Combined Well Installation and Groundwater Monitoring Report for the Period of April 1 through June 30, 2008 Former Hot Mix Asphalt Plant Area (AOC #1) Hanson Aggregates Radum Facility 3000 Busch Road, Pleasanton, California ACEH Case #RO0002941 and Geotracker Global ID # SLT19719376

July 23, 2008
001-09567-07

Prepared for
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July 23, 2008

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

Subject: **Combined Well Installation and Groundwater Monitoring Report for the Period of April 1 through June 30, 2008, Former Hot Mix Asphalt Plant Area (AOC #1), Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California, ACEH Case #RO0002941 and Geotracker Global ID # SLT19719376**

Dear Mr. Wickham:

The enclosed "Combined Well Installation and Groundwater Monitoring Report" ("the Report") was prepared by LFR Inc. (LFR) on behalf of Hanson Aggregates West Region for the former hot mix asphalt plant area (located within area of concern [AOC] #1) of the Hanson Aggregates Radum Facility, located at 3000 Busch Road, Pleasanton, California ("the Site"). This Report presents and discusses the results of well installation and development activities completed during June 2008 and of the first of four planned quarterly groundwater monitoring events conducted at the Site.

The investigation and groundwater monitoring were conducted in accordance with the February 28, 2008 work plan approved by Alameda County Environmental Health in its technical comment letter dated March 31, 2008. Results are in agreement with previous investigation results and confirm that groundwater beneath the Site has not been affected by total petroleum hydrocarbons previously detected in limited areas of the Site. LFR plans to conduct the second groundwater monitoring event during third quarter 2008.

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

If you have any questions or comments concerning this Report, please call me at (925) 426-4170 or Katrin Schliewen of LFR at (510) 652-4500.

Sincerely,

Lee W. Cover
Environmental Manager
Hanson Aggregates Northern California

Attachment

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CERTIFICATIONS

LFR Inc. has prepared this Combined Well Installation and Second Quarter 2008 Groundwater Monitoring Report on behalf of Hanson Aggregates West Region 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.

July 23, 2008

Katrin M. Schliewen, P.G. — Date
Senior Hydrogeologist
California Professional Geologist No. 7808

July 23, 2008

Ron Goloubow — Date
Senior Associate Geologist

EXECUTIVE SUMMARY

This "Combined Well Installation and Groundwater Monitoring Report for the period of April 1 through June 30, 2008" presents the results of well installation activities and the first quarterly groundwater monitoring event conducted by LFR Inc. (LFR) in the former hot mix asphalt plant area of the Hanson Aggregates Radum Facility ("the Site"). The primary objective of the well installation activities was to install three new groundwater monitoring wells to expand the groundwater monitoring well network at the Site, at the request of Alameda County Environmental Health (ACEH). This report also presents the results of the first of four planned quarterly groundwater monitoring events scheduled to be conducted at the Site.

The installation of the three new wells and the initiation of quarterly groundwater monitoring at the Site were conducted according to the scope of work described in the "Work Plan for Additional Well Installations and Quarterly Groundwater Monitoring and Reporting," submitted to ACEH on February 28, 2008 and approved by ACEH in a March 31, 2008 comment letter.

Well Installation Activities

LFR successfully installed groundwater monitoring wells MW-8 through MW-10 during June 9 through 11, 2008. Wells MW-8 through MW-10 were installed to monitor groundwater immediately downgradient from the former truck scale (well MW-8), former soil boring B26 (well MW-9), and former soil boring B22 (well MW-10). The wells were constructed with wells screens intersecting first encountered groundwater, similarly to existing wells MW-1 through MW-7. The only evidence of petroleum hydrocarbons in soil observed during the installation of the wells was a black asphalt material in the soil samples collected between approximately 27 and 32 feet below ground surface from the soil boring drilled for well MW-9. The black asphalt material observed at this depth was consistent with the "deep" soil contamination encountered during previous subsurface investigations completed in the northern portion of the Site. Two depth-discrete soil samples were collected, one from within the affected soil interval and one from immediately beneath the affected soil interval. Analytical and investigation results confirm that the deep soil contamination is vertically limited, consists of heavy petroleum hydrocarbon material such as asphalt material, and appears to be relatively immobile.

