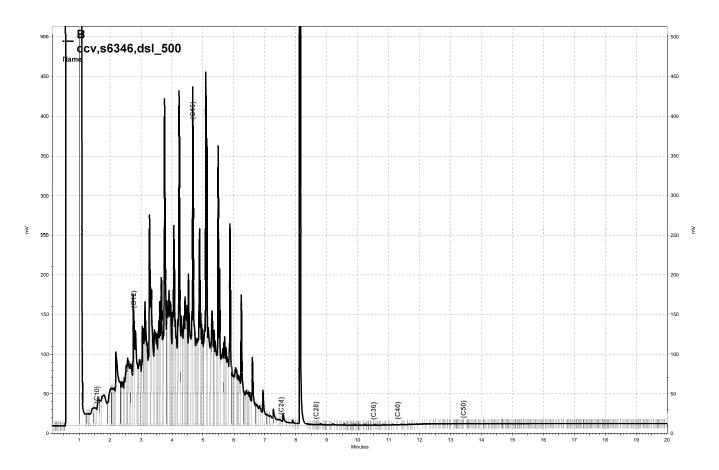
Type: MSD Lab ID: QC397294

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,318	93	57-134	3	32

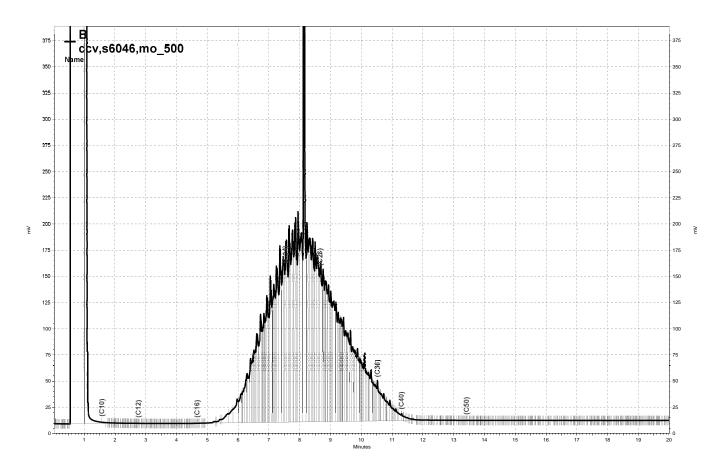
Surrogate	%REC	Limits	
Hexacosane	95	51-134	



\Lims\gdrive\ezchrom\Projects\GC14B\Data\203b076, B



\\Lims\gdrive\ezchrom\Projects\GC15B\Data\203b004, B



\Lims\gdrive\ezchrom\Projects\GC15B\Data\203b005, B



Total Extractable Hydrocarbons Lab #: 196066 Location: Hanson Radum LFR Levine Fricke Client: Prep: SHAKER TABLE 001-09567-01 EPA 8015B Project#: Analysis: Matrix: Soil Sampled: 07/18/07 07/19/07 Units: mq/Kq Received: Basis: as received 07/19/07 Prepared: Batch#: 127422

Field ID: EB-35(C)-5.5Diln Fac: 1.000 07/23/07 SAMPLE Analyzed: Type: Lab ID: 196066-003 Cleanup Method: EPA 3630C

Analyte Result Diesel C10-C24 ND 1.0 Motor Oil C24-C36 MD

%REC Limits Surrogate Hexacosane 1 N Q 40 - 127

1.000 Field ID: EB-35(C)-10.5Diln Fac: 07/23/07 Type: SAMPLE Analyzed: Lab ID: 196066-004 Cleanup Method: EPA 3630C

Analyte Result 1.0 Diesel C10-C24 ND Motor Oil C24-C36 ND

Surrogate %REC Limits 79 40-127 Hexacosane

Field ID: EB-35(D)-5.5Diln Fac: 10.00 SAMPLE 07/23/07 Type: Analyzed: Lab ID: 196066-005 Cleanup Method: EPA 3630C

Analyte Result Diesel C10-C24 38 H Y 9.9 Motor Oil C24-C36 810 H

%REC Limits Surrogate Hexacosane DΩ 40 - 127

Field ID: EB-35(D)-9.5Diln Fac: 1.000 07/23/07 SAMPLE Type: Analyzed: EPA 3630C Lab ID: 196066-006 Cleanup Method:

Result Analyte Diesel C10-C24 ND 0.99 Motor Oil C24-C36 MD

Surrogate %REC Limits Hexacosane 40-127

40 0

<sup>\*=</sup> Value outside of QC limits; see narrative H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected RL= Reporting Limit Page 1 of 3



Total Extractable Hydrocarbons 196066 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: Project#: 001-09567-01 EPA 8015B 07/18/07 Matrix: Soil Received: 07/19/07 Units: mg/Kg as received Basis: Prepared: 07/19/07 12<u>74</u>22 Batch#:

Field ID: SS-31(A)-5.5 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/24/07
Lab ID: 196066-007 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	5.9 н	5.0	

Surrogate	%REC	Limits
Hexacosane	77	40-127

Field ID: SS-31(A)-10.5 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/24/07
Lab ID: 196066-008 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
BULLOGUEC	OTCE		
Hexacosane	100	40-127	
nexacosane	100	40-12/	

Field ID: SS-31(A)-15.5 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/23/07
Lab ID: 196066-009 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC Limit
ne 94 40-12

 Field ID:
 SS-31(A)-20.5
 Diln Fac:
 1.000

 Type:
 SAMPLE
 Analyzed:
 07/24/07

 Lab ID:
 196066-010
 Cleanup Method:
 EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate
xacosane

<sup>\*=</sup> Value outside of QC limits; see narrative

RL= Reporting Limit Page 2 of 3

H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit



Total Extractable Hydrocarbons 196066 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: Project#: 001-09567-01 EPA 8015B 07/18/07 Matrix: Soil Received: 07/19/07 Units: mg/Kg as received Basis: Prepared: 07/19/07 Batch#: 127422

Field ID: SS-31(A)-25.5 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/24/07
Lab ID: 196066-011 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	87	40-127

Field ID: SS-31(A)-30.5 Diln Fac: 1.000
Type: SAMPLE Analyzed: 07/24/07
Lab ID: 196066-012 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
	70	40 100	
Hexacosane	70	40-127	

Type: BLANK Analyzed: 07/22/07 Lab ID: QC397041 Cleanup Method: EPA 3630C

Diln Fac: 1.000

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	81	40-127

Page 3 of 3

<sup>\*=</sup> Value outside of QC limits; see narrative

H= Heavier hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit



	Total Ext	ractable Hydrocar	rbons
Lab #:	196066	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE
Project#:	001-09567-01	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC397042	Batch#:	127422
Matrix:	Soil	Prepared:	07/19/07
Units:	mg/Kg	Analyzed:	07/23/07
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.78	34.08	68	58-127

Surrogate	%REC	Limits
Hexacosane	63	40-127

Page 1 of 1 41.0



	Total Extractable Hydrocarbons						
Lab #:	196066	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE				
Project#:	001-09567-01	Analysis:	EPA 8015B				
Field ID:	ZZZZZZZZZ	Diln Fac:	1.000				
MSS Lab ID:	195992-006	Batch#:	127422				
Matrix:	Miscell.	Sampled:	07/13/07				
Units:	mg/Kg	Received:	07/16/07				
Basis:	as received	Prepared:	07/19/07				

Type: MS Analyzed: 07/22/07 Lab ID: QC397043 Cleanup Method: EPA 3630C

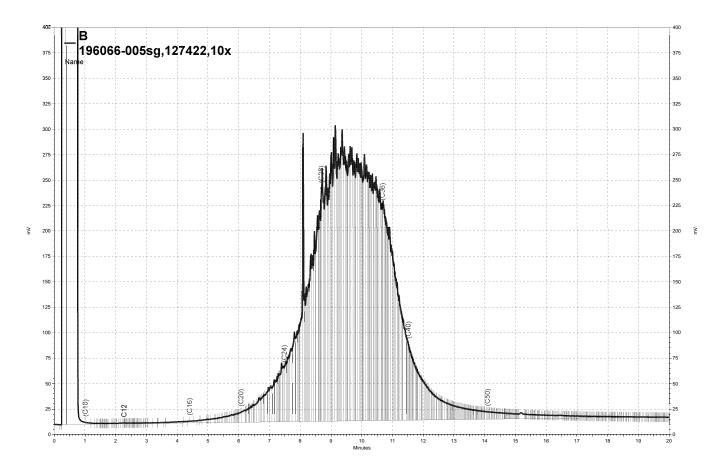
Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	55.33	49.94	124.9	139	29-147

Surrogate	%REC	Limits	
Hexacosane	100	40-127	

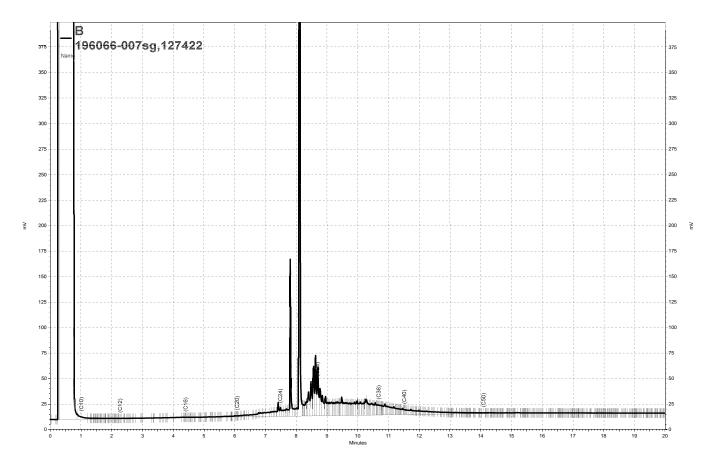
Type: MSD Analyzed: 07/23/07 Lab ID: QC397044 Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD I	Lim
Diesel C10-C24	49.89	119.1	128	29-147	5 4	46

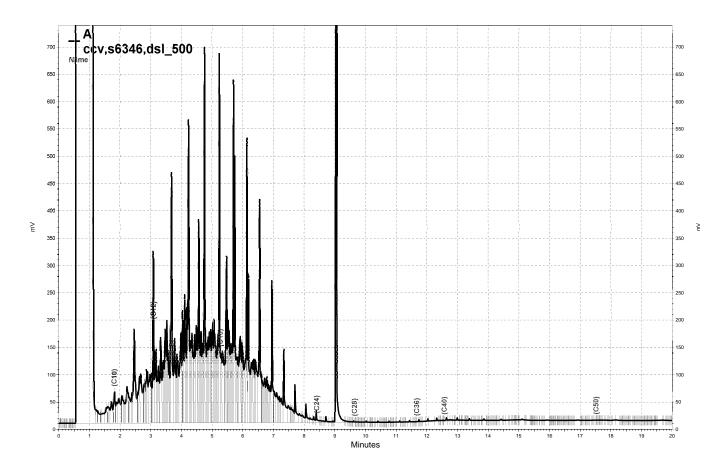
Surrogate	%REC	Limits
Hexacosane	96	40-127



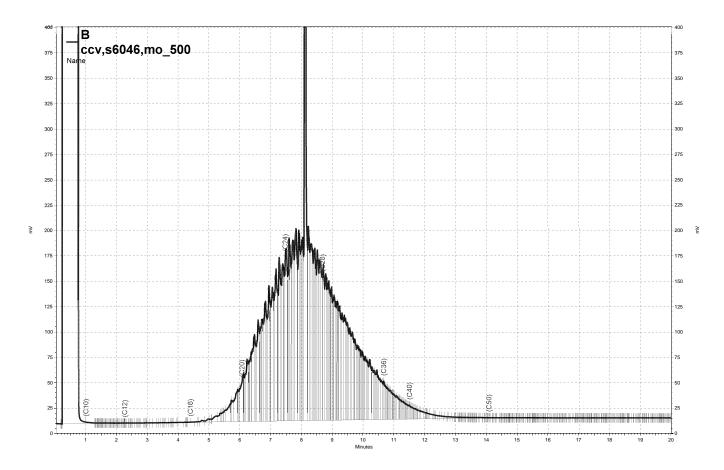
\\Lims\gdrive\ezchrom\Projects\GC14B\Data\203b048, B



\Lims\gdrive\ezchrom\Projects\GC14B\Data\203b070, B



\Lims\gdrive\ezchrom\Projects\GC17A\Data\203a004, A



\Lims\gdrive\ezchrom\Projects\GC14B\Data\203b005, B



	G	Gasoline by GC/MS	
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	B-1(A)-GGW 196066-001 Water ug/L 1.000	Batcĥ#: Sampled: Received: Analyzed:	127360 07/18/07 07/19/07 07/18/07

Gasoline C7-c12	Analyte	Result	RT.	
tert_Buty1 Alcohol (TBA)				
Free   12				
Chloromethane				
Viny  Chloride				
Isopropy  Ether (DIPE)				
Bromomethane				
Ethyl tert-Butyl Ether (FTBE)   ND   0.5     Methyl tert-Amyl Ether (TAME)   ND   0.5     Chloroethane   ND   1.0     Trichloroefluoromethane   ND   1.0     Acedone   10   10     Freon 113   ND   0.5     1.1-Dichloroethene   ND   0.5     1.1-Dichloroethene   ND   0.5     Methylene Chloride   ND   0.5     MTBE   ND   0.5     Trans-1,2-Dichloroethene   ND   0.5     Vinyl Acetate   ND				
Methyl tert-Amyl Ether (TAME) ND				
Chicroethane				
Trichlorofluoromethane				
Acetone				
Freen   113				
1.1-Dichloroethene				
Methylene Chloride				
Carbon Disulfide				
MTBE   ND				
trans-1,2-Dichloroethene				
Vinyl Acetate				
1-Dichloroethane				
2-Butanone	<b>1</b> • • • • • • • • • • • • • • • • • • •		— <del></del>	
cis-1,2-Dichloropropane         ND         0.5           2,2-Dichloropropane         ND         0.5           Chloroform         ND         0.5           Bromochloromethane         ND         0.5           1,1,1-Trichloroethane         ND         0.5           1,1-Dichloropropene         ND         0.5           Carbon Tetrachloride         ND         0.5           1,2-Dichloroethane         ND         0.5           Benzene         ND         0.5           Trichloroethene         ND         0.5           1,2-Dichloropropane         ND         0.5           Bromodichloromethane         ND         0.5           1,2-Dichloropropane         ND         0.5           Dibromomethane         ND         0.5           4-Methyl-2-Pentanone         ND         0.5           cis-1,3-Dichloropropene         ND         0.5           Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         0.5           1,3-Dichloropropane         ND         0.5           Dibromochlorometha				
2,2-Dichloropropane       ND       0.5         Chloroform       ND       0.5         Bromochloromethane       ND       0.5         1,1,1-Trichloroethane       ND       0.5         1,1-Dichloropropene       ND       0.5         Carbon Tetrachloride       ND       0.5         1,2-Dichloroethane       ND       0.5         Benzene       ND       0.5         Trichloroethene       ND       0.5         1,2-Dichloropropane       ND       0.5         Bromodichloromethane       ND       0.5         Bromodichloromethane       ND       0.5         Dibromomethane       ND       0.5         Undered       ND       0.5         Toluene       ND       0.5         Toluene       ND       0.5         1,1,2-Trichloropropene       ND       0.5         1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       0.5         1,2-Dibromoethane       ND       0.5         Tetrachloroethane       ND       0.5         1,2-Dibromoethane       ND       0.5         1,2-Dibromoethane       ND       0.5         <				
Chloroform				
Bromochloromethane				
1,1,1-Trichloroethane				
1,1-Dichloropropene			0.5	
Carbon Tetrachloride         ND         0.5           1,2-Dichloroethane         ND         0.5           Benzene         ND         0.5           Trichloroethene         ND         0.5           1,2-Dichloropropane         ND         0.5           Bromodichloromethane         ND         0.5           Dibromomethane         ND         0.5           4-Methyl-2-Pentanone         ND         0.5           4-Methyl-2-Pentanone         ND         0.5           Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         0.5           1,3-Dichloropropane         ND         0.5           Tetrachloroethane         ND         0.5           Dibromochloromethane         ND         0.5           1,2-Dibromoethane         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylen			0.5	
1,2-Dichloroethane         ND         0.5           Benzene         ND         0.5           Trichloroethene         ND         0.5           1,2-Dichloropropane         ND         0.5           Bromodichloromethane         ND         0.5           Dibromomethane         ND         0.5           4-Methyl-2-Pentanone         ND         10           cis-1,3-Dichloropropene         ND         0.5           Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         10           1,3-Dichloropropane         ND         0.5           Tetrachloroethene         ND         0.5           Dibromochloromethane         ND         0.5           Dibromochloromethane         ND         0.5           Chlorobenzene         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND <t< td=""><td></td><td></td><td>0.5</td><td></td></t<>			0.5	
Benzene         ND         0.5           Trichloroethene         ND         0.5           1,2-Dichloropropane         ND         0.5           Bromodichloromethane         ND         0.5           Dibromomethane         ND         0.5           4-Methyl-2-Pentanone         ND         10           cis-1,3-Dichloropropene         ND         0.5           Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         0.5           2-Hexanone         ND         0.5           1,3-Dichloropropane         ND         0.5           Tetrachloropropane         ND         0.5           Tetrachloroethane         ND         0.5           1,2-Dibromoethane         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           2,1,1,2-Tetrachloroethane         ND         0.5           5,1,1,2-Tetrachloroethane         ND         0.5           6,1,1,1,2-Tetrachloroethane         ND         0.5           <			0.5	
Trichloroethene	,		0.5	
1,2-Dichloropropane       ND       0.5         Bromodichloromethane       ND       0.5         Dibromomethane       ND       0.5         4-Methyl-2-Pentanone       ND       10         cis-1,3-Dichloropropene       ND       0.5         Toluene       ND       0.5         trans-1,3-Dichloropropene       ND       0.5         1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       10         1,3-Dichloropropane       ND       0.5         Tetrachloropropane       ND       0.5         Tetrachloroethane       ND       0.5         1,2-Dibromoethane       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Bromoform       ND       0.5         Bromoform       ND       0.5				
Bromodichloromethane				
Dibromomethane         ND         0.5           4-Methyl-2-Pentanone         ND         10           cis-1,3-Dichloropropene         ND         0.5           Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         0.5           1,3-Dichloropropane         ND         0.5           Tetrachloroethene         ND         0.5           Dibromochloromethane         ND         0.5           1,2-Dibromoethane         ND         0.5           Chlorobenzene         ND         0.5           1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0			0.5	
4-Methyl-2-Pentanone       ND       10         cis-1,3-Dichloropropene       ND       0.5         Toluene       ND       0.5         trans-1,3-Dichloropropene       ND       0.5         1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       10         1,3-Dichloropropane       ND       0.5         Tetrachloroethene       ND       0.5         Dibromochloromethane       ND       0.5         1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0				
cis-1,3-Dichloropropene         ND         0.5           Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         10           1,3-Dichloropropane         ND         0.5           Tetrachloroethene         ND         0.5           Dibromochloromethane         ND         0.5           1,2-Dibromoethane         ND         0.5           Chlorobenzene         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0				
Toluene         ND         0.5           trans-1,3-Dichloropropene         ND         0.5           1,1,2-Trichloroethane         ND         0.5           2-Hexanone         ND         10           1,3-Dichloropropane         ND         0.5           Tetrachloroethene         ND         0.5           Dibromochloromethane         ND         0.5           1,2-Dibromoethane         ND         0.5           Chlorobenzene         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0	<b>1</b>			
trans-1,3-Dichloropropene       ND       0.5         1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       10         1,3-Dichloropropane       ND       0.5         Tetrachloroethene       ND       0.5         Dibromochloromethane       ND       0.5         1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       0.5				
1,1,2-Trichloroethane       ND       0.5         2-Hexanone       ND       10         1,3-Dichloropropane       ND       0.5         Tetrachloroethene       ND       0.5         Dibromochloromethane       ND       0.5         1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,2-Tetrachloroethane       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       0.5				
2-Hexanone       ND       10         1,3-Dichloropropane       ND       0.5         Tetrachloroethene       ND       0.5         Dibromochloromethane       ND       0.5         1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0				
1,3-Dichloropropane       ND       0.5         Tetrachloroethene       ND       0.5         Dibromochloromethane       ND       0.5         1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0				
Tetrachloroethene         ND         0.5           Dibromochloromethane         ND         0.5           1,2-Dibromoethane         ND         0.5           Chlorobenzene         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0				
Dibromochloromethane         ND         0.5           1,2-Dibromoethane         ND         0.5           Chlorobenzene         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0				
1,2-Dibromoethane       ND       0.5         Chlorobenzene       ND       0.5         1,1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0			0.5	
Chlorobenzene         ND         0.5           1,1,1,2-Tetrachloroethane         ND         0.5           Ethylbenzene         ND         0.5           m,p-Xylenes         ND         0.5           o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0				
1,1,1,2-Tetrachloroethane       ND       0.5         Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0				
Ethylbenzene       ND       0.5         m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0				
m,p-Xylenes       ND       0.5         o-Xylene       ND       0.5         Styrene       ND       0.5         Bromoform       ND       1.0			U.5	
o-Xylene         ND         0.5           Styrene         ND         0.5           Bromoform         ND         1.0			U.5	
Styrene ND 0.5 Bromoform ND 1.0			U.5	
Bromoform ND 1.0			U.5	
I CONTROLOGICATION IN INC.				
	Isopropylbenzene	ND ND		
1,1,2,2-Tetrachloroethane ND 0.5 1,2,3-Trichloropropane ND 0.5				

ND= Not Detected RL= Reporting Limit Page 1 of 2

5.1



	Gasoline	e by GC/MS	
Lab #:	196066	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-01	Analysis:	EPA 8260B
Field ID:	B-1(A)-GGW	Batch#:	127360
Lab ID:	196066-001	Sampled:	07/18/07
Matrix:	Water	Received:	07/19/07
Units: Diln Fac:	ug/L 1.000	Analyzed:	07/18/07

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	94	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	98	80-122	



Gasoline by GC/MS				
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396744 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127360 07/18/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	G	Gasoline by GC/MS		
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396744 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127360 07/18/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	100	80-120	
Bromofluorobenzene	98	80-122	



	Ga	soline by GC/MS		
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127360 07/18/07	

Type: BS Lab ID: QC396745

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	137.5	110	68-132
Isopropyl Ether (DIPE)	25.00	25.20	101	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	28.31	113	75-124
Methyl tert-Amyl Ether (TAME)	25.00	29.88	120	77-120
1,1-Dichloroethene	25.00	29.27	117	80-132
Benzene	25.00	27.35	109	80-120
Trichloroethene	25.00	25.55	102	80-120
Toluene	25.00	28.26	113	80-120
Chlorobenzene	25.00	26.81	107	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	98	80-122	

Type: BSD Lab ID: QC396746

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	125.1	100	68-132	9	20
Isopropyl Ether (DIPE)	25.00	23.70	95	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	25.00	26.28	105	75-124	7	20
Methyl tert-Amyl Ether (TAME)	25.00	27.41	110	77-120	9	20
1,1-Dichloroethene	25.00	27.31	109	80-132	7	20
Benzene	25.00	25.83	103	80-120	6	20
Trichloroethene	25.00	23.96	96	80-120	6	20
Toluene	25.00	26.39	106	80-120	7	20
Chlorobenzene	25.00	25.47	102	80-120	5	20

Surrogate %	%REC	Limits
Dibromofluoromethane 97	7	80-123
1,2-Dichloroethane-d4 97	7	79-134
Toluene-d8 10	00	80-120
Bromofluorobenzene 96	6	80-122



	Gaso	oline by GC/MS		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Matrix:	Water	Batch#:	127360	
Units:	ug/L	Analyzed:	07/18/07	
Diln Fac:	1.000			

Type: BS Lab ID: QC396827

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,500	1,427	95	70-130

Surrogate %R	REC	Limits
Dibromofluoromethane 96		80-123
1,2-Dichloroethane-d4 95		79-134
Toluene-d8 99		80-120
Bromofluorobenzene 97		80-122

Type: BSD Lab ID: QC396828

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,500	1,399	93	70-130	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-123
1,2-Dichloroethane-d4	97	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-122



	Gasolin	e by GC/MS	
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B
Field ID: MSS Lab ID: Matrix: Units: Diln Fac:	ZZZZZZZZZZ 196040-002 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127360 07/17/07 07/17/07 07/19/07

Type: MS Lab ID: QC396910

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.579	125.0	124.4	99	69-137
Isopropyl Ether (DIPE)	<0.04032	25.00	25.43	102	69-120
Ethyl tert-Butyl Ether (ETBE)	<0.07412	25.00	27.36	109	78-127
Methyl tert-Amyl Ether (TAME)	<0.04870	25.00	28.79	115	79-120
1,1-Dichloroethene	<0.09386	25.00	27.83	111	80-139
Benzene	<0.2500	25.00	26.96	108	80-123
Trichloroethene	<0.1151	25.00	25.03	100	75-129
Toluene	<0.1338	25.00	27.15	109	80-122
Chlorobenzene	<0.1569	25.00	26.43	106	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	99	80-123	
1,2-Dichloroethane-d4	100	79-134	
Toluene-d8	100	80-120	
Bromofluorobenzene	97	80-122	

Type: MSD Lab ID: QC396911

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	123.8	99	69-137	0	20
Isopropyl Ether (DIPE)	25.00	24.50	98	69-120	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	26.41	106	78-127	4	20
Methyl tert-Amyl Ether (TAME)	25.00	27.83	111	79-120	3	20
1,1-Dichloroethene	25.00	26.78	107	80-139	4	20
Benzene	25.00	26.47	106	80-123	2	20
Trichloroethene	25.00	24.48	98	75-129	2	20
Toluene	25.00	26.57	106	80-122	2	20
Chlorobenzene	25.00	26.07	104	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	97	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-122



	BTXE	L & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-5.5	Diln Fac:	0.9804	
Lab ID:	196066-007	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	103	76-135
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-126

ND= Not Detected RL= Reporting Limit

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	BTXI	E & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-10.5	Diln Fac:	0.9434	
Lab ID:	196066-008	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	94	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-126
1,2-Dichloroethane-d4	110	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-126



	втхі	E & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-15.5	Diln Fac:	0.9615	
Lab ID:	196066-009	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-126
1,2-Dichloroethane-d4	107	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-126

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	BTXE	E & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-20.5	Diln Fac:	0.9259	
Lab ID:	196066-010	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	93	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-126
1,2-Dichloroethane-d4	108	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-126



	BTXE	: & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-25.5	Diln Fac:	0.9615	
Lab ID:	196066-011	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-126
1,2-Dichloroethane-d4	110	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-126



	BTXE	E & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-30.5	Diln Fac:	1.000	
Lab ID:	196066-012	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-126
1,2-Dichloroethane-d4	107	76-135
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-126

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	BT	XE & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Type:	BLANK	Basis:	as received	
Lab ID:	QC396987	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127415	
Units:	ug/Kg	Analyzed:	07/19/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	102	76-135
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-126



	втх	E & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Type:	LCS	Basis:	as received	
Lab ID:	QC396988	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127415	
Units:	ug/Kg	Analyzed:	07/19/07	

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	242.5	97	56-130
MTBE	50.00	44.92	90	66-120
Isopropyl Ether (DIPE)	50.00	41.80	84	57-120
Ethyl tert-Butyl Ether (ETBE)	50.00	41.66	83	68-120
1,2-Dichloroethane	50.00	51.35	103	73-120
Benzene	50.00	50.06	100	80-120
Methyl tert-Amyl Ether (TAME)	50.00	49.17	98	73-120
Toluene	50.00	50.57	101	80-120
1,2-Dibromoethane	50.00	51.94	104	80-120
Ethylbenzene	50.00	51.79	104	80-125
m,p-Xylenes	100.0	104.8	105	80-123
o-Xylene	50.00	52.00	104	80-122

Surrogate	%REC	Limits	
Dibromofluoromethane	100	78-126	
1,2-Dichloroethane-d4	107	76-135	
Toluene-d8	101	80-120	
Bromofluorobenzene	96	80-126	ļ



		BTXE & Oxygenates		
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-5.5	Diln Fac:	0.9804	
MSS Lab ID:	196066-007	Batch#:	127415	
Matrix:	Soil	Sampled:	07/18/07	
Units:	ug/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/19/07	

Type: MS Lab ID: QC397059

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.403	245.1	169.4	69	45-123
MTBE	<0.1161	49.02	35.11	72	55-120
Isopropyl Ether (DIPE)	<0.1337	49.02	32.47	66	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.1074	49.02	33.07	67	58-120
1,2-Dichloroethane	<0.1975	49.02	43.39	89	56-120
Benzene	<0.1925	49.02	40.59	83	61-122
Methyl tert-Amyl Ether (TAME)	<0.09438	49.02	38.33	78	60-120
Toluene	<0.2524	49.02	40.54	83	57-124
1,2-Dibromoethane	<0.2877	49.02	42.76	87	57-120
Ethylbenzene	<0.3561	49.02	41.18	84	55-129
m,p-Xylenes	<0.5854	98.04	83.47	85	53-127
o-Xylene	<0.1744	49.02	41.82	85	54-127

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-126
1,2-Dichloroethane-d4	109	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	96	80-126

Type: MSD Lab ID: QC397060

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	245.1	170.2	69	45-123	0	32
MTBE	49.02	38.42	78	55-120	9	20
Isopropyl Ether (DIPE)	49.02	36.99	75	50-120	13	20
Ethyl tert-Butyl Ether (ETBE)	49.02	36.89	75	58-120	11	20
1,2-Dichloroethane	49.02	38.61	79	56-120	12	20
Benzene	49.02	37.31	76	61-122	8	20
Methyl tert-Amyl Ether (TAME)	49.02	41.85	85	60-120	9	20
Toluene	49.02	37.40	76	57-124	8	21
1,2-Dibromoethane	49.02	38.44	78	57-120	11	20
Ethylbenzene	49.02	38.12	78	55-129	8	23
m,p-Xylenes	98.04	77.48	79	53-127	7	23
o-Xylene	49.02	39.15	80	54-127	7	22

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-126
1,2-Dichloroethane-d4	104	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	97	80-126



Semivolatile Organics by GC/MS					
Lab #:	196066	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Field ID:	SS-31(A)-5.5	Batch#:	127409		
Lab ID:	196066-007	Sampled:	07/18/07		
Matrix:	Soil	Received:	07/19/07		
Units:	ug/Kg	Prepared:	07/19/07		
Basis:	as received	Analyzed:	07/24/07		
Diln Fac:	1.000	_			

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	ļ
bis(2-Chloroethyl)ether	ND	330	ļ
2-Chlorophenol	ND	330	ļ
1,3-Dichlorobenzene	ND	330	ļ
1,4-Dichlorobenzene	ND	330	ļ
Benzyl alcohol	ND	330	ļ
1,2-Dichlorobenzene	ND	330	J
2-Methylphenol	ND	330	ļ
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,600	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	ļ
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND	66	
Fluorene			
4-Chlorophenyl-phenylether	ND	330 660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit Page 1 of 2



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	Semivolatile Organics by GC/MS					
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Field ID:	SS-31(A)-5.5	Batch#:	127409			
Lab ID:	196066-007	Sampled:	07/18/07			
Matrix:	Soil	Received:	07/19/07			
Units:	ug/Kg	Prepared:	07/19/07			
Basis:	as received	Analyzed:	07/24/07			
Diln Fac:	1.000	-				

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	52	28-120
Phenol-d5	54	30-120
2,4,6-Tribromophenol	49	20-120
Nitrobenzene-d5	56	39-120
2-Fluorobiphenyl	54	44-120
Terphenyl-d14	51	39-120

ND= Not Detected RL= Reporting Limit Page 2 of 2

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	Semivolatile Organics by GC/MS					
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Field ID:	SS-31(A)-10.5	Batch#:	127409			
Lab ID:	196066-008	Sampled:	07/18/07			
Matrix:	Soil	Received:	07/19/07			
Units:	ug/Kg	Prepared:	07/19/07			
Basis:	as received	Analyzed:	07/24/07			
Diln Fac:	1.000	-				

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	ļ
bis(2-Chloroethyl)ether	ND	330	ļ
2-Chlorophenol	ND	330	ļ
1,3-Dichlorobenzene	ND	330	ļ
1,4-Dichlorobenzene	ND	330	ļ
Benzyl alcohol	ND	330	ļ
1,2-Dichlorobenzene	ND	330	J
2-Methylphenol	ND	330	ļ
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,600	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	ļ
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND	66	
Fluorene			
4-Chlorophenyl-phenylether	ND	330 660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Semivolatile Organics by GC/MS					
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Field ID: Lab ID: Matrix: Units: Basis: Diln Fac:	SS-31(A)-10.5 196066-008 Soil ug/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127409 07/18/07 07/19/07 07/19/07 07/24/07			

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	65	28-120
Phenol-d5	60	30-120
2,4,6-Tribromophenol	64	20-120
Nitrobenzene-d5	70	39-120
2-Fluorobiphenyl	65	44-120
Terphenyl-d14	63	39-120



Date of Rep						
Semivolatile Organics by GC/MS						
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC396965	Batch#:	127409			
Matrix:	Soil	Prepared:	07/19/07			
Units:	uq/Kq	Analyzed:	07/20/07			
Basis:	as received	-				

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	670	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND ND	67	
4-Chloroaniline	ND ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	67	
Hexachlorocyclopentadiene	ND ND	670	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Chioronaphthalene 2-Nitroaniline	ND ND	670	
Dimethylphthalate	ND ND	330	
	ND ND	67	
Acenaphthylene	ND	330	
2,6-Dinitrotoluene	ND	670	
3-Nitroaniline	ND ND	67	
Acenaphthene	ND	670	
2,4-Dinitrophenol		670	
4-Nitrophenol Dibenzofuran	ND ND	330	
2,4-Dinitrotoluene	ND ND	330 330	
Diethylphthalate	ND	67	
Fluorene	ND	330	
4-Chlorophenyl-phenylether	ND	670	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	670	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	670	
Phenanthrene	ND	67	
Anthracene	ND	67	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Semivolatile Organics by GC/MS					
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Type: Lab ID:	BLANK	Diln Fac:	1.000			
Lab ID:	QC396965	Batch#:	127409			
Matrix:	Soil	Prepared:	07/19/07			
Units:	ug/Kg	Analyzed:	07/20/07			
Basis:	as received	-				

Analyte	Result	RL	
Fluoranthene	ND	67	
Pyrene	ND	67	
Butylbenzylphthalate	ND	330	
3,3 <sup>1</sup> -Dichlorobenzidine	ND	670	
Benzo(a)anthracene	ND	67	
Chrysene	ND	67	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	67	
Benzo(k)fluoranthene	ND	67	
Benzo(a)pyrene	ND	67	
Indeno(1,2,3-cd)pyrene	ND	67	
Dibenz(a,h)anthracene	ND	67	
Benzo(g,h,i)perylene	ND	67	

Surrogate	%REC	Limits
2-Fluorophenol	69	28-120
Phenol-d5	68	30-120
2,4,6-Tribromophenol	74	20-120
Nitrobenzene-d5	70	39-120
2-Fluorobiphenyl	74	44-120
Terphenyl-d14	72	39-120



	Semivolati	ile Organics by G	GC/MS	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC396966	Batch#:	127409	
Matrix:	Soil	Prepared:	07/19/07	
Units:	ug/Kg	Analyzed:	07/20/07	
Basis:	as received			

Analyte	Spiked	Result	%REC	Limits
Phenol	2,665	1,778	67	40-120
2-Chlorophenol	2,665	1,834	69	40-120
1,4-Dichlorobenzene	1,332	1,067	80	45-120
N-Nitroso-di-n-propylamine	1,332	782.0	59	34-120
1,2,4-Trichlorobenzene	1,332	1,136	85	45-120
4-Chloro-3-methylphenol	2,665	1,993	75	45-120
Acenaphthene	1,332	970.3	73	42-120
4-Nitrophenol	2,665	1,630	61	31-120
2,4-Dinitrotoluene	1,332	1,111	83	41-120
Pentachlorophenol	2,665	1,970	74	21-120
Pyrene	1,332	991.4	74	41-120

Surrogate	%REC	Limits
2-Fluorophenol	69	28-120
Phenol-d5	68	30-120
2,4,6-Tribromophenol	104	20-120
Nitrobenzene-d5	68	39-120
2-Fluorobiphenyl	74	44-120
Terphenyl-d14	71	39-120

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	Semivolatile	Organics by G	C/MS
Lab #:	196066	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8270C
Field ID:	SS-31(A)-5.5	Batch#:	127409
MSS Lab ID:	196066-007	Sampled:	07/18/07
Matrix:	Soil	Received:	07/19/07
Units:	ug/Kg	Prepared:	07/19/07
Basis:	as received	Analyzed:	07/26/07
Diln Fac:	1.000	<u>-</u>	

Type: MS Lab ID: QC396967

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<79.34	2,660	1,877	71	38-120
2-Chlorophenol	<77.83	2,660	1,848	69	38-120
1,4-Dichlorobenzene	<21.83	1,330	987.9	74	49-120
N-Nitroso-di-n-propylamine	<15.02	1,330	880.9	66	43-120
1,2,4-Trichlorobenzene	<20.21	1,330	1,021	77	47-120
4-Chloro-3-methylphenol	<88.23	2,660	2,071	78	44-120
Acenaphthene	<14.68	1,330	970.9	73	48-120
4-Nitrophenol	<65.81	2,660	1,692	64	30-120
2,4-Dinitrotoluene	<12.11	1,330	1,075	81	41-120
Pentachlorophenol	<147.7	2,660	1,547	58	13-120
Pyrene	<14.95	1,330	1,029	77	42-120

Surrogate	%REC	Limits
2-Fluorophenol	69	28-120
Phenol-d5	74	30-120
2,4,6-Tribromophenol	100	20-120
Nitrobenzene-d5	70	39-120
2-Fluorobiphenyl	74	44-120
Terphenyl-d14	72	39-120

Type: MSD Lab ID: QC396968

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,659	1,830	69	38-120	2	26
2-Chlorophenol	2,659	1,872	70	38-120	1	28
1,4-Dichlorobenzene	1,329	1,081	81	49-120	9	27
N-Nitroso-di-n-propylamine	1,329	844.8	64	43-120	4	28
1,2,4-Trichlorobenzene	1,329	1,104	83	47-120	8	26
4-Chloro-3-methylphenol	2,659	1,965	74	44-120	5	28
Acenaphthene	1,329	962.8	72	48-120	1	29
4-Nitrophenol	2,659	1,566	59	30-120	8	38
2,4-Dinitrotoluene	1,329	1,024	77	41-120	5	26
Pentachlorophenol	2,659	1,546	58	13-120	0	55
Pyrene	1,329	979.8	74	42-120	5	30

Surrogate	%REC	Limits
2-Fluorophenol	70	28-120
Phenol-d5	72	30-120
2,4,6-Tribromophenol	102	20-120
Nitrobenzene-d5	69	39-120
2-Fluorobiphenyl	75	44-120
Terphenyl-d14	70	39-120



	Organochlorine Pesticides					
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8081A			
Field ID:	SS-31(A)-5.5	Batch#:	127426			
Lab ID:	196066-007	Sampled:	07/18/07			
Matrix:	Soil	Received:	07/19/07			
Units:	ug/Kg	Prepared:	07/19/07			
Basis:	as received	Analyzed:	07/20/07			
Diln Fac:	1.000					

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	59	

Surrogate	%REC	Limits	
TCMX	66	50-120	
Decachlorobiphenyl	84	54-133	

ND= Not Detected RL= Reporting Limit Page 1 of 1

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	Organoch	nlorine Pesticide	es	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8081A	
Field ID:	SS-31(A)-10.5	Batch#:	127426	
Lab ID:	196066-008	Sampled:	07/18/07	
Matrix:	Soil	Received:	07/19/07	
Units:	ug/Kg	Prepared:	07/19/07	
Basis:	as received	Analyzed:	07/20/07	
Diln Fac:	1.000			

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	59	

Surrogate	%REC	Limits
TCMX	57	50-120
Decachlorobiphenyl	76	54-133

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	Organochlorine Pesticides					
Lab #:	196066	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8081A			
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC397061	Batch#:	127426			
Matrix:	Soil	Prepared:	07/19/07			
Units:	ug/Kg	Analyzed:	07/20/07			
Basis:	as received					

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	64	50-120
Decachlorobiphenyl	100	54-133

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	Organoch	nlorine Pesticide	es	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8081A	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC397062	Batch#:	127426	
Matrix:	Soil	Prepared:	07/19/07	
Units:	ug/Kg	Analyzed:	07/20/07	
Basis:	as received			

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.32	9.443	71	42-120
Heptachlor	13.32	9.818	74	44-130
Aldrin	13.32	9.564	72	47-120
Dieldrin	26.63	20.72	78	50-121
Endrin	26.63	19.00	71	39-130
4,4'-DDT	26.63	19.17	72	45-127

Surrogate	%REC	Limits
TCMX	65	50-120
Decachlorobiphenyl	90	54-133

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	Organochlorine Pesticides						
Lab #:	196066	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8081A				
Field ID:	ZZZZZZZZZ	Batch#:	127426				
MSS Lab ID:	196075-003	Sampled:	07/19/07				
Matrix:	Soil	Received:	07/19/07				
Units:	ug/Kg	Prepared:	07/19/07				
Basis:	as received	Analyzed:	07/21/07				
Diln Fac:	1.000	_					

Cleanup Method: EPA 3620B

Type: Lab ID: MS QC397063

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.5534	13.31	10.30	77	45-120
Heptachlor	0.6478	13.31	9.770	69	50-124
Aldrin	0.9546	13.31	10.29	70	47-122
Dieldrin	<1.245	26.62	21.64	81	47-122
Endrin	<1.500	26.62	18.84	71	46-127
4,4'-DDT	108.8	26.62	69.01 #	-149 NI	M 27-136

Surrogate	%REC	Limits
TCMX	87	50-120
Decachlorobiphenyl	555 * >LR k	b 54-133

Type: Lab ID: Cleanup Method: EPA 3620B MSD

QC397064

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.25	11.87	90	45-120	15	39
Heptachlor	13.25	10.79	77	50-124	10	37
Aldrin	13.25	11.38	79	47-122	10	35
Dieldrin	26.50	25.22	95	47-122	16	34
Endrin	26.50	23.20	88	46-127	21	37
4,4'-DDT	26.50	91.72 #	-64 NM	27-136	28	49

	Surrogate	%REC	Limits
TCMX		95	50-120
Deca	chlorobiphenyl	503 * >LR	b 54-133

<sup>#=</sup> CCV drift outside limits; average CCV drift within limits per method requirements
\*= Value outside of QC limits; see narrative

b= See narrative

NM= Not Meaningful: Sample concentration > 4X spike concentration > LR= Response exceeds instrument's linear range RPD= Relative Percent Difference



	Polychlorinated	Biphenyls	(PCBs)
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8082
Matrix: Units: Basis: Diln Fac: Batch#:	Soil ug/Kg as received 1.000 127426	Sampled: Received: Prepared: Analyzed:	07/18/07 07/19/07 07/19/07 07/21/07

Field ID: SS-31(A)-5.5196066-007 Lab ID: SAMPLE Cleanup Method: EPA 3665A Type:

Analyte	Result	RL	
Aroclor-1016	ND	9.5	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.5	
Aroclor-1242	ND	9.5	
Aroclor-1248	ND	9.5	
Aroclor-1254	ND	9.5	
Aroclor-1260	ND	9.5	

Surrogate	%REC	Limits
TCMX	92	63-141
Decachlorobiphenyl	83	50-158

Field ID: SS-31(A)-10.5Lab ID: 196066-008 Type: SAMPLÈ Cleanup Method: EPA 3665A

Analyte	Result	RL	
Aroclor-1016	ND	9.5	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.5	
Aroclor-1242	ND	9.5	
Aroclor-1248	ND	9.5	
Aroclor-1254	ND	9.5	
Aroclor-1260	ND	9.5	

Surrogate	%REC	Limits
TCMX	104	63-141
Decachlorobiphenyl	100	50-158

Type: Lab ID: BLANK Cleanup Method: EPA 3665A

QC397061

Analyte	Result	RL	
Aroclor-1016	ND	9.6	
Aroclor-1221	ND	19	
Aroclor-1232	ND	9.6	
Aroclor-1242	ND	9.6	
Aroclor-1248	ND	9.6	
Aroclor-1254	ND	9.6	
Aroclor-1260	ND	9.6	

Surrogate	%REC	Limits	
TCMX	105	63-141	
Decachlorobiphenyl	113	50-158	

ND= Not Detected RL= Reporting Limit



	Polychlorinated	Biphenyls (	PCBs)
Lab #:	196066	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC397069	Batch#:	127426
Matrix:	Soil	Prepared:	07/19/07
Units:	ug/Kg	Analyzed:	07/21/07
Basis:	as received		

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits
Aroclor-1232	166.3	171.5	103	68-138

Surrogate	%REC	Limits
TCMX	101	63-141
Decachlorobiphenyl	88	50-158

Page 1 of 1 27.0



	Polychloria	nated Biphenyls (	PCBs)	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8082	
Field ID:	SS-31(A)-5.5	Batch#:	127426	
MSS Lab ID:	196066-007	Sampled:	07/18/07	
Matrix:	Soil	Received:	07/19/07	
Units:	ug/Kg	Prepared:	07/19/07	
Basis:	as received	Analyzed:	07/21/07	
Diln Fac:	1.000			

Type: MS Cleanup Method: EPA 3665A

Lab ID: QC397070

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1232	<1.312	166.2	194.6	117	72-140

Surrogate	%REC	Limits
TCMX	112	63-141
Decachlorobiphenyl	103	50-158

Type: MSD Cleanup Method: EPA 3665A

Lab ID: QC397071

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1232	166.3	180.3	108	72-140	8	27

Surrogate	%REC	Limits
TCMX	99	63-141
Decachlorobiphenyl	98	50-158



	Californ	nia Title 26 Meta	als	
Lab #:	196066	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SS-31(A)-5.5	Basis:	as received	
Lab ID:	196066-007	Diln Fac:	1.000	
Matrix:	Soil	Sampled:	07/18/07	
Units:	mg/Kg	Received:	07/19/07	

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	0.95	0.50	127437	07/19/07	07/23/07	EPA 3050B	EPA 6010B
Arsenic	8.3	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Barium	260	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Beryllium	0.41	0.10	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Chromium	27	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Cobalt	9.8	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Copper	35	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Lead	6.9	0.15	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Mercury	0.13	0.020	127507	07/23/07	07/23/07	METHOD	EPA 7471A
Molybdenum	ND	0.25	127437	07/19/07	07/23/07	EPA 3050B	EPA 6010B
Nickel	40	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Vanadium	39	0.25	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B
Zinc	46	1.0	127437	07/19/07	07/20/07	EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	als	
Lab #:	196066	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SS-31(A)-10.5	Basis:	as received	
Lab ID:	196066-008	Diln Fac:	1.000	
Matrix:	Soil	Sampled:	07/18/07	
Units:	mg/Kg	Received:	07/19/07	

Analyte	Result	RL	Batch# Prepared	Analyzed Prep	Analysis
Antimony	1.6	0.50	127437 07/19/07	07/23/07 EPA 3050B	EPA 6010B
Arsenic	5.5	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Barium	170	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Beryllium	0.48	0.10	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Chromium	72	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Cobalt	15	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Copper	46	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Lead	10	0.15	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Mercury	0.055	0.020	127507 07/23/07	07/23/07 METHOD	EPA 7471A
Molybdenum	0.41	0.25	127437 07/19/07	07/23/07 EPA 3050B	EPA 6010B
Nickel	100	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Selenium	ND	0.50	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Silver	ND	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Thallium	ND	0.50	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Vanadium	35	0.25	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B
Zinc	70	1.0	127437 07/19/07	07/20/07 EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	ıls	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3050B	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397087	Batch#:	127437	
Matrix:	Soil	Prepared:	07/19/07	
Units:	mg/Kg	Analyzed:	07/20/07	
Basis:	as received			

Analyte	Result	RL	
Antimony	ND	0.50	
Arsenic	ND	0.25	
Barium	ND	0.25	
Beryllium	ND	0.10	
Cadmium	ND	0.25	
Chromium	ND	0.25	
Cobalt	ND	0.25	
Copper	ND	0.25	
Lead	ND	0.15	
Molybdenum	ND	0.25	
Nickel	ND	0.25	
Selenium	ND	0.50	
Silver	ND	0.25	
Thallium	ND	0.50	
Vanadium	ND	0.25	
Zinc	ND	1.0	



California Title 26 Metals					
Lab #: Client: Project#:	196066 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3050B EPA 6010B		
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Batch#: Prepared: Analyzed:	127437 07/19/07 07/20/07		

Type: BS Lab ID: QC397088

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	98.52	99	80-120
Arsenic	50.00	48.81	98	80-120
Barium	100.0	97.46	97	80-120
Beryllium	2.500	2.537	101	80-120
Cadmium	10.00	9.926	99	80-120
Chromium	100.0	94.68	95	80-120
Cobalt	25.00	23.33	93	80-120
Copper	12.50	11.71	94	80-120
Lead	100.0	95.09	95	80-120
Molybdenum	20.00	20.14	101	80-120
Nickel	25.00	23.60	94	80-120
Selenium	50.00	49.81	100	80-120
Silver	10.00	9.384	94	80-120
Thallium	50.00	48.48	97	80-120
Vanadium	25.00	23.82	95	80-120
Zinc	25.00	24.25	97	80-120

Type: BSD Lab ID: QC397089

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	98.48	98	80-120	0	20
Arsenic	50.00	48.73	97	80-120	0	20
Barium	100.0	97.53	98	80-120	0	20
Beryllium	2.500	2.549	102	80-120	0	20
Cadmium	10.00	9.973	100	80-120	0	20
Chromium	100.0	95.13	95	80-120	0	20
Cobalt	25.00	23.35	93	80-120	0	20
Copper	12.50	11.77	94	80-120	0	20
Lead	100.0	95.52	96	80-120	0	20
Molybdenum	20.00	20.31	102	80-120	1	20
Nickel	25.00	23.61	94	80-120	0	20
Selenium	50.00	49.69	99	80-120	0	20
Silver	10.00	9.388	94	80-120	0	20
Thallium	50.00	48.21	96	80-120	1	20
Vanadium	25.00	23.93	96	80-120	0	20
Zinc	25.00	24.46	98	80-120	1	20



California Title 26 Metals					
Lab #:	196066	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3050B		
Project#:	001-09567-01	Analysis:	EPA 6010B		
Field ID:	ZZZZZZZZZ	Batch#:	127437		
MSS Lab ID:	196071-001	Sampled:	07/17/07		
Matrix:	Soil	Received:	07/19/07		
Units:	mg/Kg	Prepared:	07/19/07		
Basis:	as received	Analyzed:	07/20/07		
Diln Fac:	1.000	_			

Type: MS Lab ID: QC397090

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<0.02455	99.01	96.84	98	1-129
Arsenic	0.1249	49.50	48.42	98	72-120
Barium	2.484	99.01	98.97	97	49-138
Beryllium	4.818	2.475	7.589	112	80-120
Cadmium	1,062	9.901	1,039 >LR	-233 NM	72-120
Chromium	1,630	99.01	1,733 >LR	104 NM	63-122
Cobalt	1.633	24.75	25.77	98	61-120
Copper	3,152	12.38	3,154 >LR	16 NM	59-137
Lead	86.85	99.01	186.3	100	55-122
Molybdenum	4.908	19.80	24.63	100	66-120
Nickel	1,192	24.75	1,214 >LR	88 NM	45-139
Selenium	0.2042	49.50	49.17	99	73-120
Silver	0.4776	9.901	10.04	97	53-120
Thallium	0.2131	49.50	46.45	93	64-120
Vanadium	<0.01889	24.75	20.30	82	55-139
Zinc	1,941	24.75	1,917 >LR	-98 NM	49-140

Type: MSD Lab ID: QC397091

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	98.04	95.48	97	1-129	0	23
Arsenic	49.02	47.74	97	72-120	0	20
Barium	98.04	96.05	95	49-138	2	23
Beryllium	2.451	7.362	104	80-120	3	20
Cadmium	9.804	1,019 >LR	-445 NM	72-120	NC	20
Chromium	98.04	1,679 >LR	50 NM	63-122	NC	20
Cobalt	24.51	25.23	96	61-120	1	23
Copper	12.25	3,086 >LR	-543 NM	59-137	NC	20
Lead	98.04	182.0	97	55-122	2	26
Molybdenum	19.61	24.20	98	66-120	1	20
Nickel	24.51	1,176 >LR	-63 NM	45-139	NC	26
Selenium	49.02	48.48	98	73-120	0	20
Silver	9.804	9.813	95	53-120	1	22
Thallium	49.02	45.76	93	64-120	1	20
Vanadium	24.51	19.84	81	55-139	1	20
Zinc	24.51	1,863 >LR	-321 NM	49-140	NC	23

NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

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	Californ	nia Title 26 Meta	ıls	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Basis:	as received	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397433	Batch#:	127507	
Matrix:	Soil	Prepared:	07/23/07	
Units:	mg/Kg	Analyzed:	07/23/07	

Result	RL	
ND	0.020	



California Title 26 Metals					
Lab #:	196066	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	METHOD		
Project#:	001-09567-01	Analysis:	EPA 7471A		
Analyte:	Mercury	Diln Fac:	1.000		
Matrix:	Soil	Batch#:	127507		
Units:	mg/Kg	Prepared:	07/23/07		
Basis:	as received	Analyzed:	07/23/07		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC397434	0.5000	0.5220	104	80-120		
BSD	QC397435	0.5000	0.5080	102	80-120	3	20



	Californ	nia Title 26 Meta	als	
Lab #:	196066	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Diln Fac:	1.000	
Field ID:	ZZZZZZZZZ	Batch#:	127507	
MSS Lab ID:	196050-001	Sampled:	07/18/07	
Matrix:	Soil	Received:	07/18/07	
Units:	mg/Kg	Prepared:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC397437	<0.005263	0.4098	0.4295	105	67-143		
MSD	QC397438		0.4032	0.4419	110	67-143	4	23



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

#### Laboratory Job Number 196103

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum Emeryville, CA 94608

Level : II

<u>Sample ID</u>	<u>Lab ID</u>
SS-31(A)-40.5	196103-001
SS-31(A)-50.5	196103-002
SS-31(A)-52.5	196103-003
SS-31(A)-60.5	196103-004
SS-31(A)-65.5	196103-005
SS-31(A)-GGW	196103-006
SS-31(B)-5.5	196103-007
SS-31(B)-10.5	196103-008
SS-31(B)-15.5	196103-009
SS-31(B)-20.5	196103-010
SS-31(B)-25.5	196103-011
SS-31(B)-30.5	196103-012
SS-31(B)-40	196103-013
SS-31(B)-50	196103-014
SS-31(B)-60.5	196103-015

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/30/2007</u>

Date: <u>07/30/2007</u>

Signature:

Operations Manager



#### CASE NARRATIVE

Laboratory number: 196103

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/20/07 Samples Received: 07/20/07

This hardcopy data package contains sample and QC results for thirteen soil samples and one water sample, requested for the above referenced project on 07/20/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/27/07.

#### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Soil:

No analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B) Water:

No analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B) Soil:

No analytical problems were encountered.



Total Volatile Hydrocarbons Lab #: 196103 Location: Hanson Radum EPA 5030B Client: Prep: LFR Levine Fricke 001-09567-01 Analysis: Diln Fac: EPA 8015B Project#: 1.000 07/19/07 Soil Matrix: Sampled: Units: mg/Kg Basis: as received Received: 07/20/07

Field ID: SS-31(A)-40.5Batch#: 127451 Type: SAMPLE Analyzed: 07/20/07

Lab ID: 196103-001

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	101	70-132	
Bromofluorobenzene (FID)	105	66-138	

Field ID: SS-31(A)-50.5Batch#: 127451 SAMPLE Analyzed: 07/20/07 Type: Lab ID: 196103-002

Analy	rte Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	70-132
Bromofluorobenzene (FID)	104	66-138

Field ID: SS-31(A)-52.5Batch#: 127451 07/20/07 Type: SAMPLE Analyzed: Lab ID: 196103-003

Analyte Result Gasoline C7-C12 ND 0.99

Surrogate	%REC	Limits
Trifluorotoluene (FID)	87	70-132
Bromofluorobenzene (FID)	95	66-138

Field ID: SS-31(A)-60.5Batch#: 127451 Type: SAMPLE Analyzed: 07/20/07

Lab ID: 196103-004

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	94	70-132	
Bromofluorobenzene (FID)	101	66-138	

ND= Not Detected RL= Reporting Limit

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Total Volatile Hydrocarbons Lab #: 196103 Location: Hanson Radum Client: LFR Levine Fricke EPA 5030B Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B Matrix: 1.000 Soil 07/19/07 Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(B)-5.5 Type: SAMPLE Lab ID: 196103-007

Batch#: 127451 Analyzed: 07/21/07

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate%RECLimitsTrifluorotoluene (FID)9270-132Bromofluorobenzene (FID)10166-138

Field ID: SS-31(B)-10.5 Batch#: 127451 Type: SAMPLE Analyzed: 07/21/07 Lab ID: 196103-008

Analyte Result RL
Gasoline C7-C12 ND 0.99

Surrogate %REC Limits
Trifluorotoluene (FID) 100 70-132
Bromofluorobenzene (FID) 106 66-138

Field ID: SS-31(B)-15.5 Batch#: 127451
Type: SAMPLE Analyzed: 07/21/07
Lab ID: 196103-009

Lab ID: 196103-009

AnalyteResultRLGasoline C7-C12ND0.96

Surrogate%RECLimitsTrifluorotoluene (FID)9870-132Bromofluorobenzene (FID)10666-138

Field ID: SS-31(B)-20.5 Batch#: 127451
Type: SAMPLE Analyzed: 07/21/07
Lab ID: 196103-010

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate%RECLimitsTrifluorotoluene (FID)9970-132Bromofluorobenzene (FID)10566-138

ND= Not Detected RL= Reporting Limit

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127451

07/21/07

Total Volatile Hydrocarbons Lab #: 196103 Location: Hanson Radum Client: LFR Levine Fricke EPA 5030B Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B Soil 1.000 Matrix: 07/19/07 Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(B)-25.5 Batch#: Type: SAMPLE Analyzed:

Lab ID: 196103-011

Analyte	Result	RL	
Gasoline C7-C12	ND	0.97	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	70-132
Bromofluorobenzene (FID)	105	66-138

Field ID: SS-31(B)-30.5 Batch#: 127518
Type: SAMPLE Analyzed: 07/23/07
Lab ID: 196103-012

Analyte	e Result	RL	
Gasoline C7-C12	ND	0.97	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	70-132
Bromofluorobenzene (FID)	107	66-138

Field ID: SS-31(B)-40 Batch#: 127518
Type: SAMPLE Analyzed: 07/23/07
Lab ID: 196103-013

 Analyte
 Result
 RL

 Gasoline C7-C12
 ND
 1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	70-132
Bromofluorobenzene (FID)	118	66-138

Field ID: SS-31(B)-50 Batch#: 127518
Type: SAMPLE Analyzed: 07/23/07
Lab ID: 196103-014

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	113	70-132	
Bromofluorobenzene (FID)	118	66-138	

ND= Not Detected RL= Reporting Limit

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Total Volatile Hydrocarbons Hanson Radum EPA 5030B Lab #: 196103 Location: Client: LFR Levine Fricke Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B Soil 1.000 Matrix: 07/19/07 Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(B)-60.5 Type: SAMPLE

Lab ID: 196103-015

Bromofluorobenzene (FID)

Batch#: 127518 Analyzed: 07/23/07

Analyte	Result	RL	
Gasoline C7-C12	ND	0.99	
Surrogate	%REC Limits		

66-138

Type: BLANK Batch#: 127451 Lab ID: QC397138 Batch#: 07/20/07

100

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	95	70-132	
Bromofluorobenzene (FID)	103	66-138	

Type: BLANK Batch#: 127518 Lab ID: QC397460 Analyzed: 07/23/07

Anal	te Result	RL	
Gasoline C7-C12	ND	0.20	

Surrogate	%REC	%REC Limi
Trifluorotoluene (FID)	92	92 70-1
Bromofluorobenzene (FID)	93	93 66-1

ND= Not Detected RL= Reporting Limit Page 4 of 4

26.0



Total Volatile Hydrocarbons					
Lab #:	196103	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 5030B		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Basis:	as received		
Lab ID:	QC397139	Diln Fac:	1.000		
Matrix:	Soil	Batch#:	127451		
Units:	mg/Kg	Analyzed:	07/20/07		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	10.59	106	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	70-132
Bromofluorobenzene (FID)	109	66-138

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	Total Vol	atile Hydrocarbo	ons	
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZ	Diln Fac:	1.000	
MSS Lab ID:	196079-001	Batch#:	127451	
Matrix:	Soil	Sampled:	07/19/07	
Units:	mg/Kg	Received:	07/19/07	
Basis:	as received	Analyzed:	07/20/07	

Type: MS Lab ID: QC397140

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.07274	9.709	10.33	106	36-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	70-132
Bromofluorobenzene (FID)	107	66-138

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.901	9.626	97	36-120	9	29

Surrogate	%REC	Limits
Trifluorotoluene (FID)	110	70-132
Bromofluorobenzene (FID)	105	66-138



	Total Vol	atile Hydrocarbo	ons	
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Type:	LCS	Basis:	as received	
Lab ID:	QC397462	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127518	
Units:	mg/Kg	Analyzed:	07/23/07	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.582	96	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	128	70-132
Bromofluorobenzene (FID)	130	66-138

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	Total Vol	Latile Hydrocarbo	ons	
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZ	Diln Fac:	1.000	
MSS Lab ID:	196124-006	Batch#:	127518	
Matrix:	Soil	Sampled:	07/20/07	
Units:	mg/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Type: MS Lab ID: QC397463

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.02811	2.000	1.469	72	36-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	70-132
Bromofluorobenzene (FID)	98	66-138

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2.075	1.488	70	36-120	2	29

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	70-132
Bromofluorobenzene (FID)	100	66-138



	Total Extr	actable Hydrocar	rbons	
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	SS-31(A)-GGW	Batch#:	127482	
Matrix:	Water	Sampled:	07/19/07	
Units:	ug/L	Received:	07/20/07	
Diln Fac:	1.000	Prepared:	07/21/07	

 Type:
 SAMPLE
 Analyzed:
 07/23/07

 Lab ID:
 196103-006
 Cleanup Method:
 EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits	
Hexacosane	114	61-134	

Type: BLANK Analyzed: 07/22/07 Lab ID: QC397291 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	105	61-134

ND= Not Detected RL= Reporting Limit

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Total Extractable Hydrocarbons						
Lab #:	196103	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3520C			
Project#:	001-09567-01	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC397292	Batch#:	127482			
Matrix:	Water	Prepared:	07/21/07			
Units:	ug/L	Analyzed:	07/22/07			

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,192	88	58-130

Surrogate	%REC	Limits
Hexacosane	98	61-134

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	Total Extractable Hydrocarbons						
Lab #:	196103	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3520C				
Project#:	001-09567-01	Analysis:	EPA 8015B				
Field ID:	ZZZZZZZZZ	Batch#:	127482				
MSS Lab ID:	196040-002	Sampled:	07/17/07				
Matrix:	Water	Received:	07/17/07				
Units:	ug/L	Prepared:	07/21/07				
Diln Fac:	1.000	Analyzed:	07/23/07				

Type: MS Lab ID: QC397293

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<15.44	2,500	2,261	90	57-134

Surrogate	СГ	Limits	
xacosane	6	51-134	

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,318	93	57-134	3	32

Surrogate	%REC	Limits	
Hexacosane	95	51-134	



Total Extractable Hydrocarbons Hanson Radum SHAKER TABLE Lab #: 196103 Location: Client: Prep: LFR Levine Fricke 001-09567-01 Analysis: Diln Fac: Project#: EPA 8015B 1.000 07/19/07 Matrix: Soil Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(A)-40.5Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/23/07 Lāb ID: 196103-001 Cleanup Method: EPA 3630C

Batch#: 127476

Anal	lyte Resul	lt RL
Diesel C10-C24	ND	1.0
$\mathbf{I}$ MOTOR (1) $\mathbf{I}$ (1) $\mathbf{I}$	C36 ND	5.0

Surrogate	%REC	Limits
Hexacosane	63	40-127

07/20/07 Field ID: SS-31(A)-50.5Prepared: Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-002 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	46	40-127

Field ID: Prepared: 07/20/07 SS-31(A)-52.507/23/07 Type: SAMPLE Analyzed: Lāb ID: 196103-003 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	55	40-127

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 $<sup>\</sup>mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons Lab #: 196103 Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B Matrix: Soil 1.000 07/19/07 Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(A)-60.5 Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-004 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Su	ırrogate	%REC	Limits
Hexacosane	-	64	40-127

Field ID: SS-31(B)-5.5 Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-007 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	2.6 нү Z	0.99	
Motor Oil C24-C36	11 H	5.0	

	Surrogate	%REC	Limits
(	exacosane	73	40-12

Field ID: SS-31(B)-10.5 Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-008 Cleanup Method: EPA 3630C Batch#: 127476

 Analyte
 Result
 RL

 Diesel C10-C24
 6.2 H Y Z
 1.0

 Motor Oil C24-C36
 75 H L
 5.0

	Surrogate	%REC	Limits
Hexa	acosane	64	40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit
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Total Extractable Hydrocarbons Lab #: 196103 Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B Matrix: Soil 1.000 07/19/07 Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(B)-15.5 Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-009 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	1.2 Y Z	0.99	
Motor Oil C24-C36	6.3 Н	5.0	

Surrogate	%REC	Limits
Hexacosane	46	40-127

Field ID: SS-31(B)-20.5 Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-010 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	6.4 Y Z	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC	Limits
Hexacosane 61	40-127

Field ID: SS-31(B)-25.5 Prepared: 07/20/07 Type: SAMPLE Analyzed: 07/24/07 Lab ID: 196103-011 Cleanup Method: EPA 3630C Batch#: 127476

 Analyte
 Result
 RL

 Diesel C10-C24
 27 Y Z
 1.0

 Motor Oil C24-C36
 ND
 5.0

Surrogate	%REC	Limits
Hexacosane	57	40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196103 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B Matrix: 1.000 Soil 07/19/07 Units: mg/Kg Sampled: Basis: as received Received: 07/20/07

Field ID: SS-31(B)-30.5Prepared: 07/20/07 07/24/07 Type: SAMPLE Analyzed: Lab ID: 196103-012 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	32 Y Z	1.0	
Motor Oil C24-C36	5.4 H L Z	5.0	

	Surrogate	%REC	Limits
Hexacosan	ie	51	40-127

Field ID: SS-31(B)-4007/20/07 Prepared: Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-013 Cleanup Method: EPA 3630C

Batch#: 127476

Analyte	Result	RL	
Diesel C10-C24	21 Y Z	0.99	
Motor Oil C24-C36	ND	5.0	

	Surrogate	%REC	Limits
Hexa	exacosane	55	40-127

SS-31(B)-50 Field ID: 07/21/07 Prepared: Type: SAMPLE Analyzed: 07/23/07 Lab ID: 196103-014 Cleanup Method: EPA 3630C Batch#: 127480

Analyte	Result	RL	
Diesel C10-C24	17 Y Z	1.0	
Motor Oil C24-C36	160 Y Z	5.0	

 $\mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196103 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Diln Fac: Project#: 001-09567-01 EPA 8015B 1.000 Matrix: Soil 07/19/07 Units: mg/Kg Sampled: Received: Basis: as received 07/20/07

Field ID: SS-31(B)-60.5Prepared: 07/21/07 07/23/07 Type: SAMPLE Analyzed: Lab ID: 196103-015 Cleanup Method: EPA 3630C

Batch#: 127480

Analyte	Result	RL	
Diesel C10-C24	9.2 Y Z	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	83	40-127

Type: BLANK 07/20/07 Prepared: QC397235 Lab ID: Analyzed: 07/23/07 Batch#: 127476 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Hexacosane	71	40-127	

Type: BLANK Prepared: 07/21/07 Lab ID: QC397284 07/23/07 Analyzed: Batch#: 127480 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate
Hexacosane

 $<sup>\</sup>mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons					
Lab #:	196103	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC397236	Batch#:	127476		
Matrix:	Soil	Prepared:	07/20/07		
Units:	mg/Kg	Analyzed:	07/22/07		
Basis:	as received				

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.78	34.47	69	58-127

Surrogate	%REC	Limits
Hexacosane	65	40-127

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	Total Extractable Hydrocarbons				
Lab #:	196103	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Batch#:	127476		
MSS Lab ID:	196114-001	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/20/07		
Units:	mg/Kg	Prepared:	07/20/07		
Basis:	as received	Analyzed:	07/22/07		
Diln Fac:	1.000				

Type: MS Lab ID: QC397237

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	1.793	50.06	48.41	93	29-147

Surrogate	%REC	Limits
Hexacosane	64	40-127

Analyte	Spiked	Result	%REC	Limits	RPD I	Lim
Diesel C10-C24	50.09	36.79	70	29-147	27 4	46

Surrogate	%REC	Limits	
Hexacosane	69	40-127	



Total Extractable Hydrocarbons						
Lab #:	196103	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE			
Project#:	001-09567-01	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC397285	Batch#:	127480			
Matrix:	Soil	Prepared:	07/21/07			
Units:	mg/Kg	Analyzed:	07/23/07			
Basis:	as received					

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.86	55.39	111	58-127

Surrogate	%REC	Limits
Hexacosane	110	40-127

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	Total Extractable Hydrocarbons						
Lab #:	196103	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE				
Project#:	001-09567-01	Analysis:	EPA 8015B				
Field ID:	ZZZZZZZZZZ	Batch#:	127480				
MSS Lab ID:	196130-001	Sampled:	07/19/07				
Matrix:	Soil	Received:	07/20/07				
Units:	mg/Kg	Prepared:	07/21/07				
Basis:	as received	Analyzed:	07/23/07				
Diln Fac:	1.000						

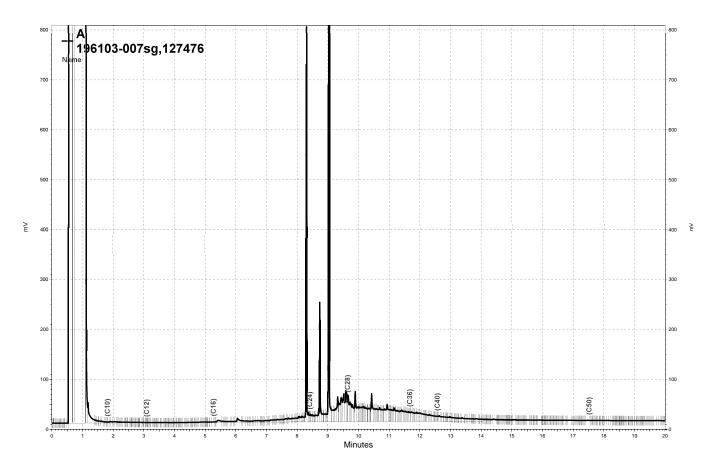
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Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	6.329	49.91	54.94	97	29-147

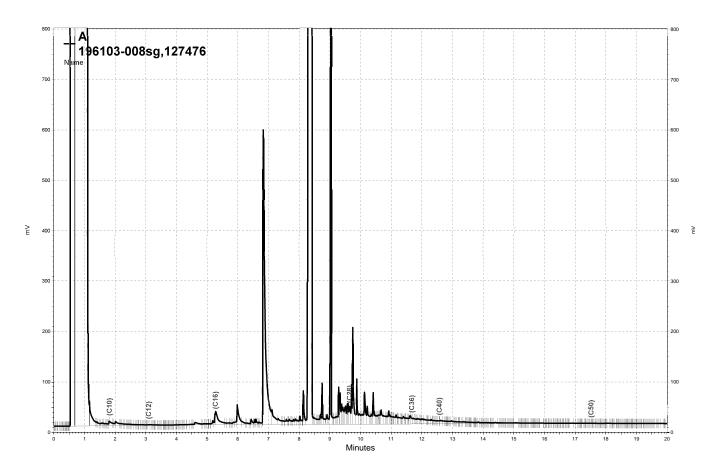
Surrogate	%REC	Limits
Hexacosane	101	40-127

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Diesel C10-C24	49.54	61.27	111	29-147	12 46

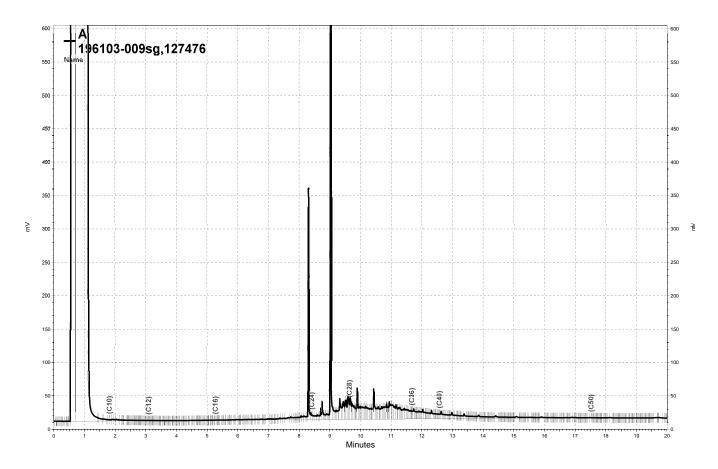
Surrogate	%REC	Limits
Hexacosane	112	40-127



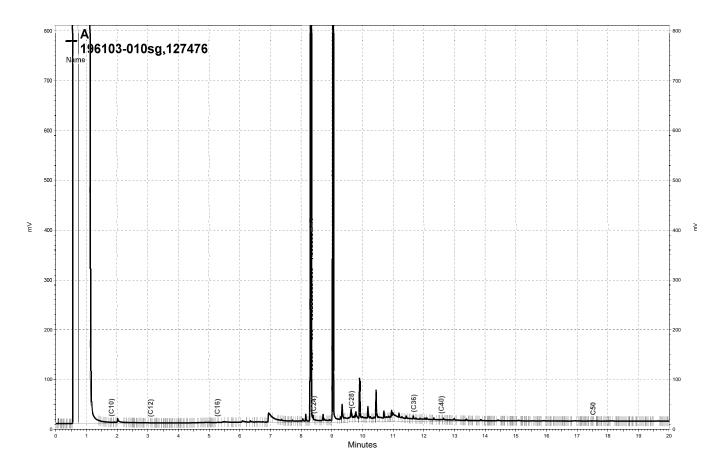
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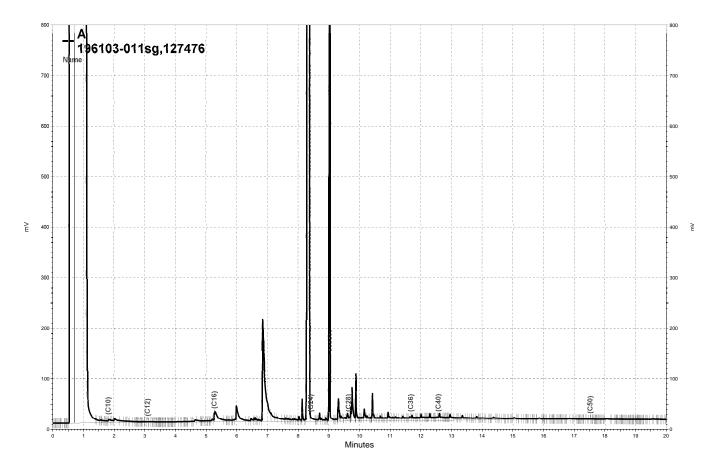
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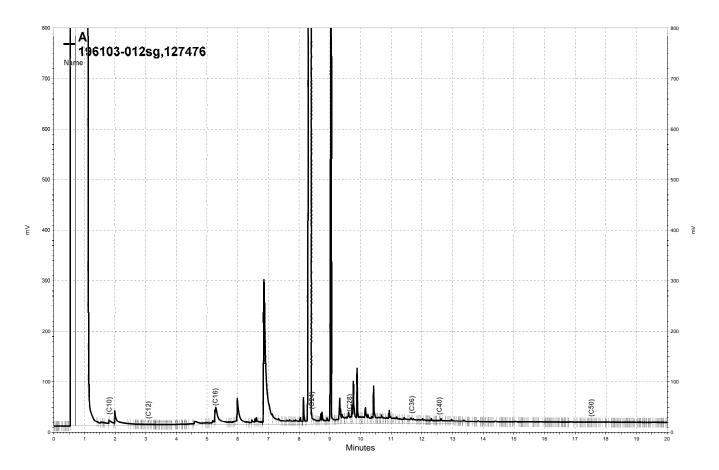
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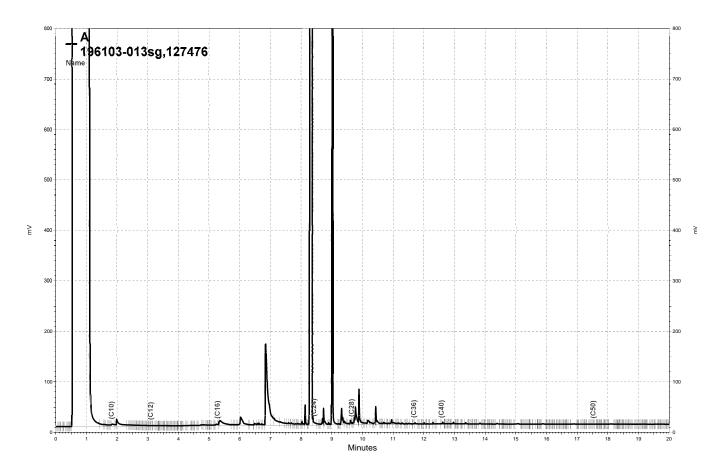
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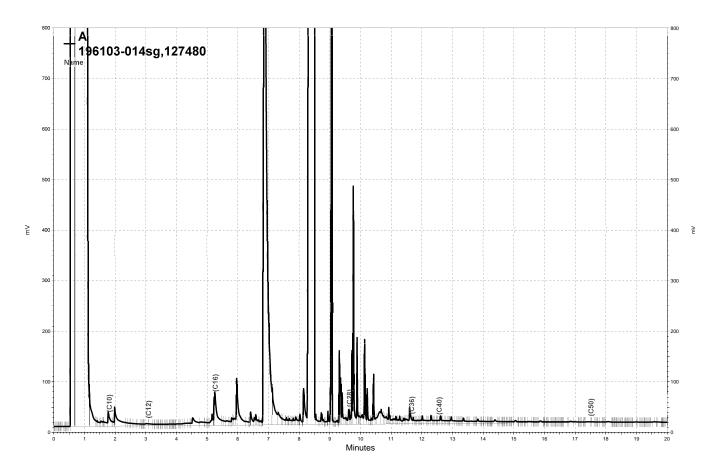
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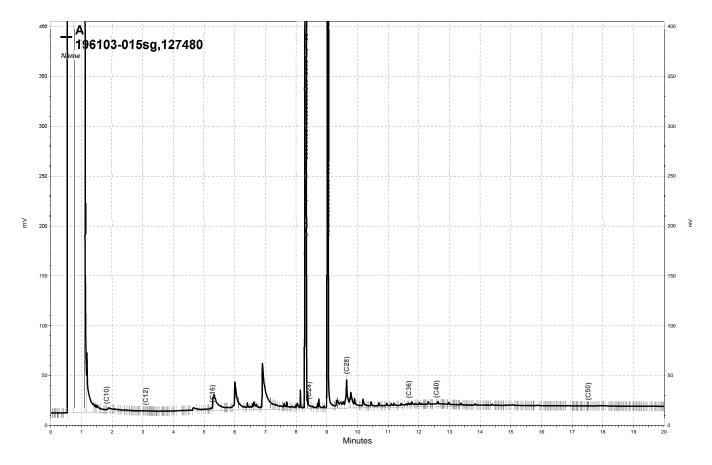
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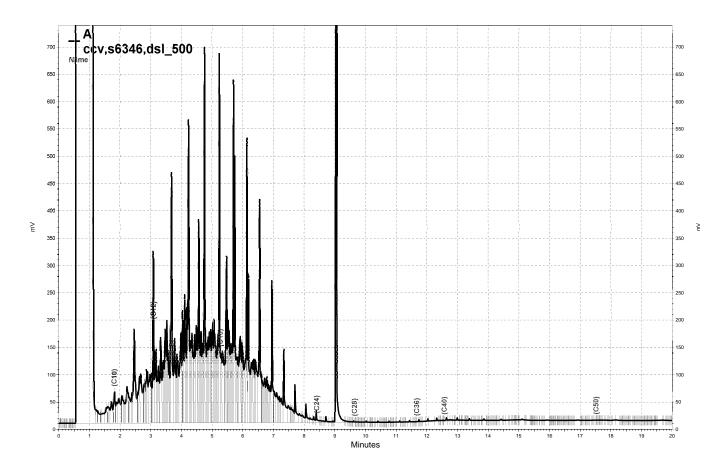
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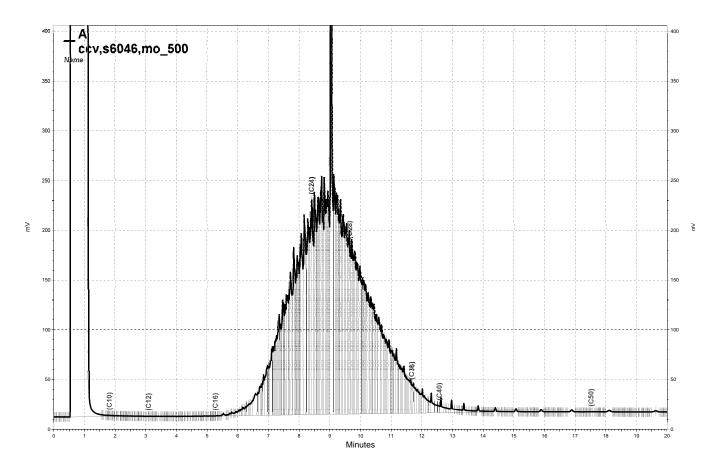
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	Gasoline	by GC/MS	
Lab #: Client: Project#:	196103 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-31(A)-GGW 196103-006 Water ug/L 1 000	Batch#: Sampled: Received: Analyzed:	127450 07/19/07 07/20/07 07/20/07

Analyte	Result	RT.
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND ND	0.5
Chloroform	ND ND	0.5
Bromochloromethane	ND ND	0.5
1,1,1-Trichloroethane	ND ND	0.5
1,1-Dichloropropene	ND ND	0.5
Carbon Tetrachloride	ND ND	0.5
1,2-Dichloroethane	ND ND	0.5
Benzene	ND	0.5
Trichloroethene	ND ND	0.5
1,2-Dichloropropane	ND ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
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ND= Not Detected RL= Reporting Limit Page 1 of 2



	Gaso	line by GC/MS		
Lab #: Client: Project#:	196103 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-31(A)-GGW 196103-006 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127450 07/19/07 07/20/07 07/20/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	93	80-123	
1,2-Dichloroethane-d4	100	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	101	80-122	



	Gas	soline by GC/MS		
Lab #: Client: Project#:	196103 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127450 07/20/07	

Type: BS Lab ID: QC397133

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	111.5	89	68-132
Isopropyl Ether (DIPE)	25.00	20.79	83	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	21.63	87	75-124
Methyl tert-Amyl Ether (TAME)	25.00	26.67	107	77-120
1,1-Dichloroethene	25.00	26.82	107	80-132
Benzene	25.00	26.46	106	80-120
Trichloroethene	25.00	27.39	110	80-120
Toluene	25.00	26.80	107	80-120
Chlorobenzene	25.00	27.51	110	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-123
1,2-Dichloroethane-d4	98	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-122

Type: BSD Lab ID: QC397134

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	105.8	85	68-132	5	20
Isopropyl Ether (DIPE)	25.00	18.51	74	65-120	12	20
Ethyl tert-Butyl Ether (ETBE)	25.00	19.88	80	75-124	8	20
Methyl tert-Amyl Ether (TAME)	25.00	23.79	95	77-120	11	20
1,1-Dichloroethene	25.00	23.61	94	80-132	13	20
Benzene	25.00	23.45	94	80-120	12	20
Trichloroethene	25.00	24.81	99	80-120	10	20
Toluene	25.00	24.80	99	80-120	8	20
Chlorobenzene	25.00	24.32	97	80-120	12	20

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-123
1,2-Dichloroethane-d4	97	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-122



Datell ge kej		oline by GC/MS		
Lab #: Client: Project#:	196103 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397135 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127450 07/20/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	G	Gasoline by GC/MS		
Lab #: Client: Project#:	196103 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397135 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127450 07/20/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-123	
1,2-Dichloroethane-d4	97	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	106	80-122	



	Gaso	line by GC/MS		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Matrix:	Water	Batch#:	127450	
Units:	ug/L	Analyzed:	07/20/07	
Diln Fac:	1.000			

Type: BS Lab ID: QC397190

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	982.8	98	70-130

Surrogate %	%REC	Limits
Dibromofluoromethane 91	1	80-123
1,2-Dichloroethane-d4 10	00	79-134
Toluene-d8 10	03	80-120
Bromofluorobenzene 97	7	80-122

Type: BSD Lab ID: QC397191

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	957.8	96	70-130	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-123
1,2-Dichloroethane-d4	98	79-134
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-122



	BTXI	E & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-40.5	Diln Fac:	0.9615	
Lab ID:	196103-001	Batch#:	127494	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-126
1,2-Dichloroethane-d4	103	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-126

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	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-50.5	Diln Fac:	0.9259	
Lab ID:	196103-002	Batch#:	127494	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	93	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-126
1,2-Dichloroethane-d4	106	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-126

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	втхі	E & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-52.5	Diln Fac:	0.9434	
Lab ID:	196103-003	Batch#:	127494	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	94	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	105	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-126



	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(A)-60.5	Diln Fac:	0.8929	
Lab ID:	196103-004	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	89	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-126
1,2-Dichloroethane-d4	112	76-135
Toluene-d8	106	80-120
Bromofluorobenzene	100	80-126

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	BTXE	E & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-5.5	Diln Fac:	0.9434	
Lab ID:	196103-007	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	94	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	98	78-126
1,2-Dichloroethane-d4	114	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-126



	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-10.5	Diln Fac:	0.9615	
Lab ID:	196103-008	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-126
1,2-Dichloroethane-d4	113	76-135
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-126



	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-15.5	Diln Fac:	0.9615	
Lab ID:	196103-009	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-126
1,2-Dichloroethane-d4	112	76-135
Toluene-d8	104	80-120
Bromofluorobenzene	101	80-126

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	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-20.5	Diln Fac:	0.9259	
Lab ID:	196103-010	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	93	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-126
1,2-Dichloroethane-d4	116	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-126



	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-25.5	Diln Fac:	0.9615	
Lab ID:	196103-011	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	116	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-126



	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-30.5	Diln Fac:	0.8929	
Lab ID:	196103-012	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	89	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	117	76-135
Toluene-d8	103	80-120
Bromofluorobenzene	101	80-126

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	втхі	E & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-40	Diln Fac:	0.8929	
Lab ID:	196103-013	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	89	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-126
1,2-Dichloroethane-d4	116	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-126



	BTXE	L & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-50	Diln Fac:	0.8929	
Lab ID:	196103-014	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	89	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	118	76-135
Toluene-d8	103	80-120
Bromofluorobenzene	101	80-126



	BTXE	% Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-60.5	Diln Fac:	0.9804	
Lab ID:	196103-015	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-126
1,2-Dichloroethane-d4	115	76-135
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-126



	BT	XE & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Type:	LCS	Basis:	as received	
Lab ID:	QC397378	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127494	
Units:	ug/Kg	Analyzed:	07/23/07	

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	125.2	100	56-130
MTBE	25.00	23.94	96	66-120
Isopropyl Ether (DIPE)	25.00	22.73	91	57-120
Ethyl tert-Butyl Ether (ETBE)	25.00	21.67	87	68-120
1,2-Dichloroethane	25.00	25.72	103	73-120
Benzene	25.00	25.43	102	80-120
Methyl tert-Amyl Ether (TAME)	25.00	25.40	102	73-120
Toluene	25.00	25.49	102	80-120
1,2-Dibromoethane	25.00	25.09	100	80-120
Ethylbenzene	25.00	26.99	108	80-125
m,p-Xylenes	50.00	52.22	104	80-123
o-Xylene	25.00	26.38	106	80-122

Surrogate	%REC	Limits	
Dibromofluoromethane	101	78-126	
1,2-Dichloroethane-d4	106	76-135	
Toluene-d8	100	80-120	
Bromofluorobenzene	98	80-126	



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# Batch QC Report

	ВТ	XE & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Type:	BLANK	Basis:	as received	
Lab ID:	QC397379	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127494	
Units:	ug/Kg	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-126
1,2-Dichloroethane-d4	107	76-135
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-126



BTXE & Oxygenates						
Lab #:	196103	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Type:	BLANK	Basis:	as received			
Lab ID:	QC397380	Diln Fac:	1.000			
Matrix:	Soil	Batch#:	127494			
Units:	ug/Kg	Analyzed:	07/23/07			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	93	78-126
1,2-Dichloroethane-d4	93	76-135
Toluene-d8	97	80-120
Bromofluorobenzene	93	80-126

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		BTXE & Oxygenates	
Lab #:	196103	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-01	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9804
MSS Lab ID:	196096-011	Batch#:	127494
Matrix:	Soil	Sampled:	07/17/07
Units:	ug/Kg	Received:	07/19/07
Basis:	as received	Analyzed:	07/23/07

Type: MS Lab ID: QC397381

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<3.013	245.1	162.3	66	45-123
MTBE	1.011	49.02	41.34	82	55-120
Isopropyl Ether (DIPE)	<0.1696	49.02	41.09	84	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.08887	49.02	39.85	81	58-120
1,2-Dichloroethane	<0.1943	49.02	42.15	86	56-120
Benzene	0.2064	49.02	47.19	96	61-122
Methyl tert-Amyl Ether (TAME)	<0.1769	49.02	43.93	90	60-120
Toluene	<0.5418	49.02	44.85	92	57-124
1,2-Dibromoethane	<0.2179	49.02	39.30	80	57-120
Ethylbenzene	<0.5715	49.02	42.87	87	55-129
m,p-Xylenes	<1.282	98.04	81.15	83	53-127
o-Xylene	<0.5054	49.02	41.21	84	54-127

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-126
1,2-Dichloroethane-d4	92	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-126

Type: MSD Lab ID: QC397382

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	245.1	140.9	57	45-123	14	32
MTBE	49.02	38.58	77	55-120	7	20
Isopropyl Ether (DIPE)	49.02	40.43	82	50-120	2	20
Ethyl tert-Butyl Ether (ETBE)	49.02	39.10	80	58-120	2	20
1,2-Dichloroethane	49.02	37.01	76	56-120	13	20
Benzene	49.02	46.77	95	61-122	1	20
Methyl tert-Amyl Ether (TAME)	49.02	44.24	90	60-120	1	20
Toluene	49.02	46.95	96	57-124	5	21
1,2-Dibromoethane	49.02	36.61	75	57-120	7	20
Ethylbenzene	49.02	47.19	96	55-129	10	23
m,p-Xylenes	98.04	92.06	94	53-127	13	23
o-Xylene	49.02	45.41	93	54-127	10	22

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-126
1,2-Dichloroethane-d4	81	76-135
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-126



BTXE & Oxygenates						
Lab #:	196103	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Type:	LCS	Basis:	as received			
Lab ID:	QC397429	Diln Fac:	1.000			
Matrix:	Soil	Batch#:	127505			
Units:	ug/Kg	Analyzed:	07/23/07			

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	154.9	124	56-130
MTBE	25.00	23.13	93	66-120
Isopropyl Ether (DIPE)	25.00	23.44	94	57-120
Ethyl tert-Butyl Ether (ETBE)	25.00	22.98	92	68-120
1,2-Dichloroethane	25.00	24.45	98	73-120
Benzene	25.00	26.28	105	80-120
Methyl tert-Amyl Ether (TAME)	25.00	26.60	106	73-120
Toluene	25.00	27.19	109	80-120
1,2-Dibromoethane	25.00	27.23	109	80-120
Ethylbenzene	25.00	26.85	107	80-125
m,p-Xylenes	50.00	51.96	104	80-123
o-Xylene	25.00	26.54	106	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	95	78-126
1,2-Dichloroethane-d4	100	76-135
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-126

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BTXE & Oxygenates						
Lab #:	196103	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Type:	BLANK	Basis:	as received			
Lab ID:	QC397430	Diln Fac:	1.000			
Matrix:	Soil	Batch#:	127505			
Units:	ug/Kg	Analyzed:	07/23/07			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	93	78-126
1,2-Dichloroethane-d4	103	76-135
Toluene-d8	103	80-120
Bromofluorobenzene	101	80-126

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		BTXE & Oxygenates		
Lab #:	196103	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(B)-60.5	Diln Fac:	0.9804	
MSS Lab ID:	196103-015	Batch#:	127505	
Matrix:	Soil	Sampled:	07/19/07	
Units:	ug/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Type: MS Lab ID: QC397495

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<7.258	245.1	255.2	104	45-123
MTBE	<0.5953	49.02	42.00	86	55-120
Isopropyl Ether (DIPE)	<0.5554	49.02	45.63	93	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.6013	49.02	42.38	86	58-120
1,2-Dichloroethane	<0.8152	49.02	45.75	93	56-120
Benzene	<0.6947	49.02	46.34	95	61-122
Methyl tert-Amyl Ether (TAME)	<0.6889	49.02	48.02	98	60-120
Toluene	<0.5124	49.02	47.14	96	57-124
1,2-Dibromoethane	<0.6878	49.02	46.43	95	57-120
Ethylbenzene	<0.6598	49.02	43.25	88	55-129
m,p-Xylenes	<1.205	98.04	82.61	84	53-127
o-Xylene	<0.5031	49.02	43.24	88	54-127

Surrogate	%REC	imits	
Dibromofluoromethane	107	78-126	
1,2-Dichloroethane-d4	112	76-135	
Toluene-d8	104	30-120	
Bromofluorobenzene	99	30-126	

Type: MSD Lab ID: QC397496

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	245.1	225.6	92	45-123	12	32
MTBE	49.02	39.01	80	55-120	7	20
Isopropyl Ether (DIPE)	49.02	42.29	86	50-120	8	20
Ethyl tert-Butyl Ether (ETBE)	49.02	39.72	81	58-120	6	20
1,2-Dichloroethane	49.02	41.13	84	56-120	11	20
Benzene	49.02	43.39	89	61-122	7	20
Methyl tert-Amyl Ether (TAME)	49.02	44.84	91	60-120	7	20
Toluene	49.02	44.18	90	57-124	6	21
1,2-Dibromoethane	49.02	42.57	87	57-120	9	20
Ethylbenzene	49.02	41.55	85	55-129	4	23
m,p-Xylenes	98.04	79.66	81	53-127	4	23
o-Xylene	49.02	41.95	86	54-127	3	22

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-126
1,2-Dichloroethane-d4	105	76-135
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-126



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 9471O, Phone (510) 486-0900

## Laboratory Job Number 196141

LFR Levine Fricke 1900 Powell Street Emeryville, CA 94608 Project : 001-09567-01 Location : Hanson Radum

Level : II

<u>Sample ID</u> <u>Lab ID</u> SS-31(B)-5.5 196141-001 SS-31(B)-10.5 196141-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/31/2</u>007

Signature:

Operations Manager

Date: <u>07/31/2007</u>

NELAP # 01107CA

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#### CASE NARRATIVE

Laboratory number: 196141

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/23/07 Samples Received: 07/20/07

This hardcopy data package contains sample and QC results for two soil samples, requested for the above referenced project on 07/23/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/26/07.

#### Semivolatile Organics by GC/MS (EPA 8270C):

Matrix spikes were not reported for this analysis because the parent sample needed to be re-extracted. SS-31(B)-10.5 (lab # 196141-002) was diluted due to the viscous nature of the sample extract. No other analytical problems were encountered.

#### Pesticides (EPA 8081A):

No analytical problems were encountered.

#### Polychlorinated Biphenyls (PCBs) (EPA 8082):

No analytical problems were encountered.

### Metals (EPA 6010B and EPA 7471A):

No analytical problems were encountered.



	Semivolat:	ile Organics by G	C/MS	
Lab #:	196141	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	SS-31(B)-5.5	Batch#:	127543	
Lab ID:	196141-001	Sampled:	07/19/07	
Matrix:	Soil	Received:	07/20/07	
Units:	ug/Kg	Prepared:	07/24/07	
Basis:	as received	Analyzed:	07/25/07	
Diln Fac:	1.000			

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	ļ
bis(2-Chloroethyl)ether	ND	330	ļ
2-Chlorophenol	ND	330	ļ
1,3-Dichlorobenzene	ND	330	ļ
1,4-Dichlorobenzene	ND	330	ļ
Benzyl alcohol	ND	330	ļ
1,2-Dichlorobenzene	ND	330	J
2-Methylphenol	ND	330	ļ
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,600	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	ļ
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND	66	
Fluorene			
4-Chlorophenyl-phenylether	ND	330 660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit



	Semivolati	ile Organics by G	C/MS	
Lab #: Client: Project#:	196141 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C	
Field ID: Lab ID: Matrix: Units: Basis: Diln Fac:	SS-31(B)-5.5 196141-001 Soil ug/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127543 07/19/07 07/20/07 07/24/07 07/25/07	

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	76	28-120
Phenol-d5	78	30-120
2,4,6-Tribromophenol	96	20-120
Nitrobenzene-d5	72	39-120
2-Fluorobiphenyl	76	44-120
Terphenyl-d14	80	39-120



	Semivolatile Organics by GC/MS						
Lab #:	196141	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8270C				
Field ID:	SS-31(B)-10.5	Batch#:	127543				
Lab ID:	196141-002	Sampled:	07/19/07				
Matrix:	Soil	Received:	07/20/07				
Units:	ug/Kg	Prepared:	07/24/07				
Basis:	as received	Analyzed:	07/25/07				
Diln Fac:	50.00	-					

Analyte	Result	RL
N-Nitrosodimethylamine	ND	16,000
Phenol	ND	16,000
bis(2-Chloroethyl)ether	ND	16,000
2-Chlorophenol	ND	16,000
1,3-Dichlorobenzene	ND	16,000
1,4-Dichlorobenzene	ND	16,000
Benzyl alcohol	ND	16,000
1,2-Dichlorobenzene	ND	16,000
2-Methylphenol	ND	16,000
bis(2-Chloroisopropyl) ether	ND	16,000
4-Methylphenol	ND	16,000
N-Nitroso-di-n-propylamine	ND	16,000
Hexachloroethane	ND	16,000
Nitrobenzene	ND	16,000
Isophorone	ND	16,000
2-Nitrophenol	ND	33,000
2,4-Dimethylphenol	ND ND	16,000
Benzoic acid	ND ND	82,000
	ND ND	
bis(2-Chloroethoxy)methane		16,000
2,4-Dichlorophenol	ND	16,000
1,2,4-Trichlorobenzene	ND	16,000
Naphthalene	ND	3,300
4-Chloroaniline	ND	16,000
Hexachlorobutadiene	ND	16,000
4-Chloro-3-methylphenol	ND	16,000
2-Methylnaphthalene	ND	3,300
Hexachlorocyclopentadiene	ND	33,000
2,4,6-Trichlorophenol	ND	16,000
2,4,5-Trichlorophenol	ND	16,000
2-Chloronaphthalene	ND	16,000
2-Nitroaniline	ND	33,000
Dimethylphthalate	ND	16,000
Acenaphthylene	ND	3,300
2,6-Dinitrotoluene	ND	16,000
3-Nitroaniline	ND	33,000
Acenaphthene	ND	3,300
2,4-Dinitrophenol	ND	33,000
4-Nitrophenol	ND	33,000
Dibenzofuran	ND	16,000
2,4-Dinitrotoluene	ND	16,000
Diethylphthalate	ND	16,000
Fluorene	ND	3,300
4-Chlorophenyl-phenylether	ND	16,000
4-Nitroaniline	ND	33,000
4,6-Dinitro-2-methylphenol	ND	33,000
N-Nitrosodiphenylamine	ND	16,000
Azobenzene	ND	16,000
4-Bromophenyl-phenylether	ND	16,000
Hexachlorobenzene	ND	16,000
Pentachlorophenol	ND	33,000
Phenanthrene	ND	3,300
Anthracene	ND	3,300

DO= Diluted Out ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS						
Lab #: Client: Project#:	196141 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Field ID: Lab ID: Matrix: Units: Basis:	SS-31(B)-10.5 196141-002 Soil ug/Kg as received	Batch#: Sampled: Received: Prepared: Analyzed:	127543 07/19/07 07/20/07 07/24/07 07/25/07			
Diln Fac:	50.00	Mialy Zed:	01/23/01			

Analyte	Result	RL	
Di-n-butylphthalate	ND	16,000	
Fluoranthene	ND	3,300	
Pyrene	ND	3,300	
Butylbenzylphthalate	ND	16,000	
3,3'-Dichlorobenzidine	ND	33,000	
Benzo(a)anthracene	ND	3,300	
Chrysene	ND	3,300	
bis(2-Ethylhexyl)phthalate	ND	16,000	
Di-n-octylphthalate	ND	16,000	
Benzo(b)fluoranthene	ND	3,300	
Benzo(k)fluoranthene	ND	3,300	
Benzo(a)pyrene	ND	3,300	
Indeno(1,2,3-cd)pyrene	ND	3,300	
Dibenz(a,h)anthracene	ND	3,300	
Benzo(g,h,i)perylene	ND	3,300	

Surrogate	%REC	Limits
2-Fluorophenol D	00	28-120
Phenol-d5	00	30-120
2,4,6-Tribromophenol D	00	20-120
Nitrobenzene-d5 D	00	39-120
2-Fluorobiphenyl D	00	44-120
Terphenyl-d14 D	00	39-120

DO= Diluted Out ND= Not Detected RL= Reporting Limit Page 2 of 2



Semivolatile Organics by GC/MS						
Lab #: Client: Project#:	196141 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Type: Lab ID: Matrix: Units: Basis:	BLANK QC397616 Soil ug/Kg as received	Diln Fac: Batch#: Prepared: Analyzed:	1.000 127543 07/24/07 07/24/07			

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND ND	66	
4-Chloroaniline	ND ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND	330	
		330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND ND	66	
Fluorene	ND ND	330	
4-Chlorophenyl-phenylether		660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS					
Lab #:	196141	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Type: Lab ID:	BLANK	Diln Fac:	1.000		
Lab ID:	QC397616	Batch#:	127543		
Matrix:	Soil	Prepared:	07/24/07		
Units:	uq/Kq	Analyzed:	07/24/07		
Basis:	as received				

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3 -Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	70	28-120
Phenol-d5	69	30-120
2,4,6-Tribromophenol	88	20-120
Nitrobenzene-d5	69	39-120
2-Fluorobiphenyl	78	44-120
Terphenyl-d14	73	39-120



Semivolatile Organics by GC/MS						
Lab #:	196141	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC397617	Batch#:	127543			
Matrix:	Soil	Prepared:	07/24/07			
Units:	ug/Kg	Analyzed:	07/24/07			
Basis:	as received					

Analyte	Spiked	Result	%REC	Limits
Phenol	2,655	1,849	70	40-120
2-Chlorophenol	2,655	1,833	69	40-120
1,4-Dichlorobenzene	1,328	1,047	79	45-120
N-Nitroso-di-n-propylamine	1,328	824.0	62	34-120
1,2,4-Trichlorobenzene	1,328	1,094	82	45-120
4-Chloro-3-methylphenol	2,655	2,184	82	45-120
Acenaphthene	1,328	1,020	77	42-120
4-Nitrophenol	2,655	1,856	70	31-120
2,4-Dinitrotoluene	1,328	1,196	90	41-120
Pentachlorophenol	2,655	2,245	85	21-120
Pyrene	1,328	1,094	82	41-120

Surrogate	%REC	Limits
2-Fluorophenol	66	28-120
Phenol-d5	68	30-120
2,4,6-Tribromophenol	102	20-120
Nitrobenzene-d5	68	39-120
2-Fluorobiphenyl	75	44-120
Terphenyl-d14	76	39-120



	Organoch	nlorine Pesticide	es	
Lab #:	196141	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8081A	
Field ID:	SS-31(B)-5.5	Batch#:	127544	
Lab ID:	196141-001	Sampled:	07/19/07	
Matrix:	Soil	Received:	07/20/07	
Units:	ug/Kg	Prepared:	07/24/07	
Basis:	as received	Analyzed:	07/25/07	
Diln Fac:	1.000			

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	97	50-120
Decachlorobiphenyl	93	54-133

ND= Not Detected RL= Reporting Limit

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	Organochlorine Pesticides				
Lab #:	196141	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8081A		
Field ID:	SS-31(B)-10.5	Batch#:	127544		
Lab ID:	196141-002	Sampled:	07/19/07		
Matrix:	Soil	Received:	07/20/07		
Units:	ug/Kg	Prepared:	07/24/07		
Basis:	as received	Analyzed:	07/25/07		
Diln Fac:	1.000				

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	97	50-120
Decachlorobiphenyl	104	54-133

ND= Not Detected RL= Reporting Limit

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	Organochlorine Pesticides				
Lab #:	196141	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8081A		
Type:	BLANK	Diln Fac:	1.000		
Lab ID:	QC397620	Batch#:	127544		
Matrix:	Soil	Prepared:	07/24/07		
Units:	ug/Kg	Analyzed:	07/25/07		
Basis:	as received				

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	59	

Surrogate	%REC	Limits
TCMX	106	50-120
Decachlorobiphenyl	88	54-133



	Organochlorine Pesticides					
Lab #:	196141	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B	ļ		
Project#:	001-09567-01	Analysis:	EPA 8081A	ļ		
Field ID:	ZZZZZZZZZZ	Batch#:	127544			
MSS Lab ID:	196123-001	Sampled:	07/20/07	ļ		
Matrix:	Soil	Received:	07/20/07			
Units:	ug/Kg	Prepared:	07/24/07			
Basis:	as received	Analyzed:	07/31/07			
Diln Fac:	1.000					

Type: MS Cleanup Method: EPA 3620B

Lab ID: QC397624

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.3348	13.35	13.03	98	45-120
Heptachlor	<0.4037	13.35	13.76	103	50-124
Aldrin	<0.2824	13.35	12.72 #	95	47-122
Dieldrin	<0.7589	26.70	26.48	99	47-122
Endrin	<1.077	26.70	27.03 #	101	46-127
4,4'-DDT	<0.7880	26.70	24.63	92	27-136

Surrogate	%REC	Limits	
TCMX	110	50-120	
Decachlorobiphenyl	116	54-133	

Type: MSD Cleanup Method: EPA 3620B

Lab ID: QC397625

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.29	13.27	100	45-120	2	39
Heptachlor	13.29	14.11	106	50-124	3	37
Aldrin	13.29	12.40 #	93	47-122	2	35
Dieldrin	26.59	26.61	100	47-122	1	34
Endrin	26.59	27.36 #	103	46-127	2	37
4,4'-DDT	26.59	25.73	97	27-136	5	49

Surrogate	%REC	Limits	
TCMX	115	50-120	
Decachlorobiphenyl	120	54-133	

#= CCV drift outside limits; average CCV drift within limits per method requirements
RPD= Relative Percent Difference

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	Organochlorine Pesticides						
Lab #:	196141	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8081A				
Type:	LCS	Diln Fac:	1.000				
Lab ID:	QC397626	Batch#:	127544				
Matrix:	Soil	Prepared:	07/24/07				
Units:	ug/Kg	Analyzed:	07/25/07				
Basis:	as received						

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.24	12.71	96	42-120
Heptachlor	13.24	14.08	106	44-130
Aldrin	13.24	12.26	93	47-120
Dieldrin	26.47	27.44	104	50-121
Endrin	26.47	27.39	103	39-130
4,4'-DDT	26.47	29.05	110	45-127

Surrogate	%REC	Limits
TCMX	100	50-120
Decachlorobiphenyl	85	54-133

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	Polychlorinate	d Biphenyls	(PCBs)
Lab #:	196141	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	127544
Units:	ug/Kg	Sampled:	07/19/07
Basis:	as received	Received:	07/20/07
Diln Fac:	1.000	Prepared:	07/24/07

Field ID: SS-31(B)-5.5 Lab ID: 196141-001 Type: SAMPLE Analyzed: 07/25/07

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	107	63-141
Decachlorobiphenyl	89	50-158

Field ID: SS-31(B)-10.5 Lab ID: 196141-002 Type: SAMPLE Analyzed: 07/25/07

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	124	63-141
Decachlorobiphenyl	117	50-158

Type: BLANK Analyzed: 07/24/07 Lab ID: QC397620

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	120	63-141
Decachlorobiphenyl	116	50-158

ND= Not Detected RL= Reporting Limit

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	Polychlorina	ted Biphenyls (	PCBs)	
Lab #:	196141	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8082	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC397621	Batch#:	127544	
Matrix:	Soil	Prepared:	07/24/07	
Units:	ug/Kg	Analyzed:	07/24/07	
Basis:	as received			

Analyte	Spiked	Result	%REC	Limits
Aroclor-1232	166.2	185.4	112	68-138

Surrogate	%REC	Limits
TCMX	105	63-141
Decachlorobiphenyl	98	50-158

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	Polychlorinated Biphenyls (PCBs)					
Lab #:	196141	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8082			
Field ID:	ZZZZZZZZZZ	Batch#:	127544			
MSS Lab ID:	196123-001	Sampled:	07/20/07			
Matrix:	Soil	Received:	07/20/07			
Units:	ug/Kg	Prepared:	07/24/07			
Basis:	as received	Analyzed:	07/24/07			
Diln Fac:	1.000					

Type: MS Lab ID: QC397622

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1232	<1.312	167.7	178.5	106	72-140

Surrogate	%REC	Limits
TCMX	106	63-141
Decachlorobiphenyl	84	50-158

Type: MSD Lab ID: QC397623

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1232	168.2	175.6	104	72-140	2	27

Surrogate	%REC	Limits
TCMX	101	63-141
Decachlorobiphenyl	78	50-158



California Title 26 Metals					
Lab #:	196141	Project#:	001-09567-01		
Client:	LFR Levine Fricke	Location:	Hanson Radum		
Field ID:	SS-31(B)-5.5	Basis:	as received		
Lab ID:	196141-001	Diln Fac:	1.000		
Matrix:	Soil	Sampled:	07/19/07		
Units:	mg/Kg	Received:	07/20/07		

Analyte	Result	RL	Batch# Prepared	Analyzed Prep	Analysis
Antimony	1.6	0.50	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Arsenic	6.6	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Barium	180	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Beryllium	0.40	0.10	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Chromium	65	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Cobalt	16	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Copper	34	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Lead	11	0.15	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Mercury	0.072	0.020	127600 07/25/07	07/25/07 METHOD	EPA 7471A
Molybdenum	0.31	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Nickel	100	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Selenium	ND	0.50	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Silver	ND	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Thallium	ND	0.50	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Vanadium	34	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Zinc	63	1.0	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B

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3.1

	Californ	nia Title 26 Meta	ls	
Lab #:	196141	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SS-31(B)-10.5	Basis:	as received	
Lab ID:	196141-002	Diln Fac:	1.000	
Matrix:	Soil	Sampled:	07/19/07	
Units:	mg/Kg	Received:	07/20/07	

Analyte	Result	RL	Batch# Prepared	Analyzed Prep	Analysis
Antimony	1.8	0.50	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Arsenic	5.6	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Barium	150	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Beryllium	0.37	0.10	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Chromium	59	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Cobalt	12	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Copper	28	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Lead	8.2	0.15	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Mercury	0.052	0.020	127600 07/25/07	07/25/07 METHOD	EPA 7471A
Molybdenum	ND	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Nickel	90	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Selenium	ND	0.50	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Silver	ND	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Thallium	ND	0.50	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Vanadium	32	0.25	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B
Zinc	53	1.0	127538 07/23/07	07/24/07 EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	ıls	
Lab #:	196141	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3050B	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397594	Batch#:	127538	
Matrix:	Soil	Prepared:	07/23/07	
Units:	mg/Kg	Analyzed:	07/24/07	
Basis:	as received			

Analyte	Result	RL	
Antimony	ND	0.50	
Arsenic	ND	0.25	
Barium	ND	0.25	
Beryllium	ND	0.10	
Cadmium	ND	0.25	
Chromium	ND	0.25	
Cobalt	ND	0.25	
Copper	ND	0.25	
Lead	ND	0.15	
Molybdenum	ND	0.25	
Nickel	ND	0.25	
Selenium	ND	0.50	
Silver	ND	0.25	
Thallium	ND	0.50	
Vanadium	ND	0.25	
Zinc	ND	1.0	



California Title 26 Metals				
Lab #: Client: Project#:	196141 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3050B EPA 6010B	
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Batch#: Prepared: Analyzed:	127538 07/23/07 07/24/07	

Type: BS Lab ID: QC397595

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	96.62	97	80-120
Arsenic	50.00	48.33	97	80-120
Barium	100.0	96.91	97	80-120
Beryllium	2.500	2.475	99	80-120
Cadmium	10.00	9.911	99	80-120
Chromium	100.0	96.08	96	80-120
Cobalt	25.00	23.42	94	80-120
Copper	12.50	12.02	96	80-120
Lead	100.0	95.52	96	80-120
Molybdenum	20.00	20.59	103	80-120
Nickel	25.00	23.60	94	80-120
Selenium	50.00	48.48	97	80-120
Silver	10.00	9.566	96	80-120
Thallium	50.00	48.08	96	80-120
Vanadium	25.00	24.11	96	80-120
Zinc	25.00	24.39	98	80-120

Type: BSD Lab ID: QC397596

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	97.28	97	80-120	1	20
Arsenic	50.00	48.64	97	80-120	1	20
Barium	100.0	97.30	97	80-120	0	20
Beryllium	2.500	2.490	100	80-120	1	20
Cadmium	10.00	9.879	99	80-120	0	20
Chromium	100.0	96.36	96	80-120	0	20
Cobalt	25.00	23.60	94	80-120	1	20
Copper	12.50	12.42	99	80-120	3	20
Lead	100.0	96.12	96	80-120	1	20
Molybdenum	20.00	20.50	102	80-120	0	20
Nickel	25.00	23.68	95	80-120	0	20
Selenium	50.00	49.11	98	80-120	1	20
Silver	10.00	9.464	95	80-120	1	20
Thallium	50.00	48.76	98	80-120	1	20
Vanadium	25.00	24.19	97	80-120	0	20
Zinc	25.00	24.45	98	80-120	0	20



	California T	itle 26 Metals	
Lab #:	196141	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3050B
Project#:	001-09567-01	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZ	Batch#:	127538
MSS Lab ID:	196071-003	Sampled:	07/17/07
Matrix:	Soil	Received:	07/19/07
Units:	mg/Kg	Prepared:	07/23/07
Basis: Diln Fac:	as received 1.000	Analyzed:	07/24/07

Type: MS Lab ID: QC397597

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	0.9685	90.09	26.49	28	1-129
Arsenic	2.564	45.05	45.21	95	72-120
Barium	131.7	90.09	221.9	100	49-138
Beryllium	0.3335	2.252	2.450	94	80-120
Cadmium	2,333	9.009	1,526 >LR	-8959 NN	4 72-120
Chromium	1,604	90.09	1,687 >LR	92 NM	63-122
Cobalt	8.121	22.52	26.35	81	61-120
Copper	1,423	11.26	1,257 >LR	-1472 NN	4 59-137
Lead	20.15	90.09	94.42	82	55-122
Molybdenum	1.377	18.02	18.08	93	66-120
Nickel	30.05	22.52	46.93	75	45-139
Selenium	<0.07345	45.05	42.21	94	73-120
Silver	0.1510	9.009	9.039	99	53-120
Thallium	0.04788	45.05	37.27	83	64-120
Vanadium	41.10	22.52	64.28	103	55-139
Zinc	369.5	22.52	347.9	-96 NM	49-140

Type: MSD Lab ID: QC397598

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	96.15	27.27	27	1-129	4	23
Arsenic	48.08	46.11	91	72-120	4	20
Barium	96.15	224.4	96	49-138	2	23
Beryllium	2.404	2.529	91	80-120	3	20
Cadmium	9.615	1,664 >LR	-6957 NM	72-120	NC	20
Chromium	96.15	1,650 >LR	48 NM	63-122	NC	20
Cobalt	24.04	27.10	79	61-120	2	23
Copper	12.02	1,351 >LR	-599 NM	59-137	NC	20
Lead	96.15	98.95	82	55-122	1	26
Molybdenum	19.23	18.74	90	66-120	2	20
Nickel	24.04	48.88	78	45-139	1	26
Selenium	48.08	43.73	91	73-120	3	20
Silver	9.615	9.354	96	53-120	3	22
Thallium	48.08	39.07	81	64-120	2	20
Vanadium	24.04	65.96	103	55-139	0	20
Zinc	24.04	394.1	102 NM	49-140	12	23

NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference



	Californ	nia Title 26 Meta	ıls	
Lab #:	196141	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Basis:	as received	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397831	Batch#:	127600	
Matrix:	Soil	Prepared:	07/25/07	
Units:	mg/Kg	Analyzed:	07/25/07	

Result	RL	
ND	0.020	

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California Title 26 Metals						
Lab #:	196141	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01	Analysis:	EPA 7471A			
Analyte:	Mercury	Diln Fac:	1.000			
Matrix:	Soil	Batch#:	127600			
Units:	mg/Kg	Prepared:	07/25/07			
Basis:	as received	Analyzed:	07/25/07			

Type	Lab ID	Spiked	Result		Limits	RPD	Lim
BS	QC397832	0.5000	0.4540	91	80-120		
BSD	QC397833	0.5000	0.4240	85	80-120	7	20



California Title 26 Metals						
Lab #:	196141	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01	Analysis:	EPA 7471A			
Analyte:	Mercury	Diln Fac:	1.000			
Field ID:	ZZZZZZZZZ	Batch#:	127600			
MSS Lab ID:	196123-001	Sampled:	07/20/07			
Matrix:	Soil	Received:	07/20/07			
Units:	mg/Kg	Prepared:	07/25/07			
Basis:	as received	Analyzed:	07/25/07			

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC397835	0.08440	0.4808	0.5990	107	67-143		
MSD	QC397836		0.4717	0.4774	83	67-143	21	23



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

## Laboratory Job Number 196134

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

Sample ID	<u>Lab ID</u>
SS-31(B)-GGW	196134-001
SS-31(C)-GGW	196134-002
SS-31(C)-5.5	196134-003
SS-31(C)-10.5	196134-004
SS-31(C)-15.5	196134-005
SS-31(C)-19.5	196134-006
SS-31(C)-25.5	196134-007
SS-31(C)-30	196134-008
SS-31(C)-40	196134-009
SS-31(C)-51	196134-010
SS-31(C)-60.5	196134-011
SS-31(C)-67.5	196134-012
SS-31(D)-5.5	196134-013
SS-31(D)-10.5	196134-014
SS-31(D)-15	196134-015
SS-31(D)-19.5	196134-016

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/31/2007</u>

Date: <u>07/31/2007</u>

Signature:

Operations Manager

NELAP # 01107CA Page 1 of \_\_\_\_



#### CASE NARRATIVE

Laboratory number: 196134

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/23/07 Samples Received: 07/23/07

This hardcopy data package contains sample and QC results for thirteen soil samples and two water samples, requested for the above referenced project on 07/23/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/27/07.

#### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

#### TPH-Extractables by GC (EPA 8015B) Soil:

No analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B) Water:

No analytical problems were encountered.

## Volatile Organics by GC/MS (EPA 8260B) Soil:

No analytical problems were encountered.

#### Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

#### Pesticides (EPA 8081A):

No analytical problems were encountered.

## Polychlorinated Biphenyls (PCBs) (EPA 8082):

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7471A):

No analytical problems were encountered.



Total Volatile Hydrocarbons Lab #: 196134 Location: Hanson Radum EPA 5030B Client: LFR Levine Fricke Prep: 001-09567-01 Project#: Analysis: EPA 8015B Batch#: 127519 Matrix: Soil 07/20/07 Sampled: Units: mg/Kg Basis: as received Received: 07/23/07 Diln Fac: 1.000

Field ID: SS-31(C)-5.5 Lab ID: 196134-003 Type: SAMPLE Analyzed: 07/23/07

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate%RECLimitsTrifluorotoluene (FID)9970-132Bromofluorobenzene (FID)10766-138

Field ID: SS-31(C)-10.5 Lab ID: 196134-004 Type: SAMPLE Analyzed: 07/23/07

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate%RECLimitsTrifluorotoluene (FID)10170-132Bromofluorobenzene (FID)10866-138

Field ID: SS-31(C)-15.5 Lab ID: 196134-005 Type: SAMPLE Analyzed: 07/23/07

Analyte Result RL
Gasoline C7-C12 ND 0.98

Surrogate %REC Limits
Trifluorotoluene (FID) 105 70-132
Bromofluorobenzene (FID) 110 66-138

Field ID: SS-31(C)-19.5 Lab ID: 196134-006 Type: SAMPLE Analyzed: 07/23/07

AnalyteResultRLGasoline C7-C12ND0.97

Surrogate %REC Limits
Trifluorotoluene (FID) 97 70-132
Bromofluorobenzene (FID) 108 66-138

ND= Not Detected RL= Reporting Limit Page 1 of 4

24.0



Total Volatile Hydrocarbons Lab #: 196134 Location: Hanson Radum Client: LFR Levine Fricke EPA 5030B Prep: EPA 8015B 127519 Project#: 001-09567-01 Analysis: Soil Matrix: Batch#: 07/20/07 Units: mg/Kg Sampled: as received 1.000 Basis: Received: 07/23/07 Diln Fac:

Field ID: SS-31(C)-25.5 Lab ID: 196134-007 Type: SAMPLE Analyzed: 07/23/07

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	
Surrogate	%REC Limits		
Trifluorotoluene (FID)	96 70-132		
Bromofluorobenzene (FID)	107 66-138		

Field ID: SS-31(C)-30 Lab ID: 196134-008 Type: SAMPLE Analyzed: 07/23/07

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	70-132
Bromofluorobenzene (FID)	107	66-138

Field ID: SS-31(C)-40 Lab ID: 196134-009 Type: SAMPLE Analyzed: 07/23/07

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	70-132
Bromofluorobenzenė (FID)	106	66-138

Field ID: SS-31(C)-51 Lab ID: 196134-010 Type: SAMPLE Analyzed: 07/23/07

Analyte	Result	RL	
Gasoline C7-C12	ND	0.99	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	103	70-132	
Bromofluorobenzene (FID)	107	66-138	

ND= Not Detected RL= Reporting Limit

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Total Volatile Hydrocarbons Hanson Radum EPA 5030B Lab #: 196134 Location: Client: LFR Levine Fricke Prep: Analysis: Batch#: EPA 8015B 127519 Project#: 001-09567-01 Soil Matrix: 07/20/07 Sampled: Units: mg/Kg as received 1.000 Basis: Received: 07/23/07 Diln Fac:

Field ID: SS-31(C)-60.5 Lab ID: 196134-011 Type: SAMPLE Analyzed: 07/24/07

Gasoline C7-C12 ND 1.1	Analyte	Result	RL	
	1 ( <del>-</del> asoline ('/-('l/	ND	1.1	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	70-132
Bromofluorobenzene (FID)	106	66-138

Field ID: SS-31(D)-5.5 Lab ID: 196134-013 Type: SAMPLE Analyzed: 07/24/07

Analyte	Result	RL	
Gasoline C7-C12	ND	0.96	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	105	70-132
Bromofluorobenzene (FID)	109	66-138

Field ID: SS-31(D)-10.5 Lab ID: 196134-014 Type: Analyzed: 07/24/07

Analyte	Result	RL	
Gasoline C7-C12	ND	0.96	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	70-132
Bromofluorobenzene (FID)	108	66-138

Field ID: SS-31(D)-15 Lab ID: 196134-015 Type: SAMPLE Analyzed: 07/24/07

Analyte	Result	RL	
Gasoline C7-C12	ND	0.98	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	103	70-132	
Bromofluorobenzene (FID)	110	66-138	

ND= Not Detected RL= Reporting Limit

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Total Volatile Hydrocarbons							
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8015B				
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Batch#: Sampled: Received:	127519 07/20/07 07/23/07				

Lab ID: Analyzed: 196134-016 07/24/07 Field ID: SS-31(D)-19.5SAMPLE Type:

Analyte	Result	RL	
Gasoline C7-C12	ND	0.98	
d	0.DEG - ::-		

Surrogate
Trifluorotoluene (FID) **Limits** 70-132 105 Bromofluorobenzene (FID) 111 66-138

Type: Lab ID: BLANK Analyzed: 07/23/07

QC397465

Analy	te Result	RL	
Gasoline C7-C12	ND	0.20	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	70-132
Bromofluorobenzene (FID)	105	66-138



	Total Vol	atile Hydrocarbo	ons	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Type:	LCS	Basis:	as received	
Lab ID:	QC397466	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127519	
Units:	mg/Kg	Analyzed:	07/23/07	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.041	90	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	70-132
Bromofluorobenzene (FID)	106	66-138

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	Total Vol	atile Hydrocarbo	ons	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZ	Diln Fac:	1.000	
MSS Lab ID:	196123-001	Batch#:	127519	
Matrix:	Soil	Sampled:	07/20/07	
Units:	mg/Kg	Received:	07/20/07	
Basis:	as received	Analyzed:	07/23/07	

Type: MS Lab ID: QC397467

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.02104	1.859	1.816	97	36-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	70-132
Bromofluorobenzene (FID)	113	66-138

Type: MSD Lab ID: QC397468

Analyte	Spiked	Result	%REC	Limits	RPD L	Lim
Gasoline C7-C12	1.984	1.602	80	36-120		29

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	97	70-132	
Bromofluorobenzene (FID)	105	66-138	



	Total Extr	actable Hydrocar	rbons	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Matrix:	Water	Sampled:	07/20/07	
Units:	ug/L	Received:	07/23/07	
Diln Fac:	1.000	Prepared:	07/21/07	
Batch#:	127485			

Field ID: SS-31(B)-GGW Analyzed: 07/23/07
Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196134-001

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	101	61-134

Field ID: SS-31(C)-GGW Analyzed: 07/23/07 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196134-002

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

	Surrogate	%REC	Limits
exac	cosane	113	61-134

Type: BLANK Analyzed: 07/24/07 Lab ID: QC397298 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	86	61-134

ND= Not Detected RL= Reporting Limit

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	Total Extr	ractable Hydrocar	rbons	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC397299	Batch#:	127485	
Matrix:	Water	Prepared:	07/21/07	
Units:	ug/L	Analyzed:	07/22/07	

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,989	80	58-130

Surrogate	%REC	Limits
Hexacosane	94	61-134

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	Total Ext	ractable Hydrocar	rbons	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZ	Batch#:	127485	
MSS Lab ID:	196070-002	Sampled:	07/17/07	
Matrix:	Water	Received:	07/19/07	
Units:	ug/L	Prepared:	07/21/07	
Diln Fac:	1.000	Analyzed:	07/23/07	

Type: MS Lab ID: QC397300

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	97.25	2,500	2,808	108	57-134

Surrogate	%REC	Limits
Hexacosane	122	61-134

Type: MSD Lab ID: QC397301

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,587	100	57-134	8	32

Surrogate	%REC	Limits
Hexacosane	112	61-134



Total Extractable Hydrocarbons					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Batch#:	127485		
MSS Lab ID:	196093-002	Sampled:	07/18/07		
Matrix:	Water	Received:	07/19/07		
Units:	ug/L	Prepared:	07/21/07		
Diln Fac:	1.000	Analyzed:	07/23/07		

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC397302

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<17.01	2,500	2,118	85	57-134

Surrogate	%REC	Limits
Hexacosane	101	61-134

Type: MSD Cleanup Method: EPA 3630C

Lab ID: QC397303

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,825	73	57-134	15	32

Surrogate	%REC	Limits
Hexacosane	88	61-134

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Total Extractable Hydrocarbons					
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum SHAKER TABLE EPA 8015B		
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Sampled: Received: Prepared:	07/20/07 07/23/07 07/23/07		

SS-31(C)-5.5Batch#: 127535 Analyzed: 07/25/07 Field ID: SAMPLÈ Type: Lab ID: 196134-003 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	2.0 Н Ү Z	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Hexacosane	77	40-127	

Batch#: Laccii#:
Analyzed: SS-31(C)-10.5Field ID: 127535 Type: SAMPLE 07/25/07 Lab ID: 196134-004 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Hexacosane	93	40-127	

SS-31(C)-15.5Field ID: Batch#: Balcn#: Analyzed: 127535 Type: SAMPLE 196134-005 07/25/07 Cleanup Method: EPA 3630C Lāb ID:

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	59	40-127

Batch#: 127535 Analyzed: 07/24/07 Cleanup Method: EPA 3630C Field ID: SS-31(C)-19.5SAMPLÈ Type: Lab ID: 196134-006

Analyte	Result	RL	
Diesel C10-C24	2.3 Y Z	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	76	40-127

 $\mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons 196134 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: Project#: 001-09567-01 EPA 8015B Matrix: 07/20/07 Soil Received: 07/23/07 Units: mg/Kg Basis: as received Prepared: 07/23/07 1.000 Diln Fac:

Field ID: SS-31(C)-25.5Batch#: 127535 Analyzed: Type: SAMPLE 07/24/07 Lab ID: 196134-007 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	70	40-127

Field ID: SS-31(C)-30Batch#: 127534 Analyzed: Type: SAMPLE 07/25/07 196134-008 Lab ID: Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Field ID: SS-31(C)-40Batch#: Analyzed: 07/25/07 Type: SAMPLE 196134-009 Lab ID: Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC Li	imits
lexacosane	103 40	0-12

Field ID: SS-31(C)-51 Batch#: 127534 Analyzed: 07/25/07 Type: SAMPLE Lab ID: 196134-010 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	94	40-127

 $\mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196134 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: Project#: 001-09567-01 EPA 8015B Matrix: 07/20/07 Soil Received: 07/23/07 Units: mg/Kg Basis: as received Prepared: 07/23/07 1.000 Diln Fac:

Field ID: SS-31(C)-60.5Batch#: 127534 Analyzed: Type: SAMPLE 07/25/07 Lab ID: 196134-011 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	5.7 Y Z	1.0	
Motor Oil C24-C36	ND	5.0	

Sı	urrogate	%REC	Limits
Hexacosane		97	40-127

Field ID: SS-31(D)-5.5Batch#: 127534 Analyzed: Type: SAMPLE 07/25/07 196134-013 Lab ID: Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Hexacosane	77	40-127	

Field ID: SS-31(D)-10.5Batch#: Analyzed: 07/25/07 Type: SAMPLE Lab ID: 196134-014 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.7 H Y Z	0.99	
Motor Oil C24-C36	9.4 H L	5.0	

Surrogate	%REC	Limits
Hexacosane	79	40-127

Field ID: SS-31(D)-15Batch#: 127534 07/25/07 Analyzed: Type: SAMPLE Lab ID: 196134-015 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	3.2 Y Z	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	74	40-127

 $\mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons				
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum SHAKER TABLE EPA 8015B	
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Sampled: Received: Prepared:	07/20/07 07/23/07 07/23/07	

Field ID: SS-31(D)-19.5Batch#: 127534 Analyzed: SAMPLE 07/25/07 Type: Cleanup Method: EPA 3630C Lab ID: 196134-016

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	98	40-127

Type: BLANK Analyzed: 07/24/07 Lab ID: QC397574 Cleanup Method: EPA 3630C

127534 Batch#:

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Type: BLANK Analyzed: 07/24/07 OC397580 127535 Lab ID: Cleanup Method: EPA 3630C Batch#:

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

	Surrogate %	&REC	Limits
Hexacosa	acosane 72	2	40-127

 $<sup>\</sup>mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard Z= Sample exhibits unknown single peak or peaks

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC397575	Batch#:	127534		
Matrix:	Soil	Prepared:	07/23/07		
Units:	mg/Kg	Analyzed:	07/24/07		
Basis:	as received				

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.90	40.08	80	58-127

Surrogate	%REC	Limits
Hexacosane	85	40-127

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Total Extractable Hydrocarbons					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	ZZZZZZZZZZ	Batch#:	127534		
MSS Lab ID:	196123-001	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/20/07		
Units:	mg/Kg	Prepared:	07/23/07		
Basis:	as received	Analyzed:	07/24/07		
Diln Fac:	1.000				

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC397576

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	44.24	49.93	99.61	111	29-147

Surrogate	%REC	Limits
Hexacosane	83	40-127

Type: MSD Cleanup Method: EPA 3630C

Lab ID: QC397577

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.95	110.8	133	29-147	11	46

Surrogate	%REC	Limits
Hexacosane	90	40-127



Total Extractable Hydrocarbons					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC397581	Batch#:	127535		
Matrix:	Soil	Prepared:	07/23/07		
Units:	mg/Kg	Analyzed:	07/24/07		
Basis:	as received				

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.84	36.64	74	58-127

Surrogate	%REC	Limits
Hexacosane	78	40-127

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	Total Ext	ractable Hydrocar	rbons	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZ	Batch#:	127535	
MSS Lab ID:	196124-006	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/20/07	
Units:	mg/Kg	Prepared:	07/23/07	
Basis:	as received	Analyzed:	07/24/07	
Diln Fac:	1.000			

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC397582

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2.332	49.92	30.59	57	29-147

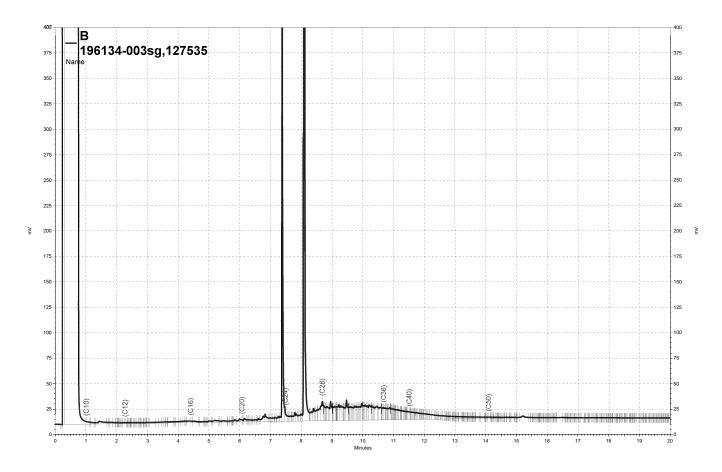
Surrogate	%REC	Limits
Hexacosane	57	40-127

Type: MSD Cleanup Method: EPA 3630C

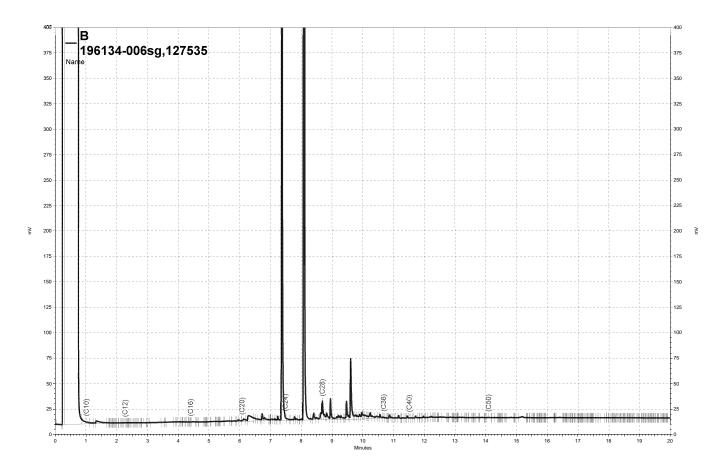
Lab ID: QC397583

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.88	40.57	77	29-147	28	46

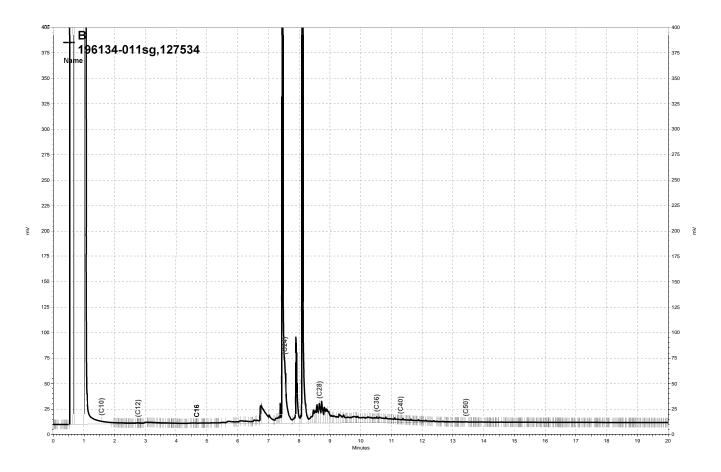
Surrogate	%REC	Limits	
Hexacosane	79	40-127	



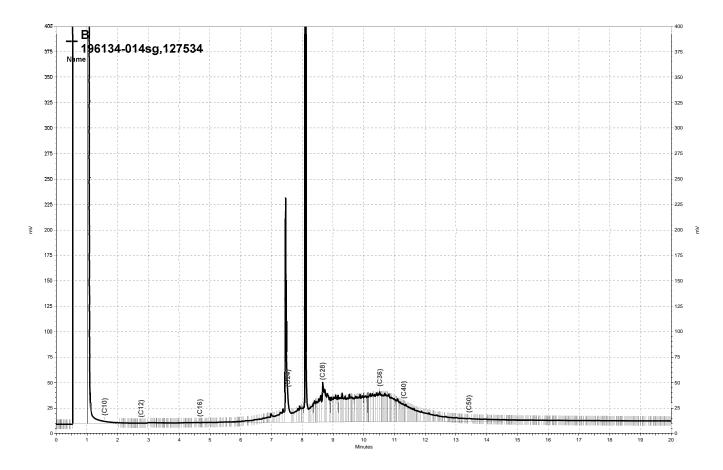
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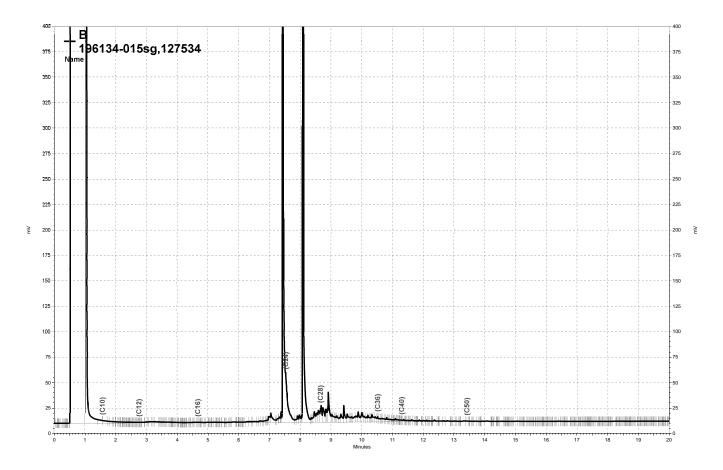
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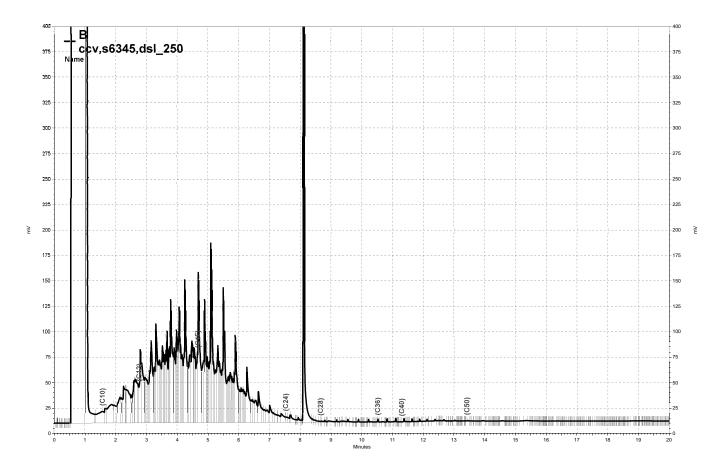
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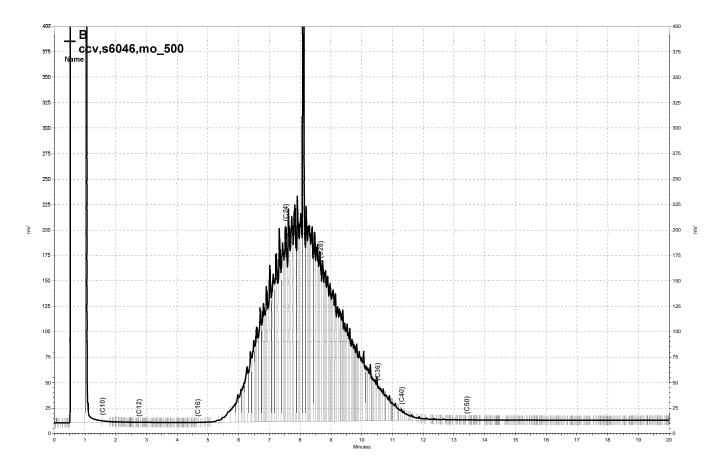
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		Gasoline by GC/MS	
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-31(B)-GGW 196134-001 Water ug/L 1 000	Batcĥ#: Sampled: Received: Analyzed:	127501 07/20/07 07/23/07 07/23/07

Analyte	Result	RI.
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND ND	0.5
	ND ND	0.5
Methyl tert-Amyl Ether (TAME) Chloroethane	ND ND	1.0
		1.0
Trichlorofluoromethane	ND	= * *
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,1,2,2-lettaciiioloetilalle 1,2,3-Trichloropropane	ND	0.5
	191.1	



	Gasoline by GC/MS					
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B			
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-31(B)-GGW 196134-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127501 07/20/07 07/23/07 07/23/07			

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	104	79-134	
Toluene-d8	97	80-120	
Bromofluorobenzene	104	80-122	

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	G	asoline by GC/MS		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-GGW	Batch#:	127501	
Lab ID:	196134-002	Sampled:	07/20/07	
Matrix:	Water	Received:	07/23/07	
Units:	ug/L	Analyzed:	07/23/07	
Diln Fac:	1.000	_		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5



	Gá	asoline by GC/MS		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-GGW	Batch#:	127501	
Lab ID:	196134-002	Sampled:	07/20/07	
Matrix:	Water	Received:	07/23/07	
Units:	ug/L	Analyzed:	07/23/07	
Diln Fac:	1.000			

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-123	
1,2-Dichloroethane-d4	104	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	105	80-122	



Gasoline by GC/MS					
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B		
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127501 07/23/07		

Type: BS Lab ID: QC397407

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	108.0	86	68-132
Isopropyl Ether (DIPE)	25.00	20.34	81	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	20.65	83	75-124
Methyl tert-Amyl Ether (TAME)	25.00	24.78	99	77-120
1,1-Dichloroethene	25.00	23.47	94	80-132
Benzene	25.00	24.91	100	80-120
Trichloroethene	25.00	25.58	102	80-120
Toluene	25.00	26.08	104	80-120
Chlorobenzene	25.00	25.85	103	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	93	80-123	
1,2-Dichloroethane-d4	98	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	96	80-122	

Type: BSD Lab ID: QC397408

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	110.6	88	68-132	2	20
Isopropyl Ether (DIPE)	25.00	19.69	79	65-120	3	20
Ethyl tert-Butyl Ether (ETBE)	25.00	20.60	82	75-124	0	20
Methyl tert-Amyl Ether (TAME)	25.00	24.17	97	77-120	2	20
1,1-Dichloroethene	25.00	22.86	91	80-132	3	20
Benzene	25.00	23.60	94	80-120	5	20
Trichloroethene	25.00	24.33	97	80-120	5	20
Toluene	25.00	24.22	97	80-120	7	20
Chlorobenzene	25.00	24.80	99	80-120	4	20

Surrogate %R	REC	Limits
Dibromofluoromethane 95		80-123
1,2-Dichloroethane-d4 97		79-134
Toluene-d8 97		80-120
Bromofluorobenzene 97		80-122



	Gaso	oline by GC/MS		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Matrix:	Water	Batch#:	127501	
Units:	ug/L	Analyzed:	07/23/07	
Diln Fac:	1.000			

Type: BS Lab ID: QC397409

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	934.9	93	70-130

Surrogate %I	REC	Limits
Dibromofluoromethane 93		80-123
1,2-Dichloroethane-d4 99	1	79-134
Toluene-d8 101	1	80-120
Bromofluorobenzene 97		80-122

Type: BSD Lab ID: QC397410

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	902.7	90	70-130	4	20

Surrogate	%REC	Limits	
Dibromofluoromethane	92	80-123	
1,2-Dichloroethane-d4	97	79-134	
Toluene-d8	97	80-120	
Bromofluorobenzene	98	80-122	

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	Ga	soline by GC/MS		
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397411 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127501 07/23/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5



		Gasoline by GC/MS		
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397411 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127501 07/23/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	91	80-123	
1,2-Dichloroethane-d4	103	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	103	80-122	



	BTXE	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-5.5	Diln Fac:	1.000	
Lab ID:	196134-003	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	101	78-126
1,2-Dichloroethane-d4	109	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-126

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	BTXE	& Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-10.5	Diln Fac:	0.9091	
Lab ID:	196134-004	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-126
1,2-Dichloroethane-d4	110	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-126



	BTXE	L & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-15.5	Diln Fac:	0.9091	
Lab ID:	196134-005	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-126
1,2-Dichloroethane-d4	113	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-126



	втхі	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-19.5	Diln Fac:	0.9804	
Lab ID:	196134-006	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-126
1,2-Dichloroethane-d4	116	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-126