Quarterly Groundwater Monitoring Event

The groundwater monitoring event that was completed during this reporting period represents the first periodic groundwater monitoring event for the Site. Depth-to-groundwater measurements were made prior to sampling. Equipotential contours drawn based on groundwater elevations indicate that the local groundwater flow direction is

approximately to the west and northwest, with a horizontal groundwater gradient of approximately 0.015 to 0.025 foot per foot.

Wells MW-1 through MW-10 (except for well MW-4) were purged and sampled on June 16, 2008. Well MW-4 could not be sampled due to an insufficient amount of water in the well. Analytical results of groundwater samples collected during this monitoring period indicate that none of the compounds analyzed for were detected above laboratory reporting limits in any of the wells. The analytical results confirm that groundwater beneath the Site has not been affected by the total petroleum hydrocarbons (TPH) or TPH-related compounds detected in limited areas in soil.

The quarterly groundwater monitoring results are consistent with results from wells MW-1 through MW-7 previously monitored and sampled on October 22, 2007. LFR will conduct the second groundwater monitoring event during third quarter 2008 (July 1 through September 30, 2008). All groundwater samples collected will be analyzed for the same parameters analyzed for during the current quarter; in addition, samples collected from wells MW-3, MW-8, and MW-9 will be submitted for the analysis of dissolved metals.

1.0 INTRODUCTION

This "Combined Well Installation and Groundwater Monitoring Report" presents the results of the well installation activities and groundwater monitoring activities conducted during the period of April 1 through June 30, 2008 by LFR Inc. (LFR) on behalf of Hanson Aggregates West Region ("Hanson") in the former hot mix asphalt plant area of the Hanson Aggregates Radum Facility located at 3000 Busch Road, Pleasanton, California ("the Site"; Figure 1). The groundwater monitoring event that was completed during this reporting period represents the first periodic groundwater monitoring and reporting event for the Site. The Site is located within area of concern #1 (AOC #1). Three new wells were installed to increase the groundwater monitoring network at the Site, and quarterly groundwater monitoring was initiated to monitor groundwater quality and groundwater flow direction and gradient for approximately one year.

The scope of work of the investigations conducted at the Site was described in the "Work Plan for Additional Well Installations and Quarterly Groundwater Monitoring and Reporting in the Former Hot Mix Asphalt Plant Area (AOC #1) of the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California, SLIC Case #RO0002941 and GeoTracker ID SLT19719376" ("the Work Plan"), which was submitted to Alameda County Environmental Health (ACEH) on February 28, 2008. ACEH approved the Work Plan on March 31, 2008 with one technical comment. In its approval letter, ACEH requested that, as part of the quarterly groundwater monitoring program, sampling for dissolved metals be conducted during the second quarterly groundwater monitoring event instead of the first as proposed in the Work Plan, to allow additional time to pass between installing the three new groundwater monitoring wells and sampling for dissolved metals.

LFR completed the well installation work during June 9 through 11, 2008, and conducted the first of four planned quarterly groundwater monitoring events on June 16, 2008. As requested by ACEH in its March 31, 2008 letter, this combined report presents both a summary of the well installation activities completed and the results of the quarterly groundwater monitoring event. This report is organized as follows.

- Section 2.0 presents background information including a site history and summary of previous environmental investigations conducted at the Site.
- Section 3.0 describes the methodology of the activities conducted.
- Section 4.0 presents and discusses the results of the well installation activities and of the first quarterly groundwater monitoring event.
- Section 5.0 summarizes the overall conclusions of environmental conditions at the Site based on the results of the well installation and groundwater monitoring completed and presents recommendations.

- Section 6.0 defines LFR's professional limitations.
- Section 7.0 provides a reference list of primary documents related to environmental investigations conducted at the Site and throughout the Radum property to date.

2.0 BACKGROUND

2.1 Site Description and History

The approximately 1,050-acre property consisting of the former Radum facility is located at 3000 Busch Road, Pleasanton, California, partly within the city limits of Pleasanton and partly within an unincorporated area of Alameda County (Figures 1 and 2). The property includes three large ponds or lakes (Lake I, Lake H, and Cope Pond), created during historical aggregate mining operations, and approximately 320 acres of developable land (approximately the southern third; Figure 2). During 2007, the majority of the property was transferred to Legacy Partners ("Legacy") as part of a real estate transaction. Hanson retained ownership of an approximately 15-acre parcel (Parcel 1; AOC #1) located in the southwestern corner of the property, and also retained the responsibility for conducting the characterization investigations of petroleum hydrocarbon-affected soil and groundwater in the SS-123 area.