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	BTXE	L & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-25.5	Diln Fac:	0.9804	
Lab ID:	196134-007	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	103	78-126
1,2-Dichloroethane-d4	116	76-135
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-126

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	BTXE	L & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-30	Diln Fac:	0.9615	
Lab ID:	196134-008	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-126
1,2-Dichloroethane-d4	119	76-135
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-126

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	втхі	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-40	Diln Fac:	0.9804	
Lab ID:	196134-009	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	106	78-126
1,2-Dichloroethane-d4	120	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-126

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	BTXE	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-51	Diln Fac:	1.000	
Lab ID:	196134-010	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-126
1,2-Dichloroethane-d4	119	76-135
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-126

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	BTXE	L & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(C)-60.5	Diln Fac:	0.9804	
Lab ID:	196134-011	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-126
1,2-Dichloroethane-d4	121	76-135
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-126



	втхі	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(D)-5.5	Diln Fac:	0.9615	
Lab ID:	196134-013	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	108	78-126
1,2-Dichloroethane-d4	123	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	105	80-126



	втхі	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(D)-10.5	Diln Fac:	0.9434	
Lab ID:	196134-014	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/23/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	94	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	109	78-126
1,2-Dichloroethane-d4	126	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-126

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	BTXE	: & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(D)-15	Diln Fac:	0.9091	
Lab ID:	196134-015	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/24/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	108	78-126
1,2-Dichloroethane-d4	126	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-126



	BTXE	E & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(D)-19.5	Diln Fac:	0.9259	
Lab ID:	196134-016	Batch#:	127494	
Matrix:	Soil	Sampled:	07/20/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/24/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	93	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane	108	78-126
1,2-Dichloroethane-d4	124	76-135
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-126



	В	TXE & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Type:	LCS	Basis:	as received	
Lab ID:	QC397378	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127494	
Units:	ug/Kg	Analyzed:	07/23/07	

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	125.2	100	56-130
MTBE	25.00	23.94	96	66-120
Isopropyl Ether (DIPE)	25.00	22.73	91	57-120
Ethyl tert-Butyl Ether (ETBE)	25.00	21.67	87	68-120
1,2-Dichloroethane	25.00	25.72	103	73-120
Benzene	25.00	25.43	102	80-120
Methyl tert-Amyl Ether (TAME)	25.00	25.40	102	73-120
Toluene	25.00	25.49	102	80-120
1,2-Dibromoethane	25.00	25.09	100	80-120
Ethylbenzene	25.00	26.99	108	80-125
m,p-Xylenes	50.00	52.22	104	80-123
o-Xylene	25.00	26.38	106	80-122

Surrogate	%REC	Limits	
Dibromofluoromethane	101	78-126	
1,2-Dichloroethane-d4	106	76-135	
Toluene-d8	100	80-120	
Bromofluorobenzene	98	80-126	



BTXE & Oxygenates							
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 5030B				
Project#:	001-09567-01	Analysis:	EPA 8260B				
Type:	BLANK	Basis:	as received				
Lab ID:	QC397379	Diln Fac:	1.000				
Matrix:	Soil	Batch#:	127494				
Units:	ug/Kg	Analyzed:	07/23/07				

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-126
1,2-Dichloroethane-d4	107	76-135
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-126



BTXE & Oxygenates							
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 5030B				
Project#:	001-09567-01	Analysis:	EPA 8260B				
Type:	BLANK	Basis:	as received				
Lab ID:	QC397380	Diln Fac:	1.000				
Matrix:	Soil	Batch#:	127494				
Units:	ug/Kg	Analyzed:	07/23/07				

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	93	78-126
1,2-Dichloroethane-d4	93	76-135
Toluene-d8	97	80-120
Bromofluorobenzene	93	80-126



		BTXE & Oxygenates		
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	ZZZZZZZZZ	Diln Fac:	0.9804	
MSS Lab ID:	196096-011	Batch#:	127494	
Matrix:	Soil	Sampled:	07/17/07	
Units:	uq/Kq	Received:	07/19/07	
Basis:	as received	Analyzed:	07/23/07	

Type: MS Lab ID: QC397381

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<3.013	245.1	162.3	66	45-123
MTBE	1.011	49.02	41.34	82	55-120
Isopropyl Ether (DIPE)	<0.1696	49.02	41.09	84	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.08887	49.02	39.85	81	58-120
1,2-Dichloroethane	<0.1943	49.02	42.15	86	56-120
Benzene	0.2064	49.02	47.19	96	61-122
Methyl tert-Amyl Ether (TAME)	<0.1769	49.02	43.93	90	60-120
Toluene	<0.5418	49.02	44.85	92	57-124
1,2-Dibromoethane	<0.2179	49.02	39.30	80	57-120
Ethylbenzene	<0.5715	49.02	42.87	87	55-129
m,p-Xylenes	<1.282	98.04	81.15	83	53-127
o-Xylene	<0.5054	49.02	41.21	84	54-127

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-126
1,2-Dichloroethane-d4	92	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-126

Type: MSD Lab ID: QC397382

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	245.1	140.9	57	45-123	14	32
MTBE	49.02	38.58	77	55-120	7	20
Isopropyl Ether (DIPE)	49.02	40.43	82	50-120	2	20
Ethyl tert-Butyl Ether (ETBE)	49.02	39.10	80	58-120	2	20
1,2-Dichloroethane	49.02	37.01	76	56-120	13	20
Benzene	49.02	46.77	95	61-122	1	20
Methyl tert-Amyl Ether (TAME)	49.02	44.24	90	60-120	1	20
Toluene	49.02	46.95	96	57-124	5	21
1,2-Dibromoethane	49.02	36.61	75	57-120	7	20
Ethylbenzene	49.02	47.19	96	55-129	10	23
m,p-Xylenes	98.04	92.06	94	53-127	13	23
o-Xylene	49.02	45.41	93	54-127	10	22

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-126
1,2-Dichloroethane-d4	81	76-135
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-126



	Semivolatile Organics by GC/MS							
Lab #:	196134	Location:	Hanson Radum					
Client:	LFR Levine Fricke	Prep:	EPA 3550B					
Project#:	001-09567-01	Analysis:	EPA 8270C					
Field ID:	SS-31(C)-5.5	Batch#:	127543					
Lab ID:	196134-003	Sampled:	07/20/07					
Matrix:	Soil	Received:	07/23/07					
Units:	ug/Kg	Prepared:	07/24/07					
Basis:	as received	Analyzed:	07/25/07					
Diln Fac:	1.000							

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND	330	
4-Chloro-3-methylphenol	ND	330	
2-Methylnaphthalene	ND	66	
Hexachlorocyclopentadiene	ND	660	
2,4,6-Trichlorophenol	ND	330	
2,4,5-Trichlorophenol	ND	330	
2-Chloronaphthalene	ND	330	
2-Nitroaniline	ND	660	
Dimethylphthalate	ND	330	
Acenaphthylene	ND	66	
2,6-Dinitrotoluene	ND	330	
3-Nitroaniline	ND	660	
Acenaphthene	ND	66	
2,4-Dinitrophenol	ND	660	
4-Nitrophenol	ND	660	
Dibenzofuran	ND	330	
2,4-Dinitrotoluene	ND	330	
Diethylphthalate	ND	330	
Fluorene	ND	66	
4-Chlorophenyl-phenylether	ND	330	
4-Nitroaniline	ND	660	
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	



Semivolatile Organics by GC/MS							
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C				
Field ID: Lab ID: Matrix: Units: Basis: Diln Fac:	SS-31(C)-5.5 196134-003 Soil ug/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127543 07/20/07 07/23/07 07/24/07 07/25/07				

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	50	28-120
Phenol-d5	57	30-120
2,4,6-Tribromophenol	73	20-120
Nitrobenzene-d5	52	39-120
2-Fluorobiphenyl	61	44-120
Terphenyl-d14	64	39-120



Semivolatile Organics by GC/MS							
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8270C				
Field ID:	SS-31(C)-10.5	Batch#:	127543				
Lab ID:	196134-004	Sampled:	07/20/07				
Matrix:	Soil	Received:	07/23/07				
Units:	ug/Kg	Prepared:	07/24/07				
Basis:	as received	Analyzed:	07/25/07				
Diln Fac:	1.000						

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND ND	66	
Fluorene			
4-Chlorophenyl-phenylether	ND ND	330 660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	



Semivolatile Organics by GC/MS				
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C	
Field ID: Lab ID: Matrix: Units:	SS-31(C)-10.5 196134-004 Soil	Batch#: Sampled: Received: Prepared:	127543 07/20/07 07/23/07 07/24/07	
Basis: Diln Fac:	as received 1.000	Analyzed:	07/25/07	

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol 59	59	28-120
Phenol-d5 60	50	30-120
2,4,6-Tribromophenol 79	79	20-120
Nitrobenzene-d5 59	59	39-120
2-Fluorobiphenyl 60	50	44-120
Terphenyl-d14 6	57	39-120



Semivolatile Organics by GC/MS				
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	SS-31(D)-5.5	Batch#:	127543	
Lab ID:	196134-013	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/23/07	
Units:	ug/Kg	Prepared:	07/24/07	
Basis:	as received	Analyzed:	07/25/07	
Diln Fac:	1.000			

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,600	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
	ND ND	330	
2,6-Dinitrotoluene 3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate		66	
Fluorene	ND	330	
4-Chlorophenyl-phenylether	ND	660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	



Semivolatile Organics by GC/MS				
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C	
Field ID: Lab ID: Matrix: Units: Basis: Diln Fac:	SS-31(D)-5.5 196134-013 Soil ug/Kg as received 1.000	Batch#: Sampled: Received: Prepared: Analyzed:	127543 07/20/07 07/23/07 07/24/07 07/25/07	

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	55	28-120
Phenol-d5	58	30-120
2,4,6-Tribromophenol	72	20-120
Nitrobenzene-d5	54	39-120
2-Fluorobiphenyl	60	44-120
Terphenyl-d14	65	39-120



	Semivolat:	ile Organics by G	C/MS	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	SS-31(D)-10.5	Batch#:	127666	
Lab ID:	196134-014	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/23/07	
Units:	ug/Kg	Prepared:	07/26/07	
Basis:	as received	Analyzed:	07/26/07	
Diln Fac:	1.000	-		

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	670	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	67	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	67	
Hexachlorocyclopentadiene	ND ND	670	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Chioronaphthalene 2-Nitroaniline	ND ND	670	
Dimethylphthalate	ND ND	330	
	ND ND	67	
Acenaphthylene	ND ND	330	
2,6-Dinitrotoluene	ND ND	670	
3-Nitroaniline			
Acenaphthene	ND	67 670	
2,4-Dinitrophenol	ND	670	
4-Nitrophenol	ND	330	
Dibenzofuran	ND		
2,4-Dinitrotoluene	ND	330 330	
Diethylphthalate	ND		
Fluorene	ND	67	
4-Chlorophenyl-phenylether	ND	330	
4-Nitroaniline	ND	670	
4,6-Dinitro-2-methylphenol	ND	670	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	670	
Phenanthrene	ND	67	
Anthracene	ND	67	
Di-n-butylphthalate	ND	330	



	Semivolatile Organics by GC/MS						
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8270C				
Field ID:	SS-31(D)-10.5	Batch#:	127666				
Lab ID:	196134-014	Sampled:	07/20/07				
Matrix:	Soil	Received:	07/23/07				
Units:	ug/Kg	Prepared:	07/26/07				
Basis: Diln Fac:	as received 1.000	Analyzed:	07/26/07				

Analyte	Result	RL	
Fluoranthene	ND	67	
Pyrene	ND	67	
Butylbenzylphthalate	ND	330	
3,3'-Dichlorobenzidine	ND	670	
Benzo(a)anthracene	ND	67	
Chrysene	ND	67	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	67	
Benzo(k)fluoranthene	ND	67	
Benzo(a)pyrene	ND	67	
Indeno(1,2,3-cd)pyrene	ND	67	
Dibenz(a,h)anthracene	ND	67	
Benzo(g,h,i)perylene	ND	67	

Surrogate	%REC	Limits
2-Fluorophenol	74	28-120
Phenol-d5	75	30-120
2,4,6-Tribromophenol	82	20-120
Nitrobenzene-d5	73	39-120
2-Fluorobiphenyl	72	44-120
Terphenyl-d14	68	39-120



Datell QC Rep							
Semivolatile Organics by GC/MS							
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8270C				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC397616	Batch#:	127543				
Matrix:	Soil	Prepared:	07/24/07				
Units:	ug/Kg	Analyzed:	07/24/07				
Basis:	as received	_					

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	
bis(2-Chloroethyl)ether	ND	330	
2-Chlorophenol	ND	330	
1,3-Dichlorobenzene	ND	330	
1,4-Dichlorobenzene	ND	330	
Benzyl alcohol	ND	330	
1,2-Dichlorobenzene	ND	330	
2-Methylphenol	ND	330	
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,700	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND ND	66	
4-Chloroaniline	ND ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND	330	
		330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND ND	66	
Fluorene	ND ND	330	
4-Chlorophenyl-phenylether		660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Semivolatile Organics by GC/MS						
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8270C				
Type: Lab ID:	BLANK	Diln Fac:	1.000				
Lab ID:	QC397616	Batch#:	127543				
Matrix:	Soil	Prepared:	07/24/07				
Units:	uq/Kq	Analyzed:	07/24/07				
Basis:	as received						

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3 -Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	70	28-120
Phenol-d5	69	30-120
2,4,6-Tribromophenol	88	20-120
Nitrobenzene-d5	69	39-120
2-Fluorobiphenyl	78	44-120
Terphenyl-d14	73	39-120



Semivolatile Organics by GC/MS						
Lab #:	196134	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC397617	Batch#:	127543			
Matrix:	Soil	Prepared:	07/24/07			
Units:	ug/Kg	Analyzed:	07/24/07			
Basis:	as received					

Analyte	Spiked	Result	%REC	Limits
Phenol	2,655	1,849	70	40-120
2-Chlorophenol	2,655	1,833	69	40-120
1,4-Dichlorobenzene	1,328	1,047	79	45-120
N-Nitroso-di-n-propylamine	1,328	824.0	62	34-120
1,2,4-Trichlorobenzene	1,328	1,094	82	45-120
4-Chloro-3-methylphenol	2,655	2,184	82	45-120
Acenaphthene	1,328	1,020	77	42-120
4-Nitrophenol	2,655	1,856	70	31-120
2,4-Dinitrotoluene	1,328	1,196	90	41-120
Pentachlorophenol	2,655	2,245	85	21-120
Pyrene	1,328	1,094	82	41-120

Surrogate	%REC	Limits
2-Fluorophenol	66	28-120
Phenol-d5	68	30-120
2,4,6-Tribromophenol	102	20-120
Nitrobenzene-d5	68	39-120
2-Fluorobiphenyl	75	44-120
Terphenyl-d14	76	39-120

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Semivolatile Organics by GC/MS						
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3550B EPA 8270C			
Type: Lab ID: Matrix: Units: Basis:	BLANK QC398143 Soil ug/Kg as received	Diln Fac: Batch#: Prepared: Analyzed:	1.000 127666 07/26/07 07/26/07			

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	330	
Phenol	ND	330	ļ
bis(2-Chloroethyl)ether	ND	330	ļ
2-Chlorophenol	ND	330	ļ
1,3-Dichlorobenzene	ND	330	ļ
1,4-Dichlorobenzene	ND	330	ļ
Benzyl alcohol	ND	330	ļ
1,2-Dichlorobenzene	ND	330	J
2-Methylphenol	ND	330	ļ
bis(2-Chloroisopropyl) ether	ND	330	
4-Methylphenol	ND	330	
N-Nitroso-di-n-propylamine	ND	330	
Hexachloroethane	ND	330	
Nitrobenzene	ND	330	
Isophorone	ND	330	
2-Nitrophenol	ND	660	
2,4-Dimethylphenol	ND	330	
Benzoic acid	ND	1,600	
bis(2-Chloroethoxy)methane	ND	330	
2,4-Dichlorophenol	ND	330	
1,2,4-Trichlorobenzene	ND	330	
Naphthalene	ND	66	
4-Chloroaniline	ND	330	
Hexachlorobutadiene	ND ND	330	
4-Chloro-3-methylphenol	ND ND	330	
2-Methylnaphthalene	ND ND	66	
Hexachlorocyclopentadiene	ND ND	660	
2,4,6-Trichlorophenol	ND ND	330	ļ
2,4,5-Trichlorophenol	ND ND	330	
2-Chloronaphthalene	ND ND	330	
2-Nitroaniline	ND ND	660	
Dimethylphthalate	ND ND	330	
Acenaphthylene	ND ND	66	
2,6-Dinitrotoluene	ND ND	330	
3-Nitroaniline	ND ND	660	
Acenaphthene	ND ND	66	
	ND ND	660	
2,4-Dinitrophenol 4-Nitrophenol	ND ND	660	
Dibenzofuran	ND ND	330	
	ND	330	
2,4-Dinitrotoluene	ND ND	330	
Diethylphthalate	ND	66	
Fluorene			
4-Chlorophenyl-phenylether	ND	330 660	
4-Nitroaniline	ND		
4,6-Dinitro-2-methylphenol	ND	660	
N-Nitrosodiphenylamine	ND	330	
Azobenzene	ND	330	
4-Bromophenyl-phenylether	ND	330	
Hexachlorobenzene	ND	330	
Pentachlorophenol	ND	660	
Phenanthrene	ND	66	
Anthracene	ND	66	
Di-n-butylphthalate	ND	330	

ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Type: Lab ID:	BLANK	Diln Fac:	1.000		
Lab ID:	QC398143	Batch#:	127666		
Matrix:	Soil	Prepared:	07/26/07		
Units:	uq/Kq	Analyzed:	07/26/07		
Basis:	as received				

Analyte	Result	RL	
Fluoranthene	ND	66	
Pyrene	ND	66	
Butylbenzylphthalate	ND	330	
3,3 -Dichlorobenzidine	ND	660	
Benzo(a)anthracene	ND	66	
Chrysene	ND	66	
bis(2-Ethylhexyl)phthalate	ND	330	
Di-n-octylphthalate	ND	330	
Benzo(b)fluoranthene	ND	66	
Benzo(k)fluoranthene	ND	66	
Benzo(a)pyrene	ND	66	
Indeno(1,2,3-cd)pyrene	ND	66	
Dibenz(a,h)anthracene	ND	66	
Benzo(g,h,i)perylene	ND	66	

Surrogate	%REC	Limits
2-Fluorophenol	75	28-120
Phenol-d5	79	30-120
2,4,6-Tribromophenol	85	20-120
Nitrobenzene-d5	75	39-120
2-Fluorobiphenyl	79	44-120
Terphenyl-d14	73	39-120



Semivolatile Organics by GC/MS					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC398144	Batch#:	127666		
Matrix:	Soil	Prepared:	07/26/07		
Units:	ug/Kg	Analyzed:	07/26/07		
Basis:	as received				

Analyte	Spiked	Result	%REC	Limits
Phenol	2,644	1,927	73	40-120
2-Chlorophenol	2,644	1,921	73	40-120
1,4-Dichlorobenzene	1,322	1,044	79	45-120
N-Nitroso-di-n-propylamine	1,322	922.2	70	34-120
1,2,4-Trichlorobenzene	1,322	1,078	82	45-120
4-Chloro-3-methylphenol	2,644	2,099	79	45-120
Acenaphthene	1,322	996.4	75	42-120
4-Nitrophenol	2,644	1,885	71	31-120
2,4-Dinitrotoluene	1,322	1,111	84	41-120
Pentachlorophenol	2,644	1,824	69	21-120
Pyrene	1,322	1,004	76	41-120

Surrogate	%REC	Limits
2-Fluorophenol	69	28-120
Phenol-d5	73	30-120
2,4,6-Tribromophenol	99	20-120
Nitrobenzene-d5	71	39-120
2-Fluorobiphenyl	74	44-120
Terphenyl-d14	71	39-120

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Semivolatile Organics by GC/MS					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Field ID:	ZZZZZZZZZ	Batch#:	127666		
MSS Lab ID:	196124-006	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/20/07		
Units:	ug/Kg	Prepared:	07/26/07		
Basis: Diln Fac:	as received 1.000	Analyzed:	07/27/07		

Type: MS Lab ID: QC398145

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<68.23	2,659	1,835	69	38-120
2-Chlorophenol	<71.02	2,659	1,856	70	38-120
1,4-Dichlorobenzene	<16.96	1,329	1,049	79	49-120
N-Nitroso-di-n-propylamine	<14.03	1,329	841.8	63	43-120
1,2,4-Trichlorobenzene	<15.15	1,329	1,107	83	47-120
4-Chloro-3-methylphenol	<70.29	2,659	2,005	75	44-120
Acenaphthene	<14.95	1,329	954.3	72	48-120
4-Nitrophenol	<84.28	2,659	1,630	61	30-120
2,4-Dinitrotoluene	<15.28	1,329	1,051	79	41-120
Pentachlorophenol	<66.87	2,659	1,193	45	13-120
Pyrene	<14.94	1,329	948.4	71	42-120

Surrogate	%REC	Limits
2-Fluorophenol	69	28-120
Phenol-d5	70	30-120
2,4,6-Tribromophenol	99	20-120
Nitrobenzene-d5	69	39-120
2-Fluorobiphenyl	75	44-120
Terphenyl-d14	70	39-120

Type: MSD Lab ID: QC398146

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,659	1,893	71	38-120	3	26
2-Chlorophenol	2,659	1,879	71	38-120	1	28
1,4-Dichlorobenzene	1,329	1,001	75	49-120	5	27
N-Nitroso-di-n-propylamine	1,329	906.8	68	43-120	7	28
1,2,4-Trichlorobenzene	1,329	1,093	82	47-120	1	26
4-Chloro-3-methylphenol	2,659	2,159	81	44-120	7	28
Acenaphthene	1,329	1,015	76	48-120	6	29
4-Nitrophenol	2,659	1,858	70	30-120	13	38
2,4-Dinitrotoluene	1,329	1,129	85	41-120	7	26
Pentachlorophenol	2,659	1,279	48	13-120	7	55
Pyrene	1,329	1,038	78	42-120	9	30

Surrogate	%REC	Limits	
2-Fluorophenol	69	28-120	
Phenol-d5	73	30-120	
2,4,6-Tribromophenol	103	20-120	
Nitrobenzene-d5	72	39-120	
2-Fluorobiphenyl	77	44-120	
Terphenyl-d14	76	39-120	



Semivolatile Organics by GC/MS						
Lab #:	196134	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8270C			
Field ID:	ZZZZZZZZZ	Batch#:	127666			
MSS Lab ID:	196215-012	Sampled:	07/24/07			
Matrix:	Soil	Received:	07/25/07			
Units:	ug/Kg	Prepared:	07/26/07			
Basis:	as received	Analyzed:	07/27/07			
Diln Fac:	1.000	_				

Type: MS Lab ID: QC398147

Analyte	MSS Result	Spiked	Result	%REC	Limits
Phenol	<67.94	2,665	2,098	79	38-120
2-Chlorophenol	<70.72	2,665	2,076	78	38-120
1,4-Dichlorobenzene	<16.89	1,332	1,150	86	49-120
N-Nitroso-di-n-propylamine	<13.97	1,332	1,017	76	43-120
1,2,4-Trichlorobenzene	<15.09	1,332	1,169	88	47-120
4-Chloro-3-methylphenol	<69.99	2,665	2,229	84	44-120
Acenaphthene	<14.89	1,332	1,051	79	48-120
4-Nitrophenol	<83.91	2,665	2,029	76	30-120
2,4-Dinitrotoluene	<15.22	1,332	1,131	85	41-120
Pentachlorophenol	<66.58	2,665	1,888	71	13-120
Pyrene	<14.88	1,332	1,059	79	42-120

Surrogate	%REC	Limits
2-Fluorophenol	77	28-120
Phenol-d5	80	30-120
2,4,6-Tribromophenol	103	20-120
Nitrobenzene-d5	79	39-120
2-Fluorobiphenyl	79	44-120
Terphenyl-d14	75	39-120

Type: MSD Lab ID: QC398148

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	2,658	1,857	70	38-120	12	26
2-Chlorophenol	2,658	1,879	71	38-120	10	28
1,4-Dichlorobenzene	1,329	1,039	78	49-120	10	27
N-Nitroso-di-n-propylamine	1,329	881.9	66	43-120	14	28
1,2,4-Trichlorobenzene	1,329	1,084	82	47-120	7	26
4-Chloro-3-methylphenol	2,658	2,056	77	44-120	8	28
Acenaphthene	1,329	970.9	73	48-120	8	29
4-Nitrophenol	2,658	1,807	68	30-120	11	38
2,4-Dinitrotoluene	1,329	1,054	79	41-120	7	26
Pentachlorophenol	2,658	1,838	69	13-120	2	55
Pyrene	1,329	954.3	72	42-120	10	30

Surrogate	%REC	Limits
2-Fluorophenol	69	28-120
Phenol-d5	71	30-120
2,4,6-Tribromophenol	98	20-120
Nitrobenzene-d5	69	39-120
2-Fluorobiphenyl	73	44-120
Terphenyl-d14	68	39-120



	Organochlorine Pesticides						
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8081A				
Field ID:	SS-31(C)-5.5	Batch#:	127545				
Lab ID:	196134-003	Sampled:	07/20/07				
Matrix:	Soil	Received:	07/23/07				
Units:	ug/Kg	Prepared:	07/24/07				
Basis:	as received	Analyzed:	07/26/07				
Diln Fac:	1.000						

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	77	50-120
Decachlorobiphenyl	85	54-133

ND= Not Detected RL= Reporting Limit

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	Organochlorine Pesticides						
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8081A				
Field ID:	SS-31(C)-10.5	Batch#:	127545				
Lab ID:	196134-004	Sampled:	07/20/07				
Matrix:	Soil	Received:	07/23/07				
Units:	ug/Kg	Prepared:	07/24/07				
Basis:	as received	Analyzed:	07/26/07				
Diln Fac:	1.000						

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	92	50-120
Decachlorobiphenyl	100	54-133

ND= Not Detected RL= Reporting Limit

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	Organochlorine Pesticides						
Lab #:	196134	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3550B				
Project#:	001-09567-01	Analysis:	EPA 8081A				
Field ID:	SS-31(D)-5.5	Batch#:	127545				
Lab ID:	196134-013	Sampled:	07/20/07				
Matrix:	Soil	Received:	07/23/07				
Units:	ug/Kg	Prepared:	07/24/07				
Basis:	as received	Analyzed:	07/26/07				
Diln Fac:	1.000						

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	102	50-120
Decachlorobiphenyl	113	54-133

ND= Not Detected RL= Reporting Limit

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	Organochlorine Pesticides				
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8081A		
Field ID:	SS-31(D)-10.5	Batch#:	127545		
Lab ID:	196134-014	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/23/07		
Units:	ug/Kg	Prepared:	07/24/07		
Basis:	as received	Analyzed:	07/26/07		
Diln Fac:	1.000				

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	60	

Surrogate	%REC	Limits
TCMX	98	50-120
Decachlorobiphenyl	107	54-133

ND= Not Detected RL= Reporting Limit Page 1 of 1

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	Organochlorine Pesticides				
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8081A		
Type:	BLANK	Diln Fac:	1.000		
Lab ID:	QC397627	Batch#:	127545		
Matrix:	Soil	Prepared:	07/24/07		
Units:	ug/Kg	Analyzed:	07/25/07		
Basis:	as received				

Cleanup Method: EPA 3620B

Analyte	Result	RL	
alpha-BHC	ND	1.7	
beta-BHC	ND	1.7	
gamma-BHC	ND	1.7	
delta-BHC	ND	1.7	
Heptachlor	ND	1.7	
Aldrin	ND	1.7	
Heptachlor epoxide	ND	1.7	
Endosulfan I	ND	1.7	
Dieldrin	ND	3.3	
4,4'-DDE	ND	3.3	
Endrin	ND	3.3	
Endosulfan II	ND	3.3	
Endosulfan sulfate	ND	3.3	
4,4'-DDD	ND	3.3	
Endrin aldehyde	ND	3.3	
4,4'-DDT	ND	3.3	
alpha-Chlordane	ND	1.7	
gamma-Chlordane	ND	1.7	
Methoxychlor	ND	17	
Toxaphene	ND	59	

Surrogate	%REC	Limits
TCMX	107	50-120
Decachlorobiphenyl	117	54-133

ND= Not Detected RL= Reporting Limit

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	Organochlorine Pesticides					
Lab #:	196134	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3550B			
Project#:	001-09567-01	Analysis:	EPA 8081A			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC397631	Batch#:	127545			
Matrix:	Soil	Prepared:	07/24/07			
Units:	ug/Kg	Analyzed:	07/25/07			
Basis:	as received					

Cleanup Method: EPA 3620B

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.20	8.652	66	42-120
Heptachlor	13.20	9.825	74	44-130
Aldrin	13.20	9.239	70	47-120
Dieldrin	26.40	22.53	85	50-121
Endrin	26.40	12.50	47	39-130
4,4'-DDT	26.40	24.31	92	45-127

Surrogate	%REC	Limits
TCMX	62	50-120
Decachlorobiphenyl	94	54-133

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	Organochlorine Pesticides				
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8081A		
Field ID:	ZZZZZZZZZ	Batch#:	127545		
MSS Lab ID:	196124-006	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/20/07		
Units:	ug/Kg	Prepared:	07/24/07		
Basis:	as received	Analyzed:	07/31/07		
Diln Fac:	1.000				

Type: MS Cleanup Method: EPA 3620B

Lab ID: QC397632

Analyte	MSS Result	Spiked	Result	%REC	Limits
gamma-BHC	<0.3685	13.26	9.911	75	45-120
Heptachlor	<0.4792	13.26	10.79	81	50-124
Aldrin	<0.3149	13.26	10.52 #	79	47-122
Dieldrin	<0.9902	26.52	22.46	85	47-122
Endrin	<1.174	26.52	22.14 #	83	46-127
4,4'-DDT	<1.265	26.52	23.60	89	27-136

Surrogate	%REC	Limits	
TCMX	87	50-120	
Decachlorobiphenyl	128	54-133	

Type: MSD Cleanup Method: EPA 3620B

Lab ID: QC397633

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
gamma-BHC	13.32	11.74	88	45-120	16	39
Heptachlor	13.32	12.61	95	50-124	15	37
Aldrin	13.32	12.18 #	91	47-122	14	35
Dieldrin	26.64	24.43	92	47-122	8	34
Endrin	26.64	28.32 #	106	46-127	24	37
4,4'-DDT	26.64	23.80	89	27-136	0	49

Surrogate	%REC	Limits	
TCMX	92	50-120	
Decachlorobiphenyl	104	54-133	

#= CCV drift outside limits; average CCV drift within limits per method requirements
RPD= Relative Percent Difference

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	Polychlorinated	d Biphenyls	(PCBs)
Lab #:	196134	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Matrix:	Soil	Batch#:	127545
Units:	ug/Kg	Sampled:	07/20/07
Basis:	as received	Received:	07/23/07
Diln Fac:	1.000	Prepared:	07/24/07

Field ID: SS-31(C)-5.5 Analyzed: 07/25/07
Type: SAMPLE Cleanup Method: EPA 3665A

Lab ID: SAMPLE 196134-003

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	107	63-141
Decachlorobiphenyl	106	50-158

Field ID: SS-31(C)-10.5 Analyzed: 07/25/07 Type: SAMPLE Cleanup Method: EPA 3665A Lab ID: 196134-004

**RL** 12 Result Analyte Aroclor-1016 ND 24 12 Aroclor-1221 NDAroclor-1232 NDAroclor-1242 Aroclor-1248 ND 12  $\overline{12}$ NDAroclor-1254 ND 12 Aroclor-1260 ND

	Surrogate	%REC	Limits
TCMX		115	63-141
	robiphenyl	121	50-158

Field ID: SS-31(D)-5.5 Analyzed: 07/25/07 Type: SAMPLE Cleanup Method: EPA 3665A

Lab ID: 196134-013

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	119	63-141
Decachlorobiphenyl	117	50-158

ND= Not Detected RL= Reporting Limit

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	Polychlorin	nated Biphenyls (	PCBs)	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3550B	
Project#:	001-09567-01	Analysis:	EPA 8082	
Matrix:	Soil	Batch#:	127545	
Units:	ug/Kg	Sampled:	07/20/07	
Basis:	as received	Received:	07/23/07	
Diln Fac:	1.000	Prepared:	07/24/07	

Analyzed: 07/25/07 Cleanup Method: EPA 3665A SS-31(D)-10.5 SAMPLE 196134-014 Field ID:

Type: Lab ID:

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	116	63-141
Decachlorobiphenyl	124	50-158

Type: BLANK Lab ID: QC397627 Analyzed: 07/24/07 Cleanup Method: EPA 3665A

Analyte	Result	RL	
Aroclor-1016	ND	12	
Aroclor-1221	ND	24	
Aroclor-1232	ND	12	
Aroclor-1242	ND	12	
Aroclor-1248	ND	12	
Aroclor-1254	ND	12	
Aroclor-1260	ND	12	

Surrogate	%REC	Limits
TCMX	119	63-141
Decachlorobiphenyl	128	50-158

ND= Not Detected RL= Reporting Limit
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	Polychlorinated	Biphenyls	(PCBs)
Lab #:	196134	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-01	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC397628	Batch#:	127545
Matrix:	Soil	Prepared:	07/24/07
Units:	ug/Kg	Analyzed:	07/24/07
Basis:	as received		

Cleanup Method: EPA 3665A

Analyte	Spiked	Result	%REC	Limits
Aroclor-1232	164.3	188.8	115	68-138

Surrogate	%REC	Limits
TCMX	119	63-141
Decachlorobiphenyl	122	50-158

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Polychlorinated Biphenyls (PCBs)					
Lab #:	196134	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3550B		
Project#:	001-09567-01	Analysis:	EPA 8082		
Field ID:	ZZZZZZZZZZ	Batch#:	127545		
MSS Lab ID:	196124-006	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/20/07		
Units:	ug/Kg	Prepared:	07/24/07		
Basis:	as received	Analyzed:	07/24/07		
Diln Fac:	1.000				

Type: MS Cleanup Method: EPA 3665A

Lab ID: QC397629

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1232	<2.400	164.6	166.8	101	72-140

Surrogate	%REC	Limits
TCMX	109	63-141
Decachlorobiphenyl	108	50-158

Type: MSD Cleanup Method: EPA 3665A

Lab ID: QC397630

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1232	166.6	179.9	108	72-140	6	27

Surrogate	%REC	Limits
TCMX	113	63-141
Decachlorobiphenyl	116	50-158



California Title 26 Metals					
Lab #:	196134	Project#:	001-09567-01		
Client:	LFR Levine Fricke	Location:	Hanson Radum		
Field ID:	SS-31(C)-5.5	Diln Fac:	1.000		
Lab ID:	196134-003	Sampled:	07/20/07		
Matrix:	Soil	Received:	07/23/07		
Units:	mg/Kg	Analyzed:	07/25/07		
Basis:	as received				

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	ND	0.50	127580 07/24/07	EPA 3050B	EPA 6010B
Arsenic	7.3	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Barium	260	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Beryllium	0.41	0.10	127580 07/24/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Chromium	22	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Cobalt	8.2	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Copper	18	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Lead	5.2	0.15	127580 07/24/07	EPA 3050B	EPA 6010B
Mercury	0.089	0.020	127600 07/25/07	METHOD	EPA 7471A
Molybdenum	ND	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Nickel	28	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127580 07/24/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127580 07/24/07	EPA 3050B	EPA 6010B
Vanadium	35	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Zinc	38	1.0	127580 07/24/07	EPA 3050B	EPA 6010B

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	Californi	a Title 26 Meta	ıls	
Lab #:	196134	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SS-31(C)-10.5	Diln Fac:	1.000	
Lab ID:	196134-004	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/23/07	
Units:	mg/Kg	Analyzed:	07/25/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepared	Prep	Analysis
Antimony	ND	0.50	127580 07/24/07	EPA 3050B	EPA 6010B
Arsenic	6.3	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Barium	270	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Beryllium	0.42	0.10	127580 07/24/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Chromium	44	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Cobalt	12	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Copper	25	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Lead	6.4	0.15	127580 07/24/07	EPA 3050B	EPA 6010B
Mercury	0.091	0.020	127600 07/25/07	METHOD	EPA 7471A
Molybdenum	ND	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Nickel	71	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127580 07/24/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127580 07/24/07	EPA 3050B	EPA 6010B
Vanadium	36	0.25	127580 07/24/07	EPA 3050B	EPA 6010B
Zinc	45	1.0	127580 07/24/07	EPA 3050B	EPA 6010B

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	Californi	ia Title 26 Meta	ıls	
Lab #:	196134	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SS-31(D)-5.5	Diln Fac:	1.000	
Lab ID:	196134-013	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/23/07	
Units:	mg/Kg	Analyzed:	07/25/07	
Basis:	as received			

Analyte	Result	RL	Batch# Prepar	ed Prep	Analysis
Antimony	ND	0.50	127580 07/24/	07 EPA 3050B	EPA 6010B
Arsenic	5.0	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Barium	270	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Beryllium	0.39	0.10	127580 07/24/	07 EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Chromium	39	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Cobalt	9.7	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Copper	22	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Lead	4.6	0.15	127580 07/24/	07 EPA 3050B	EPA 6010B
Mercury	0.058	0.020	127600 07/25/	07 METHOD	EPA 7471A
Molybdenum	ND	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Nickel	63	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Selenium	ND	0.50	127580 07/24/	07 EPA 3050B	EPA 6010B
Silver	ND	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Thallium	ND	0.50	127580 07/24/	07 EPA 3050B	EPA 6010B
Vanadium	30	0.25	127580 07/24/	07 EPA 3050B	EPA 6010B
Zinc	38	1.0	127580 07/24/	07 EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	als	
Lab #:	196134	Project#:	001-09567-01	
Client:	LFR Levine Fricke	Location:	Hanson Radum	
Field ID:	SS-31(D)-10.5	Diln Fac:	1.000	
Lab ID:	196134-014	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/23/07	
Units:	mg/Kg	Analyzed:	07/25/07	
Basis:	as received			

Analyte	Result	RL	Batch# Pi	repared	Prep	Analysis
Antimony	ND	0.50	127580 07	7/24/07	EPA 3050B	EPA 6010B
Arsenic	6.0	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Barium	330	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Beryllium	0.44	0.10	127580 07	7/24/07	EPA 3050B	EPA 6010B
Cadmium	ND	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Chromium	38	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Cobalt	11	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Copper	25	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Lead	6.6	0.15	127580 07	7/24/07	EPA 3050B	EPA 6010B
Mercury	0.087	0.020	127600 07	7/25/07	METHOD	EPA 7471A
Molybdenum	ND	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Nickel	57	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Selenium	ND	0.50	127580 07	7/24/07	EPA 3050B	EPA 6010B
Silver	ND	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Thallium	ND	0.50	127580 07	7/24/07	EPA 3050B	EPA 6010B
Vanadium	36	0.25	127580 07	7/24/07	EPA 3050B	EPA 6010B
Zinc	45	1.0	127580 07	7/24/07	EPA 3050B	EPA 6010B

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	Californ	nia Title 26 Meta	als	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3050B	
Project#:	001-09567-01	Analysis:	EPA 6010B	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397759	Batch#:	127580	
Matrix:	Soil	Prepared:	07/24/07	
Units:	mg/Kg	Analyzed:	07/25/07	
Basis:	as received			

Analyte	Result	RL	
Antimony	ND	0.50	
Arsenic	ND	0.25	
Barium	ND	0.25	
Beryllium	ND	0.10	
Cadmium	ND	0.25	
Chromium	ND	0.25	
Cobalt	ND	0.25	
Copper	ND	0.25	
Lead	ND	0.15	
Molybdenum	ND	0.25	
Nickel	ND	0.25	
Selenium	ND	0.50	
Silver	ND	0.25	
Thallium	ND	0.50	
Vanadium	ND	0.25	
Zinc	ND	1.0	



	Californ	nia Title 26 Meta	als	
Lab #: Client: Project#:	196134 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 3050B EPA 6010B	
Matrix: Units: Basis: Diln Fac:	Soil mg/Kg as received 1.000	Batch#: Prepared: Analyzed:	127580 07/24/07 07/25/07	

Type: BS Lab ID: QC397760

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	97.85	98	80-120
Arsenic	50.00	48.81	98	80-120
Barium	100.0	98.96	99	80-120
Beryllium	2.500	2.394	96	80-120
Cadmium	10.00	10.08	101	80-120
Chromium	100.0	96.09	96	80-120
Cobalt	25.00	23.47	94	80-120
Copper	12.50	11.79	94	80-120
Lead	100.0	95.17	95	80-120
Molybdenum	20.00	20.34	102	80-120
Nickel	25.00	23.56	94	80-120
Selenium	50.00	48.95	98	80-120
Silver	10.00	9.538	95	80-120
Thallium	50.00	47.17	94	80-120
Vanadium	25.00	24.24	97	80-120
Zinc	25.00	24.42	98	80-120

Type: BSD Lab ID: QC397761

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	98.74	99	80-120	1	20
Arsenic	50.00	48.42	97	80-120	1	20
Barium	100.0	100.1	100	80-120	1	20
Beryllium	2.500	2.424	97	80-120	1	20
Cadmium	10.00	10.16	102	80-120	1	20
Chromium	100.0	97.18	97	80-120	1	20
Cobalt	25.00	23.76	95	80-120	1	20
Copper	12.50	11.91	95	80-120	1	20
Lead	100.0	96.75	97	80-120	2	20
Molybdenum	20.00	20.77	104	80-120	2	20
Nickel	25.00	23.85	95	80-120	1	20
Selenium	50.00	50.20	100	80-120	3	20
Silver	10.00	9.695	97	80-120	2	20
Thallium	50.00	47.65	95	80-120	1	20
Vanadium	25.00	24.51	98	80-120	1	20
Zinc	25.00	24.47	98	80-120	0	20



	California T	itle 26 Metals	
Lab #:	196134	Location:	Hanson Radum
Client: Project#:	LFR Levine Fricke 001-09567-01	Prep: Analysis:	EPA 3050B EPA 6010B
Field ID:	ZZZZZZZZZZZ	Batch#:	127580
MSS Lab ID:	196147-001	Sampled:	07/20/07
Matrix:	Soil	Received:	07/23/07
Units:	mg/Kg	Prepared:	07/24/07
Basis: Diln Fac:	as received 1.000	Analyzed:	07/25/07

Type: MS Lab ID: QC397762

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	0.1763	93.46	45.95	49	1-129
Arsenic	1.998	46.73	47.18	97	72-120
Barium	65.70	93.46	159.8	101	49-138
Beryllium	0.3264	2.336	2.535	95	80-120
Cadmium	<0.02395	9.346	8.852	95	72-120
Chromium	7.338	93.46	93.65	92	63-122
Cobalt	3.009	23.36	24.04	90	61-120
Copper	5.529	11.68	16.58	95	59-137
Lead	2.300	93.46	85.55	89	55-122
Molybdenum	0.1733	18.69	17.88	95	66-120
Nickel	2.666	23.36	23.53	89	45-139
Selenium	<0.04713	46.73	44.67	96	73-120
Silver	<0.05716	9.346	8.830	94	53-120
Thallium	<0.08561	46.73	40.58	87	64-120
Vanadium	33.31	23.36	55.69	96	55-139
Zinc	17.77	23.36	40.34	97	49-140

Type: MSD Lab ID: QC397763

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	93.46	45.87	49	1-129	0	23
Arsenic	46.73	49.36	101	72-120	5	20
Barium	93.46	168.8	110	49-138	6	23
Beryllium	2.336	2.627	98	80-120	4	20
Cadmium	9.346	9.195	98	72-120	4	20
Chromium	93.46	96.55	95	63-122	3	20
Cobalt	23.36	25.17	95	61-120	5	23
Copper	11.68	17.61	103	59-137	6	20
Lead	93.46	89.51	93	55-122	5	26
Molybdenum	18.69	18.60	99	66-120	4	20
Nickel	23.36	24.95	95	45-139	6	26
Selenium	46.73	43.31	93	73-120	3	20
Silver	9.346	9.048	97	53-120	2	22
Thallium	46.73	41.92	90	64-120	3	20
Vanadium	23.36	58.60	108	55-139	5	20
Zinc	23.36	43.34	109	49-140	7	23



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# Batch QC Report

	Californ	nia Title 26 Meta	ıls	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Basis:	as received	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397831	Batch#:	127600	
Matrix:	Soil	Prepared:	07/25/07	
Units:	mg/Kg	Analyzed:	07/25/07	

Result	RL	
ND	0.020	

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	Californ	ia Title 26 Meta	ıls	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Diln Fac:	1.000	
Matrix:	Soil	Batch#:	127600	
Units:	mg/Kg	Prepared:	07/25/07	
Basis:	as received	Analyzed:	07/25/07	

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC397832	0.5000	0.4540	91	80-120		
BSD	QC397833	0.5000	0.4240	85	80-120	7	20



	Californ	nia Title 26 Meta	als	
Lab #:	196134	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7471A	
Analyte:	Mercury	Diln Fac:	1.000	
Field ID:	ZZZZZZZZZ	Batch#:	127600	
MSS Lab ID:	196123-001	Sampled:	07/20/07	
Matrix:	Soil	Received:	07/20/07	
Units:	mg/Kg	Prepared:	07/25/07	
Basis:	as received	Analyzed:	07/25/07	

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC397835	0.08440	0.4808	0.5990	107	67-143		
MSD	QC397836		0.4717	0.4774	83	67-143	21	23



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

### Laboratory Job Number 196163

LFR Levine Fricke Project : 001-09567-01 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

<u>Sample ID</u>	<u>Lab ID</u>
SS-31(D)-GGW	196163-001
SS-123(F1)-GGW	196163-002
SS-31(D)-25	196163-003
SS-31(D)-30	196163-004
SS-31(D)-40	196163-005
SS-31(D)-50.5	196163-006
SS-31(D)-60.5	196163-007
SS-123(F1)-5.5	196163-008
SS-123(F1)-15.5	196163-009
SS-123(F2)-6	196163-010
SS-123(F2)-11.5	196163-011
SS-123(F2)-16.5	196163-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/30/2007</u>

Date: <u>07/30/2007</u>

Signature:

Operations Manager

NELAP # 01107CA



### CASE NARRATIVE

Laboratory number: 196163

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/23/07 Samples Received: 07/23/07

This hardcopy data package contains sample and QC results for nine soil samples and two water samples, requested for the above referenced project on 07/23/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/26/07.

#### TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B) Soil:

High RPD was observed for diesel C10-C24 in the MS/MSD of SS-31(D)-50.5 (lab # 196163-006). No other analytical problems were encountered.

### Volatile Organics by GC/MS (EPA 8260B) Water:

No analytical problems were encountered.

### Volatile Organics by GC/MS (EPA 8260B) Soil:

No analytical problems were encountered.



Total Volatile Hydrocarbons Lab #: 196163 Location: Hanson Radum Client: LFR Levine Fricke Prep: EPA 5030B Project#: 001-09567-01 EPA 8015B Analysis: Matrix: Soil Batch#: 127568 Units: 07/23/07 mg/Kg Sampled: Basis: as received Received: 07/23/07 Diln Fac: 1.000 Analyzed: 07/24/07

Field ID: SS-31(D)-25 Lab ID: 196163-003

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	93	70-132
Bromofluorobenzene (FID)	102	66-138

Field ID: SS-31(D)-30 Lab ID: 196163-004

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	0.99	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	70-132
Bromofluorobenzene (FID)	107	66-138

Field ID: SS-31(D)-40 Lab ID: 196163-005

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

	Surrogate	%REC	Limits
Tr	ifluorotoluene (FID)	107	70-132
Br	omofluorobenzene (FID)	114	66-138

ND= Not Detected RL= Reporting Limit

Page 1 of 2 2.0



Total Volatile Hydrocarbons Lab #: 196163 Location: Hanson Radum Client: LFR Levine Fricke Prep: EPA 5030B Project#: 001-09567-01 EPA 8015B Analysis: Matrix: Soil Batch#: 127568 Units: mg/Kg Sampled: 07/23/07 Basis: as received Received: 07/23/07 Diln Fac: 1.000 Analyzed: 07/24/07

Field ID: SS-31(D)-50.5 Lab ID: 196163-006

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	0.95	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	70-132
Bromofluorobenzene (FID)	104	66-138

Field ID: SS-31(D)-60.5 Lab ID: 196163-007

Type: SAMPLE

Analyte	Result	RL	
Gasoline C7-C12	ND	1.0	

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	70-132
Bromofluorobenzene (FID)	104	66-138

Type: BLANK Lab ID: QC397711

Analyte	Result	RL	
Gasoline C7-C12	ND	0.20	

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	97	70-132	
Bromofluorobenzene (FID)	101	66-138	

ND= Not Detected RL= Reporting Limit

Page 2 of 2 2.0



Total Volatile Hydrocarbons					
Lab #:	196163	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 5030B		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Basis:	as received		
Lab ID:	QC397712	Diln Fac:	1.000		
Matrix:	Soil	Batch#:	127568		
Units:	mg/Kg	Analyzed:	07/24/07		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.959	100	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	106	70-132
Bromofluorobenzene (FID)	101	66-138

Page 1 of 1 3.0



Total Volatile Hydrocarbons					
Lab #:	196163	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 5030B		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	SS-31(D)-25	Diln Fac:	1.000		
MSS Lab ID:	196163-003	Batch#:	127568		
Matrix:	Soil	Sampled:	07/23/07		
Units:	mg/Kg	Received:	07/23/07		
Basis:	as received	Analyzed:	07/24/07		

Type: MS Lab ID: QC397713

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.09166	9.901	9.881	99	36-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	70-132
Bromofluorobenzene (FID)	112	66-138

Type: MSD Lab ID: QC397714

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.20	10.22	99	36-120	0	29

Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	70-132
Bromofluorobenzene (FID)	107	66-138



	Total Extr	ractable Hydrocar	rbons	
Lab #:	196163	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Matrix:	Water	Sampled:	07/23/07	
Units:	ug/L	Received:	07/23/07	
Diln Fac:	1.000	Prepared:	07/24/07	
Batch#:	127571	Analyzed:	07/25/07	

Field ID: SS-31(D)-GGW Lab ID: 196163-001 Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	89	61-134

Field ID: SS-123(F1)-GGW Lab ID: 196163-002 Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	101	61-134

Type: BLANK Cleanup Method: EPA 3630C

Type: BLANK Lab ID: QC397725

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	94	61-134

ND= Not Detected RL= Reporting Limit

Page 1 of 1 20.0



	Total Extr	actable Hydrocar	rbons
Lab #:	196163	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-01	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	127571
Units:	ug/L	Prepared:	07/24/07
Diln Fac:	1.000	Analyzed:	07/25/07

Type: BS Cleanup Method: EPA 3630C

Lab ID: QC397726

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,330	93	58-130

Surrogate	%REC	Limits
Hexacosane	99	61-134

Type: BSD Cleanup Method: EPA 3630C

Lab ID: QC397727

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,389	96	58-130	3	27

Surrogate	%REC	Limits
Hexacosane	100	61-134



Total Extractable Hydrocarbons				
Lab #:	196163	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Matrix:	Soil	Sampled:	07/23/07	
Units:	mg/Kg	Received:	07/23/07	
Basis:	as received	Prepared:	07/24/07	
Batch#:	127577	Analyzed:	07/25/07	

SS-31(D)-25Field ID: Diln Fac: 1.000 Cleanup Method: EPA 3630C SAMPLÈ Type: Lab ID: 196163-003

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
241103400	<u> </u>	
Hexacosane	25	40-127
iicxacobaiic	0.5	10 127

SS-31(D)-30 Field ID: 1.000 Diln Fac: Cleanup Method: EPA 3630C Type: SAMPLE

Lāb ID: 196163-004

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
exacosane	74	40-127

Diln Fac: 1.000 Cleanup Method: EPA 3630C SS-31(D)-40 Diln Fac: Field ID: Type: SAMPLÈ Lāb ID: 196163-005

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	77	40-127

SS-31(D)-50.5Diln Fac: Field ID: 1.000 SAMPLE Cleanup Method: EPA 3630C Type: Lāb ID: 196163-006

Analyt	e Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	5 ND	5.0	

Surrogate	%REC	Limits
Hexacosane	77	40-127

 $\mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected RL= Reporting Limit Page 1 of 3

23.0



Total Extractable Hydrocarbons 196163 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Analysis: Sampled: EPA 8015B 07/23/07 Project#: 001-09567-01 Matrix: Soil 07/23/07 Units: mg/Kg Received: Basis: as received Prepared: 07/24/07 07/25/07 Batch#: 127577 Analyzed:

Field ID: SS-31(D)-60.5 Diln Fac: 1.000 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196163-007

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	92	40-127

Field ID: SS-123(F1)-5.5 Diln Fac: 1.000 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196163-008

Analyte	Result	RL	
Diesel C10-C24	14 H Y	1.0	
Motor Oil C24-C36	46 H L	5.0	

Field ID: SS-123(F1)-15.5 Diln Fac: 1.000 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196163-009

Analyte	Result	RL	
Diesel C10-C24	20 н Ү	0.99	
Motor Oil C24-C36	110 H L	5.0	

Surrogate %REC Limit
xacosane 95 40-1

Field ID: SS-123(F2)-6 Diln Fac: 10.00 Type: SAMPLE Cleanup Method: EPA 3630C

Lab ID: 196163-010

Analyte	Result	RL	
Diesel C10-C24	54 H Y	9.9	
Motor Oil C24-C36	430 H L	50	

Surrogate	%REC	Limits
Hexacosane	DO	40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons					
Lab #: Client:	196163 LFR Levine Fricke	Location: Prep:	Hanson Radum SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Matrix:	Soil	Sampled:	07/23/07		
Units:	mg/Kg	Received:	07/23/07		
Basis:	as received	Prepared:	07/24/07		
Batch#:	127577	Analyzed:	07/25/07		

Field ID: SS-123(F2)-11.5Diln Fac: 5.000 Cleanup Method: EPA 3630C Type: SAMPLE

Lab ID: 196163-011

Analyte	Result	RL	
Diesel C10-C24	35 н Ү	5.0	
Motor Oil C24-C36	290 н L	25	

Surrogate %REC Limits Heyacosane 82 40-127				
00 40 107	Surrogate	%DEC	T.imite	
	Builogace	-SKEC	птштср	
	Hexacosane	82	M = 1.0.7	

Type: BLANK Diln Fac: 1.000 Lab ID: QC397747 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

	Surrogate	%REC	Limits
10V2C0G2	sane	73	40-12

 $<sup>\</sup>mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard DO= Diluted Out

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons					
Lab #:	196163	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Type:	LCS	Diln Fac:	1.000		
Lab ID:	QC397748	Batch#:	127577		
Matrix:	Soil	Prepared:	07/24/07		
Units:	mg/Kg	Analyzed:	07/25/07		
Basis:	as received				

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.82	36.61	73	58-127

Surrogate	%REC	Limits
Hexacosane	72	40-127

Page 1 of 1 24.0



Total Extractable Hydrocarbons					
Lab #:	196163	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	SS-31(D)-50.5	Batch#:	127577		
MSS Lab ID:	196163-006	Sampled:	07/23/07		
Matrix:	Soil	Received:	07/23/07		
Units:	mg/Kg	Prepared:	07/24/07		
Basis:	as received	Analyzed:	07/25/07		
Diln Fac:	1.000				

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC397749

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	<0.1859	50.04	23.34	47	29-147

Surrogate	%REC	Limits
Hexacosane	47	40-127

Type: MSD Cleanup Method: EPA 3630C

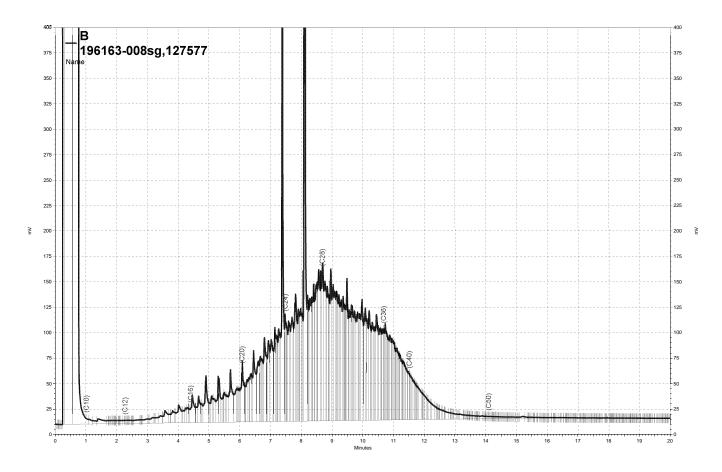
Lab ID: QC397750

Analyte	Spiked	Result	%REC	Limits RPD Lim
Diesel C10-C24	50.41	39.44	78	29-147 51 * 46

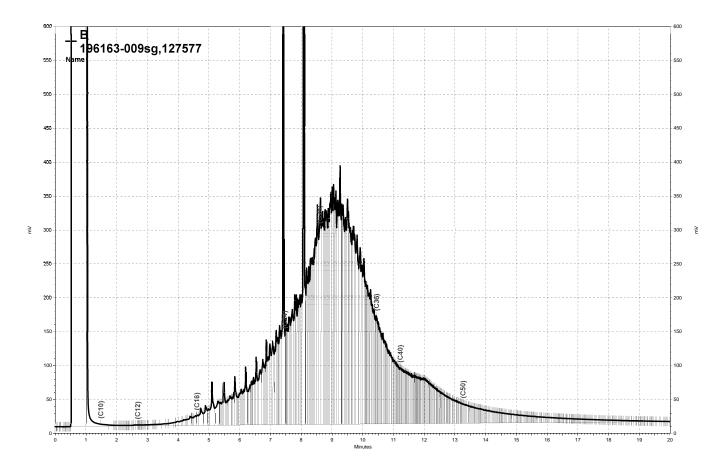
Surrogate	%REC	Limits
Hexacosane	78	40-127

Page 1 of 1 25.0

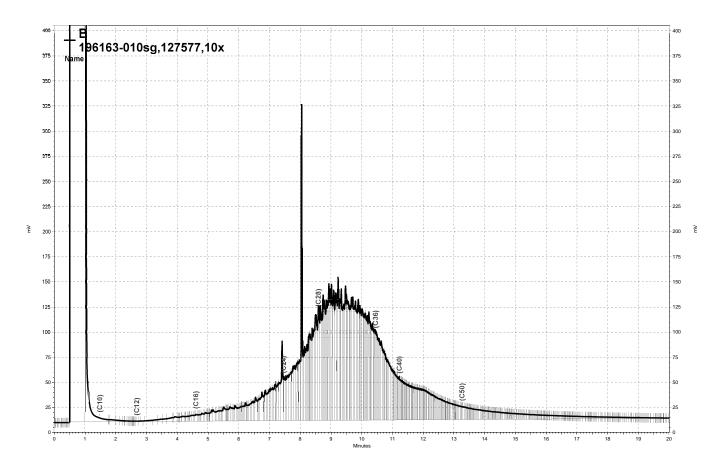
<sup>\*=</sup> Value outside of QC limits; see narrative RPD= Relative Percent Difference



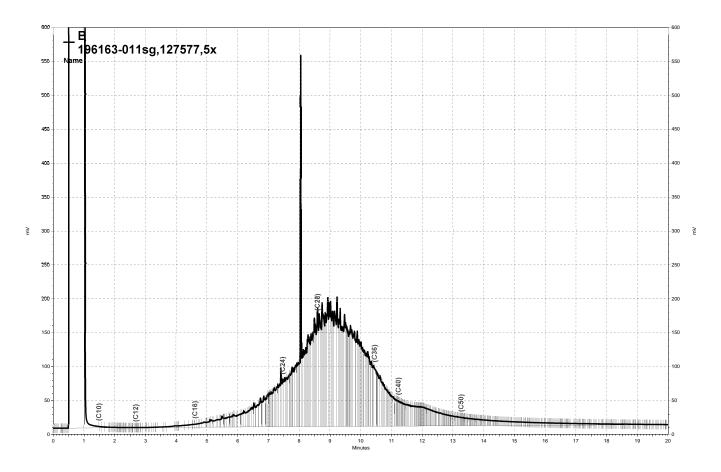
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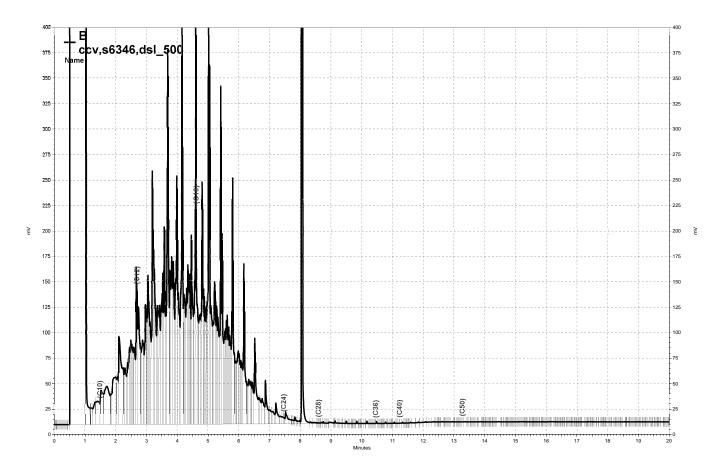
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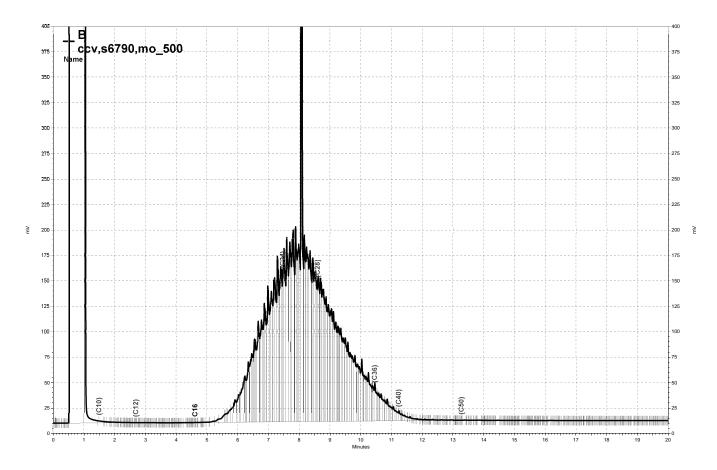
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\\Lims\gdrive\ezchrom\Projects\GC15B\Data\206b003, B



\Lims\gdrive\ezchrom\Projects\GC15B\Data\206b005, B



	Gaso	oline by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-31(D)-GGW 196163-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127548 07/23/07 07/23/07 07/24/07	

Analyte	Result	RI.
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND ND	0.5
	ND ND	0.5
Methyl tert-Amyl Ether (TAME) Chloroethane	ND ND	1.0
		1.0
Trichlorofluoromethane	ND	= * *
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,1,2,2-lettaciiioloetilalle 1,2,3-Trichloropropane	ND	0.5
	191.1	

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Gaso	line by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-31(D)-GGW 196163-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127548 07/23/07 07/23/07 07/24/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-123
1,2-Dichloroethane-d4	104	79-134
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-122

2 of 2 6.0



	Gas	oline by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-123(F1)-GGW 196163-002 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127548 07/23/07 07/23/07 07/24/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Gaso	line by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-123(F1)-GGW 196163-002 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127548 07/23/07 07/23/07 07/24/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	99	80-123	
1,2-Dichloroethane-d4	104	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	107	80-122	

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	Gas	oline by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127548 07/24/07	

Type: BS Lab ID: QC397639

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	113.4	91	68-132
Isopropyl Ether (DIPE)	25.00	21.18	85	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	21.52	86	75-124
Methyl tert-Amyl Ether (TAME)	25.00	26.02	104	77-120
1,1-Dichloroethene	25.00	26.02	104	80-132
Benzene	25.00	25.63	103	80-120
Trichloroethene	25.00	27.10	108	80-120
Toluene	25.00	26.95	108	80-120
Chlorobenzene	25.00	26.34	105	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-123
1,2-Dichloroethane-d4	101	79-134
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-122

Type: BSD Lab ID: QC397640

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	112.6	90	68-132	1	20
Isopropyl Ether (DIPE)	25.00	19.99	80	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	25.00	20.37	81	75-124	5	20
Methyl tert-Amyl Ether (TAME)	25.00	24.22	97	77-120	7	20
1,1-Dichloroethene	25.00	24.08	96	80-132	8	20
Benzene	25.00	24.78	99	80-120	3	20
Trichloroethene	25.00	26.17	105	80-120	3	20
Toluene	25.00	25.93	104	80-120	4	20
Chlorobenzene	25.00	24.84	99	80-120	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-123
1,2-Dichloroethane-d4	101	79-134
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-122



	Gasoline by GC/MS					
Lab #:	196163	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Matrix:	Water	Batch#:	127548			
Units:	ug/L	Analyzed:	07/24/07			
Diln Fac:	1.000					

Type: BS Lab ID: QC397641

Analyte	Spiked	Result	%REC Limits	
Gasoline C7-C12	1,500	1,511	101 70-130	

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-123
1,2-Dichloroethane-d4	103	79-134
Toluene-d8	102	80-120
Bromofluorobenzene	95	80-122

Type: BSD Lab ID: QC397642

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,500	1,440	96	70-130	5	20

Surrogate	%REC	Limits	
Dibromofluoromethane	91	80-123	
1,2-Dichloroethane-d4	99	79-134	
Toluene-d8	96	80-120	
Bromofluorobenzene	97	80-122	



baccii ge neg		oline by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397643 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127548 07/24/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	C	Gasoline by GC/MS		
Lab #: Client: Project#:	196163 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397643 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127548 07/24/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	90	80-123	
1,2-Dichloroethane-d4	100	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	101	80-122	



	втхі	E & Oxygenates		
Lab #:	196163	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(D)-25	Diln Fac:	1.000	
Lab ID:	196163-003	Batch#:	127547	
Matrix:	Soil	Sampled:	07/23/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/24/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	95	78-126
1,2-Dichloroethane-d4	98	76-135
Toluene-d8	96	80-120
Bromofluorobenzene	91	80-126

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	BTXE	E & Oxygenates		
Lab #:	196163	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	SS-31(D)-30	Diln Fac:	0.9434	
Lab ID:	196163-004	Batch#:	127547	
Matrix:	Soil	Sampled:	07/23/07	
Units:	ug/Kg	Received:	07/23/07	
Basis:	as received	Analyzed:	07/24/07	

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	94	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane 94	4	78-126
1,2-Dichloroethane-d4 9	7	76-135
Toluene-d8 9	7	80-120
Bromofluorobenzene 91	1	80-126

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BTXE & Oxygenates						
Lab #:	196163	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Field ID:	SS-31(D)-40	Diln Fac:	0.9804			
Lab ID:	196163-005	Batch#:	127547			
Matrix:	Soil	Sampled:	07/23/07			
Units:	ug/Kg	Received:	07/23/07			
Basis:	as received	Analyzed:	07/24/07			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	95	78-126
1,2-Dichloroethane-d4	97	76-135
Toluene-d8	96	80-120
Bromofluorobenzene	93	80-126

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BTXE & Oxygenates						
Lab #:	196163	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Field ID:	SS-31(D)-50.5	Diln Fac:	0.9091			
Lab ID:	196163-006	Batch#:	127547			
Matrix:	Soil	Sampled:	07/23/07			
Units:	ug/Kg	Received:	07/23/07			
Basis:	as received	Analyzed:	07/24/07			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	96	78-126
1,2-Dichloroethane-d4	97	76-135
Toluene-d8	96	80-120
Bromofluorobenzene	93	80-126

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BTXE & Oxygenates						
Lab #:	196163	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Field ID:	SS-31(D)-60.5	Diln Fac:	1.000			
Lab ID:	196163-007	Batch#:	127547			
Matrix:	Soil	Sampled:	07/23/07			
Units:	ug/Kg	Received:	07/23/07			
Basis:	as received	Analyzed:	07/24/07			

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	95	78-126
1,2-Dichloroethane-d4	101	76-135
Toluene-d8	96	80-120
Bromofluorobenzene	95	80-126

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BTXE & Oxygenates						
Lab #:	196163	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Type:	LCS	Basis:	as received			
Lab ID:	QC397637	Diln Fac:	1.000			
Matrix:	Soil	Batch#:	127547			
Units:	ug/Kg	Analyzed:	07/24/07			

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	154.6	124	56-130
MTBE	25.00	25.73	103	66-120
Isopropyl Ether (DIPE)	25.00	23.17	93	57-120
Ethyl tert-Butyl Ether (ETBE)	25.00	23.59	94	68-120
1,2-Dichloroethane	25.00	29.08	116	73-120
Benzene	25.00	25.86	103	80-120
Methyl tert-Amyl Ether (TAME)	25.00	26.65	107	73-120
Toluene	25.00	26.60	106	80-120
1,2-Dibromoethane	25.00	26.38	106	80-120
Ethylbenzene	25.00	27.96	112	80-125
m,p-Xylenes	50.00	52.61	105	80-123
o-Xylene	25.00	26.12	104	80-122

Surrogate	%REC	Limits	
Dibromofluoromethane	107	78-126	
1,2-Dichloroethane-d4	118	76-135	
Toluene-d8	101	80-120	
Bromofluorobenzene	101	80-126	

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## Batch QC Report

BTXE & Oxygenates							
Lab #:	196163	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 5030B				
Project#:	001-09567-01	Analysis:	EPA 8260B				
Type:	BLANK	Basis:	as received				
Lab ID:	QC397638	Diln Fac:	1.000				
Matrix:	Soil	Batch#:	127547				
Units:	ug/Kg	Analyzed:	07/24/07				

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-126
1,2-Dichloroethane-d4	119	76-135
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-126



	BTXE & Oxygenates						
Lab #:	196163	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 5030B				
Project#:	001-09567-01	Analysis:	EPA 8260B				
Field ID:	SS-31(D)-40	Diln Fac:	0.9804				
MSS Lab ID:	196163-005	Batch#:	127547				
Matrix:	Soil	Sampled:	07/23/07				
Units:	ug/Kg	Received:	07/23/07				
Basis:	as received	Analyzed:	07/25/07				

Type: MS Lab ID: QC397671

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<3.013	245.1	183.1	75	45-123
MTBE	<0.1879	49.02	37.58	77	55-120
Isopropyl Ether (DIPE)	<0.1696	49.02	36.34	74	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.08887	49.02	36.27	74	58-120
1,2-Dichloroethane	<0.1943	49.02	39.97	82	56-120
Benzene	<0.1351	49.02	42.71	87	61-122
Methyl tert-Amyl Ether (TAME)	<0.1769	49.02	42.18	86	60-120
Toluene	<0.5418	49.02	44.05	90	57-124
1,2-Dibromoethane	<0.2179	49.02	41.39	84	57-120
Ethylbenzene	<0.5715	49.02	45.63	93	55-129
m,p-Xylenes	<1.282	98.04	87.89	90	53-127
o-Xylene	<0.5054	49.02	44.61	91	54-127

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-126
1,2-Dichloroethane-d4	99	76-135
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-126

Type: MSD Lab ID: QC397672

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	245.1	202.4	83	45-123	10	32
MTBE	49.02	36.76	75	55-120	2	20
Isopropyl Ether (DIPE)	49.02	34.44	70	50-120	5	20
Ethyl tert-Butyl Ether (ETBE)	49.02	34.41	70	58-120	5	20
1,2-Dichloroethane	49.02	37.09	76	56-120	7	20
Benzene	49.02	42.02	86	61-122	2	20
Methyl tert-Amyl Ether (TAME)	49.02	41.48	85	60-120	2	20
Toluene	49.02	43.66	89	57-124	1	21
1,2-Dibromoethane	49.02	39.26	80	57-120	5	20
Ethylbenzene	49.02	46.03	94	55-129	1	23
m,p-Xylenes	98.04	89.61	91	53-127	2	23
o-Xylene	49.02	44.18	90	54-127	1	22

Surrogate	%REC	Limits
Dibromofluoromethane	95	78-126
1,2-Dichloroethane-d4	96	76-135
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-126



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

#### Laboratory Job Number 196188

LFR Levine Fricke Project : 001-09567-02 1900 Powell Street Location : Hanson Radum

Emeryville, CA 94608 Level : II

<u>Sample ID</u>	<u>Lab ID</u>
SS-123(F2)-16.5	196188-001
SS-123(F2)-21	196188-002
SS-123(F2)-GGW	196188-003
SS-123(AA)-GGW	196188-004
SS-123(F3)-5.5	196188-005
SS-123(F3)-10.5	196188-006
SS-123(F3)-15.5	196188-007
SS-123(F3)-20.5	196188-008
SS-123(F3)-25.5	196188-009
SS-123(F3)-GGW	196188-010
SS-123(AA)-5.5	196188-011
SS-123(AA)-7.5	196188-012
SS-123(AA)-10.5	196188-013
SS-123(AA)-15.5	196188-014
SS-123(AA)-18	196188-015

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/31/2007</u>

Date: <u>07/30/2007</u>

Signature:

Operations Manager

NELAP # 01107CA



#### CASE NARRATIVE

Laboratory number: 196188

Client: LFR Levine Fricke

Project: 001-09567-02 Location: Hanson Radum

Request Date: 07/24/07 Samples Received: 07/24/07

This hardcopy data package contains sample and QC results for twelve soil samples and three water samples, requested for the above referenced project on 07/24/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/26/07.

#### TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

### TPH-Extractables by GC (EPA 8015B) Soil:

No analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B):

SS-123(F2)-GGW (lab # 196188-003) and SS-123(AA)-GGW (lab # 196188-004) had pH greater than 2. No other analytical problems were encountered.



	Total Extractable Hydrocarbons						
Lab #:	196188	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 3520C				
Project#:	001-09567-02	Analysis:	EPA 8015B				
Matrix:	Water	Sampled:	07/24/07				
Units:	ug/L	Received:	07/24/07				
Diln Fac:	1.000	Prepared:	07/25/07				
Batch#:	127596	Analyzed:	07/26/07				

Field ID: SS-123(F2)-GGW Lab ID: 196188-003 Cleanup Method: EPA 3630C SAMPLE Type:

Analyte	Result	RL	
Diesel C10-C24	990 Н Ү	50	
Motor Oil C24-C36	4,000 H L	300	

	Surrogate	%REC	Limits
xaco	osane	90	61-1

Field ID: SS-123(AA)-GGW Lab ID: 196188-004 Cleanup Method: EPA 3630C SAMPLE Type:

Analyte	Result	RL	
Diesel C10-C24	340 H Y	50	
Motor Oil C24-C36	2,400 H L	300	

SS-123(F3)-GGW SAMPLE Lab ID: Field ID: 196188-010 Cleanup Method: EPA 3630C Type:

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	108	61-134

Cleanup Method: EPA 3630C Lab ID: Type: BLANK

QC397819

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Hexacosane 110 61-134	Surrogate	%REC	Limits
	Heyacogane	110	

Page 1 of 1

 $<sup>\</sup>mbox{\sc H=}$  Heavier hydrocarbons contributed to the quantitation  $\mbox{\sc L=}$  Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit



	Total Extractable Hydrocarbons			
Lab #:	196188	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-02	Analysis:	EPA 8015B	
Matrix:	Water	Batch#:	127596	
Units:	ug/L	Prepared:	07/25/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Type: BS Cleanup Method: EPA 3630C

Lab ID: QC397820

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,461	98	58-130

Surrogate	%REC	Limits
Hexacosane	115	61-134

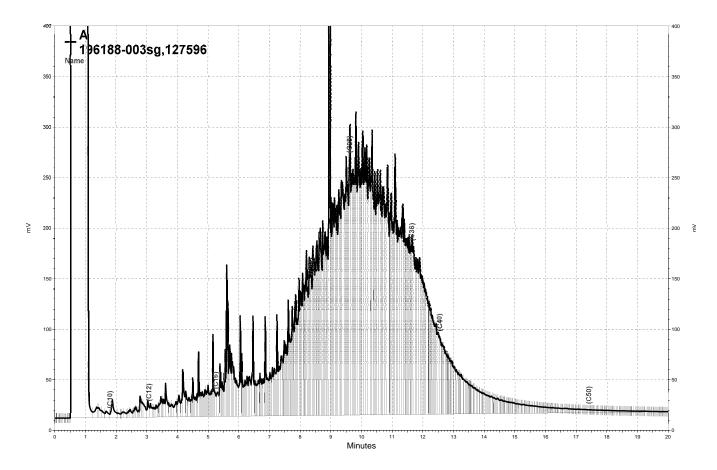
Type: BSD Cleanup Method: EPA 3630C

Lab ID: QC397821

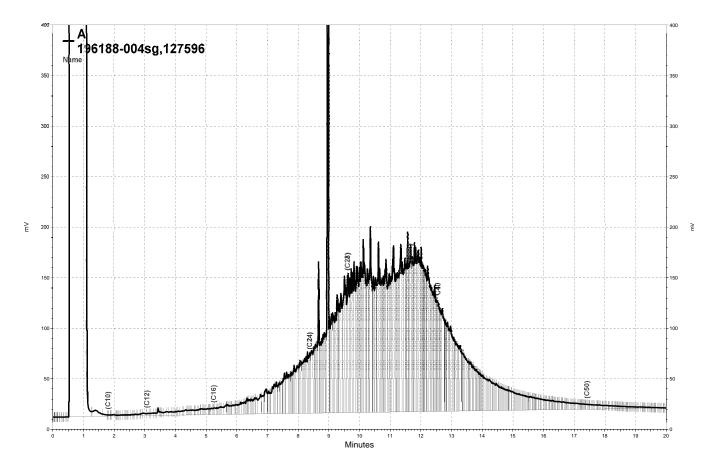
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,634	105	58-130	7	27

Surrogate	%REC	Limits
Hexacosane	124	61-134

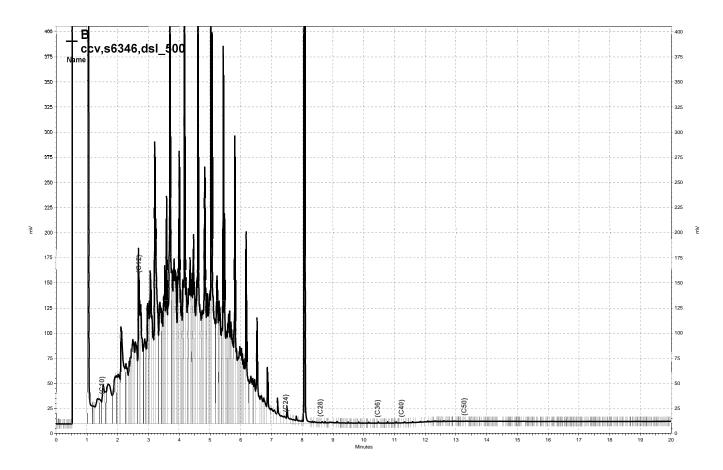
Page 1 of 1 13.1



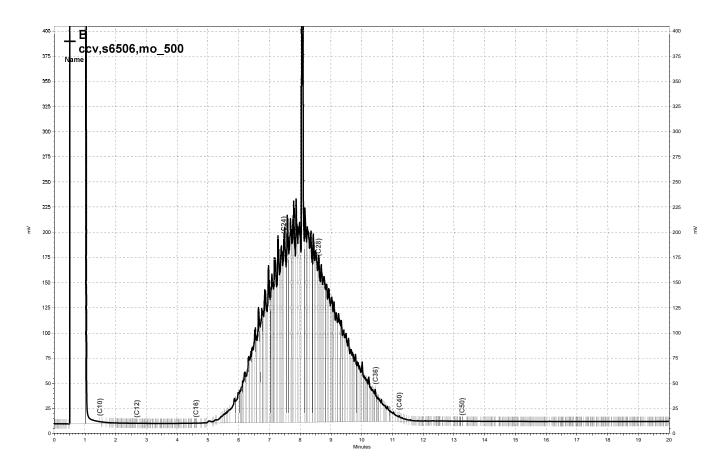
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Total Extractable Hydrocarbons Lab #: 196188 Location: Hanson Radum Client: Prep: SHAKER TABLE LFR Levine Fricke 001-09567-02 EPA 8015B Project# Analysis: Matrix: Soil Batch#: 127616 07/24/07 Units: mq/Kq Received: 07/25/07 Rasis: as received Prepared:

Field ID: SS-123(F2)-16.5 Sampled: 07/23/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-001 Cleanup Method: EPA 3630C Diln Fac: 1.000

 Analyte
 Result.
 RI.

 Diesel C10-C24
 27 H Y
 0.99

 Motor Oil C24-C36
 120 H I.
 5.0

Surrogate %REC Limits
Hexacosane 93 40-127

Field ID: SS-123(F2)-21 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-002 Cleanup Method: EPA 3630C

Diln Fac: 1.000

 Analyte
 Result
 RI.

 Diesel C10-C24
 10 H Y
 0.99

 Motor Oil C24-C36
 29 H I.
 5.0

Surrogate %REC Limits
Hexacosane 87 40-127

Field ID: SS-123(F3)-5.5 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-005 Cleanup Method: EPA 3630C Diln Fac: 20.00

 Analyte
 Result
 RL

 Diesel C10-C24
 83 H Y
 20

 Motor Oil C24-C36
 970 H
 100

Surrogate %REC Limits
Hexacosane DO 40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

DO= Diluted Out ND= Not Detected RL= Reporting Limit Page 1 of 5



Total Extractable Hydrocarbons 196188 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Project#: 001-09567-02 Analysis: EPA 8015B Matrix: 127616 Soil Batch#: 07/24/07 Units: mg/Kg Received: Basis: as received Prepared: 07/25/07

Field ID: SS-123(F3)-10.5 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-006 Cleanup Method: EPA 3630C

Diln Fac: 1.000

Analyte	Result	RL	
Diesel C10-C24	3.3 H Y	1.0	
Motor Oil C24-C36	39 Н	5.0	

Surrogate	%REC	Limits
Hexacosane	95	40-127

Field ID: SS-123(F3)-15.5 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-007 Cleanup Method: EPA 3630C

Diln Fac: 10.00

Analyte	Result	RL	
Diesel C10-C24	19 н ү	10	
Motor Oil C24-C36	270 н	50	

Surrogate %REC Limit
acosane DO 40-

Field ID: SS-123(F3)-20.5 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-008 Cleanup Method: EPA 3630C

Diln Fac: 1.000

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	82	40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196188 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Project#: 001-09567-02 Analysis: EPA 8015B Matrix: 127616 Soil Batch#: 07/24/07 Units: mg/Kg Received: Basis: as received Prepared: 07/25/07

Field ID: SS-123(F3)-25.5Sampled: 07/24/07 07/26/07 Type: SAMPLE Analyzed: Lab ID: 196188-009 Cleanup Method: EPA 3630C

Diln Fac: 1.000

Analyte	Result	RL	
Diesel C10-C24	1.5 H Y Z	1.0	
Motor Oil C24-C36	8.2 H	5.0	

Field ID: SS-123(AA)-5.507/24/07 Sampled: Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-011 Cleanup Method: EPA 3630C

Diln Fac: 1.000

Analyte	Result	RL	
Diesel C10-C24	1.6 н ү	1.0	
Motor Oil C24-C36	15 н	5.0	

	Surrogate	%REC	Limits
[6	lexacosane	78	40-12

SS-123(AA)-7.5Field ID: 07/24/07 Sampled: Type: SAMPLE Analyzed: 07/25/07 Lab ID: 196188-012 Cleanup Method: EPA 3630C

Diln Fac: 20.00

Analyte	Result	RL	
Diesel C10-C24	89 H Y	20	
Motor Oil C24-C36	810 H	99	

Surrogate	%REC	Limits
Hexacosane	DO	40-127

H= Heavier hydrocarbons contributed to the quantitation L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons 196188 Lab #: Location: Hanson Radum Client: LFR Levine Fricke SHAKER TABLE Prep: Project#: 001-09567-02 Analysis: EPA 8015B Matrix: 127616 Soil Batch#: 07/24/07 Units: mg/Kg Received: Basis: as received Prepared: 07/25/07

Field ID: SS-123(AA)-10.5 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/26/07 Lab ID: 196188-013 Cleanup Method: EPA 3630C

Diln Fac: 1.000

Analyte	Result	RL	
Diesel C10-C24	1.9 H Y Z	1.0	
Motor Oil C24-C36	11 H	5.0	

Surrogate	%REC	Limits
Hexacosane	75	40-127

Field ID: SS-123(AA)-15.5 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/25/07 Lab ID: 196188-014 Cleanup Method: EPA 3630C

Diln Fac: 10.00

Analyte	Result	RL	
Diesel C10-C24	39 H Y	10	
Motor Oil C24-C36	450 н	50	

Surrogate %REC Limit
acosane DO 40-

Field ID: SS-123(AA)-18 Sampled: 07/24/07 Type: SAMPLE Analyzed: 07/25/07 Lab ID: 196188-015 Cleanup Method: EPA 3630C Diln Fac: 50.00

 Analyte
 Result
 RL

 Diesel C10-C24
 170 H Y
 50

 Motor Oil C24-C36
 1,500 H
 250

	Surrogate	%REC	Limits
Н	exacosane	DO	40-127

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons					
Lab #:	196188	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE		
Project#:	001-09567-02	Analysis:	EPA 8015B		
Matrix:	Soil	Batch#:	127616		
Units:	mg/Kg	Received:	07/24/07		
Basis:	as received	Prepared:	07/25/07		

BLANK Analyzed: 07/25/07 Type: Lab ID: QC397896 Cleanup Method: EPA 3630C

Diln Fac: ĩ.000

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
Hexacosane	66	40-127

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
DO= Diluted Out

ND= Not Detected

RL= Reporting Limit



Total Extractable Hydrocarbons				
Lab #:	196188	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-02	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC397897	Batch#:	127616	
Matrix:	Soil	Prepared:	07/25/07	
Units:	mg/Kg	Analyzed:	07/25/07	
Basis:	as received			

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.85	38.76	78	58-127

Surrogate	%REC	Limits
Hexacosane	80	40-127

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Total Extractable Hydrocarbons				
Lab #:	196188	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	SHAKER TABLE	
Project#:	001-09567-02	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZZ	Batch#:	127616	
MSS Lab ID:	196197-007	Sampled:	07/24/07	
Matrix:	Soil	Received:	07/25/07	
Units:	mg/Kg	Prepared:	07/25/07	
Basis:	as received	Analyzed:	07/26/07	
Diln Fac:	1.000			

Type: MS Lab ID: QC397898

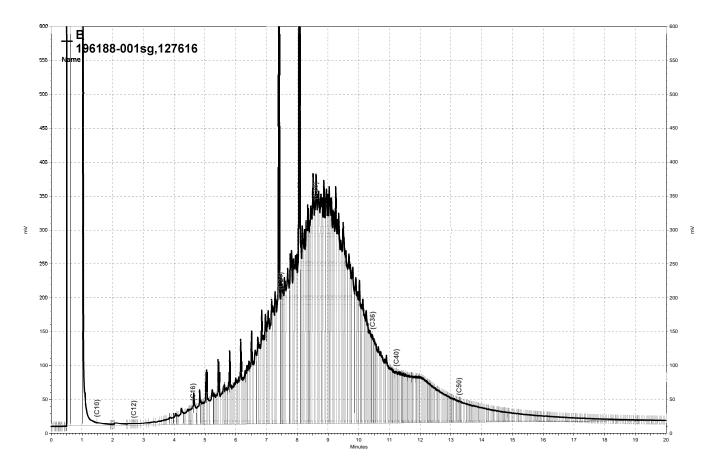
Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	6.942	49.91	48.64	84	29-147

Surrogate	%REC	Limits
Hexacosane	98	40-127

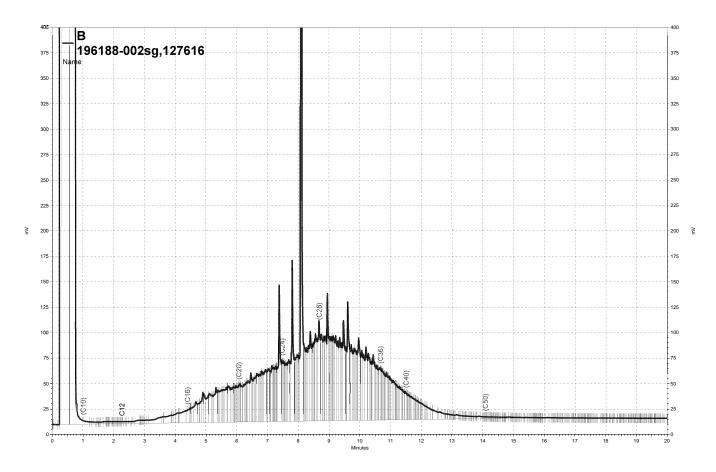
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Analyte	Spiked	Result	%REC	Limits	RPD Lim
Diesel C10-C24	49.88	54.94	96	29-147	12 46

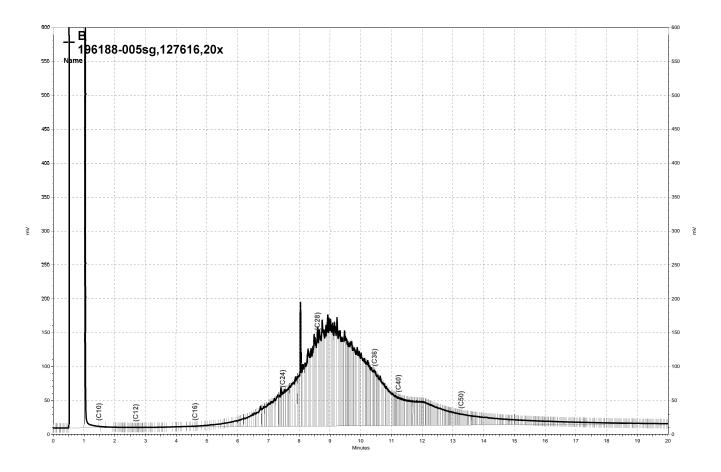
Surrogate	%REC	Limits
Hexacosane	107	40-127



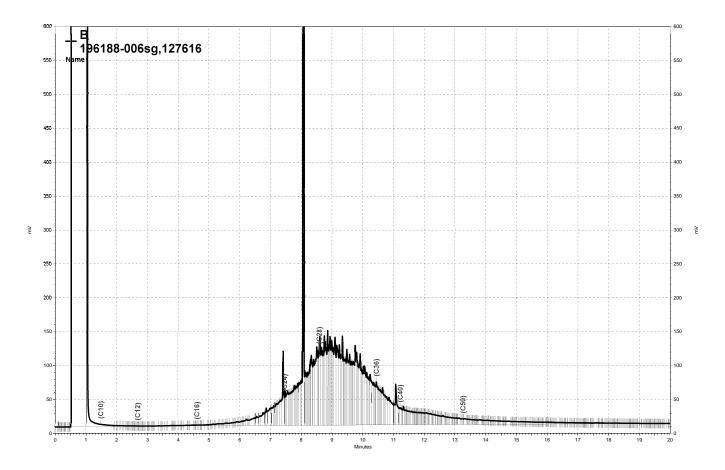
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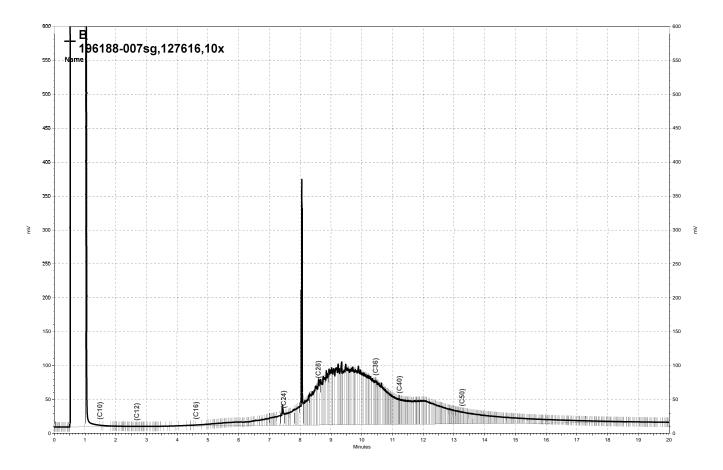
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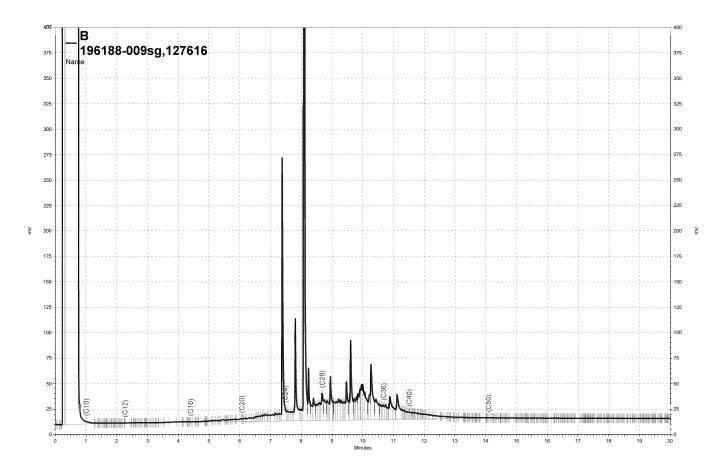
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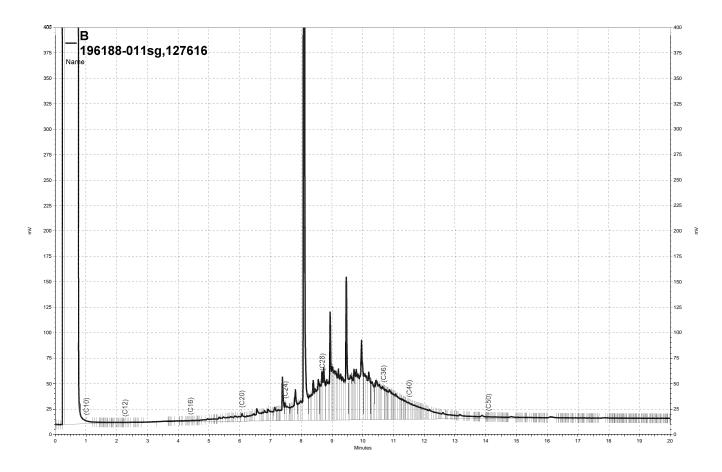
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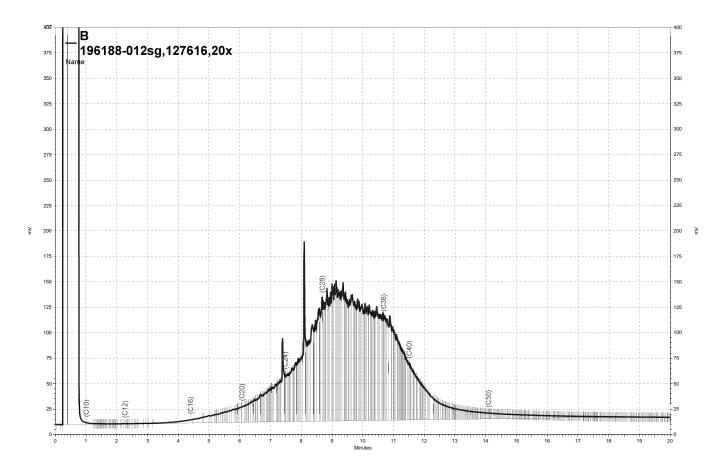
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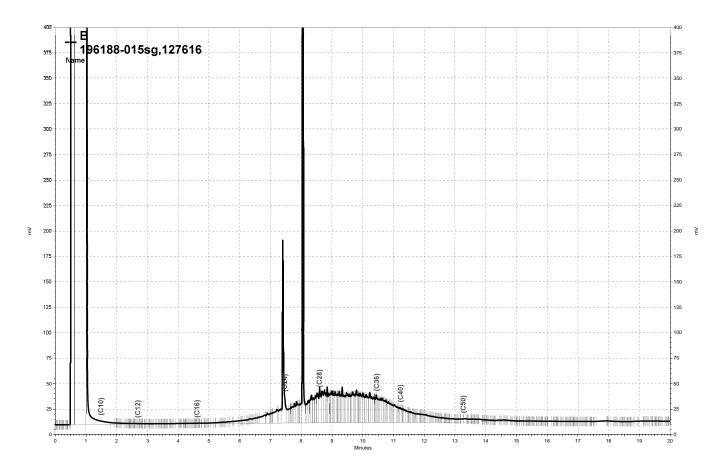
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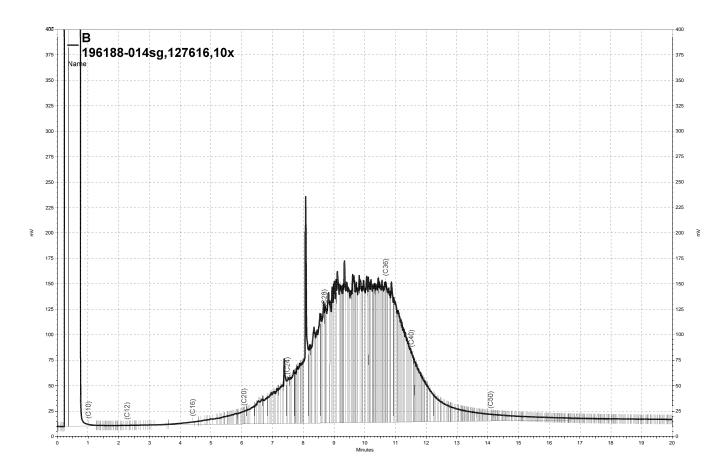
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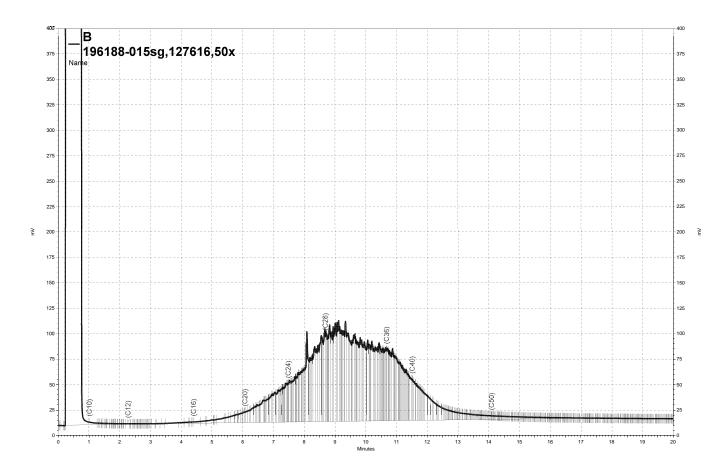
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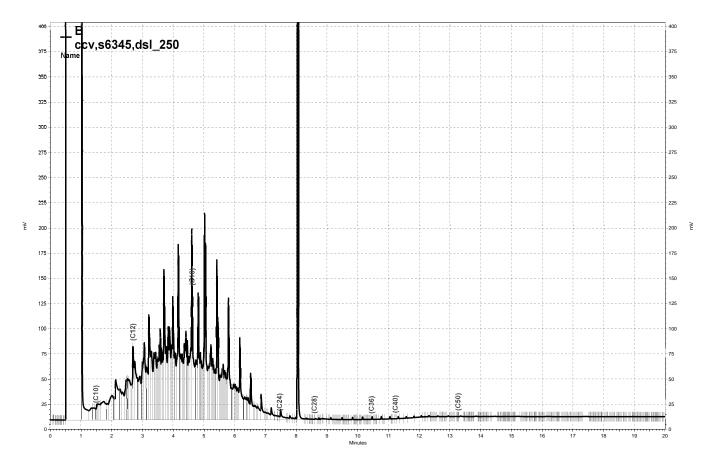
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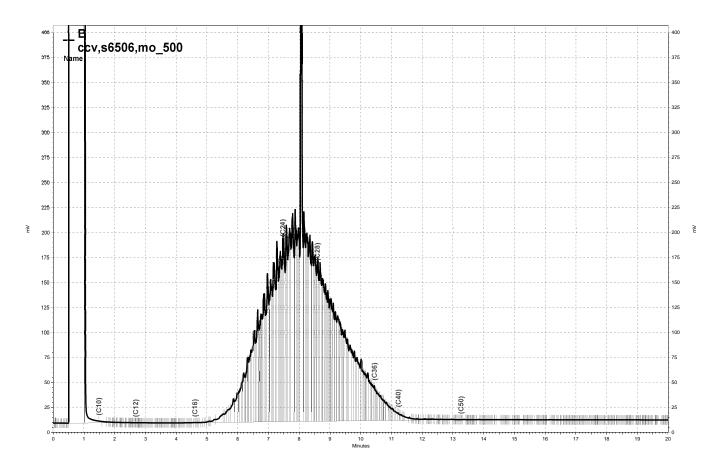
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	Gaso	oline by GC/MS		
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-123(F2)-GGW 196188-003 Water ug/L 1 000	Batcĥ#: Sampled: Received: Analyzed:	127594 07/24/07 07/24/07 07/25/07	