As described in the Phase I Environmental Site Assessment (ESA) by ENV America Inc. (ENV 2006a), mining of sand and gravel in the Livermore-Amador Valley began prior to 1900. Mining at the property began in approximately 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 likely were backfilled with debris and mine waste, as is evident from debris encountered during drilling in various areas of the property. Hanson purchased the property in 1991 and continued mining operations until 2001 when mining was discontinued due to lack of available aggregate materials. Based on subsurface investigations conducted throughout the property, historical mining and aggregate processing operations have resulted in localized petroleum hydrocarbon-affected soil and groundwater in certain localized areas.

The Site consists primarily of the former hot mix asphalt plant area where historical activities included the use of paving oil, lubricants, and diesel fuel. Most of the structures associated with the former hot mix asphalt plant have been demolished. Currently visible at the Site are the concrete base of the truck scale, the base of the paving oil containment structure, several concrete pads, and miscellaneous debris. Standing water and petroleum product have been observed in the paving oil containment structure.

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 Water Agency, Alameda County Flood Control and Water Conservation District ("Zone 7") Annual Report for the Groundwater Management Program (Zone 7 2007). The 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 and others at the Site have encountered unconsolidated sediments consisting predominantly of coarse-grained sediments (mostly gravels) and intervals of finer-grained sediments (clays and silts). Because of the historical aggregate mining activities throughout the property, some areas (including at the Site), likely contain fill material in addition to native sediment. The locations of the former mining pits are not well known or documented. In some soil borings advanced at the Site, particularly in the northern and western portions of the Site, approximately uniformly sized fine-grained gravel ("pea gravel") and concrete and metal pieces were encountered at depths up to approximately 35 feet bgs, indicative of historical mining pits subsequently filled with sorted aggregate material and/or debris.

Groundwater beneath the Site has been encountered approximately between 45 and 65 feet bgs in temporary soil borings advanced by LFR and other consultants during previous and the current investigations. Based on groundwater elevations in groundwater monitoring wells recently installed at the Site, the local groundwater flow direction appears to be generally to the west and northwest at a gradient of approximately 0.015 to 0.025 foot per foot.

2.3 Summary of Previous Site Investigations Conducted at the Site

Several subsurface investigations have been conducted throughout the Radum property and at the Site to date by various consultants, including Baseline Environmental Consulting, Brown & Caldwell, ENV, and LFR, on behalf of Hanson and of Legacy. The results of previous investigations, including various Phase I and Phase II ESAs conducted at the Site have been described extensively in reports prepared by ENV and LFR.

The most recent subsurface investigation conducted at the Site was completed by LFR during October 2007. The primary objectives of the characterization investigation were to: further characterize the lateral and/or vertical extent of petroleum hydrocarbons to the south, southwest, and northwest of the former asphalt plant; investigate the nature of the deep soil contamination identified in the northern half of the Site approximately between 30 to 40 feet bgs; and install groundwater monitoring wells to monitor groundwater flow and quality over time. These objectives were met by advancing 11 temporary soil borings to collect depth-discrete soil samples and grab groundwater samples for laboratory analyses, collecting samples from the free product encountered in the former paving oil structure and from the deep soil contamination for specialized leaching and fingerprinting analyses, and installing seven groundwater monitoring wells approximately around and in the vicinity of the former hot mix asphalt plant. The new wells were developed and surveyed, and initial groundwater samples were collected for laboratory analyses.

Based on the results from the October 2007 investigations and well installation activities, LFR concluded that:

- The lateral and/or vertical extent of petroleum hydrocarbons in soil had been sufficiently characterized at the Site.
- The deep soil contamination is relatively old, of limited extent, and immobile; was probably buried in place during historical mining operations; and is unlikely to further affect soil or significantly affect groundwater beneath the Site.
- The local groundwater flow direction in October 2007 was approximately to the west-northwest.
- Groundwater beneath the Site does not appear to have been significantly affected by total petroleum hydrocarbons (TPH) detected in soil beneath the Site.