Analyte	Result	RT.
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane (1511)	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	0.	
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	2.	
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Gasoline	by GC/MS	
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-123(F2)-GGW 196188-003 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127594 07/24/07 07/24/07 07/25/07

Analyte	Res	ult	RL	
Propylbenzene	ND		0.5	
Bromobenzene	ND		0.5	
1,3,5-Trimethylbenzene	ND		0.5	
2-Chlorotoluene	ND		0.5	
4-Chlorotoluene	ND		0.5	
tert-Butylbenzene	ND		0.5	
1,2,4-Trimethylbenzene		0.7	0.5	
sec-Butylbenzene	ND		0.5	
para-Isopropyl Toluene		0.7	0.5	
1,3-Dichlorobenzene	ND		0.5	
1,4-Dichlorobenzene	ND		0.5	
n-Butylbenzene	ND		0.5	
1,2-Dichlorobenzene	ND		0.5	
1,2-Dibromo-3-Chloropropane	ND		2.0	
1,2,4-Trichlorobenzene	ND		0.5	
Hexachlorobutadiene	ND		0.5	
Naphthalene		4.6	2.0	
1,2,3-Trichlorobenzene	ND		0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	103	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	101	80-122	



	Gasoline by GC/MS					
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B			
Field ID: Lab ID: Matrix: Units: Diln Fac:	SS-123(AA)-GGW 196188-004 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127594 07/24/07 07/24/07 07/25/07			

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
1,2,3-iricilioropropane	ИП	U.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



Gasoline by GC/MS					
Lab #: Client:	196188 LFR Levine Fricke	Location: Prep:	Hanson Radum EPA 5030B		
Project#: Field ID: Lab ID:	001-09567-02 SS-123(AA)-GGW 196188-004	Analysis: Batch#: Sampled:	EPA 8260B 127594 07/24/07		
Matrix: Units: Diln Fac:	Water ug/L 1.000	Received: Analyzed:	07/24/07 07/25/07		

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-123	
1,2-Dichloroethane-d4	105	79-134	
Toluene-d8	96	80-120	
Bromofluorobenzene	100	80-122	

2 of 2



	Gaso	oline by GC/MS		
Lab #:	196188	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-02	Analysis:	EPA 8260B	
Field ID:	SS-123(F3)-GGW	Batch#:	127594	
Lab ID:	196188-010	Sampled:	07/24/07	
Matrix:	Water	Received:	07/24/07	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000	-		

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
1,2,3-iricilioropropane	ИП	U.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	Ga	soline by GC/MS		
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix:	SS-123(F3)-GGW 196188-010 Water	Batch#: Sampled: Received:	127594 07/24/07 07/24/07	
Units: Diln Fac:	ug/L 1.000	Analyzed:	07/25/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane 98	8	80-123
1,2-Dichloroethane-d4	.05	79-134
Toluene-d8	.00	80-120
Bromofluorobenzene 10	.06	80-122



	Gas	soline by GC/MS		
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127594 07/25/07	

Type: BS Lab ID: QC397811

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	112.2	90	68-132
Isopropyl Ether (DIPE)	25.00	19.99	80	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	20.71	83	75-124
Methyl tert-Amyl Ether (TAME)	25.00	24.56	98	77-120
1,1-Dichloroethene	25.00	24.16	97	80-132
Benzene	25.00	25.20	101	80-120
Trichloroethene	25.00	25.59	102	80-120
Toluene	25.00	27.12	108	80-120
Chlorobenzene	25.00	25.47	102	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-123	
1,2-Dichloroethane-d4	103	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	98	80-122	

Type: BSD Lab ID: QC397812

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	106.4	85	68-132	5	20
Isopropyl Ether (DIPE)	25.00	18.91	76	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	25.00	19.08	76	75-124	8	20
Methyl tert-Amyl Ether (TAME)	25.00	23.58	94	77-120	4	20
1,1-Dichloroethene	25.00	22.44	90	80-132	7	20
Benzene	25.00	23.09	92	80-120	9	20
Trichloroethene	25.00	23.50	94	80-120	9	20
Toluene	25.00	25.12	100	80-120	8	20
Chlorobenzene	25.00	24.03	96	80-120	6	20

Surrogate %R	REC	Limits
Dibromofluoromethane 93		80-123
1,2-Dichloroethane-d4 100	)	79-134
Toluene-d8 98		80-120
Bromofluorobenzene 99		80-122



	Gas	oline by GC/MS		
Lab #:	196188	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-02	Analysis:	EPA 8260B	
Matrix:	Water	Batch#:	127594	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000			

Type: BS Lab ID: QC397813

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	943.9	94	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-123
1,2-Dichloroethane-d4	100	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-122

Type: BSD Lab ID: QC397814

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	831.4	83	70-130	13	20

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-123
1,2-Dichloroethane-d4	100	79-134
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-122



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	Gasc	oline by GC/MS		
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397815 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127594 07/25/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5

ND= Not Detected RL= Reporting Limit Page 1 of 2



	C	Gasoline by GC/MS		
Lab #: Client: Project#:	196188 LFR Levine Fricke 001-09567-02	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397815 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127594 07/25/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	93	80-123	
1,2-Dichloroethane-d4	99	79-134	
Toluene-d8	101	80-120	
Bromofluorobenzene	106	80-122	



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

## Laboratory Job Number 195957

LFR Levine Fricke 1900 Powell Street Emeryville, CA 94608 Project : 001-09567-01 Location : Hanson Radum

Level : II

Sample ID TW-5

<u>Lab ID</u> 195957-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/25/2007</u>

Date: <u>07/25/2007</u>

Signature:

Operations Manager

NELAP # 01107CA

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#### CASE NARRATIVE

Laboratory number: 195957

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/12/07 Samples Received: 07/12/07

This hardcopy data package contains sample and QC results for one water sample, requested for the above referenced project on 07/12/07. The sample was received cold and intact. All data were e-mailed to Katrin Schliewen on 07/23/07.

#### TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

## Volatile Organics by GC/MS (EPA 8260B):

No analytical problems were encountered.

## Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

#### Metals (EPA 6010B and EPA 7470A):

No analytical problems were encountered.



Total Extractable Hydrocarbons					
Lab #:	195957	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Field ID:	TW-5	Sampled:	07/12/07		
Matrix:	Water	Received:	07/12/07		
Units:	ug/L	Prepared:	07/13/07		
Diln Fac:	1.000	Analyzed:	07/20/07		
Batch#:	127244				

Type: SAMPLE Cleanup Method: EPA 3630C

Type: SAMPLE Lab ID: 195957-001

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	113	61-134

Type: BLANK Cleanup Method: EPA 3630C

Lab ID: QC396220

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

S
Hexacosane

ND= Not Detected RL= Reporting Limit

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	Total Extr	ractable Hydrocar	rbons	
Lab #:	195957	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Type:	LCS	Diln Fac:	1.000	
Lab ID:	QC396221	Batch#:	127244	
Matrix:	Water	Prepared:	07/13/07	
Units:	ug/L	Analyzed:	07/20/07	

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,697	108	58-130

Surrogate	%REC	Limits
Hexacosane	129	61-134

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	Total Ext	ractable Hydrocar	rbons	
Lab #:	195957	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8015B	
Field ID:	ZZZZZZZZZZ	Batch#:	127244	
MSS Lab ID:	195929-004	Sampled:	07/11/07	
Matrix:	Water	Received:	07/12/07	
Units:	${\tt ug/L}$	Prepared:	07/13/07	
Diln Fac:	1.000	Analyzed:	07/17/07	

Type: MS Lab ID: QC396222

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	25.03	2,500	2,571	102	57-134

Surrogate	%REC	Limits	
Hexacosane	105	61-134	

Type: MSD Lab ID: QC396223

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,577	102	57-134	0	32

Surrogate	%REC	Limits
Hexacosane	106	61-134



	Gasoline by GC/MS					
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 5030B EPA 8260B			
Field ID: Lab ID: Matrix: Units: Diln Fac:	TW-5 195957-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127216 07/12/07 07/12/07 07/13/07			

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
1,2,3-iricilioropropane	ИП	U.5



	Gá	asoline by GC/MS		
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	TW-5 195957-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127216 07/12/07 07/12/07 07/13/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	95	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	99	80-122	



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	Ga	soline by GC/MS		
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396077 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127216 07/13/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
1,2,3-iricilioropropane	ИП	U.5



		Gasoline by GC/MS		
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC396077 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127216 07/13/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-123	
1,2-Dichloroethane-d4	95	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	100	80-122	



		Gasoline by GC/MS		
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Analyzed:	127216 07/13/07	

Type: BS Lab ID: QC396078

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	150.0	157.5	105	68-132
Isopropyl Ether (DIPE)	30.00	25.77	86	65-120
Ethyl tert-Butyl Ether (ETBE)	30.00	29.99	100	75-124
Methyl tert-Amyl Ether (TAME)	30.00	32.54	108	77-120
1,1-Dichloroethene	30.00	32.29	108	80-132
Benzene	30.00	30.15	100	80-120
Trichloroethene	30.00	28.88	96	80-120
Toluene	30.00	31.17	104	80-120
Chlorobenzene	30.00	30.69	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-123
1,2-Dichloroethane-d4	95	79-134
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-122

Type: BSD Lab ID: QC396079

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	150.0	167.4	112	68-132	6	20
Isopropyl Ether (DIPE)	30.00	27.39	91	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	30.00	30.87	103	75-124	3	20
Methyl tert-Amyl Ether (TAME)	30.00	33.64	112	77-120	3	20
1,1-Dichloroethene	30.00	34.57	115	80-132	7	20
Benzene	30.00	31.40	105	80-120	4	20
Trichloroethene	30.00	29.60	99	80-120	2	20
Toluene	30.00	32.85	110	80-120	5	20
Chlorobenzene	30.00	31.73	106	80-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-123
1,2-Dichloroethane-d4	96	79-134
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-122



	Gas	soline by GC/MS		
Lab #:	195957	Prep:	EPA 5030B	
Client:	LFR Levine Fricke	Analysis:	EPA 8260B	
Project#:	STANDARD			
Matrix:	Water	Batch#:	127216	
Units:	ug/L	Analyzed:	07/13/07	
Diln Fac:	1.000			

Type: BS Lab ID: QC396080

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,500	1,352	90	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-123
1,2-Dichloroethane-d4	95	79-134
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-122

Type: BSD Lab ID: QC396081

	Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gas	soline C7-C12	1,500	1,320	88	70-130	2	20

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	94	80-122	



	Semivolatile Organics by GC/MS					
Lab #:	195957	Prep:	EPA 3520C			
Client:	LFR Levine Fricke	Analysis:	EPA 8270C			
Project#:	STANDARD					
Field ID:	TW-5	Batch#:	127305			
Lab ID:	195957-001	Sampled:	07/12/07			
Matrix:	Water	Received:	07/12/07			
Units:	uq/L	Prepared:	07/16/07			
Diln Fac:	1.000	Analyzed:	07/17/07			

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.4
Phenol	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
2-Chlorophenol	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND ND	9.4
Benzyl alcohol	ND	9.4 9.4
1,2-Dichlorobenzene	ND	
2-Methylphenol	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
4-Methylphenol	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
bis(2-Chloroethoxy)methane	ND	9.4
2,4-Dichlorophenol	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
	ND ND	9.4
4-Chloro-3-methylphenol		
2-Methylnaphthalene	ND	9.4 19
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	19
Acenaphthene	ND	9.4
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	$9.\overline{4}$
Fluorene	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
4-Nitroaniline	ND ND	19
4,6-Dinitro-2-methylphenol	ND ND	19
	ND	9.4
N-Nitrosodiphenylamine		
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Pentachlorophenol	ND	19
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4



Semivolatile Organics by GC/MS					
Lab #:	195957	Prep:	EPA 3520C		
Client:	LFR Levine Fricke	Analysis:	EPA 8270C		
Project#:	STANDARD	_			
Field ID:	TW-5	Batch#:	127305		
Lab ID:	195957-001	Sampled:	07/12/07		
Matrix:	Water	Received:	07/12/07		
Units:	uq/L	Prepared:	07/16/07		
Diln Fac:	1.000	Analyzed:	07/17/07		

Analyte	Result	RL	
Pyrene	ND	9.4	
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	ND	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits	
2-Fluorophenol	68	40-120	
Phenol-d5	71	38-120	
2,4,6-Tribromophenol	99	40-120	
Nitrobenzene-d5	78	48-120	
2-Fluorobiphenyl	77	50-120	
Terphenyl-d14	72	23-120	



Semivolatile Organics by GC/MS						
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 3520C EPA 8270C			
Type: Lab ID: Matrix: Units:	BLANK QC396535 Water ug/L	Diln Fac: Batch#: Prepared: Analyzed:	1.000 127305 07/16/07 07/17/07			

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	10	
Phenol	ND	10	
bis(2-Chloroethyl)ether	ND	10	
2-Chlorophenol	ND	10	
1,3-Dichlorobenzene	ND	10	
1,4-Dichlorobenzene	ND	10	
Benzyl alcohol	ND	10	
1,2-Dichlorobenzene	ND	10	
2-Methylphenol	ND	10	
bis(2-Chloroisopropyl) ether	ND	10	
4-Methylphenol	ND	10	
N-Nitroso-di-n-propylamine	ND	10	
Hexachloroethane	ND	10	
Nitrobenzene	ND	10	
Isophorone	ND	10	
2-Nitrophenol	ND	20	
2,4-Dimethylphenol	ND	10	
Benzoic acid	ND	50	
bis(2-Chloroethoxy)methane	ND	10	
2,4-Dichlorophenol	ND	10	
1,2,4-Trichlorobenzene	ND	10	
Naphthalene	ND	10	
4-Chloroaniline	ND	10	
Hexachlorobutadiene	ND	10	
4-Chloro-3-methylphenol	ND	10	
2-Methylnaphthalene	ND	10	
Hexachlorocyclopentadiene	ND	20	
2,4,6-Trichlorophenol	ND	10	
2,4,5-Trichlorophenol	ND	10	
2-Chloronaphthalene	ND	10	
2-Nitroaniline	ND	20	
Dimethylphthalate	ND	10	
Acenaphthylene	ND	10	
2,6-Dinitrotoluene	ND	10	
3-Nitroaniline	ND	20	
Acenaphthene	ND	10	
2,4-Dinitrophenol	ND	20	
4-Nitrophenol	ND	20	
Dibenzofuran	ND	10	
2,4-Dinitrotoluene	ND	10	
Diethylphthalate	ND	10	
Fluorene	ND	10	
4-Chlorophenyl-phenylether	ND	10	
4-Nitroaniline	ND	20	
4,6-Dinitro-2-methylphenol	ND	20	
N-Nitrosodiphenylamine	ND	10	
Azobenzene	ND	10	
4-Bromophenyl-phenylether	ND	10	
Hexachlorobenzene	ND	10	
Pentachlorophenol	ND	20	
Phenanthrene	ND	10	
Anthracene	ND	10	
Di-n-butylphthalate	ND	10	
Fluoranthene	ND	10	



	Semivolatile Organics by GC/MS						
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 3520C EPA 8270C				
Type: Lab ID: Matrix: Units:	BLANK QC396535 Water ug/L	Diln Fac: Batch#: Prepared: Analyzed:	1.000 127305 07/16/07 07/17/07				

Analyte	Result	RL	
Pyrene	ND	10	
Butylbenzylphthalate	ND	10	
3,3'-Dichlorobenzidine	ND	20	
Benzo(a)anthracene	ND	10	
Chrysene	ND	10	
bis(2-Ethylhexyl)phthalate	ND	10	
Di-n-octylphthalate	ND	10	
Benzo(b)fluoranthene	ND	10	
Benzo(k)fluoranthene	ND	10	
Benzo(a)pyrene	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	
Dibenz(a,h)anthracene	ND	10	
Benzo(g,h,i)perylene	ND	10	

Surrogate	%REC	Limits
2-Fluorophenol	59	40-120
Phenol-d5	75	38-120
2,4,6-Tribromophenol	95	40-120
Nitrobenzene-d5	73	48-120
2-Fluorobiphenyl	74	50-120
Terphenyl-d14	75	23-120



Semivolatile Organics by GC/MS						
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 3520C EPA 8270C			
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Prepared:	127305 07/16/07			

Type: Lab ID: BS QC396536 Analyzed: 07/17/07

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	58.00	72	47-120
2-Chlorophenol	80.00	61.38	77	52-120
1,4-Dichlorobenzene	40.00	28.95	72	41-120
N-Nitroso-di-n-propylamine	40.00	27.46	69	46-120
1,2,4-Trichlorobenzene	40.00	30.96	77	45-120
4-Chloro-3-methylphenol	80.00	65.23	82	52-120
Acenaphthene	40.00	31.16	78	52-120
4-Nitrophenol	80.00	62.86	79	46-120
2,4-Dinitrotoluene	40.00	36.06	90	49-120
Pentachlorophenol	80.00	73.13	91	39-120
Pyrene	40.00	32.86	82	48-120

Surrogate	%REC	Limits	
2-Fluorophenol	74	40-120	
Phenol-d5	76	38-120	
2,4,6-Tribromophenol	108	40-120	
Nitrobenzene-d5	76	48-120	
2-Fluorobiphenyl	76	50-120	
Terphenyl-d14	82	23-120	

BSD QC396537 Type: Lab ID: Analyzed: 07/18/07

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	50.40	63	47-120	14	28
2-Chlorophenol	80.00	54.46	68	52-120	12	27
1,4-Dichlorobenzene	40.00	26.04	65	41-120	11	32
N-Nitroso-di-n-propylamine	40.00	23.33	58	46-120	16	28
1,2,4-Trichlorobenzene	40.00	28.03	70	45-120	10	29
4-Chloro-3-methylphenol	80.00	56.51	71	52-120	14	26
Acenaphthene	40.00	27.83	70	52-120	11	27
4-Nitrophenol	80.00	52.21	65	46-120	19	31
2,4-Dinitrotoluene	40.00	32.43	81	49-120	11	29
Pentachlorophenol	80.00	67.20	84	39-120	8	28
Pyrene	40.00	31.79	79	48-120	3	30

Surrogate	%REC	Limits
2-Fluorophenol	65	40-120
Phenol-d5	67	38-120
2,4,6-Tribromophenol	102	40-120
Nitrobenzene-d5	67	48-120
2-Fluorobiphenyl	71	50-120
Terphenyl-d14	80	23-120



	Dissolved Calif	fornia Title 26	Metals
Lab #:	195957	Project#:	STANDARD
Client:	LFR Levine Fricke		
Field ID:	TW-5	Diln Fac:	1.000
Lab ID:	195957-001	Sampled:	07/12/07
Matrix:	Filtrate	Received:	07/12/07
Units:	ug/L		

Analyte	Result	RL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	10	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Arsenic	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Barium	280	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Beryllium	ND	2.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Chromium	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Cobalt	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Copper	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Lead	ND	3.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Mercury	ND	0.20	127271	07/16/07	07/16/07	METHOD	EPA 7470A
Molybdenum	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Nickel	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Selenium	ND	10	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Silver	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Thallium	ND	10	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Vanadium	ND	5.0	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B
Zinc	30	20	127328	07/17/07	07/17/07	EPA 3010A	EPA 6010B

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Dissolved California Title 26 Metals						
Lab #:	195957	Prep:	METHOD			
Client:	LFR Levine Fricke	Analysis:	EPA 7470A			
Project#:	STANDARD					
Analyte:	Mercury	Diln Fac:	1.000			
Type:	BLANK	Batch#:	127271			
Lab ID:	QC396345	Prepared:	07/16/07			
Matrix:	Water	Analyzed:	07/16/07			
Units:	ug/L					

Result	RL	
ND	0.20	

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Dissolved California Title 26 Metals						
Lab #:	195957	Prep:	METHOD			
Client:	LFR Levine Fricke	Analysis:	EPA 7470A			
Project#:	STANDARD					
Analyte:	Mercury	Batch#:	127271			
Matrix:	Water	Prepared:	07/16/07			
Units:	ug/L	Analyzed:	07/16/07			
Diln Fac:	1.000					

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC396346	5.000	5.020	100	80-120		
BSD	QC396347	5.000	5.100	102	80-120	2	20



Dissolved California Title 26 Metals						
Lab #:	195957	Prep:	METHOD			
Client:	LFR Levine Fricke	Analysis:	EPA 7470A			
Project#:	STANDARD					
Analyte:	Mercury	Batch#:	127271			
Field ID:	ZZZZZZZZZ	Sampled:	07/13/07			
MSS Lab ID:	195975-001	Received:	07/13/07			
Matrix:	Water	Prepared:	07/16/07			
Units:	ug/L	Analyzed:	07/16/07			
Diln Fac:	1.000					

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC396349	<0.02083	5.000	5.380	108	80-123		
MSD	QC396350		5.000	5.500	110	80-123	2	20



Dissolved California Title 26 Metals						
Lab #:	195957	Prep:	EPA 3010A			
Client:	LFR Levine Fricke	Analysis:	EPA 6010B			
Project#:	STANDARD					
Type:	BLANK	Diln Fac:	1.000			
Lab ID:	QC396613	Batch#:	127328			
Matrix:	Water	Prepared:	07/17/07			
Units:	ug/L	Analyzed:	07/17/07			

Analyte	Result	RL	
Antimony	ND	10	
Arsenic	ND	5.0	
Barium	ND	5.0	
Beryllium	ND	2.0	
Cadmium	ND	5.0	
Chromium	ND	5.0	
Cobalt	ND	5.0	
Copper	ND	5.0	
Lead	ND	3.0	
Molybdenum	ND	5.0	
Nickel	ND	5.0	
Selenium	ND	10	
Silver	ND	5.0	
Thallium	ND	10	
Vanadium	ND	5.0	
Zinc	ND	20	

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Dissolved California Title 26 Metals						
Lab #: Client: Project#:	195957 LFR Levine Fricke STANDARD	Prep: Analysis:	EPA 3010A EPA 6010B			
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batch#: Prepared: Analyzed:	127328 07/17/07 07/17/07			

Type: BS Lab ID: QC396614

Analyte	Spiked	Result	%REC	Limits
Antimony	500.0	490.2	98	80-120
Arsenic	100.0	98.40	98	80-120
Barium	2,000	1,969	98	80-120
Beryllium	50.00	53.58	107	80-120
Cadmium	50.00	50.37	101	80-120
Chromium	200.0	192.8	96	80-120
Cobalt	500.0	480.3	96	80-120
Copper	250.0	231.8	93	80-120
Lead	100.0	97.59	98	80-120
Molybdenum	400.0	385.3	96	80-120
Nickel	500.0	488.5	98	80-120
Selenium	100.0	100.6	101	80-120
Silver	50.00	48.79	98	80-120
Thallium	100.0	102.1	102	80-120
Vanadium	500.0	488.3	98	80-120
Zinc	500.0	505.7	101	80-120

Type: BSD Lab ID: QC396615

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	493.8	99	80-120	1	20
Arsenic	100.0	98.72	99	80-120	0	20
Barium	2,000	1,993	100	80-120	1	20
Beryllium	50.00	54.31	109	80-120	1	20
Cadmium	50.00	50.87	102	80-120	1	20
Chromium	200.0	195.3	98	80-120	1	20
Cobalt	500.0	487.2	97	80-120	1	20
Copper	250.0	234.7	94	80-120	1	20
Lead	100.0	98.50	98	80-120	1	20
Molybdenum	400.0	389.1	97	80-120	1	20
Nickel	500.0	494.7	99	80-120	1	20
Selenium	100.0	102.1	102	80-120	1	20
Silver	50.00	49.84	100	80-120	2	20
Thallium	100.0	103.2	103	80-120	1	20
Vanadium	500.0	496.4	99	80-120	2	20
Zinc	500.0	512.3	102	80-120	1	20



Dissolved California Title 26 Metals					
Lab #:	195957	Prep:	EPA 3010A		
Client:	LFR Levine Fricke	Analysis:	EPA 6010B		
Project#:	STANDARD				
Field ID:	ZZZZZZZZZZ	Batch#:	127328		
MSS Lab ID:	195996-001	Sampled:	07/16/07		
Matrix:	Water	Received:	07/16/07		
Units:	uq/L	Prepared:	07/17/07		
Diln Fac:	1.000	Analyzed:	07/17/07		

Type: MS Lab ID: QC396616

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	4.239	500.0	528.3	105	78-122
Arsenic	10.22	100.0	116.2	106	79-128
Barium	116.7	2,000	2,050	97	80-120
Beryllium	0.4010	50.00	55.29	110	80-122
Cadmium	<0.3555	50.00	50.10	100	80-121
Chromium	34.56	200.0	227.3	96	80-120
Cobalt	1.742	500.0	479.6	96	80-120
Copper	120.4	250.0	372.8	101	80-120
Lead	<1.150	100.0	89.51	90	70-120
Molybdenum	7.493	400.0	404.6	99	80-120
Nickel	25.49	500.0	502.3	95	78-120
Selenium	3.711	100.0	111.0	107	78-132
Silver	1.955	50.00	53.72	104	72-123
Thallium	<1.131	100.0	92.49	92	72-120
Vanadium	45.42	500.0	550.1	101	80-120
Zinc	107.6	500.0	614.0	101	80-124

Type: MSD Lab ID: QC396617

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	500.0	531.6	105	78-122	1	20
Arsenic	100.0	116.5	106	79-128	0	20
Barium	2,000	2,078	98	80-120	1	20
Beryllium	50.00	55.40	110	80-122	0	20
Cadmium	50.00	49.91	100	80-121	0	20
Chromium	200.0	228.0	97	80-120	0	20
Cobalt	500.0	481.3	96	80-120	0	20
Copper	250.0	375.2	102	80-120	1	20
Lead	100.0	90.49	90	70-120	1	20
Molybdenum	400.0	408.8	100	80-120	1	20
Nickel	500.0	504.2	96	78-120	0	20
Selenium	100.0	113.7	110	78-132	2	20
Silver	50.00	54.61	105	72-123	2	20
Thallium	100.0	92.63	93	72-120	0	20
Vanadium	500.0	550.1	101	80-120	0	20
Zinc	500.0	619.3	102	80-124	1	20



# Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

### Laboratory Job Number 196218

LFR Levine Fricke 1900 Powell Street

Emeryville, CA 94608

Project : 001-09567-01

Location : Hanson Radum

Level : II

Sample ID	<u>Lab ID</u>
3S/1E 10D8	196218-001
3S/1E 10N3	196218-002
3S/1E 10K2	196218-003
MW - 10	196218-004
TB-072507	196218-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Signature:

Project Manager

Date: <u>07/31/2007</u>

Date: <u>07/31/200</u>7

Signature:

Operations Manager

NELAP # 01107CA

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#### CASE NARRATIVE

Laboratory number: 196218

Client: LFR Levine Fricke

Project: 001-09567-01 Location: Hanson Radum

Request Date: 07/25/07 Samples Received: 07/25/07

This hardcopy data package contains sample and QC results for five water samples, requested for the above referenced project on 07/25/07. The samples were received cold and intact. All data were e-mailed to Katrin Schliewen on 07/26/07.

#### TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

#### Volatile Organics by GC/MS (EPA 8260B):

Low recovery was observed for 1,1-dichloroethene in the MSD for batch 127592; the parent sample was not a project sample, and the BS/BSD were within limits. High RPD was also observed for 1,1-dichloroethene in the MS/MSD for batch 127592; the RPD was acceptable in the BS/BSD, and this analyte was not detected at or above the RL in the associated sample. 1,2,3-trichlorobenzene and 1,2,4-trichlorobenzene were detected between the MDL and the RL in the method blank for batch 127592 and the method blank for batch 127594; these analytes were not detected in samples at or above the RL. No other analytical problems were encountered.

## Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

#### Metals (EPA 6020 and EPA 7470A):

No analytical problems were encountered.



Total Extractable Hydrocarbons Lab #: 196218 Location: Hanson Radum Client: LFR Levine Fricke Prep: EPA 3520C Project#: 001-09567-01 EPA 8015B Analysis: Matrix: Water Sampled: 07/25/07 Units: ug/L Received: 07/25/07 Diln Fac: 1.000 Prepared: 07/25/07 Batch#: 127596 Analyzed: 07/26/07

Field ID: 3S/1E 10D8 Lab ID: 196218-001

Type: SAMPLE

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	100	61-134

Field ID: 3S/1E 10N3 Lab ID: 196218-002

Type: SAMPLE

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	110	61-134

Field ID: 3S/1E 10K2 Lab ID: 196218-003

Type: SAMPLE

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
Hexacosane	99	61-134

ND= Not Detected RL= Reporting Limit

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Total Extractable Hydrocarbons					
Lab #:	196218	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8015B		
Matrix:	Water	Sampled:	07/25/07		
Units:	ug/L	Received:	07/25/07		
Diln Fac:	1.000	Prepared:	07/25/07		
Batch#:	127596	Analyzed:	07/26/07		

Field ID: MW-10 Lab ID: 196218-004

Type: SAMPLE

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Surrogate	%REC	Limits
exacosane	96	61-134

Type: BLANK Lab ID: QC397819

Analyte	Result	RL	
Diesel C10-C24	ND	50	
Motor Oil C24-C36	ND	300	

Sur	Surrogate %REC	Limits
Hexacosane	ane 116	61-134

ND= Not Detected RL= Reporting Limit

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Total Extractable Hydrocarbons						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 3520C			
Project#:	001-09567-01	Analysis:	EPA 8015B			
Matrix:	Water	Batch#:	127596			
Units:	ug/L	Prepared:	07/25/07			
Diln Fac:	1.000	Analyzed:	07/26/07			

Type: BS Cleanup Method: EPA 3630C

Lab ID: QC397820

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,461	98	58-130

Surrogate	%REC	Limits
Hexacosane	115	61-134

Type: BSD Cleanup Method: EPA 3630C

Lab ID: QC397821

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,634	105	58-130	7	27

Surrogate	%REC	Limits
Hexacosane	124	61-134



	Purgeable Organics by GC/MS						
Lab #:	196218	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	EPA 5030B				
Project#:	001-09567-01	Analysis:	EPA 8260B				
Field ID:	TB-072507	Batch#:	127592				
Lab ID:	196218-005	Sampled:	07/25/07				
Matrix:	Water	Received:	07/25/07				
Units:	ug/L	Analyzed:	07/25/07				
Diln Fac:	1.000	-					

Analyte	Result	RL	
Freon 12	ND	1.0	
Chloromethane	ND	1.0	
Vinyl Chloride	ND	0.5	
Bromomethane	0.6 J	1.0	
Chloroethane	ND	1.0	
Trichlorofluoromethane	ND	1.0	
Acetone	ND	10	
Freon 113	ND ND	5.0	
1,1-Dichloroethene	ND	0.5	
Methylene Chloride	ND	5.0	
Carbon Disulfide	ND	0.5	
MTBE	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
Vinyl Acetate	ND	10	
1,1-Dichloroethane	ND ND	0.5	
2-Butanone	ND ND	10	
cis-1,2-Dichloroethene	ND	0.5	
	ND	0.5	
2,2-Dichloropropane Chloroform	ND	0.5	
Bromochloromethane		0.5	
	ND	0.5	
1,1,1-Trichloroethane	ND		
1,1-Dichloropropene	ND	0.5 0.5	
Carbon Tetrachloride	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Trichloroethene	ND	0.5	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
Dibromomethane	ND	0.5	
4-Methyl-2-Pentanone	ND	10	
cis-1,3-Dichloropropene	ND	0.5	
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
2-Hexanone	ND	10	
1,3-Dichloropropane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Chlorobenzene	ND	0.5	
1,1,1,2-Tetrachloroethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	1.0	
Isopropylbenzene	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	
1,2,3-Trichloropropane	ND	0.5	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	

J= Estimated value ND= Not Detected RL= Reporting Limit Page 1 of 2



	Purgeable	Organics by GC/	MS	
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	TB-072507	Batch#:	127592	
Lab ID:	196218-005	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000	-		

Analyte	Result	RL	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	0.5	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-123
1,2-Dichloroethane-d4	102	79-134
Toluene-d8	101	80-120
Bromofluorobenzene	111	80-122



Purgeable Organics by GC/MS						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	EPA 5030B			
Project#:	001-09567-01	Analysis:	EPA 8260B			
Matrix:	Water	Batch#:	127592			
Units:	ug/L	Analyzed:	07/25/07			
Diln Fac:	1.000					

Type: BS Lab ID: QC397804

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	25.76	103	80-132
Benzene	25.00	25.85	103	80-120
Trichloroethene	25.00	25.29	101	80-120
Toluene	25.00	28.19	113	80-120
Chlorobenzene	25.00	24.63	99	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	102	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	100	80-120	
Bromofluorobenzene	101	80-122	

Type: BSD Lab ID: QC397805

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	21.89	88	80-132	16	20
Benzene	25.00	22.88	92	80-120	12	20
Trichloroethene	25.00	22.03	88	80-120	14	20
Toluene	25.00	25.21	101	80-120	11	20
Chlorobenzene	25.00	21.74	87	80-120	12	20

Surrogate	%REC	Limits	
Dibromofluoromethane	101	80-123	
1,2-Dichloroethane-d4	96	79-134	
Toluene-d8	101	80-120	
Bromofluorobenzene	102	80-122	



Purgeable Organics by GC/MS					
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B		
Type: Lab ID: Matrix: Units:	BLANK QC397806 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127592 07/25/07		

Analyte	Result	RL	
Freon 12	ND	1.0	
Chloromethane	ND	1.0	
Vinyl Chloride	ND	0.5	
Bromomethane	ND	1.0	
Chloroethane	ND	1.0	
Trichlorofluoromethane	ND	1.0	
Acetone	ND	10	
Freon 113	ND	0.5	
1,1-Dichloroethene	ND ND	0.5	
Methylene Chloride	ND ND	5.0	
Carbon Disulfide		0.5	
	ND		
MTBE	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
Vinyl Acetate	ND	10	
1,1-Dichloroethane	ND	0.5	
2-Butanone	ND	10	
cis-1,2-Dichloroethene	ND	0.5	
2,2-Dichloropropane	ND	0.5	
Chloroform	ND	0.5	
Bromochloromethane	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
1,1-Dichloropropene	ND	0.5	
Carbon Tetrachloride	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Benzene	ND	0.5	
Trichloroethene	ND	0.5	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND ND	0.5	
Dibromomethane	ND ND	0.5	
	ND ND	10	
4-Methyl-2-Pentanone		0.5	
cis-1,3-Dichloropropene	ND ND		
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
2-Hexanone	ND	10	
1,3-Dichloropropane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
1,2-Dibromoethane	ND	0.5	
Chlorobenzene	ND	0.5	
1,1,1,2-Tetrachloroethane	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	1.0	
Isopropylbenzene	ND ND	0.5	
1,1,2,2-Tetrachloroethane	ND ND	0.5	
1,1,2,2-letrachioroethane	ND ND	0.5	
		0.5	
Propylbenzene	ND ND		
Bromobenzene	ND ND	0.5	
1,3,5-Trimethylbenzene	ND ND	0.5	
2-Chlorotoluene	ND	0.5	

J= Estimated value ND= Not Detected RL= Reporting Limit Page 1 of 2



	Purgeable	Organics by GC/	MS	
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Type: Lab ID: Matrix: Units:	BLANK QC397806 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127592 07/25/07	

Analyte	Result	RL
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	0.5
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	0.5
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	0.3 J	0.5

Surrogate	%REC	Limits	
Dibromofluoromethane	102	80-123	
1,2-Dichloroethane-d4	100	79-134	
Toluene-d8	100	80-120	
Bromofluorobenzene	109	80-122	



	Purgeable	Organics by GC/	MS	
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	ZZZZZZZZZ	Batch#:	127592	
MSS Lab ID:	196196-001	Sampled:	07/23/07	
Matrix:	Water	Received:	07/24/07	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000			

Type: MS Lab ID: QC397882

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1169	25.00	27.27	109	80-139
Benzene	<0.06286	25.00	25.68	103	80-123
Trichloroethene	0.1668	25.00	26.08	104	75-129
Toluene	<0.1220	25.00	25.55	102	80-122
Chlorobenzene	<0.1069	25.00	23.81	95	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-123
1,2-Dichloroethane-d4	99	79-134
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-122

Type: MSD Lab ID: QC397883

Analyte	Spiked	Result	%REC	Limits R	RPD	Lim
1,1-Dichloroethene	25.00	19.85	79 *	80-139 3	31 *	20
Benzene	25.00	25.12	100	80-123 2	2	20
Trichloroethene	25.00	25.51	101	75-129 2	2	20
Toluene	25.00	24.63	99	80-122 4	4	20
Chlorobenzene	25.00	23.17	93	80-120 3	3	20

Surrogate	%REC	Limits	
Dibromofluoromethane	104	80-123	
1,2-Dichloroethane-d4	98	79-134	
Toluene-d8	102	80-120	
Bromofluorobenzene	102	80-122	

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<sup>\*=</sup> Value outside of QC limits; see narrative RPD= Relative Percent Difference



	Gas	soline by GC/MS		
Lab #: Client:	196218 LFR Levine Fricke	Location:	Hanson Radum EPA 5030B	
Project#:	001-09567-01	Prep: Analysis:	EPA 8260B	
Field ID: Lab ID:	3S/1E 10D8 196218-001	Batch#: Sampled:	127594 07/25/07	
Matrix:	Water	Received:	07/25/07	
Units: Diln Fac:	ug/L 1.000	Analyzed:	07/25/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5



	Gaso	line by GC/MS		
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	3S/1E 10D8 196218-001 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127594 07/25/07 07/25/07 07/25/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	96	80-123	
1,2-Dichloroethane-d4	104	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	105	80-122	



	Gas	soline by GC/MS		
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	3S/1E 10N3 196218-002 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127594 07/25/07 07/25/07 07/25/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5



	Ga	soline by GC/MS		
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	3S/1E 10N3	Batch#:	127594	
Lab ID:	196218-002	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000			

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	97	80-123	
1,2-Dichloroethane-d4	103	79-134	
Toluene-d8	101	80-120	
Bromofluorobenzene	105	80-122	

of 2 7.0



	G	asoline by GC/MS		
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Field ID:	3S/1E 10K2	Batch#:	127594	
Lab ID:	196218-003	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000			

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5



		ine by GC/MS	
Lab #: Client:	196218 LFR Levine Fricke	Location: Prep:	Hanson Radum EPA 5030B
Project#:	001-09567-01	Analysis:	EPA 8260B
Field ID: Lab ID:	3S/1E 10K2 196218-003	Batch#: Sampled:	127594 07/25/07
Matrix:	Water	Received:	07/25/07
Units: Diln Fac:	ug/L 1.000	Analyzed:	07/25/07

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-123	
1,2-Dichloroethane-d4	100	79-134	
Toluene-d8	97	80-120	
Bromofluorobenzene	104	80-122	

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	Ga	soline by GC/MS		
Lab #: Client:	196218 LFR Levine Fricke	Location: Prep:	Hanson Radum EPA 5030B	
Project#: Field ID: Lab ID:	001-09567-01 MW-10 196218-004	Analysis: Batch#:	EPA 8260B 127594 07/25/07	
Matrix: Units:	Water uq/L	Sampled: Received: Analyzed:	07/25/07 07/25/07 07/25/07	
Diln Fac:	1.000	Analyzeu:	07/25/07	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5 0.5
m,p-Xylenes	ND	
o-Xylene	ND	0.5
Styrene Bromoform	ND ND	0.5 1.0
	ND ND	0.5
Isopropylbenzene 1,1,2,2-Tetrachloroethane	ND ND	0.5
	ND ND	0.5
1,2,3-Trichloropropane	מא	U.5



	Ga	soline by GC/MS		
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Field ID: Lab ID: Matrix: Units: Diln Fac:	MW-10 196218-004 Water ug/L 1.000	Batch#: Sampled: Received: Analyzed:	127594 07/25/07 07/25/07 07/25/07	

Analyte	Result	RL	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	2.0	
1,2,4-Trichlorobenzene	ND	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
Dibromofluoromethane	97	80-123	
1,2-Dichloroethane-d4	104	79-134	
Toluene-d8	99	80-120	
Bromofluorobenzene	100	80-122	



	Gas	oline by GC/MS		
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B	
Matrix: Units: Diln Fac:	Water ug/L 1.000	Batcĥ#: Analyzed:	127594 07/25/07	

Type: BS Lab ID: QC397811

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	112.2	90	68-132
Isopropyl Ether (DIPE)	25.00	19.99	80	65-120
Ethyl tert-Butyl Ether (ETBE)	25.00	20.71	83	75-124
Methyl tert-Amyl Ether (TAME)	25.00	24.56	98	77-120
1,1-Dichloroethene	25.00	24.16	97	80-132
Benzene	25.00	25.20	101	80-120
Trichloroethene	25.00	25.59	102	80-120
Toluene	25.00	27.12	108	80-120
Chlorobenzene	25.00	25.47	102	80-120

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-123	
1,2-Dichloroethane-d4	103	79-134	
Toluene-d8	98	80-120	
Bromofluorobenzene	98	80-122	

Type: BSD Lab ID: QC397812

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	106.4	85	68-132	5	20
Isopropyl Ether (DIPE)	25.00	18.91	76	65-120	6	20
Ethyl tert-Butyl Ether (ETBE)	25.00	19.08	76	75-124	8	20
Methyl tert-Amyl Ether (TAME)	25.00	23.58	94	77-120	4	20
1,1-Dichloroethene	25.00	22.44	90	80-132	7	20
Benzene	25.00	23.09	92	80-120	9	20
Trichloroethene	25.00	23.50	94	80-120	9	20
Toluene	25.00	25.12	100	80-120	8	20
Chlorobenzene	25.00	24.03	96	80-120	6	20

Surrogate	%REC	Limits
Dibromofluoromethane 9	93	80-123
1,2-Dichloroethane-d4	100	79-134
Toluene-d8	98	80-120
Bromofluorobenzene 9	99	80-122



	Ga	soline by GC/MS		
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 5030B	
Project#:	001-09567-01	Analysis:	EPA 8260B	
Matrix:	Water	Batch#:	127594	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	1.000			

Type: BS Lab ID: QC397813

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	943.9	94	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-123
1,2-Dichloroethane-d4	100	79-134
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-122

Type: BSD Lab ID: QC397814

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	831.4	83	70-130	13	20

Surrogate	%REC	Limits	
Dibromofluoromethane	94	80-123	
1,2-Dichloroethane-d4	100	79-134	
Toluene-d8	100	80-120	
Bromofluorobenzene	99	80-122	



Gasoline by GC/MS					
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B		
Type: Lab ID: Matrix: Units:	BLANK QC397815 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127594 07/25/07		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Freon 12	ND	1.0
Chloromethane	ND	1.0
Vinyl Chloride	ND ND	0.5
Isopropyl Ether (DIPE)	ND ND	0.5
Bromomethane	ND ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND ND	0.5
Methyl tert-Amyl Ether (TAME)	ND ND	0.5
Chloroethane	ND ND	1.0
Trichlorofluoromethane	ND ND	1.0
Acetone	ND ND	10
Freon 113	ND ND	0.5
1,1-Dichloroethene	ND ND	0.5
Methylene Chloride	ND ND	5.0
Carbon Disulfide	ND ND	0.5
MTBE	ND ND	0.5
trans-1,2-Dichloroethene	ND ND	0.5
Vinyl Acetate	ND ND	10
1,1-Dichloroethane	ND ND	0.5
2-Butanone	ND ND	10
cis-1,2-Dichloroethene	ND ND	0.5
	ND ND	0.5
2,2-Dichloropropane Chloroform	ND ND	0.5
Bromochloromethane		0.5
	ND ND	0.5
1,1,1-Trichloroethane		0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane Benzene	ND ND	0.5
	ND ND	0.5
Trichloroethene	ND ND	0.5
1,2-Dichloropropane		0.5
Bromodichloromethane Dibromomethane	ND ND	0.5
		10
4-Methyl-2-Pentanone	ND ND	0.5
cis-1,3-Dichloropropene Toluene	ND ND	0.5
trans-1,3-Dichloropropene	ND ND	0.5
1,1,2-Trichloroethane	ND ND	0.5
2-Hexanone	ND ND	10
	ND ND	0.5
1,3-Dichloropropane		0.5
Tetrachloroethene Dibromochloromethane	ND ND	0.5
	ND ND	0.5
1,2-Dibromoethane		0.5
Chlorobenzene 1,1,1,2-Tetrachloroethane	ND ND	0.5
		0.5
Ethylbenzene	ND ND	0.5
m,p-Xylenes	ND ND	0.5
o-Xylene	ND ND	0.5
Styrene		
Bromoform	ND ND	1.0
Isopropylbenzene		0.5
1,1,2,2-Tetrachloroethane	ND	0.5

J= Estimated value ND= Not Detected RL= Reporting Limit Page 1 of 2



Gasoline by GC/MS					
Lab #: Client: Project#:	196218 LFR Levine Fricke 001-09567-01	Location: Prep: Analysis:	Hanson Radum EPA 5030B EPA 8260B		
Type: Lab ID: Matrix: Units:	BLANK QC397815 Water ug/L	Diln Fac: Batch#: Analyzed:	1.000 127594 07/25/07		

Analyte	Result	RL	
1,2,3-Trichloropropane	ND	0.5	
Propylbenzene	ND	0.5	
Bromobenzene	ND	0.5	
1,3,5-Trimethylbenzene	ND	0.5	
2-Chlorotoluene	ND	0.5	
4-Chlorotoluene	ND	0.5	
tert-Butylbenzene	ND	0.5	
1,2,4-Trimethylbenzene	ND	0.5	
sec-Butylbenzene	ND	0.5	
para-Isopropyl Toluene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
n-Butylbenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	
1,2-Dibromo-3-Chloropropane	ND	0.5	
1,2,4-Trichlorobenzene	0.4 J	0.5	
Hexachlorobutadiene	ND	0.5	
Naphthalene	ND	2.0	
1,2,3-Trichlorobenzene	ND	0.5	

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-123
1,2-Dichloroethane-d4	99	79-134
Toluene-d8	101	80-120
Bromofluorobenzene	106	80-122



Semivolatile Organics by GC/MS					
Lab #:	196218	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Field ID:	3S/1E 10D8	Batch#:	127624		
Lab ID:	196218-001	Sampled:	07/25/07		
Matrix:	Water	Received:	07/25/07		
Units:	uq/L	Prepared:	07/25/07		
Diln Fac:	1.000	Analyzed:	07/26/07		

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	9.4	
Phenol	ND	9.4	
bis(2-Chloroethyl)ether	ND	9.4	
2-Chlorophenol	ND	9.4	
1,3-Dichlorobenzene	ND	9.4	
1,4-Dichlorobenzene	ND	9.4	
Benzyl alcohol	ND	9.4	
1,2-Dichlorobenzene	ND	9.4	
2-Methylphenol	ND	9.4	
bis(2-Chloroisopropyl) ether	ND	9.4	
4-Methylphenol	ND	9.4	
N-Nitroso-di-n-propylamine	ND	9.4	
Hexachloroethane	ND	9.4	
Nitrobenzene	ND	9.4	
Isophorone	ND	9.4	
2-Nitrophenol	ND	19	
2,4-Dimethylphenol	ND	9.4	
Benzoic acid	ND	47	
bis(2-Chloroethoxy)methane	ND	9.4	
2,4-Dichlorophenol	ND	9.4	
1,2,4-Trichlorobenzene	ND	9.4	
Naphthalene	ND	9.4	
4-Chloroaniline	ND	9.4	
Hexachlorobutadiene	ND	9.4	
4-Chloro-3-methylphenol	ND	9.4	
2-Methylnaphthalene	ND	9.4	
Hexachlorocyclopentadiene	ND	19	
2,4,6-Trichlorophenol	ND	9.4 9.4	
2,4,5-Trichlorophenol	ND	9.4	
2-Chloronaphthalene 2-Nitroaniline	ND	19	
	ND ND	9.4	
Dimethylphthalate		9.4	
Acenaphthylene 2,6-Dinitrotoluene	ND ND	9.4	
3-Nitroaniline	ND ND	19	
Acenaphthene	ND ND	9.4	
2,4-Dinitrophenol	ND ND	19	
4-Nitrophenol	ND ND	19	
Dibenzofuran	ND ND	9.4	
2,4-Dinitrotoluene	ND ND	9.4	
Diethylphthalate	ND ND	9.4	
Fluorene	ND	9.4	
4-Chlorophenyl-phenylether	ND	9.4	
4-Nitroaniline	ND	19	
4,6-Dinitro-2-methylphenol	ND	19	
N-Nitrosodiphenylamine	ND	9.4	
Azobenzene	ND	9.4	
4-Bromophenyl-phenylether	ND	9.4	
Hexachlorobenzene	ND	9.4	
Pentachlorophenol	ND	19	
Phenanthrene	ND	9.4	
Anthracene	ND	9.4	
Di-n-butylphthalate	ND	9.4	
Fluoranthene	ND	9.4	
	=-=		

ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS					
Lab #:	196218	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Field ID:	3S/1E 10D8	Batch#:	127624		
Lab ID:	196218-001	Sampled:	07/25/07		
Matrix:	Water	Received:	07/25/07		
Units:	uq/L	Prepared:	07/25/07		
Diln Fac:	1.000	Analyzed:	07/26/07		

Analyte	Result	RL	
Pyrene	ND	9.4	
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	25	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits	
2-Fluorophenol	68	40-120	
Phenol-d5	68	38-120	
2,4,6-Tribromophenol	85	40-120	
Nitrobenzene-d5	69	48-120	
2-Fluorobiphenyl	75	50-120	
Terphenyl-d14	69	23-120	



Semivolatile Organics by GC/MS					
Lab #:	196218	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Field ID:	3S/1E 10N3	Batch#:	127624		
Lab ID:	196218-002	Sampled:	07/25/07		
Matrix:	Water	Received:	07/25/07		
Units:	ug/L	Prepared:	07/25/07		
Diln Fac:	1.000	Analyzed:	07/26/07		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.4
Phenol	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
2-Chlorophenol	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
Benzyl alcohol	ND	9.4
1,2-Dichlorobenzene	ND	9.4
2-Methylphenol	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
4-Methylphenol	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	$9.\overline{4}$
Isophorone	ND	9.4
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
bis(2-Chloroethoxy)methane	ND	9.4
2,4-Dichlorophenol	ND	$9.\overline{4}$
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	19
Acenaphthene	ND	9.4
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
Fluorene	ND	9.4
4-Chlorophenyl-phenylether	ND ND	9.4
4-Nitroaniline	ND ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND ND	9.4
4-Bromophenyl-phenylether	ND ND	9.4
Hexachlorobenzene	ND ND	9.4
Pentachlorophenol	ND ND	19
Phenanthrene	ND ND	9.4
Anthracene	ND ND	9.4
Di-n-butylphthalate	ND ND	9.4
Fluoranthene	ND ND	9.4
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ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	3S/1E 10N3	Batch#:	127624	
Lab ID:	196218-002	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Prepared:	07/25/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Analyte	Result	RL	
Pyrene	ND	9.4	
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	ND	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits	
2-Fluorophenol	77	40-120	
Phenol-d5	72	38-120	
2,4,6-Tribromophenol	78	40-120	
Nitrobenzene-d5	78	48-120	
2-Fluorobiphenyl	71	50-120	
Terphenyl-d14	74	23-120	



Semivolatile Organics by GC/MS				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	3S/1E 10K2	Batch#:	127624	
Lab ID:	196218-003	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Prepared:	07/25/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.4
Phenol	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
2-Chlorophenol	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
Benzyl alcohol	ND	9.4
1,2-Dichlorobenzene	ND	9.4
2-Methylphenol	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
4-Methylphenol	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
bis(2-Chloroethoxy)methane	ND	9.4
2,4-Dichlorophenol	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	19
Acenaphthene	ND	9.4
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
Fluorene	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Pentachlorophenol	ND	19
Phenanthrene	ND	9.4
Anthracene	ND	9.4 9.4
Di-n-butylphthalate	ND	
Fluoranthene	ND	9.4

ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	3S/1E 10K2	Batch#:	127624	
Lab ID:	196218-003	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Prepared:	07/25/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Analyte	Result	RL	
Pyrene	ND	9.4	
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	ND	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits	
2-Fluorophenol	75	40-120	
Phenol-d5	72	38-120	
2,4,6-Tribromophenol	75	40-120	
Nitrobenzene-d5	79	48-120	
2-Fluorobiphenyl	73	50-120	
Terphenyl-d14	71	23-120	



Semivolatile Organics by GC/MS				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	MW-10	Batch#:	127624	
Lab ID:	196218-004	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Prepared:	07/25/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	9.4	
Phenol	ND	9.4	
bis(2-Chloroethyl)ether	ND	9.4	
2-Chlorophenol	ND	9.4	
1,3-Dichlorobenzene	ND	9.4	
1,4-Dichlorobenzene	ND	9.4	
Benzyl alcohol	ND	$9.\overline{4}$	
1,2-Dichlorobenzene	ND	9.4	
2-Methylphenol	ND	9.4	
bis(2-Chloroisopropyl) ether	ND	9.4	
4-Methylphenol	ND	9.4	
N-Nitroso-di-n-propylamine	ND	9.4	
Hexachloroethane	ND	9.4	
Nitrobenzene	ND	9.4	
Isophorone	ND	9.4	
2-Nitrophenol	ND	19	
2,4-Dimethylphenol	ND	9.4	
Benzoic acid	ND	47	
bis(2-Chloroethoxy)methane	ND	9.4	
2,4-Dichlorophenol	ND	9.4	
1,2,4-Trichlorobenzene	ND	9.4	
Naphthalene	ND	9.4	
4-Chloroaniline	ND	9.4	
Hexachlorobutadiene	ND	9.4	
4-Chloro-3-methylphenol	ND	9.4	
2-Methylnaphthalene	ND	9.4	
Hexachlorocyclopentadiene	ND	19	
2,4,6-Trichlorophenol	ND	9.4	
2,4,5-Trichlorophenol	ND	9.4	
2-Chloronaphthalene	ND	9.4	
2-Nitroaniline	ND	19	
Dimethylphthalate	ND	9.4	
Acenaphthylene	ND	9.4	
2,6-Dinitrotoluene	ND	9.4	
3-Nitroaniline	ND	19	
Acenaphthene	ND	9.4	
2,4-Dinitrophenol	ND	19	
4-Nitrophenol	ND	19	
Dibenzofuran	ND	9.4	
2,4-Dinitrotoluene	ND	9.4	
Diethylphthalate	ND	9.4	
Fluorene	ND	9.4	
4-Chlorophenyl-phenylether	ND	9.4	
4-Nitroaniline	ND	19	
4,6-Dinitro-2-methylphenol	ND	19	
N-Nitrosodiphenylamine	ND	9.4	
Azobenzene	ND	9.4	
4-Bromophenyl-phenylether	ND	9.4	
Hexachlorobenzene	ND	9.4	
Pentachlorophenol	ND	19	
Phenanthrene	ND	9.4	
Anthracene	ND	9.4	
Di-n-butylphthalate	ND	9.4	
Fluoranthene	ND	9.4	

ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Field ID:	MW-10	Batch#:	127624	
Lab ID:	196218-004	Sampled:	07/25/07	
Matrix:	Water	Received:	07/25/07	
Units:	ug/L	Prepared:	07/25/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Analyte	Result	RL	
Pyrene	ND	9.4	
Butylbenzylphthalate	ND	9.4	
3,3'-Dichlorobenzidine	ND	19	
Benzo(a)anthracene	ND	9.4	
Chrysene	ND	9.4	
bis(2-Ethylhexyl)phthalate	ND	9.4	
Di-n-octylphthalate	ND	9.4	
Benzo(b)fluoranthene	ND	9.4	
Benzo(k)fluoranthene	ND	9.4	
Benzo(a)pyrene	ND	9.4	
Indeno(1,2,3-cd)pyrene	ND	9.4	
Dibenz(a,h)anthracene	ND	9.4	
Benzo(g,h,i)perylene	ND	9.4	

Surrogate	%REC	Limits	
2-Fluorophenol	74	40-120	
Phenol-d5	71	38-120	
2,4,6-Tribromophenol	74	40-120	
Nitrobenzene-d5	77	48-120	
2-Fluorobiphenyl	71	50-120	
Terphenyl-d14	70	23-120	



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Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	EPA 3520C	
Project#:	001-09567-01	Analysis:	EPA 8270C	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC397939	Batch#:	127624	
Matrix:	Water	Prepared:	07/25/07	
Units:	ug/L	Analyzed:	07/26/07	

Analyte	Result	RL	
N-Nitrosodimethylamine	ND	10	
Phenol	ND	10	
bis(2-Chloroethyl)ether	ND	10	
2-Chlorophenol	ND	10	
1,3-Dichlorobenzene	ND	10	
1,4-Dichlorobenzene	ND	10	
Benzyl alcohol	ND	10	
1,2-Dichlorobenzene	ND	10	
2-Methylphenol	ND	10	
bis(2-Chloroisopropyl) ether	ND	10	
4-Methylphenol	ND	10	
N-Nitroso-di-n-propylamine	ND	10	
Hexachloroethane	ND	10	
Nitrobenzene	ND	10	
Isophorone	ND	10	
2-Nitrophenol	ND	20	
2,4-Dimethylphenol	ND	10	
Benzoic acid	ND	50	
bis(2-Chloroethoxy)methane	ND	10	
2,4-Dichlorophenol	ND	10	
1,2,4-Trichlorobenzene	ND	10	
Naphthalene	ND	10	
4-Chloroaniline	ND	10	
Hexachlorobutadiene	ND	10	
4-Chloro-3-methylphenol	ND	10	
2-Methylnaphthalene	ND	10	
Hexachlorocyclopentadiene	ND	20	
2,4,6-Trichlorophenol	ND	10	
2,4,5-Trichlorophenol	ND	10	
2-Chloronaphthalene	ND	10	
2-Nitroaniline	ND	20	
Dimethylphthalate	ND	10	
Acenaphthylene	ND	10	
2,6-Dinitrotoluene	ND	10	
3-Nitroaniline	ND	20	
Acenaphthene	ND	10	
2,4-Dinitrophenol	ND	20	
4-Nitrophenol	ND	20	
Dibenzofuran	ND	10	
2,4-Dinitrotoluene	ND	10	
Diethylphthalate	ND	10	
Fluorene	ND	10	
4-Chlorophenyl-phenylether	ND	10	
4-Nitroaniline	ND	20	
4,6-Dinitro-2-methylphenol	ND	20	
N-Nitrosodiphenylamine	ND	10	
Azobenzene	ND	10	
4-Bromophenyl-phenylether	ND	10	
Hexachlorobenzene	ND	10	
Pentachlorophenol	ND	20	
Phenanthrene	ND	10	
Anthracene	ND	10	
Di-n-butylphthalate	ND	10	
Fluoranthene	ND	10	

ND= Not Detected RL= Reporting Limit Page 1 of 2



Semivolatile Organics by GC/MS					
Lab #:	196218	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#: Type: Lab ID:	001-09567-01 BLANK	Analysis: Diln Fac:	EPA 8270C 1.000		
Lab ID:	QC397939	Batch#:	127624		
Matrix:	Water	Prepared:	07/25/07		
Units:	ug/L	Analyzed:	07/26/07		

Analyte	Result	RL	
Pyrene	ND	10	
Butylbenzylphthalate	ND	10	
3,3'-Dichlorobenzidine	ND	20	
Benzo(a)anthracene	ND	10	
Chrysene	ND	10	
bis(2-Ethylhexyl)phthalate	ND	10	
Di-n-octylphthalate	ND	10	
Benzo(b)fluoranthene	ND	10	
Benzo(k)fluoranthene	ND	10	
Benzo(a)pyrene	ND	10	
Indeno(1,2,3-cd)pyrene	ND	10	
Dibenz(a,h)anthracene	ND	10	
Benzo(g,h,i)perylene	ND	10	

Surrogate	%REC	Limits
2-Fluorophenol	82	40-120
Phenol-d5	88	38-120
2,4,6-Tribromophenol	92	40-120
Nitrobenzene-d5	90	48-120
2-Fluorobiphenyl	87	50-120
Terphenyl-d14	82	23-120



Semivolatile Organics by GC/MS					
Lab #:	196218	Location:	Hanson Radum		
Client:	LFR Levine Fricke	Prep:	EPA 3520C		
Project#:	001-09567-01	Analysis:	EPA 8270C		
Matrix:	Water	Batch#:	127624		
Units:	ug/L	Prepared:	07/25/07		
Diln Fac:	1.000	Analyzed:	07/26/07		

Type: BS Lab ID: QC397940

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	62.76	78	47-120
2-Chlorophenol	80.00	66.09	83	52-120
1,4-Dichlorobenzene	40.00	34.87	87	41-120
N-Nitroso-di-n-propylamine	40.00	29.04	73	46-120
1,2,4-Trichlorobenzene	40.00	36.24	91	45-120
4-Chloro-3-methylphenol	80.00	67.94	85	52-120
Acenaphthene	40.00	33.26	83	52-120
4-Nitrophenol	80.00	61.64	77	46-120
2,4-Dinitrotoluene	40.00	36.51	91	49-120
Pentachlorophenol	80.00	72.44	91	39-120
Pyrene	40.00	31.70	79	48-120

Surrogate	%REC	Limits	
2-Fluorophenol	77	40-120	
Phenol-d5	81	38-120	
2,4,6-Tribromophenol	116	40-120	
Nitrobenzene-d5	80	48-120	
2-Fluorobiphenyl	83	50-120	
Terphenyl-d14	74	23-120	

Type: BSD Lab ID: QC397941

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	63.21	79	47-120	1	28
2-Chlorophenol	80.00	65.64	82	52-120	1	27
1,4-Dichlorobenzene	40.00	33.24	83	41-120	5	32
N-Nitroso-di-n-propylamine	40.00	30.42	76	46-120	5	28
1,2,4-Trichlorobenzene	40.00	33.46	84	45-120	8	29
4-Chloro-3-methylphenol	80.00	68.58	86	52-120	1	26
Acenaphthene	40.00	32.20	81	52-120	3	27
4-Nitrophenol	80.00	59.16	74	46-120	4	31
2,4-Dinitrotoluene	40.00	35.77	89	49-120	2	29
Pentachlorophenol	80.00	71.47	89	39-120	1	28
Pyrene	40.00	32.05	80	48-120	1	30

Surrogate	%REC	Limits	
2-Fluorophenol	77	40-120	
Phenol-d5	82	38-120	
2,4,6-Tribromophenol	106	40-120	
Nitrobenzene-d5	82	48-120	
2-Fluorobiphenyl	81	50-120	
Terphenyl-d14	73	23-120	



Dissolved California Title 26 Metals						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01					
Field ID:	3S/1E 10D8	Units:	ug/L			
Lab ID:	196218-001	Sampled:	07/25/07			
Matrix:	Filtrate	Received:	07/25/07			

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Arsenic	1.2	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Barium	370	1.0	5.000	127634	07/25/07	07/25/07	EPA 6020
Beryllium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cadmium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Chromium	6.3	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cobalt	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Copper	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Lead	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Mercury	0.63	0.20	1.000	127647	07/26/07	07/26/07	EPA 7470A
Molybdenum	1.2	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Nickel	1.3	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Selenium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Silver	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Thallium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Vanadium	3.4	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Zinc	8.0	5.0	1.000	127644	07/26/07	07/26/07	EPA 6020

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Dissolved California Title 26 Metals						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01					
Field ID:	3S/1E 10N3	Units:	ug/L			
Lab ID:	196218-002	Sampled:	07/25/07			
Matrix:	Filtrate	Received:	07/25/07			

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Arsenic	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Barium	260	1.0	5.000	127634	07/25/07	07/25/07	EPA 6020
Beryllium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cadmium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Chromium	2.6	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cobalt	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Copper	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Lead	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Mercury	ND	0.20	1.000	127647	07/26/07	07/26/07	EPA 7470A
Molybdenum	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Nickel	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Selenium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Silver	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Thallium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Vanadium	1.4	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Zinc	ND	5.0	5.000	127644	07/26/07	07/26/07	EPA 6020

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Dissolved California Title 26 Metals						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01					
Field ID:	3S/1E 10K2	Units:	ug/L			
Lab ID:	196218-003	Sampled:	07/25/07			
Matrix:	Filtrate	Received:	07/25/07			

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Arsenic	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Barium	230	1.0	5.000	127634	07/25/07	07/25/07	EPA 6020
Beryllium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cadmium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Chromium	7.8	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cobalt	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Copper	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Lead	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Mercury	0.42	0.20	1.000	127647	07/26/07	07/26/07	EPA 7470A
Molybdenum	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Nickel	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Selenium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Silver	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Thallium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Vanadium	1.6	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Zinc	ND	5.0	1.000	127644	07/26/07	07/26/07	EPA 6020

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Dissolved California Title 26 Metals						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01					
Field ID:	MW-10	Units:	ug/L			
Lab ID:	196218-004	Sampled:	07/25/07			
Matrix:	Filtrate	Received:	07/25/07			

Analyte	Result	RL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Antimony	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Arsenic	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Barium	230	1.0	5.000	127634	07/25/07	07/25/07	EPA 6020
Beryllium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cadmium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Chromium	7.6	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Cobalt	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Copper	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Lead	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Mercury	0.33	0.20	1.000	127647	07/26/07	07/26/07	EPA 7470A
Molybdenum	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Nickel	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Selenium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Silver	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Thallium	ND	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Vanadium	1.5	1.0	1.000	127644	07/26/07	07/26/07	EPA 6020
Zinc	ND	5.0	1.000	127644	07/26/07	07/26/07	EPA 6020

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Dissolved California Title 26 Metals							
Lab #:	196218	Location:	Hanson Radum				
Client:	LFR Levine Fricke	Prep:	METHOD				
Project#:	001-09567-01	Analysis:	EPA 6020				
Analyte:	Barium	Diln Fac:	1.000				
Type:	BLANK	Batch#:	127634				
Lab ID:	QC397987	Prepared:	07/25/07				
Matrix:	Filtrate	Analyzed:	07/25/07				
Units:	ug/L						

Result	RL	
ND	1.0	

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Dissolved California Title 26 Metals						
Lab #:	196218	Location:	Hanson Radum			
Client:	LFR Levine Fricke	Prep:	METHOD			
Project#:	001-09567-01	Analysis:	EPA 6020			
Analyte:	Barium	Batch#:	127634			
Matrix:	Filtrate	Prepared:	07/25/07			
Units:	ug/L	Analyzed:	07/25/07			
Diln Fac:	1.000					

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC397988	100.0	103.0	103	80-120		
BSD	QC397989	100.0	98.23	98	80-120	5	20



Dissolved California Title 26 Metals				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 6020	
Analyte:	Barium	Batch#:	127634	
Field ID:	3S/1E 10D8	Sampled:	07/25/07	
MSS Lab ID:	196218-001	Received:	07/25/07	
Matrix:	Filtrate	Prepared:	07/25/07	
Units:	ug/L	Analyzed:	07/25/07	
Diln Fac:	5.000			

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC397990	367.0	100.0	466.1	99	73-125		
MSD	QC397991		100.0	475.7	109	73-125	2	20



Dissolved California Title 26 Metals				
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 6020	
Type:	BLANK	Diln Fac:	1.000	
Lab ID:	QC398057	Batch#:	127644	
Matrix:	Filtrate	Prepared:	07/26/07	
Units:	ug/L	Analyzed:	07/26/07	

Analyte	Result	RL	
Antimony	ND	1.0	
Arsenic	ND	1.0	
Beryllium	ND	1.0	
Cadmium	ND	1.0	
Chromium	ND	1.0	
Cobalt	ND	1.0	
Copper	ND	1.0	
Lead	ND	1.0	
Molybdenum	ND	1.0	
Nickel	ND	1.0	
Selenium	ND	1.0	
Silver	ND	1.0	
Thallium	ND	1.0	
Vanadium	ND	1.0	
Zinc	ND	5.0	



	Dissolved Cal	ifornia Title 26	Metals	
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 6020	
Matrix:	Filtrate	Batch#:	127644	
Units:	ug/L	Prepared:	07/26/07	
Diln Fac:	1.000	Analyzed:	07/26/07	

Type: BS Lab ID: QC398058

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	89.18	89	80-120
Arsenic	100.0	97.99	98	80-120
Beryllium	100.0	95.92	96	80-120
Cadmium	100.0	96.88	97	80-120
Chromium	100.0	97.41	97	80-120
Cobalt	100.0	98.27	98	80-120
Copper	100.0	98.14	98	80-120
Lead	100.0	96.76	97	80-120
Molybdenum	100.0	92.00	92	80-120
Nickel	100.0	98.27	98	80-120
Selenium	100.0	100.3	100	79-120
Silver	100.0	92.10	92	80-120
Thallium	50.00	49.90	100	80-120
Vanadium	100.0	97.81	98	80-120
Zinc	100.0	95.84	96	80-120

Type: BSD Lab ID: QC398059

Analyte	Spiked	Result	%REC	Limits	RPD	
Antimony	100.0	87.94	88	80-120	1	20
Arsenic	100.0	97.57	98	80-120	0	20
Beryllium	100.0	96.07	96	80-120	0	20
Cadmium	100.0	95.77	96	80-120	1	20
Chromium	100.0	97.42	97	80-120	0	20
Cobalt	100.0	97.60	98	80-120	1	20
Copper	100.0	96.85	97	80-120	1	20
Lead	100.0	96.05	96	80-120	1	20
Molybdenum	100.0	90.79	91	80-120	1	20
Nickel	100.0	97.77	98	80-120	1	20
Selenium	100.0	97.48	97	79-120	3	20
Silver	100.0	91.05	91	80-120	1	20
Thallium	50.00	49.31	99	80-120	1	20
Vanadium	100.0	97.32	97	80-120	1	20
Zinc	100.0	94.63	95	80-120	1	20



	Dissolved Califor	rnia Title 26 M	Metals
Lab #:	196218	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	METHOD
Project#:	001-09567-01	Analysis:	EPA 6020
Field ID:	3S/1E 10D8	Batch#:	127644
MSS Lab ID:	196218-001	Sampled:	07/25/07
Matrix:	Filtrate	Received:	07/25/07
Units:	ug/L	Prepared:	07/26/07
Diln Fac:	5.000	Analyzed:	07/26/07

Type: MS Lab ID: QC398060

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	0.1235	100.0	91.25	91	80-120
Arsenic	1.214	100.0	102.1	101	79-120
Beryllium	<0.01066	100.0	97.79	98	80-120
Cadmium	<0.008202	100.0	95.87	96	77-120
Chromium	6.262	100.0	102.9	97	77-120
Cobalt	0.04638	100.0	96.42	96	79-120
Copper	<0.03605	100.0	96.30	96	78-120
Lead	0.02065	100.0	91.79	92	80-120
Molybdenum	1.154	100.0	91.64	90	80-120
Nickel	1.275	100.0	98.03	97	75-120
Selenium	0.2970	100.0	104.1	104	69-120
Silver	<0.005482	100.0	88.07	88	73-120
Thallium	<0.003884	50.00	44.87	90	71-120
Vanadium	3.350	100.0	101.5	98	77-120
Zinc	7.970	100.0	96.14	88	61-125

Type: MSD Lab ID: QC398061

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	91.17	91	80-120	0	20
Arsenic	100.0	99.80	99	79-120	2	20
Beryllium	100.0	96.05	96	80-120	2	20
Cadmium	100.0	96.00	96	77-120	0	20
Chromium	100.0	102.9	97	77-120	0	20
Cobalt	100.0	96.65	97	79-120	0	20
Copper	100.0	96.44	96	78-120	0	20
Lead	100.0	91.98	92	80-120	0	20
Molybdenum	100.0	93.61	92	80-120	2	20
Nickel	100.0	97.85	97	75-120	0	20
Selenium	100.0	104.9	105	69-120	1	20
Silver	100.0	87.74	88	73-120	0	20
Thallium	50.00	44.80	90	71-120	0	20
Vanadium	100.0	101.0	98	77-120	0	20
Zinc	100.0	111.7	104	61-125	15	20



	Dissolved Cal	lifornia Title 26	5 Metals	
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7470A	
Analyte:	Mercury	Diln Fac:	1.000	
Type:	BLANK	Batch#:	127647	
Lab ID:	QC398067	Prepared:	07/26/07	
Matrix:	Water	Analyzed:	07/26/07	
Units:	ug/L			

Result	RL	
ND	0.20	

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	Dissolved Cal	ifornia Title 26	5 Metals	
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7470A	
Analyte:	Mercury	Batch#:	127647	
Matrix:	Water	Prepared:	07/26/07	
Units:	ug/L	Analyzed:	07/26/07	
Diln Fac:	1.000			

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC398068	5.000	5.210	104	80-120		
BSD	QC398069	5.000	5.280	106	80-120	1	20



	Dissolved Cal	Lifornia Title 26	5 Metals	
Lab #:	196218	Location:	Hanson Radum	
Client:	LFR Levine Fricke	Prep:	METHOD	
Project#:	001-09567-01	Analysis:	EPA 7470A	
Analyte:	Mercury	Batch#:	127647	
Field ID:	ZZZZZZZZZ	Sampled:	07/25/07	
MSS Lab ID:	196239-005	Received:	07/25/07	
Matrix:	Filtrate	Prepared:	07/26/07	
Units:	ug/L	Analyzed:	07/26/07	
Diln Fac:	1.000			

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC398074	0.8730	5.000	5.780	98	80-123		
MSD	QC398075		5.000	5.400	91	80-123	7	20

# **APPENDIX C**

**Soil Boring Logs** 

1	ECT NAME_H IT _Hanson Ag			um			BORING NUMBE	R B- 4GE 1	
PROJ	ECT LOCATION	ON_30	000 Bu	ısch F	Road, F	Pleasar	nton, California DRILLING CONTRACTOR HEW Drilling		
PROJ	ECT NUMBER	<b>R</b> _001	-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)		
LOCA	TION Not rec	orded					STAMP (IF APPLICABLE) AND/OR NOTES		
SAMF	LING METHO	<b>D</b> Ca	lifornia	a Mod	lified; c	ontinuo	ous soil core		
GROL	JND ELEVATION	<b>ON</b> N	ot ava	ilable		HOLE	E DIAMETER 8 inches		
TOP	TOP OF CASING ELEVATION N/A						E DEPTH _70.0 ft		
	RST ENCOUNT		_						
	ABILIZED WA								
	SED BY Larry	_			DA	TE 7/	/17/07 - 7/18/07		
DEPTH (feet)	111	SAMPLE RECOVERY	S	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
							Silty Gravel (GM), light yellowish brown (2.5Y 6/3), well-graded subangular fine to coarse gravel to 1-1/2 inches diameter, dry to moist		
-		X	20 20 20	GM			Source graver to 1 1/2 mones diameter, any to most	0.0	-
-		$    \rangle$	20 10 10			3.0	Silty Clay (CL), dark brown (10YR 3/3), low to medium plasticity, moist, firm	0.0	-
<b> </b>	B-1(A)-4.5			-			at 4 feet, color changes to black (5Y 2.5), odor of organic matter	0.0	- ا
5		$\square$	20 20 23	-			at 5 feet, color changes to dark yellowish brown (10YR 3/4)	0.0	5
-			5 5 7				at 5.5 feet, color changes to very dark brown (10YR 2/2)	0.0	-
-			669					0.0	-
10	B-1(A)-9.5		6 11 11	-			at 9 feet, becomes very dark grayish brown (2.5Y 3/2), moist to wet, soft	0.0	10
_								0.0	_
<u> </u>		$    \rangle$		CL				0.0	_
10/24/0		$    \rangle$						0.0	_
GDT		$  \bot \rangle$						0.0	_
900 15							at 14.5 feet, becomes dark brown (10YR 3/3), firm		15
3 SEP								0.0	_
LFF								0.0	-
D.M.G							at 17.25 feet, trace fine to coarse gravel to 1-1/2 inches diameter	0.0	.
N RAD									_
OSNA 20									20
CON	MENTS						(Continued Next Page)		
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07  A  A  A  C  C  C  C  C  C  C  C  C  C	ROVED BY:_						DATE:	LFI	R

	ECT NAME_H			um			BORING NUMBE	AGE 2 (	OF 3
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
_							Silty Clay (CL), dark brown (10YR 3/3), low to medium plasticity, moist to wet, firm (continued)	0.0	
-			<u>\</u>					0.0	
25		$\vdash$	1						25
-		$    \rangle /  $						0.0	
		$    \rangle$		CL				0.0	
-							at 28.25 feet, color changes to black (2.5Y 2.5/1)	0.0	
30									30
- 50								0.0	30
		$    \rangle /  $						0.0	
		$    \rangle$						0.0	
		$    \rangle$				34.0		0.0	
35					•		Sand with Gravel (SP) / Gravel with Sand (GP), olive brown (2.5Y 4/3), poorly graded coarse-grained sand, poorly graded subangular fine to coarse gravel to		35
			18 19 20		•		2 inches diameter, wet	0.0	
	B-1(A)-36.5		20	SP/ GP	•			150 0.0	
					•			0.0	
-					•	39.0	at 38.8 feet, silty clay interval 3 inches thick		
40				sc			Clayey Sand with Gravel (SC), dark yellowish brown (10YR 4/4), coarse-grained sand, abundant subrounded fine to coarse gravel to 2 inches diameter, wet		40
		$    \rangle$				40.5	Clayey Sand (SC), olive brown (2.5Y 4/4), medium-grained sand, wet	0.0	
		$    \wedge  $		SC		40.4		0.0	
-			Y	GC		42.4	Clayey Gravel with Sand (GC), olive brown (2.5Y 4/4), well-graded subangular fine to coarse gravel to 1-1/2 inches diameter, medium-grained sand, wet		
45						45.1			45
		$    \rangle$		CL		45.8	Silty Clay (CL), olive brown (2.5Y 4/4), medium plasticity, wet, firm  Clayey Gravel with Sand (GC), olive brown (2.5Y 4/4), well-graded subangular fine	0.0	
_		$    \wedge  $					to coarse gravel to 1-1/2 inches diameter, medium-grained sand, wet	0.0	
_				GC					
-									
50							<b>10</b> / 10 / 10		50
	MMENTS  ROVED BY:						(Continued Next Page)  DATE:	LFI	R

	JECT NAME_H NT_Hanson Ag			um			BORING NUMBER	₹ <b>B-</b> ′ GE 3 (	<b>1(A)</b> OF 3
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	ις (γ	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
- - - - 55							below 50 feet, subangular fine to coarse gravel to 3 inches diameter  Clayey Gravel with Sand (GC), olive brown (2.5Y 4/4), well-graded subangular fine to coarse gravel to 3 inches diameter, medium-grained sand, wet (continued)	0.0	- - - - 55
- - - 60 -			7	GC			3-inch subrounded rock wedged in sampler shoe	0.0	60
- 65 - -	B-1(A)-GGW					Ţ.	depth to water in sediments at approximately 65 feet during drilling depth to water measured at 67.55 feet with Solinst after drilling		- 65 - -
BORING+WELL 2007 001-09567-02 HANSON RADOM.GPJ LFR SEPT 2006.GDT 10/24/07  Abb. CO. 101-09667-02 HANSON RADOM.GPJ LFR SEPT 2006.GDT 10/24/07  Abb. CO. 101-09667-02 HANSON RADOM.GPJ LFR SEPT 2006.GDT 10/24/07						70.0	Bottom of boring at approximately 70 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 67.6 feetB.B		70
CON 001-0956 G+WELL 2007 001-0956 G+WELL 2007 001-0956	MMENTS : Ended drilling	for 7	/17/07;	; resui	med dr	rilling re	emainder of boring on 7/18/07.		
APF	ROVED BY:_						DATE:	.FI	N



PROJECT NAME Hanson Radum  CLIENT Hanson Aggregates	BORING NUMBER EB-31(	
PROJECT LOCATION 3000 Busch Road, Plea	asanton, California DRILLING CONTRACTOR HEW Drilling	
PROJECT NUMBER 001-09567-02	DRILLING METHOD Hollow Stem Auger (CME 75)	
LOCATION Not recorded	STAMP (IF APPLICABLE) AND/OR NOTES	
SAMPLING METHOD California Modified drive	en with 140-lb hammer	
GROUND ELEVATION Not available He	IOLE DIAMETER 8 inches	
TOP OF CASING ELEVATION N/A	OLE DEPTH 20.5 ft	
FIRST ENCOUNTERED WATER		
STABILIZED WATER		
	<u>7/17/07</u>	
SAMPLE TYPE NUMBER SAMPLE TYPE SAMPLE RECOVERY BLOW COUNTS (per 6 inches) U.S.C.S. GRAPHIC LOG DEPTHS	E (tag) LITHOLOGIC DESCRIPTION (Edd) OIL	DEPTH (feet)
GM 1.2	Silty Gravel (GM), yellowish brown (10YR 5/4), well-graded subangular fine to coarse gravel to 2 inches diameter, moist	
38 ML 1.2	Silt (ML), dark yellowish brown (10YR 3/4), dry to moist 0.0	_
- 13 13 13 CL 4.0	Silty Clay (CL), dark yellowish brown (10YR 3/4), medium plasticity, dry, very hard 0.0	-
5 EB-31(A)-5.5		5
- 4 4 7 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Silty Clay (CL), dark yellowish brown (10YR 4/6), medium plasticity, dry to moist, very hard  0.0	-
5 CL 88.8	0.0	-
10 5 7 ML	Silt (ML), dark yellowish brown (10YR 4/6), dry to moist  0.0	10
EB-31(A)-10.5	Silty Clay (CL), dark yellowish brown (10YR 4/6), medium plasticity, moist, firm  0.0	-
_ 5 CL	0.0	-
- 5 8 ML	Clayey Silt (ML), dark yellowish brown (10YR 4/6), nonplastic to low plasticity, moist  0.0	-
EB-31(A)-15.5	Silty Clay (CL), dark yellowish brown (10YR 4/6), medium plasticity, moist, firm  0.0	<u>15</u>
5 7 CL	0.0	-
5 8 14	0.0	-
20 5 ML 19	- 00	20
EB-31(A)-15.5 6 8 10 5 7 8 CL 5 8 14 19 19	Silty Clay (CL), dark yellowish brown (10YR 4/6), medium plasticity, moist, firm  0.0  0.0  Clayey Silt (ML), dark yellowish brown (10YR 4/4), low plasticity, moist, firm  (Continued Next Page)	
PROVED BY:	DATE:	



	JECT NAME H			um		BORING NUMBER E					
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	BLOW COUNTS (per 6 inches)	U.S.C.S.	DEPTHS (feet)	LITHOLOGIC DESCRIPTION		DEPTH (feet)			
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07   WA  A  A  A  A  A  A  A  A  A  A  A	EB-31(A)-20.5		10	ML	20.5	Clayey Silt (ML), dark yellowish brown (10YR 4/4), moist, firm (continued)  Bottom of boring at approximately 20.5 feet  Borehole backfilled with cement grout (5 sacks per 50 gallons water)	0.0				
AAA  MOD  MOD  MOD  MOD  MOD  MOD  MOD	MMENTS  ROVED BY:					DATE:	.FI	R			

CLIEN	ECT NAME_H IT _Hanson Ag			um			BORING NUMBER EB-31(B PAGE 1 OF 3				
PROJ	ECT LOCATIO	N_30	000 Bu	ısch F	Road, F	Pleasanton, California DRILLING CONTRACTOR_HEW Drilling					
PROJ	ECT NUMBER	001	-0956	7-02		DRILLING METHOD_Hollow Stem Auger (CME 75)					
LOCA	TION Not reco	orded	t			STAMP (IF APPLICABLE) AND/OR NOTES					
SAMP	LING METHO	<b>D</b> _Ca	alifornia	a Mod	lified; d	ontinuous soil core					
GROU	JND ELEVATION	<b>) N</b> N	lot ava	ilable		HOLE DIAMETER 8 inches					
TOP C	OF CASING EL	.EVA	TION	N/A		HOLE DEPTH 70.0 ft					
l_	RST ENCOUNT				67.5 ft						
▼ STA	ABILIZED WA	TER	64.8 f	t –							
	ED BY Larry				DA	TE 7/16/07					
DEPTH (feet)	111	SAMPLE	S	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION  (teet)	PID (ppm)	DEPTH (feet)			
_		X				Silty Gravel (GM) / Gravelly Silt (ML), olive brown (2.5Y 4/4), poorly graded subangular fine gravel, moist	0.0	_			
-				GM/ ML		at 1.5 to 5.4. DID readings from ouger suttings	0.0	-			
-				IVIL		at 1.5 to 5 ft, PID readings from auger cuttings	0.0	-			
- 5						5.0		5			
- 5	EB-31(B)-5.5			ML		Clayey Silt (ML), dark brown (10YR 3/3), low plasticity, moist, firm 6.0	0.0	<u> </u>			
-						Silt (ML), dark brown (10YR 3/3), moist, no staining or odor	0.0	-			
-		ΙХ					0.0	-			
				ML			0.0	-			
10		$  V \rangle$				10.0	0.0	10			
	EB-31(B)-10.5		1			Silty Clay (CL), dark brown (10YR 3/3), medium plasticity, moist, firm	0.0	-10			
-							0.0	-			
-								-			
-				CL				-			
- 15								- 15			
	EB-31(B)-15.5		5 7 13			16.0	0.0	10			
		$\prod_{i}$	<del>)                                    </del>		• 4	Sand with Gravel (SP), olive brown (2.5Y 4/4), poorly graded fine-grained sand, abundant subrounded fine gravel, moist	0.0	-			
		X	8 12 8	SP	,	abundant subjounded tine gravet, moist	0.0	-			
		$\prod$	3 5 10	<u> </u>	(XXX)	18.5 Silty Clay (CL), dark yellowish brown (10YR 4/4), low to medium plasticity, moist,	0.0	-			
20		$\prod$	10	CL		Slity Clay (CL), dark yellowish brown (10YR 4/4), low to medium plasticity, moist, firm at 20 feet, becomes very hard	0.0	20			
	MENTS	L		ļ	<u> </u>	(Continued Next Page)		20			

	NT Hanson Ac		ates					BORING NUMBER EB-31(			
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)		
	EB-31(B)-20.5		3 3 3				Silty Clay (CL), dark yellowish brown (10YR 4/4), low to medium plasticity, moist, very hard (continued)	0.0			
-							at 21.5 feet, start logging from auger cuttings		25		
<u>25</u> -							at about 25 feet, color changes to dark brown (10YR 3/3)		25		
30									30		
- 35 -				CL					35		
- 40 -									40		
- 45 -	-								45		
-											
50 <b>COI</b>	MMENTS				<i>\( \( \text{X} \text{X} \)</i>		(Continued Next Page)		50		
ΔPP	ROVED BY:						DATE:	LF	R		

		ECT NAME_H IT_Hanson Ag			um			BORING NUMBER I	BORING NUMBER EB-31(			
	DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)		
-	55 60 65	EB-31(B) -GGW			GC/ CL		<u>▼</u>	Clayey Gravel with Sand (GC) / Gravelly Clay with Sand (CL), dark brown (10YR 3/3), medium-grained sand, wet  depth to water measured at 64.8 feet with Solinst after drilling  depth to water in sediments somewhere between 65 and 70 feet during drilling  Bottom of boring at approximately 70 feet Borehole collapsed to approximately 60 feet Borehole collapsed to approximately 60 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 64.8 feetB.B		55 		
BORING+WELL 2007 001-096		MMENTS  ROVED BY:_						DATE:	LFI	R		



l	IECT NAME_H NT_Hanson Ag			um			BOF	RING NUMBER E	B-3 GE 1 (	
	ECT LOCATION			ısch F	Road, F	Pleasar	on, California DRILLING CONTRACTOR I			
PRO	ECT NUMBER	001	-0956	7-02			DRILLING METHOD Hollow	Stem Auger (CME 75)		
LOCA	ATION Not rec	ordec	d				STAMP (IF APPLICABLE) A	AND/OR NOTES		
SAMI	PLING METHO	<b>D</b> _Ca	alifornia	a Mod	lified d	riven w	h 140-lb hammer			
GRO	JND ELEVATION	<u> </u>	lot ava	ilable		HOLI	DIAMETER 8 inches			
тор	OF CASING EL	.EVA	TION	N/A		HOLI	DEPTH_20.0 ft			
FII	RST ENCOUNT	TERE	D WA	TER_						
ST	ABILIZED WA	TER_								
LOG	GED BY Larry	Lapu	yade		DA	ATE _7	6/07			
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION		PID (ppm)	DEPTH (feet)
						0.6	Gravel fill over asphalt concrete			-
-			35 35 16	GC		2.0	Clayey Gravel (GC), olive brown (2.5Y 4/4), poorly grade moist	d subangular fine gravel,	0.0	_
-		$\prod$	8	SP	9/-/-	3.0	Sand (SP), gray (2.5Y 5/1), poorly graded fine- to coarse	-grained sand, dry	0.0	_
		$\mathbb{R}^{2}$	1 <u>4</u>			0.0	Silty Clay (CL), dark brown (10YR 3/3), medium plasticity	, moist, very hard	0.0	-
5	EB-31(C)-5		10	CL		5.0	at 4.5 feet, dry intervals		0.0	5
					770707	0.0	at 5 feet, water in borehole			
							No sampling from 5 to 8 feet due to obstruction; see con	nment below]		_
_						8.0				_
			5 5 6	ML		8.7	Silt (ML), dark olive brown (2.5Y 3/3), moist Silty Clay (CL), dark olive brown (2.5Y 3/3), medium plas	ticity, mariet and	0.0	
10		$+\langle \cdot \rangle$	6 3				Silty Clay (CL), dark onve brown (2.51 3/5), medium plas	ucity, moist, soit		10
	EB-31(C)-10.5	X	5	CL					0.0	
		$\prod$	3 6			11.5	Silt (ML) / Silty Clay (CL), dark olive brown (2.5Y 3/3), lov	v to medium plasticity,	0.0	
		$\mathbb{H}$	3				moist, firm			_
		$    \rangle$	3						0.0	
15			4 10						0.0	15
L	EB-31(C)-15.5		10	ML/ CL						_
		$\prod$	6 6						0.0	_
		$    \rangle$	6 9						0.0	_
		$\mathbb{H}$	9							_
20	EB-31(C)-20	$\coprod X$	6 7			20.0	Bottom of boring at approximately 20 feet Borehole backfilled with cement grout (5 sacks per 50 ga	llons water)	0.0	20
COI	MENTS									
	Pounded from 6 Pulled approxin	5 to 6 nately	feet; r y 60 fe	no rec et of t	covery elepho	becaus one wir	encountered metal wire at base of borehole at approxim from auger. Drilled to 8 feet to resume sampling.		E	D
APP	ROVED BY:_						DATE:	<b>2</b>	. <b>Г</b>	N

## **COMMENTS**

	APPROVED BY:	DATE:
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- 1		ECT NAME_H IT Hanson Ag			um			BORING NUMBER	<b>EB-3</b> AGE 1	<b>5(A)</b>
-					usch R	Road, F	Pleasanton, California	DRILLING CONTRACTOR HEW Drilling		
P	ROJ	ECT NUMBER	001	-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)		
		TION Not reco						STAMP (IF APPLICABLE) AND/OR NOTES		
					a Mod	ified d	iven with 140-lb hammer			
		IND ELEVATION								
		OF CASING EL								
		ST ENCOUNT								
		ABILIZED WA								
		ED BY Larry	_			DA	.TE _7/17/07			
							<u> </u>			t)
	DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	S.	GRAPHIC LOG	rhs st)	LITHOLOGIC DESCRIPTION	(mdd)	DEPTH (feet)
	H	APLE	SAMI	V V V F	U.S.C.S.	I LO	(feet)	·	PID (p	H.H.
		SAN	, 5							DE
			X	20 36 50			Silty Gravel (GM), light gravel to 2 inches diam	olive brown (2.5Y 5/3), well-graded subangular fine to coarse neter, dry	0.0	_
+			$\prod$	40 44 40	GM		at 2.5 to 4 feet, petrole	um product observed: dry, similar to asphalt concrete, trace	0.0	_
$\perp$		EB-35(A)-3		40 80	-		oil	<b>,</b> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		_
-		EB-35(A)-4		90	_		4.5		0.0	_
_	5		X	22 38 50			Gravelly Clay (CL), oliv	ve brown (2.5Y 4/4), medium plasticity, abundant subangular 2 inches diameter, moist, firm	0.0	5
Ī				11 16					0.0	
ľ				16 11	CL		at 7.5 feet .2-1/2-inch-r	diameter gravel in sampler shoe; no recovery		_
T				13 12 13			at 7.5 feet, 2-1/2-111611-0	manifector graver in sampler shoe, no recovery		_
┟,	10	EB-35(A)-9.5		4 5			at 9 feet, increasing mo	pisture, very soft, less gravel	0.0	10
-	10			6			10.5	anni in atalu 40 F fact	0.0	10
							Bottom of boring at app Borehole backfilled with	proximately 10.5 feet h cement grout (5 sacks per 50 gallons water)		
4/07										
10/2										
.00.9										
۲ 200 ما										
R SE										
2 2										
OM.										
N RAC										
ANSO										
7-02 H	CON	IMENTS								
1-0956										
00 20										
L 20(										
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07										D
N N N	APPF	ROVED BY:					DATE:		LF	N