LFR recommended initiation of a periodic groundwater monitoring and reporting program at the Site, comprised of sampling groundwater monitoring wells on a quarterly basis for approximately one year. If after one year of quarterly monitoring, no significant concentrations of compounds are detected in samples collected from the groundwater monitoring wells, groundwater monitoring should cease and the wells should be abandoned. In addition, LFR recommended that remaining debris and water and petroleum product in the paving oil containment structure be removed and properly

disposed of, and that shallow soils affected by petroleum hydrocarbons be removed and confirmation sampling be conducted. LFR submitted a summary report to ACEH on December 21, 2007, presenting the results of the October 2007 subsurface investigation and aforementioned recommendations (LFR 2007d).

2.4 Regulatory Determinations

Based on its review of the December 21, 2007 summary report prepared by LFR, ACEH generally concurred with the conclusions and recommendations in the LFR report in a comment letter dated January 11, 2008. In particular, ACEH concurred that no further depth-discrete soil or grab groundwater sampling to further characterize the nature and extent of contamination be conducted at the Site at this time. ACEH requested that three additional groundwater monitoring wells be installed at the Site and that a plan for quarterly groundwater monitoring be presented in a work plan. In accordance with the ACEH request, a plan for soil excavation, removal, and confirmation sampling was submitted under separate cover and the soil excavation scope of work is being conducted under a separate work plan and effort to be completed at a later date.

The February 28, 2008 Work Plan describing the scope of work to install three additional groundwater monitoring wells and to initiate quarterly groundwater monitoring at the Site was approved by ACEH in a comment letter dated March 31, 2008. ACEH requested one change in the proposed scope of work, namely that the groundwater monitoring wells proposed to be sampled for dissolved metals be sampled during the second quarterly sampling event instead of the first.

2.5 Investigation Objectives

The primary investigation objectives were as follows:

- Install and develop three new groundwater monitoring wells.
- Initiate a quarterly groundwater monitoring and reporting program.

These objectives were met by completing the scope of work described in the Work Plan and approved by ACEH. Results of the investigation and first quarterly groundwater monitoring event are presented and discussed in this report.

3.0 METHODOLOGY

3.1 Groundwater Monitoring Well Installation

3.1.1 Pre-Field Activities

Permitting

LFR applied for and received the appropriate drilling and well installation permit from Zone 7; a copy of the approved permit is included in Appendix A.

Subsurface Utility Clearance

LFR notified Underground Service Alert (USA) to identify any public underground utilities located in the vicinity of the proposed drilling locations; no utility alerts were received. LFR also subcontracted a private underground utility locator to clear the proposed drilling locations using geophysical location methods; all proposed drilling locations were cleared satisfactorily. Surface soils were too compacted to hand-auger the upper 5 feet as generally is preferred; drilling was initiated starting at ground surface.

Health and Safety Plan

An existing site-specific Health and Safety Plan (HSP) previously prepared by LFR for subsurface investigations at this Site was updated as necessary to address health and safety concerns specific to the planned field activities. Daily health and safety tailgate meetings were conducted prior to beginning fieldwork, and fieldwork was monitored to ensure that appropriate health and safety procedures were followed during the field investigations.

In accordance with Hanson's standard facility operations, LFR and LFR's subcontractors attended on-site health and safety training conducted by a Hanson representative.

3.1.2 Drilling and Groundwater Monitoring Well Installation

Three new groundwater monitoring wells were installed at the Site to increase the existing groundwater monitoring network. The locations of new wells MW-8 through MW-10 are shown on Figure 3.

As was requested by ACEH in its March 31, 2008 letter, well MW-8 is located approximately at the northern end of the former truck scale to evaluate groundwater quality immediately downgradient from the former hot mix asphalt plant; well MW-9 is located approximately northwest of former soil boring B26 to confirm that the TPH as

diesel (TPHd), TPH as motor oil (TPHmo), and 2-methylnaphtalene detected in soil samples collected from approximately 28 and 32 feet bgs from the B26 location have not affected groundwater; and well MW-10 is located approximately northwest of former soil boring B22 to evaluate the detection of elevated TPHd concentrations reported for the grab groundwater samples collected from the B22 location. Wells MW-8 through MW-10 were installed with well screen completed to sample first encountered groundwater, as described in this section. A summary of well completion details is presented in Table 1.

Drilling and Lithologic Logging

LFR subcontracted Precision Sampling and Testing, Inc. ("Precision"), of Stockton, California, a state-certified drilling subcontractor, to conduct the drilling and well installation work using 8-inch-diameter hollow-stem auger (HSA) drilling technology. Drilling and well installation activities were completed during June 9 through 11, 2008.

During drilling, continuous soil cores were collected for lithologic evaluation and field screening. Field boring logs were prepared by an LFR field geologist and contain lithologic soil descriptions based on the Unified Soil Classification System (American Society for Testing and Materials D2488-00), and general observations such as indications of contamination and depth to first encountered groundwater. Soil boring logs were reviewed and edited by a California Professional Geologist, and were transcribed into report-quality graphic logs presented in Appendix B.

Soils encountered during drilling consisted predominantly of coarse-grained sediments (sands and gravels) with intervals of relatively finer-grained sediments (silts and clays). In the soil boring for well MW-8, a concrete slab or similar was encountered between approximately 26 and 27 feet bgs. Soil cores were screened for the possible presence of petroleum hydrocarbons, using visible or olfactory indications and/or using a portable photoionization detector (PID). The only instance of the presence of petroleum hydrocarbon material was identified in the soil boring for well MW-9. Visual indication of thick black asphalt material was observed along with elevated PID readings in the interval from approximately 27 to 32 feet bgs. This interval is consistent with the soil contamination encountered and described during previous subsurface investigations conducted at this depth in the northern portion of the Site.

First groundwater was encountered in sediment approximately between 34 and 43 feet bgs in the three soil borings, although groundwater in the boreholes stabilized approximately between 41.5 to 50.5 feet bgs.

Due to field conditions, two soil borings were advanced in the MW-10 location prior to installing well MW-10. Soil boring MW-10A was advanced to a total depth of approximately 75 feet bgs, but insufficient groundwater was encountered in the soil boring and, therefore, a well was not installed in this soil boring. During drilling of soil boring MW-10A, relatively saturated soils consisting predominantly of poorly graded sand and sand with clay were observed between approximately 45 to 51.5 feet bgs.

Based on observations made during drilling of the soil boring for well MW-9 and based on the depth to water measured in well MW-9 the day after that well was installed, soil boring MW-10A was advanced further to encounter a more significant interval of coarse-grained sediments and groundwater. However, as soil boring MW-10A was advanced further, soils encountered from approximately 51.5 feet bgs to the total depth of the soil boring consisted predominantly of lean clay, and groundwater did not enter the soil boring during drilling. Drilling was halted at the total depth of approximately 75 feet bgs, and the soil boring was abandoned by grouting the borehole from the bottom to ground surface with a cement-bentonite grout. A new soil boring (for well MW-10) was advanced approximately 20 feet southeast of former boring MW-10A. The wet, coarse-grained interval encountered in boring MW-10A between approximately 45 to 51.5 feet bgs also was encountered in the boring for well MW-10 between approximately 45 and 53.5 feet bgs. Lean clay was encountered from approximately 53.5 feet bgs to the total depth of the soil boring (approximately 55 feet bgs). Based on field observations during drilling, well MW-10 was installed in this location.

Downhole drilling and sampling equipment was appropriately cleaned by the drilling subcontractors before it arrived on-site and before use at each new drilling location. Waste soil generated during drilling was placed either on plastic tarps or directly on the ground surface near each temporary soil boring for disposal during future land development activities. Wastewater generated during the field activities was placed in properly labeled sealed drums temporarily stored at the Site pending future disposal.