	IECT NAME_H NT_Hanson Aç			um			BORING NUMBER E	<b>B-3</b> :	<b>5(B)</b> OF 1
PROJ	IECT LOCATION	ON_30	000 Bu	usch F	Road, F	Pleasant			
PROJ	IECT NUMBER	<b>R</b> _001	-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)		
LOCA	ATION Not rec	ordec	i				STAMP (IF APPLICABLE) AND/OR NOTES		
SAME	PLING METHO	D_Ca	liforni	a Mod	lified d	riven witl	h 140-lb hammer		
GRO	JND ELEVATION	<b>ON</b> _N	lot ava	ailable		HOLE	DIAMETER 8 inches		
TOP	OF CASING EI	LEVA	TION	N/A		HOLE	<b>DEPTH</b> 10.0 ft		
FIF	RST ENCOUN	TERE	D WA	TER					
ST	ABILIZED WA	TER							
LOGG	GED BY Larry	Lapu	yade		DA	ATE <u>7/1</u>	7/07		
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
			14 38 50			<u> </u>	Silty Gravel (GM), light olive brown (2.5Y 5/3), poorly graded subrounded fine gravel, trace coarse gravel to 2-1/2 inches diameter, dry	0.0	_
+	EB-35(B)-2.5		48 50 50				at 2 to 2.5 feet, black petroleum product observed: dry, similar to asphalt concrete,	0.0	-
+		H	70	GM		t	rrace oil	0.0	-
+		1	40	_				0.0	_
5	EB-35(B)-5 45 10					5.5		0.0	5
	16 12 16					S	Silty Clay (CL), olive brown (2.5Y 4/4), medium plasticity, moist, hard	0.0	-
			7 7 8	CL					_
10	EB-35(B)-9		8 7 8			10.0		0.0	10
10					Y/X/X/	E	Bottom of boring at approximately 10 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)		10_
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07  A  A							Soletiole backlined with certent grout (3 Sacks per 30 gallons water)		
BORING+WELL 2007 001-09567-02 H.  44  45  46  46  46  46  46  46  46  46	MMENTS  ROVED BY:						DATE:	. <b>F</b> l	R

	JECT NAME <u>H</u> NT Hanson Ag			um		BORIN	G NUMBER E	<b>B-3</b> :	5(C)
				ısch F	Road, F	easanton, California DRILLING CONTRACTOR HEW			
	JECT NUMBER					DRILLING METHOD Hollow Ste			
	ATION Not reco					STAMP (IF APPLICABLE) AND/			
				a Mod	ified d	ven with 140-lb hammer			
						HOLE DIAMETER 8 inches			
		-				HOLE DEPTH _11.5 ft			
	RST ENCOUNT								
	ABILIZED WA								
	GED BY Larry	_			DΔ	FE 7/18/07			
						7710,01			æ
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	Ø LITHOLOGIC DESCRIPTION  de (100 m)  de		PID (ppm)	DEPTH (feet)
_			26 20 26	GM		Silty Gravel (GM), light olive brown (2.5Y 5/3), well-graded su gravel to 3 inches diameter, dry	bangular fine to coarse	0.0	
-	EB-35(C)-2.5		26 21 20 21	GC		2.5	- /	0.0	-
5	EB-35(C)-5.5		14 12 14	sw		subrounded fine gravel, moist	,g	0.0	5
-			11 17 27	CL		Silty Clay (CL), light olive brown (2.5Y 5/3), medium plasticity	moist, firm	0.0	-
-			17 39 9 9			Silty Sand (SM), olive brown (2.5Y 4/4), fine-grained sand, mo	pist	0.0	-
10	EB-35(C)-10.5		17 23 27	SM		below 10 feet, trace gravel		0.0	10
T 10/24/07					i i i	Bottom of boring at approximately 11.5 feet Borehole backfilled with cement grout (5 sacks per 50 gallons	water)		
PT 2006.GU									
PJ LFR SE								ı	
N RADUM.G								Ĭ	
IANSO									
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07  W O	<u>MMENTS</u>								
3ORING+W	ROVED BY:					DATE:		.FI	R

	IECT NAME_Ha NT _Hanson Ag			um			BORING NUMBER EB-35(D) PAGE 1 OF 1			
				ısch F	Road, F	Pleasanton, California	DRILLING CONTRACTOR HEW Drilling			
PRO	IECT NUMBER	001	-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)			
	ATION Not reco						STAMP (IF APPLICABLE) AND/OR NOTES			
				a Mod	lified d	riven with 140-lb hammer				
GRO	JND ELEVATIO	<b>N</b> _N	lot ava	ilable		HOLE DIAMETER 8 inches	_			
ТОР	OF CASING EL	EVA	TION	N/A		HOLE DEPTH 11.0 ft	_			
			_				-			
	ABILIZED WA						_			
	GED BY Larry I	_			DA	ATE _7/17/07	_			
DEPTH (feet)			BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG		LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)	
-		X	14 30 35	GM		Silty Gravel (GM), ligh gravel to 2-1/2 inches	t olive brown (2.5Y 5/3), well-graded subangular fine to coarse diameter, dry	0.0		
-	EB-35(D)-2.5		14 26 19	Olvi		3.0 sediment	m product observed: dry, black, asphalt-like coating on	0.0		
- 5		X	13 14 14	-		to 2 inches diameter, r	rown (2.5Y 4/4), medium plasticity, trace fine to coarse gravel moist, firm to hard	0.0	5	
-	EB-35(D)-5.5		7 7 10					0.0		
-		X	5 7 7	CL				0.0	-	
10	EB-35(D)-9.5		5 7 7	-				0.0	10	
						11.0				
						Bottom of boring at ap Borehole backfilled wit	proximately 11 feet th cement grout (5 sacks per 50 gallons water)			
COL	MMENTS  ROVED BY:					DATE:		_F	R	

NUMBER 001  Not recorded  METHOD Ca  LEVATION N	1-09567 d	7-02	oad, F	leasanton, California	DRILLING CONTRACTOR HEW Drilling  DRILLING METHOD Hollow Stem Auger (CME 75)  STAMP (IF APPLICABLE) AND/OR NOTES	AGE 1 (	
Not recorded  METHOD Ca	d						
METHOD Ca					STAMP (IF APPLICABLE) AND/OR NOTES		
LEVATION_N	alifornia				,		
		a Modi	fied; c	ontinuous soil core			
	lot ava	ilable		HOLE DIAMETER 8 inches			
SING ELEVA	TION	N/A		HOLE DEPTH 70.0 ft			
NCOUNTERE	D WA	TER 6	5.5 ft				
ZED WATER	65.2 f	t					
Y Larry Lapu			DA	TE 7/18/07 - 7/19/07			
SAMPLE 17 PE NUMBER SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
					ve brown (2.5Y 5/4), medium plasticity, trace gravel, moist,		
							_
)							_
						0.0	5
1(A)-5.5	7 9 12					0.0	_
	1					0.0	_
X						0.0	-
/\	$\bigvee$					0.0	-
1(A)-10.5	8 12 15	CL				0.0	10 _
				at 12 feet, color change	es to black (10YR 2/1)	0.0	_
\						0.0	-
/\						0.0	-
I(A)-15.5	5						15
	12 19					0.0	_
	1					0.0	-
\						0.0	-
/\						0.0	-
<u>                               </u>	1		<u> </u>		(Continued Next Page)		20
	11	1(A)-5.5 7 9 12  I(A)-10.5 8 2 15  I(A)-15.5 8 5 12 19	SAMPLE 17 PL	SAMPLE 17PL  NUMBER NUMBER NUMBER SAMPLE SAM	Silty Clay (CL), light olivery hard  Solution   LITHOLOGIC DESCRIPTION  SITURD AND BY 12  Sitty Clay (CL), light olive brown (2.5Y 5/4), medium plasticity, trace gravel, moist, very hard  (A)-10.5  (A)-10.5  (A)-15.5  (A)-15	A   A   A   A   A   A   A   A   A   A	

	IECT NAME H NT Hanson Ag			um			BORING NUMBER	BORING NUMBER SS-31(A				
DEPTH (feet)	0)	SAMPLE	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)			
_	SS-31(A)-20.5		13 18 18				Silty Clay (CL), black (10YR 2/1), medium plasticity, trace gravel, moist, very hard (continued)	0.0				
-							at 22 feet, color changes to yellowish brown (10YR 6/8)	0.0				
- -		$    \rangle$						0.0				
<u>25</u>	SS-31(A)-25.5		12 13 17					0.0	25			
_			17	_				0.0	-			
-		$    \rangle$						0.0				
30	SS-31(A)-30.5		8					0.0	30			
-		$\bigcap_{i \in I} X_i$	8 8 10					0.0				
-								0.0				
- 35				CL					35			
_			1					0.0				
_		$    \rangle$						0.0				
-								0.0				
- 40								0.0	40			
-	SS-31(A)-40.5	X	18 17 23					0.0				
-				_				0.0	-			
-		$    \rangle$						0.0				
45		$\prod$						0.0	45			
-		$    \rangle$						0.0				
-		$    \rangle$						0.0				
_		$    \rangle$				49.0		0.0				
50				GM		50.0	Silty Gravel with Sand (GM), olive brown (2.5Y 4/4), well-graded subrounded fine to coarse gravel to 1-3/4 inches diameter, fine-grained sand, moist	0.0	50			
COM	<u>MMENTS</u>						(Continued Next Page)		D			
APP	ROVED BY:_						DATE:	LF	N			



	JECT NAME_H NT_Hanson Ag			um			BORING NUMBER	BORING NUMBER SS-3			
DEPTH (feet)	0)	SAMPLE	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)		
	SS-31(A)-50.5		12 17 23				Silty Clay (CL), yellowish brown (10YR 6/8), medium plasticity, trace gravel, moist, very hard	0.0			
-  -	SS-31(A)-52.5						at 52 to 53 feet, dark olive gray (5Y 3/2), petroleum hydrocarbon odor	0.0			
- 55		$  \rangle$						0.0	55		
_ 55							at 55 to 55.5 feet, trace subangular fine gravel	0.0	33		
-								0.0			
_		$    \rangle$		CL				0.0			
- 60								0.0	60		
-	SS-31(A)-60.5		8 12 17					0.0			
-		1						0.0			
_		$    \rangle$						0.0			
65	SS-31(A) -GGW SS-31(A)-65.5					65. <b>5</b> 7	depth to water measured at 65.2 feet in borehole at end of drilling depth to water in sediments at approximately 65.5 feet at time of drilling	0.0	65		
-	33-31(A)-03.3					03.3/	Silty Gravel (GM), olive brown (2.5Y 4/4), well-graded subangular to subrounded fine to coarse gravel to 1-1/2 inches diameter, wet	0.0			
-				GM				0.0			
70						70.0	Bottom of boring at approximately 70 feet		70		
							Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 65.2 feetB.				
	MMENTS  ROVED BY:						DATE:	LFI	R		



- 1		ECT NAME_H			um			BORING NUMBER	<b>SS-3</b> AGE 1	
İ	PROJ	ECT LOCATION	ON_30	00 Bı	usch F	Road, P	Pleasanton, California	DRILLING CONTRACTOR HEW Drilling		
	PROJ	ECT NUMBER	R_001	-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)		
-	LOCA	TION Not rec	orded					STAMP (IF APPLICABLE) AND/OR NOTES		
	SAMF	LING METHO	<b>D</b> Co	ntinuo	ous so	il core				
		JND ELEVATION					HOLE DIAMETER 8 inches			
		OF CASING EL					HOLE DEPTH 70.0 ft			
- 1		RST ENCOUNT		-		66.0 ft				
		ABILIZED WA								
		SED BY Larry				DΔ	TE _7/19/07 - 7/20/07			
ŀ				rauc			1110/01 1/20/01			Œ.
	DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)		LITHOLOGIC DESCRIPTION .	PID (ppm)	DEPTH (feet)
ŀ		S	+	GM	* + +	•	Silty Gravel (GM), olive brown	n (2.5Y 4/4), poorly graded subangular fine gravel, dry		
ŀ	-			Givi		0.8	. ,	2.5Y 4/4), medium plasticity, dry, very hard	-	_
ŀ	-		$  \dot{\mathbf{M}} $							-
ŀ	-		$  \perp \rangle$							_
ŀ	-									_
	5	SS-31(B)-5.5								5
ļ	-	33-31(B)-3.3							0.0	_
L			$    \rangle$						0.0	_
L	-		H							_
	-									_
	10									10
	_	SS-31(B)-10.5		CL					0.0	_
									0.0	
0/24/0			$    \rangle \rangle$				at 12 feet, color changes to b	lack (10YR 2/1)		
TO.	-									
2006.0	15		$  \   \  $							15
SEPT		SS-31(B)-15.5					at 15 feet, color changes to o	live brown (2.5Y 4/4)		
FR	-								0.0	_
M.GPJ	-								0.0	-
RADU	-		$    \rangle  $						0.0	-
NOSN	- 20		$    \rangle $						0.0	20
02 HAI	20 <b>CON</b>	MENTS			VNX/	1		(Continued Next Page)		20
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07		ROVED BY:_					DATE:		LFI	R

	JECT NAME_H NT_Hanson Ag			um		BORING NUMBER S	BORING NUMBER SS-31(B) PAGE 2 OF 3		
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)	
-	SS-31(B)-20.5					Silty Clay (CL), olive brown (2.5Y 4/4), medium plasticity, moist, very hard (continued)	0.0		
- - - 25	SS-31(B)-25.5					at 25 feet, color changes to yellowish brown (10YR 4/6)	0.0	25	
-		HW					0.0		
-		$ \cdot $				at 27 feet, color changes to olive brown (2.5Y 4/4)	0.0	-	
-							0.0		
30	SS-31(B)-30.5							30	
-	33-31(B)-30.3	$\lceil \setminus \rceil$					0.0		
-		$\  \ $					0.0		
-		$ \cdot $					0.0		
35			CL				0.0	35	
-		$ \cdot $	OL				0.0		
-							0.0		
-		$    \downarrow  $					0.0		
-	00.04(D) 40						0.0	40	
40	SS-31(B)-40							40	
<u>-</u>		$\ \cdot\ $					0.0		
		$    \rangle  $					0.0		
-						at 43 to 43.5 feet, very dark grayish brown (2.5Y 3/2)	0.0		
45								45	
-		$  \   \  $					0.0		
-		$    \rangle  $					0.0		
-							0.0		
- 50	SS-31(B)-50				50.0		0.0	50	
COI	<u>MMENTS</u>					(Continued Next Page)			

APPROVED BY:\_

	JECT NAME <u>F</u> NT <u>Hanson A</u>			um		BORING NUMBER S	SS-3	<b>1(B)</b> OF 3
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
-				14		Gravel (GP), olive brown (2.5Y 4/3), poorly graded subrounded fine to coarse gravel to 2-1/2 inches diameter, moist	0.0	-
- - _ 55						at 55 feet, increase in maximum gravel size to 3 inches, increasing clay		- - 55
-			Y				0.0	-
60	SS-31(B)-60.5	5	GP				0.0	60
- - 65								- 65
-	SS-31(B) -GGW				⊽	depth to water in sediments at approximately 66 feet during drilling		- - -
- 70				.,.	70.0			70
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07   A  A  A  A						Bottom of boring at approximately 70 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 66 feetB.		
ORING+WELL 2007 001-0956:	MMENTS  ROVED BY:	1	ı	1	ı	DATE:	LFI	R



		ECT NAME_H			um			BORING NUMBER	<b>SS-3</b> <sup>o</sup> AGE 1 (	
	PROJ	ECT LOCATION	ON_30	00 B	usch R	oad, P	leasanton, California	DRILLING CONTRACTOR HEW Drilling		
	PROJ	ECT NUMBER	R_001	-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)		
	LOCA	TION Not rec	orded					STAMP (IF APPLICABLE) AND/OR NOTES		
	SAMF	LING METHO	<b>D</b> Co	ntinud	ous so	l core				
	GROL	IND ELEVATI	ON N	ot ava	ailable		HOLE DIAMETER 8 inches			
	TOP (	OF CASING EI	LEVA <sup>.</sup>	TION	N/A		HOLE DEPTH 70.0 ft			
	∑ FIF	ST ENCOUN	TEREI	D WA	TER 6	6.0 ft				
		ABILIZED WA								
	LOGG	ED BY Larry	Lapuy	/ade		DA	TE _7/20/07			
Ī	et)	J. 1	>						$\Box$	et)
	⊣ (fe	E TY BER	IPLE VER	U.S.C.S.	PHG SG	DEPTHS (feet)	1	LITHOLOGIC DESCRIPTION	PID (ppm)	۲ (fe
	DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.	GRAPHIC LOG	DEP (fe		·	PID (	DEPTH (feet)
		S,				0.5	A 1 11 1 1 5 1		$\bot$	٥
						0.5	Asphalt concrete fragments a Silty Clay (CL), light olive brow	nd gravei wn (2.5Y 5/4), medium plasticity, moist, very hard	-	_
			$    \rangle$						9,999	_
										_
										_
	5									5
		SS-31(C)-5.5								_
	_		$    \rangle /  $						9,999	
			$    \rangle$						0,000	
			$    \rangle$							
	10		$    \rangle$	CL			at 9 to 10 feet, black (10YR 2	/1)	9,999	10
		SS-31(C)-10.5	5	CL						
/24/07	-		$    \rangle$							
DT 10	-		$    \rangle$							_
2006.G	15		$  \   \   \  $						2,500	15
SEPT 2	13	SS-31(C)-15.5	5				at 15 feet, color changes to ol	live brown (2.5Y 4/4)	2,300	15
LFR	-		$    \rangle /  $							_
M.GPJ	-		$    \rangle$				at 47 5 to 40 5 foot blook (40)	VP 2(4)	274	_
RADUI	-		$    \rangle$				at 17.5 to 18.5 feet, black (10	TR 2/1)		_
NOSI	-	SS-31(C)-19.5	5	N 41		19.5		(40)(0.5(0)	71	-
02 HAI	20 CON	MENTS		ML	אואו	<u> </u>		own (10YR 5/8), nonplastic to low plasticity, moist, hard (Continued Next Page)		20
19567-										
7 001-(										
. 200,										
+WEL										
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07	APPI	ROVED BY:_					DATE:		LF	K

S S S S S S S S S S S S S S S S S S S		
SAMPLE TYPE NUMBER NUMBER NUMBER NUMBER OU.S.C.S. U.S.C.S. GRAPHIC LOG DEPTHS (feet)  GRAPHIC OUTHING TORING  PID (ppm)	DEPTH (feet)	
ML 20.5 Clayey Silt (ML), yellowish brown (10YR 5/8), moist, hard (c Silt (ML), dark yellowish brown (10YR 3/4), wet  ML ML ML	continued) 220	-
SS-31(C)-25.5  CL  Silty Clay (CL), dark brown (10YR 3/3), medium plasticity, v  CL  Silty Clay (CL), dark brown (10YR 3/3), medium plasticity, v  28.8  SP  29.5  Sand with Gravel (SP), light yellowish brown (2.5Y 6/3), poor	ery hard	25
SS-31(C)-30  ML  Silt (ML), light olive brown (2.5Y 5/4), moist  GM  31.8  GM  31.8  GM  32.5  Silty Gravel (GM), olive brown (2.5Y 4/4), well-graded subal coarse gravel to 2 inches diameter, moist  Clayey Silt (ML), light olive brown (2.5Y 5/6), moist	ngular to subrounded fine to	30
35 Silty Clay (CL), light olive brown (2.5Y 5/6), medium plastici		40
43.0  Gravel (GP), light olive brown (2.5Y 5/6), poorly graded sub 3 inches diameter, moist	angular fine to coarse gravel to 0.0	45
GP GP	0.0	
Gravel (GP), light olive brown (2.5Y 5/6), poorly graded sub 3 inches diameter, moist  GP  GP  GOMMENTS  (Continued Next Page)  APPROVED BY:	<b>□</b> LFF	50

	DJECT NAME <u>H</u> ENT <u>Hanson A</u>			um		BORING NUMBER S	S-3	1(C) OF 3
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
-	SS-31(C)-51					Gravel (GP), light olive brown (2.5Y 5/6), poorly graded subangular fine to coarse gravel to 3 inches diameter, moist (continued)	0.0	-
- 55								55
-							0.0	_
60			GP					60
-	SS-31(C)-60.5	5	, Gi				0.0	_
- - 65							0.0	- 65
-	SS-31(C) -GGW SS-31(C)-67.5				⊽	depth to water in sediments at approximately 66 feet during drilling	0.0	_
-	00-01(0)-01.		1					-
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07  AP 0-1					70.0	Bottom of boring at approximately 70 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 66 feetB.		70
30RING+WELL 2007 001-0956 <b>A</b>	OMMENTS PROVED BY:	•				DATE:	. <b>F</b> I	R



		IECT NAME_H			um			BORING NUMBER	<b>SS-3</b> PAGE 1 (	
ŀ	PROJ	ECT LOCATION	ON_3	000 B	usch F	Road, F	Pleasanton, California	DRILLING CONTRACTOR HEW Drilling		
	PROJ	ECT NUMBER	R_001	1-0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 75)		
	LOCA	TION Not rec	ordec	d				STAMP (IF APPLICABLE) AND/OR NOTES		
		PLING METHO			ous so	il core				
	GROL	JND ELEVATION	<u> </u>	lot ava	ailable		HOLE DIAMETER 8 inches			
	тор (	OF CASING EI	LEVA	TION	N/A		HOLE DEPTH 75.0 ft			
	∑ FIF	RST ENCOUN	TERE	D WA	TER_6	65.5 ft				
	<b>▼</b> ST	ABILIZED WA	TER	66.8	ft					
	LOGG	SED BY Larry	Lapu	yade		DA	TE <u>7/20/07 - 7/23/07</u>			
	DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)		LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
Ī			$\prod$	GM	7	1.0	Silty Gravel (GM), dark brown	n (10YR 3/3), poorly graded subangular fine gravel, moist	0.0	
İ	-		ПX			1	Silty Clay (CL), light olive bro	wn (2.5Y 5/3), medium plasticity, moist, very hard	0.0	_
Ī	-		1 (-)	4					0.0	_
Ī	-									
ŀ	- 5									5
İ		5 SS-31(D)-5.5								
f	-		$    \rangle /$						0.0	-
ŀ	-								0.0	_
ŀ	-		$\prod$						0.0	_
ŀ	- 10		1 // \	$\setminus$					0.0	10
ł	10	SS-31(D)-10.5	5	CL						10
ł	-		$    \rangle$						0.0	-
24/07	-								0.0	_
T 10%	-		$\prod$				at 12.5 feet, color changes to	dark olive brown (2.5Y 3/3)		_
06.GD	-		$\square$	$\bigvee$					0.0	
EPT 20	_ 15	SS-31(D)-15		1						15
LFR SE	-		$    \rangle$						0.0	-
.GPJ	-		$      \rangle$						0.0	-
ADUM	-		$\prod$						0.0	-
SON R	-	SS-31(D)-19.5	5 <b> </b>	$\bigvee$					0.0	_
D2 HAN	20 CON	∐ //MENTS	1 1	]	<u> </u>	a		(Continued Next Page)		20
)9567-(	<u> </u>									
, 001-(										
2007										
+WELL										
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07	APP	ROVED BY:_					DATE:	<u>U</u>	LF	K

	IECT NAME H NT Hanson Ag			um		BURING NUMBER 3	BORING NUMBER SS-31(D			
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)		
-						Silty Clay (CL), dark yellowish brown (10YR 3/4), low to medium plasticity, moist, soft to firm	0.0			
- - 25	SS-31(D)-25		CL				0.0	25		
- -		$  \bigvee$				at 25 feet, increasing plasticity, hard	0.0	-		
_		$    \rangle$			29.0	at 28 feet, color changes to olive brown (2.5Y 4/4)	0.0			
30	SS-31(D)-30		ML			Clayey Silt (ML), olive brown (2.5Y 4/4), moist	0.0	30		
_					32.0	Silty Clay (CL), olive brown (2.5Y 4/4), low to medium plasticity, moist, soft	0.0	-		
- _ 35						at 33.5 feet, becomes dark brown (10YR 3/3), medium plasticity, firm	0.0	35		
_			CL				0.0			
-		$\left  \right  \right\rangle$					0.0			
<u>40</u>	SS-31(D)-40				41.0			40		
- -						Clayey Gravel (GC), dark brown (10YR 3/3), subangular to subrounded fine to coarse gravel to 2-1/2 inches diameter, moist	0.0			
- - _ 45							0.0	45		
-			GC				0.0			
-							0.0			
_ 50								50		
	MMENTS ROVED BY:					(Continued Next Page)  DATE:	L <b>F</b> I	R		

	JECT NAME_H NT_Hanson Aq			um		BORING NUMBER S	PAGE 3 OF		
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)	
_	SS-31(D)-50.5					Clayey Gravel (GC), dark brown (10YR 3/3), subangular to subrounded fine to coarse gravel to 2-1/2 inches diameter, moist (continued)	0.0		
-						at 50 to 51 feet, moist to wet	0.0	-	
								-	
55								55	
							0.0	-	
							0.0	-	
			GC					-	
60								60	
	SS-31(D)-60.5						0.0	-	
			<u> </u>				0.0	-	
•								-	
65					6E E	depth to water in sediments at approximately 65.5 feet during drilling		65	
-		$  \bigvee$		19/	65. <b>5</b> ∑	Sand with Gravel (SP), olive brown (2.5Y 4/4), poorly graded fine- to coarse-grained sand, gravel, trace clay, wet		-	
	SS-31(D) -GGW					depth to water measured at 66.8 feet in borehole after drilling		-	
				•				-	
70		<del>                                     </del>	SP					70	
•				,				-	
-			<u> </u>					-	
-								-	
75				•	75.0	Bottom of boring at approximately 75 feet		75	
						Borehole backfilled with cement grout (5 sacks per 50 gallons water)			
						After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 66.8 feetB.			
	<u> </u>								
COI	<u>MMENTS</u>								
APP	ROVED BY:_					DATE:	LFI	R	

	ECT NAME_H				um			BORING NUMBER SS-	123( GE 1 (	
PROJ	ECT LOCATIO	N_	300	00 Bu	ısch R	oad, F	leasanton, California	DRILLING CONTRACTOR HEW Drilling		
PROJ	ECT NUMBER	00	01-	0956	7-02			DRILLING METHOD Hollow Stem Auger (CME 95)		
LOCA	TION Not reco	orde	ed					STAMP (IF APPLICABLE) AND/OR NOTES		
SAMP	LING METHO	<b>D</b> _0	Cor	ntinuo	us soi	I core				
GROL	IND ELEVATION	DN_	No	ot ava	ilable		HOLE DIAMETER 8 inches			
тор с	OF CASING EL	.EV	ΆΤ	ION_	N/A		HOLE DEPTH 20.0 ft			
∑ FIR	ST ENCOUNT	ER	EC	) WA	TER <u> 1</u>	6.0 ft				
<b>▼</b> ST.	ABILIZED WA	TEF	R_1	15.7 f	t					
LOGG	ED BY Larry	Lap	uy	ade		DA	TE _7/24/07			
et)	BE .		$\searrow$						_	et)
⊣ (fee	E TY IBER	1PLE	NER ER	U.S.C.S.	PHG SG	(feet)		LITHOLOGIC DESCRIPTION	PID (ppm)	۲ (fee
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE		U.S	GRAPHIC LOG	DEF (fe		•	PID	DEPTH (feet)
	δ		<u>"</u>	CM/		0.5	Oilt Occurs (OM) / Occurs It of	NH (MI) Hald all a bound (O.E.Y.E.(O.) and a shared all		٥
_			X	GM/ _ML_/		0.5	subangular to subrounded fin	Silt (ML), light olive brown (2.5Y 5/3), poorly graded e to coarse gravel to 1-1/4 inches diameter, dry 2/1), medium plasticity, moist, very hard		_
-							Silly Clay (CL), black (101R 2	2/1), medium plasticity, moist, very nard		_
-										_
_										_
5	CC 422/AA)		╛				at E fact, calculations to via	m, dark man, (2.5V.2/4), trace subsequiles are al		5
_	SS-123(AA) -5.5	lacksquare	M				at 5 feet, color changes to ve	ry dark gray (2.5Y 3/1), trace subangular gravel	0.0	_
_	SS-123(AA)	$\bigsqcup_{i}$	ĂΙ						0.0	
_	SS-123(AA) -7.5		$\dashv$					t observed: black asphalt bound with gravel and sand, pieces	0.0	
_							up to 2-1/2 inches, dry, no od	or, similar to asphalt concrete (i.e., roadway paving)		
10										10
	SS-123(AA) -10.5			CL			at 10 feet, color changes to o	live (5Y 5/3)	0.0	
		$  \   \  $	VI							
		Ш,	Λl				at 12.5 feet, petroleum produc	ct observed: black asphalt as described at 7.5 feet	0.0	
-			\						0.0	
- 15							at 14.5 to 15 feet, concrete ch			15
	SS-123(AA) -15.5	<b>XX</b>	7			¥	depth to water measured at 1	ct observed: black asphalt as described at 7.5 feet 5.65 feet in borehole after drilling	0.0	
-	SS-123(AA) -GGW	× 1	XI			¥	at 16 feet, color changes to b 16 feet during drilling	lack (5Y 2.5); depth to water in sediments at approximately	0.0	_
-	SS-123(AA)		′\						0.0	_
-	-18		$\dashv$							_
- 20						20.0	Bottom of boring at approxima	ately 20 feet ent grout (5 sacks per 50 gallons water)		20
20		щ			<u> </u>	12U.U	Dorentile Dackilled With Cellic	ont grout to sacks per so gailons water)		

### **COMMENTS**

BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07

15.5 ft: Petroleum product (e.g., asphalt) was observed only at depths noted above (7.5, 12.5, and 15.5 feet).
15.6 ft: After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 15.6 feetB; water was turbid, containing soil sediments.

\_\_\_\_\_ DATE: \_\_ APPROVED BY:\_



	T Hanson Ag	ggrega	ates			BORING NUMBER SS	GE 1 (	
PROJI	ECT LOCATION	ON_30	000 Bı	usch Road	, Pleasanton, California	DRILLING CONTRACTOR HEW Drilling		
PROJI	ECT NUMBER	R_001	-0956	7-02		DRILLING METHOD Hollow Stem Auger (CME 75)		
LOCA	TION Not rec	orded	l			STAMP (IF APPLICABLE) AND/OR NOTES		
SAMP	LING METHO	<b>D</b> Co	ntinuo	ous soil co	re			
	ND ELEVATION				HOLE DIAMETER 8 inches	-		
	F CASING EI				HOLE DEPTH 30.0 ft	-		
	ST ENCOUN		_			-		
_	ABILIZED WA					-		
					DATE 7/22/07	-		
	<b>ED BY</b> <u>Larry</u> ш				DATE 7/23/07	-	Ī	
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG DEPTHS	(feet)	LITHOLOGIC DESCRIPTION .	PID (ppm)	DEPTH (feet)
					Gravelly Silt (ML), light brown gravel to 2 inches diameter,	nish gray (10YR 6/2), abundant subangular fine to coarse		
		$    \rangle$			graver to 2 inches diameter,	moist		
		$    / \rangle$					NM	
			1					
			ML					
5	SS-123(F1) -5.5							5
	-5.5	$    \rangle$						
		$    \rangle$					NM	
			1				INIVI	
			<u></u> -		Concrete or cement material	, chunks or slabs, generally ground to powder during drilling,	-	
10					no recovery except cored a 4	4-1/2-inch length at approximately 10 feet		10
		X		A 4 4				
			]	2 4 4 2 4 4				
				4 4			NM	
				7 A A				
15	SS 122/E1\		L	2 15				15
	SS-123(F1) -15.5		SM		Silty Sand (SM), grayish brov	wn (2.5Y 5/2), fine-grained sand, trace gravel, moist		
		$    \rangle$		17		product observed: black asphalt concrete, dry		
			ML	18	)	/ 5/1), possibly ground concrete, moist	NM	
					Concrete or cement material	, ground to powder during drilling, no recovery		
20				7 4 A				20
	MENTS			1.4 21		(Continued Next Page)		

	JECT NAME_⊢ NT _Hanson Aç			um		BORING NUMBER SS-	BORING NUMBER SS-123(F		
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)	
-	SS-123(F1) -GGW				<b>_</b>	Concrete or cement material, ground to powder during drilling, no recovery depth to water measured at 20.8 feet in borehole after drilling, clear water		-	
<u>25</u> - - -			CL		25.0	Silty Clay (CL), olive brown (2.5Y 4/4), medium plasticity, moist, soft (logged from auger cuttings)	NM	25 _ - - -	
BORING+WELL 2007 001-09567-02 HANSON RADUM.GPJ LFR SEPT 2006.GDT 10/24/07					30.0	Bottom of boring at approximately 30 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 20.8 feetB.B		30	
ORING+WELL 2007 001-09  AA  AA  AA	MMENTS ROVED BY:					DATE:	.FI	R	



CLIE	NT Hanson Ag		n Rad ates	iuiii			BORING NUMBER SS-123(F2 PAGE 1 OF 2				
PRO	JECT LOCATION	<b>DN</b> _30	000 Bı	usch R	oad, P	leasanton, California	DRILLING CONTRACTOR HEW Drilling				
PRO	JECT NUMBER	R_001	-0956	67-02			DRILLING METHOD_Hollow Stem Auger (CME 75 and	d CME 95)	)		
LOC	ATION Not rec	ordec	t				STAMP (IF APPLICABLE) AND/OR NOTES				
SAM	IPLING METHO	<b>D</b> Co	ontinuo	ous soi	l core						
GRO	OUND ELEVATION	ON N	lot ava	ailable		HOLE DIAMETER 8 inches					
TOP	OF CASING EL	_EVA	TION	N/A		HOLE DEPTH 30.0 ft					
	IRST ENCOUNT		_								
1_	TABILIZED WA										
	GED BY Larry				DA	TE 7/23/07 - 7/24/07					
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE		GRAPHIC LOG	DEPTHS (feet)		LITHOLOGIC DESCRIPTION .	PID (ppm)	DEPTH (feet)		
-			V			subrounded fine gravel, dry at 1.2 feet, color changes to d	Silt (ML), light brownish gray (2.5Y 6/2), poorly graded gray (2.5Y 6.1), moist rval, silt, dark reddish gray (5YR 4/2), dry; odor of ground	0.0			
5	SS-123(F2)-6		GM/ ML					0.0	5		
10	SS-123(F2) -11.5				45.0			0.0	10		
15 _ 15 _ 15 _ 15 _ 15 _ 15 _ 15 _ 15 _	SS-123(F2) -16.5		SP	7 7	15.0 16.5	subrounded gravel, moist	olive brown (2.5Y 3/3), poorly graded fine-grained sand,	0.0	- 15		
20				0 4 4 A	20.0				20		
NG+WELL 2007 001-09567-02 H/	MMENTS PROVED BY:					DATE:	(Continued Next Page)	LF			

1	JECT NAME_H NT_Hanson Ag			um		BORING NUMBER SS	-1 <b>23</b> GE 2 (	
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)
_	SS-123(F2)-21		SC/ CL			Clayey Sand (SC) / Sandy Clay (CL), olive gray (5Y 4/2), medium-grained sand, low plasticity fines, trace fine to coarse gravel to 1-1/2 inches diameter, moist to wet	0.0	
- - 25 -	SS-123(F2) -GGW				<u>₹</u>	Concrete or cement material, ground to powder during drilling, no recovery; obstruction and refusal (see comments)  depth to water measured at 25.8 feet in borehole after drilling, water turbid with soil sediments		25
- - 30				4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	30.0			30
				. 4. 4.	55.5	Bottom of boring at approximately 30 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)		- 55
<b>CO</b> 22 f						After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 25.8 feetB.		
22 f	MMENTS t: Encountered of with more pow	concre	ete ob	structi	on at 2	2 feet on 7/23/07; refusal; ended drilling for the day. Returned on 7/24/07 5) and advanced through the concrete obstruction.		
_							FI	R
APF	PROVED BY:_					DATE:		

### **COMMENTS**



	IT Hanson Ag	greg	ates			BORING NUMBER SS	GE 1				
PROJ	ECT LOCATIO	N_3	000 B	usch R	oad, F	Pleasanton, California DRILLING CONTRACTOR HEW Drilling	DRILLING CONTRACTOR HEW Drilling				
PROJ	ECT NUMBER	001	-0956	7-02		DRILLING METHOD Hollow Stem Auger (CME 95)					
LOCA	TION Not reco	ordec	t			STAMP (IF APPLICABLE) AND/OR NOTES					
SAMP	LING METHO	<b>D</b> _Cc	ontinuo	ous soi	l core						
GROU	IND ELEVATIO	<u> </u>	lot ava	ailable		HOLE DIAMETER 8 inches					
TOP C	OF CASING EL	.EVA	TION	N/A		HOLE DEPTH 30.0 ft					
∑ FIR	ST ENCOUNT	ERE	D WA	TER 2	6.0 ft						
	ABILIZED WAT										
	GED BY Larry I				DA	ATE 7/24/07					
DEPTH (feet)	111	SAMPLE RECOVERY		GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	PID (ppm)	DEPTH (feet)			
DEF	SAM	RS		ō			□	DEF			
			GM		1.0	Silty Gravel (GM), dark grayish brown (10YR 4/2), poorly graded subrounded fine to coarse gravel to 1-1/2 inches diameter, asphalt concrete fragments to 2-1/2 inches diameter in top 1/2 foot, moist					
						Silty Clay (CL), olive brown (2.5Y 4/4), medium plasticity, moist, very hard; concrete fragment in sampler shoe results in poor recovery					
			CL								
5					5.0			5			
	SS-123(F3) -5.5		GM CL		5.5	Silty Gravel (GM), dark grayish brown (10YR 4/2), poorly graded subrounded fine to coarse gravel to 1-1/2 inches diameter, moist  Silty Clay (CL), light olive brown (2.5Y 5/4), low plasticity, dry, very hard	0.0	J			
		$    \rangle$			7.0	trace gravel at soil contact with concrete					
		ΙM		9 4 4 P 4 4		Concrete	0.0				
		/\		2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			0.0				
10	SS-123(F3)				10.0	Silty Clay (CL), black (10YR 2/1), medium plasticity, moist, very hard		10			
	-10.5 ´	$\bigcap$					0.0				
		$    \rangle$				at 11.5 feet, color changes to dark olive gray (5Y 3/2)	0.0				
		ΙIĂ					0.0				
		$    \rangle \langle \rangle \langle \rangle \langle \rangle \langle \rangle \langle \rangle \langle \rangle \langle \rangle \langle \rangle \langle $					0.0				
15	00.400/50\		CL					15			
	SS-123(F3) -15.5	$\blacksquare$				at 15.5 to 17.5 feet, trace gravel	0.0				
		$    \rangle /  $					0.0				
						at 17.5 feet, color changes to dark yellowish brown (10YR 3/6)	0.0				
		$    \rangle \langle \rangle$									
							0.0	20			
20											

	IECT NAME_H NT_Hanson Ag			lum		BORING NUMBER SS	5-123 AGE 2 (	( <b>F3</b> )
DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY		GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION .	PID (ppm)	DEPTH (feet)
-	SS-123(F3) -20.5		CL			Silty Clay (CL), dark yellowish brown (10YR 3/6), medium plasticity, moist, very hard (continued)	0.0 0.0 0.0	- - -
_ 25	SS-123(F3) -25.5 SS-123(F3) -GGW		ML ML		26.₫ <u>√</u> 26.₫ <u>√</u>	depth to water in sediments at approximately 26 feet during drilling Silt with Sand (ML), dark olive gray (5Y 3/2), fine-grained sand, wet Clayey Silt (ML), dark olive gray (5Y 3/2), low plasticity, moist depth to water measured at 26.85 feet in borehole 40 minutes after drilling, turbid water		25
30 A A A A A A A A A A A A A A A A A A A					30.0	Bottom of boring at approximately 30 feet Borehole backfilled with cement grout (5 sacks per 50 gallons water)  After completion of drilling, collected grab groundwater sample using a disposable bailer; depth of sample is estimated to be at 26.9 feetB.		30
APP	MMENTS ROVED BY:					DATE:	LFI	R



# APPENDIX D

**Groundwater Monitoring Well Sampling Field Sheets** 

# WATER-QUALITY SAMPLING INFORMATION

		300000000000000000000000000000000000000
Project Name HANSON KADI	) M	Project No. 001-09567-0
Date 7/12/07		Sample No. TW-5
Samplers Name	PUYADE	
Sampling Location Plaasanto	n, a	110.70
Sampling Method	BANLEY	-53.20
Analyses Requested TPA TPHa F	ud DX, VO(5 (FUII SCAN)	57,50
Number and Types of Sample Bottles use		24500
Method of Shipment HAND DEINE	· .	5750
GROUND WATER	SURFACE WATER	9,20.0.0
Well No. TW-5	Stream Width	
Well Diameter (in.)	Stream Depth	
Depth to Water, 53.20	Stream Velocity	
	Rained recently?	
Water in Well Box	Other	
Well Depth (ft) 110,70	. ,	, and the second
	2-inch casing = 0.16 gal/ft	
Height of Water Column in Well 57.50	4-inch casing = 0.65 gal/ft	
Water Volume in Well 9,2 GAL	5-inch casing = 1.02 gal/ft	LOCATION MAP
	6-inch casing = $1.47$ gal/ft	

				٠	21.11 6			•
TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)		ER	REMARKS
405				, , , , , , , , , , , , , , , , , , ,				BEAIN BALLER
14.50		9.5	20.2	6.17	62			BEGIN BAILER Clean
1534		18.5	20%	7.21	-2		·	Cleu
1618		28	19.5	7.43	-14			Clau
1630	53,20							Collet Shipk
ε .	4,00							•
-								
	<u>.</u>						:	
			:					
	÷	<del></del>	-			,		

Suggested Method for Purging Well

7

## WELL MONITORING DATA SHEET

Project #	‡: 070725·1	اسرد		Client: LFR					
Sampler				Start Date: 7	25/07				
Well I.D	1:35/1E10D	8		Well Diameter: 2 3 4 6 8					
1	ell Depth: 24			Depth to Water: 56.32					
Before:		After:		Before: After:					
Depth to	Free Produ	ct:		Thickness of	Free Product (fee	t):			
Reference		<b>€</b> VC)	Grade	D.O. Meter (i	· · · · · · · · · · · · · · · · · · ·	YSI HACH			
Purge Meth	Bailer Disposable Ba Positive Air D Electric Subme	isplacement ersible	Waterra Peristaltic Extraction Pump  Cother 2 Red;	£(o   Well Diam 1"	Disposable Extraction Dedicated  Mathematical Control  Mathematic	Port Tubing WPETUBING  Diameter Multiplier 0.65			
25 1 Case Volu	_(Gals.) X me Spe	= = = = = = = = = = = = = = = = = = =	= 76 Gals. s Calculated Volum	e 2"	0.16 6" 0.37 Other	1.47 radius <sup>2</sup> * 0.163			
Time	Temp.	pН	Conductivity (mS	Turbidity (NTU)	Gals. Removed	Observations of			
940	18.6	6.93	2468	95	initial	56.40 -2			
947	18.8	691	।५११	6	25	5640 O			
953	20.4	6.90	1215	5	<i>5</i> 0	510.44 2			
959	20-6	6.96	1208	5	75	56.48 5			
				Final DTW:	56-30	5			
Did well	dewater?	Yes	<b>W</b>	Gallons actual		75			
Sampling	Time: \o c	8		Sampling Date: 7/25 lo7					
Sample I.	D.: 35/1E	1008		Laboratory:	STL	CET			
Analyzed		H-G BTEX	MTBE TPH-D	Other: see Col	L				
Equipme	nt Blank I.D	).:	· @	Duplicate I.D.					
Analyzed	for: TP	H-G BTEX	MTBE TPH-D	Other:					
D.O. (if re	eq'd):		Pre-purge:	mg/ <sub>L</sub>	Post-purge:	$^{ m mg}/_{ m L}$			
ORP (if re	eq'd):		Pre-purge:	mV	Post-purge:	mV			

WELL MONITORING DATA SHEET

OW-)

Client: 4F8

rroject #	07072	5-PW-1	<u> </u>	Client: LFR						
Sampler:	0 w			Date: 7-25-67						
Well I.D.	35//8	10K2		Well Diameter: 2 3 4 6 8						
Total We	ll Depth:	590.0		Depth to Water Pre: SS.50 Post:						
	Free Produ			Thickness	<del></del>					
Reference	ed to:	(vc)	Grade	Flow Cell		oddet (10				
Purge Metho Sampling M	ethod:	2" Grundf Dedicated	Tubing	×	Peristaltic P New Tubing		Bladder Pump Other			
<del></del>		/·	3=1042.7	·	Pump Deptl	: <u>300</u>	<u>,                                    </u>	·		
Time	Temp.	pН	Cond. (mS or (aS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals, or mL).	Observations		
1027	19.3	7.4	880	5		90	348			
1210	19.3	7.6	781	6	_	76	696			
1320	18.9	7.6	788	5		73	1043			
		···								
						-				
Did well d	lewater?	Yes (	No		Amount a	ctually a	vacuated: /04	· · ·		
Sampling	Time: / 7	325	<del>/</del>		Sampling	D .		3 g/s.		
<del></del>	D.: 35//	FILIT	· · · · · · · · · · · · · · · · · · ·				7-25-07			
Analyzed			~ \		Laborator	-	·			
			BTEX) MTB			Other:				
Anhmen	t Blank I.I	J.;	Time		Duplicate	I.D.: 3	/1Elok2 -	OUP @ 13		

## WELL MONITORING DATA SHEET

			erio billi.						
· 070725.DL	<i>,</i> (		Client: LFR						
		200 7 1 7 30000	T						
	Ν3				6 8				
			Depth to Water: 56-80						
	After:								
Free Produ	ct:		Thickness of	Free Product (fee	t):				
ed to:	Æ₹Ò	Grade			YSI HACH				
Bailer Disposable Bai Positive Air Di Electric Subme	ler splacement rsible	Waterra Peristaltic Extraction Pump  ∧ Other Z" Rody	Yell Dian	Disposable Extraction Dedicated Cother: FE  Multiplier Well D  0.04 4"	Port				
			2"						
Temp.	pН	Conductivity (mS or (S)	Turbidity (NTU)	Gals. Removed	Observations				
21.1	7-48	748,0	27	instal	56.80 5				
206	<b>%</b> .16	735.2	6	21.5	56.80 60				
226	6.96	742-2	5	43	56.80 6				
21.8	7-13	738.4	5	645	56.80 G				
			Final D7	W. 56-84					
dewater?	Yes	<b>4</b>		•	CS				
Time: (102									
			Laboratory:		C&T)				
,		MTBE TPH-D	Other: See Co						
nt Blank I.D	·.:	<b>@</b>							
for: TP	H-G BTEX	MTBE TPH-D	Other:						
eq'd):		Pre-purge:	$^{ m mg}/_{ m L}$	Post-purge:	$^{ m mg}/_{ m L}$				
eq'd):		Pre-purge:	mV		mV				
	Free Produced to:  od: Pumpiv Bailer Disposable Bai Positive Air Di Electric Subme  (Gals.) X  ne Spec  Temp. (°F or C)  21.1  20.6  21.8  dewater?  Time: 102  for: TP  tt Blank I.D  for: TP	After:  Free Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product: ed to:  Product:  Pree Product:  Product:	After:  Free Product: ed to:  Pro Grade  Od: Pumpintake @~180  Bailer Waterra  Disposable Bailer Peristaltic  Extraction Pumpintake @ Aother 2" Redo  (Gals.) X 3 = 64.7 Gals.  Temp. Conductivity (mS or ns)  Provided Pumpintake @ Aother 2" Redo  Aother 2" Redo  Aother 2" Redo  Aother 2" Redo  Aother 2" Redo  Temp. Conductivity (mS or ns)  Al. 1 148 748.0  Aother 2 180.0  Aother 2	Start Date: 3  Well Diamet  Depth to War  After: Before:  Free Product: Thickness of ed to: Pro Grade D.O. Meter ( od: Pumpintake @~180' Sampling M  Bailer Peristaltic  Positive Air Displacement Electric Submersible Aother Z'' Red **  (Gals.) X 3 = (41.7 Gals.  Temp. (Gals.) X Specified Volumes Calculated Volume  Temp. (°F or O pH or S) (NTU)  21.1 1-48 7-48.0 27  2-06 8.16 7-35.2 6  2-1.8 7-13 7-38.4 5  Final pr  dewater? Yes So Gallons actua  Time: (102 Sampling Date of the second of t	Start Date: \$\frac{1}{2\sigma_0} \sqrt{2}\$  Well Diameter: \$\sigma_3  4\$  Well Diameter: \$\sigma_3  4\$  Depth to Water: \$\frac{5}{6\sigma_0}  80\$  After: Before:  Free Product: Thickness of Free Product (fee dot): \$\frac{1}{2\sigma_0}  \text{Grade}  \text{D.O. Meter (if req'd):}  \text{Ondeter (if req'd):}   Ondeter				