Depth-Discrete Soil Sampling

In accordance with the Work Plan, LFR retained depth-discrete soil samples for chemical analysis from intervals where field screening and field observations indicated the possible presence of petroleum hydrocarbons in the soil. Based on observations made during the drilling of the soil borings, depth-discrete soil samples were collected from approximately 27.5 and 33.5 feet bgs in the soil boring for well MW-9 and were submitted for chemical analyses. The soil sample collected from approximately 27.5 feet bgs was collected from within the poorly graded gravel with sand interval where black petroleum hydrocarbon material was observed in the soil (approximately between 27 and 32 feet bgs) and elevated PID readings were recorded. The soil sample collected from approximately 33.5 feet bgs was collected from the top of a lean clay interval encountered immediately beneath the black petroleum product observed. The black petroleum hydrocarbon material observed between approximately 27 and 32 feet bgs is part of the affected soil interval encountered during previous subsurface investigations at similar depths and referred to as the “deep soil contamination.” Analytical results of samples collected from this material have indicated that the material contains elevated concentrations of heavy petroleum hydrocarbons similar to asphalt material (analytical results have reported elevated concentrations within the diesel- and motor oil-range of hydrocarbons, and, according to forensics analyses, samples from this material contain even heavier hydrocarbons). Based on field observations of the deep soil contamination, and analytical results for samples collected from within and immediately beneath the

deep soil contamination, this material is relatively immobile, does not readily leach from soil, and does not appear to have significantly affected groundwater.

The two depth-discrete soil samples collected during the June 2008 well installation activities were transferred from the core barrel to clean sample containers, which were sealed, properly labeled, and stored in an ice-chilled cooler for transport to the analytical laboratory under chain-of-custody protocol. The depth-discrete soil samples were analyzed for the following parameters:

- TPHd and TPH as motor oil (TPHmo) by U.S. Environmental Protection Agency (EPA) Method 8015 (after undergoing silica gel cleanup)
- TPHg by EPA Method 8015
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260
- Fuel oxygenates by EPA Method 8260
- Lead scavengers by EPA Method 8260

Groundwater Monitoring Well Installation

Wells MW-8 through MW-10 were installed by Precision after target depths were reached and first groundwater was encountered, as described above (Figure 3).

Each monitoring well was constructed using 2-inch-diameter Schedule 40 polyvinyl chloride (PVC) well casing and machine-slotted Schedule 40 PVC well screens with a 0.020-inch slot size. Well screen filter packs consisting of #3 graded clean silica sand were placed in the borehole annular space around each well screen interval and extended to approximately 2 feet above the top of the well screen. Coated bentonite pellets were placed in the annular space above the filter packs to create an approximately 2- to 4-foot-thick bentonite seal between the filter pack and the cement grout that was used to fill the remaining annular space to near ground surface. Note that, prior to installing wells MW-8 through MW-10, one or more feet of coated bentonite pellets also were added to the bottom of soil borings approximately adjacent to fine-grained sediment (clay), as necessary, to bring the bottom of the soil borings up so that screen intervals were installed adjacent to relatively coarse-grained saturated sediment.

Each monitoring well was equipped with a well cap, and the surface completions consisted of 4-inch-square, aboveground, stove-pipe well boxes equipped with locking access lids, installed in concrete pads. Three steel bollards were installed surrounding each well to protect the well casing and box from damage.

The well completion details are included on the soil boring logs presented in Appendix B, and are summarized in Table 2.

Well MW-8

Well MW-8, located approximately north-northwest of the northern end of the former truck scale structure (Figure 3), was installed on June 9, 2008, to a total depth of approximately 61 feet bgs with a 10-foot-long well screen (Table 2). During drilling, groundwater was first encountered in sediments at approximately 43 feet bgs, in a gravel and sand interval. The soil boring was advanced to a total depth of approximately 65 feet bgs, and water stabilized in the borehole at a depth of approximately 50.5 feet bgs. A clay interval was encountered from approximately 60 to 65 feet bgs. Because of the clay interval encountered, bentonite pellets were placed in the bottom approximately 4 feet of the borehole before the well casing and filter sand were installed.

Well MW-8 was constructed through the HSA with a well screen extending from approximately 51 to 61 feet bgs, adjacent to wet sand, and sand and gravel, intervals. The day after the well installation was completed and prior to well development, the depth to groundwater was measured to be approximately 52.8 feet below top of casing (TOC), and the total depth of the well was measured to be approximately 61.6 feet TOC.

Well MW-9

Well MW-9, located approximately northwest of former soil boring B26 (Figure 3), was installed on June 10, 2008 to a total depth of approximately 52 feet bgs with a 10-foot-long well screen (Table 2). During drilling, groundwater was first encountered at approximately 41.2 feet bgs in a clayey gravel with sand interval, just below an extensive lean clay interval (approximately 32 to 41 feet bgs). The soil boring was advanced to a total depth of approximately 60 feet bgs, and water in the borehole stabilized at approximately 41.5 feet bgs. Lean clay was encountered from approximately 53 feet bgs to the total depth of the boring; bentonite pellets were placed in the bottom approximately 7 feet of the borehole before the well casing and filter sand were installed.

Well MW-9 was constructed through the HSA with a well screen extending from approximately 42 to 52 feet bgs, adjacent to soil intervals described on the boring log as wet clayey gravel with sand, sand with clay and gravel, and sandy silt. The day after well MW-9 was installed and prior to well development, only 2.5 feet of standing water were measured in the well. On June 16, 2008, immediately prior to well development, the depth to groundwater was measured to be approximately 51.5 feet TOC and the total depth of the well was measured to be approximately 55 feet TOC, indicating approximately 3.5 feet of standing water in the well. As described in the following section, despite relatively little water present in the well, well development activities confirmed that well MW-9 recharged sufficiently for purging and sampling purposes.

Well MW-10

Well MW-10, located approximately adjacent to former soil boring B22 (Figure 3), was installed on June 11, 2008 to a total depth of approximately 54 feet bgs with a 10-foot-long well screen (Table). During drilling, groundwater was first encountered at approximately 45 feet bgs in a sand interval, just below an extensive lean clay interval (approximately 36 to 45 feet bgs). The soil boring was advanced to a total depth of approximately 55 feet bgs. Based on the soils encountered in boring MW-10A advanced initially for well MW-10, as described above, the targeted coarse-grained saturated interval was encountered between approximately 45 and 53.5 feet bgs. Lean clay was encountered from approximately 53.5 feet bgs to the total depth of the boring; bentonite pellets were placed in the bottom approximately 1 foot of the borehole prior to installation of the well casing and filter sand.

Well MW-10 was constructed through the HSA with a well screen extending from approximately 44 to 54 feet bgs, adjacent to soil intervals described on the boring log as a wet, poorly graded sand. On June 16, 2008, immediately prior to well development, the depth to groundwater was measured to be approximately 51.3 feet TOC and the total depth of the well was measured to be approximately 57.1 feet TOC, indicating approximately 6 feet of standing water in the well.

3.1.3 Well Development

The three new groundwater monitoring wells were developed on June 13, 2008, at least five days after installation. LFR subcontracted Precision (who in turn subcontracted Del-Tech Geotechnical Support Services) to conduct the well development under the direction of an LFR field geologist. The well development included a combination of bailing using a stainless steel bailer, surging (using a Waterra pump and surge block), and pumping (using a Waterra pump) to remove fine-grained sediment from the wells and improve their hydraulic efficiency.

Depth to water and total well depths were measured before and after well development, and general water-quality parameters were monitored during well development. Wells MW-8 through MW-10 were considered sufficiently developed after general water-quality parameters stabilized and at least 10 casing volumes of water were removed from each well. During well development, approximately 30 gallons of water (20 casing volumes) were removed from well MW-8; approximately 12 gallons of water (15 casing volumes) were removed from well MW-9; and approximately 25 gallons of water (25 casing volumes) were removed from well MW-10. General water-quality parameters equilibrated rapidly; however, turbidity remained high (greater than 1,000 nephelometric turbidity units [NTU]) in each of the wells. Pumping rates of approximately 0.2 gallon per minute (gpm) for well MW-9 and 0.5 gpm for wells MW-8 and MW-10 were sustained with minimal drawdown throughout well development. All downhole equipment was properly steam-cleaned between wells. Wastewater and purge water were contained in labeled 55-gallon steel drums or

60-gallon plastic drums temporarily stored on-site. Copies of well development field forms are included in Appendix C of this report.

3.1.4 Well Location Survey

LFR subcontracted Kier & Wright Civil Engineers & Surveyors, Inc., a licensed land surveyor, to survey the locations and the TOC elevations of the three new groundwater monitoring wells. Well locations presented on Figures 3 through 6 are based on the land survey results.

3.2 Quarterly Groundwater Monitoring

The first of four planned quarterly groundwater monitoring events was completed on June 16, 2008. This monitoring event consisted of measuring depth to groundwater and of purging and sampling groundwater monitoring wells MW-1 through MW-10. The methodology of the quarterly monitoring event is described in this section, and results are presented and discussed in Section 4.0.

3.2.1 Groundwater Elevation Monitoring

Depth-to-groundwater monitoring was conducted prior to purging and sampling, using a Solinst water level indicator and with respect to the TOC. Depth-to-groundwater measurements were recorded on a field sheet, a copy of which is included in Appendix C. Groundwater elevations were calculated by subtracting the depth-to-groundwater measurement from the TOC elevation. Calculated groundwater elevations are presented in Table 2 and on Figure 6.

3.2.2 Groundwater Well Purging and Sampling

Wells MW-1 through MW-10 (except for well MW-4) were purged and sampled using single-use disposable bailers on June 16, 2008, approximately three days after well development was completed. Well MW-4 did not contain sufficient water for purging and sampling. Note that in the Work Plan it was proposed that a low-flow purging and sampling technique would be used during the quarterly groundwater monitoring events. However, to accelerate the purging and sampling event, as well as to provide additional, more vigorous purging of the wells to lower turbidity, purging and sampling during the current quarter were conducted using disposable bailers. This method also was used when wells MW-1 through MW-7 were first sampled in October 2007.

Depth to groundwater and general water-quality parameters were monitored during purging, and the parameters were recorded on field sheets, copies of which are included in Appendix C. The wells were considered sufficiently purged after at least three casing volumes were removed from each well and general water-quality

parameters stabilized. Groundwater samples were collected after purging was completed.

Groundwater samples were collected in clean, laboratory-provided sample containers, properly labeled, and stored in an ice-chilled cooler for transportation to the laboratory under chain-of-custody protocol. Because dedicated, single-use, disposable bailers were used, no equipment blank samples were collected. One field duplicate sample was collected from well MW-5. Although a trip blank sample was proposed to be collected, due to the field oversight, the trip blank sample was not submitted to the laboratory and therefore was not analyzed.

3.2.3 Quarterly Monitoring Laboratory Analyses

Groundwater samples were submitted to Curtis & Tompkins, Ltd., a California-certified analytical laboratory located in Berkeley, California. All samples were analyzed for the following parameters, and in accordance with the sample matrix presented in Table 1:

- TPHd and TPHmo by EPA Method 8015 (after undergoing silica gel cleanup)
- TPHg by EPA Method 8260
- BTEX by EPA Method 8260
- Fuel oxygenates by EPA Method 8260
- Lead scavengers by EPA Method 8260
- Semivolatile organic compounds by EPA Method 8270

Analytical results for the quarterly groundwater monitoring event are summarized in Table 4 based on laboratory-certified analytical reports included in Appendix D.

4.0 RESULTS

Results from the drilling and quarterly groundwater monitoring event conducted during June 2008 are discussed in this section. A summary of analytical results is presented in Tables 3 and 4. All TPHd, TPHmo, and TPHg analytical results for soil and grab groundwater samples collected to date at the Site are presented on Figure 4. Analytical results for groundwater samples collected during the current quarterly groundwater monitoring event are presented and summarized on Figure 5. Groundwater elevation data and interpreted groundwater equipotential contours are presented on Figure 6. Analytical results were compared to the November 2007 San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for deep soils and groundwater beneath commercial/industrial land use areas where water is considered a current or potential drinking water source (RWQCB 2007). Relevant ESLs

are included in the summary tables, and compounds detected at concentrations that exceeded the ESLs are highlighted in the appropriate summary tables and figures.

4.1 Depth-Discrete Soil Samples

The two depth-discrete soil samples collected from soil boring MW-9 contained only TPHd, TPHmo, and, in the case of the 27.5-foot sample, also TPHg (Table 3) above laboratory reporting limits. BTEX compounds, fuel oxygenates, and lead scavengers were not present above laboratory reporting limits in either soil sample. Only the soil sample collected from within the deep soil contamination interval (the 27.5-foot sample) contained elevated TPH concentrations, and only the TPHd concentration exceeded the ESL. The soil sample collected from approximately 33.5 feet bgs contained only low concentrations of TPHd and TPHmo.

The analytical results of the depth-discrete soil samples confirmed the visual observations made during the field, namely that only the soil from within the interval visually observed to contain black petroleum hydrocarbon contained elevated TPH concentrations. The interval immediately beneath the deep soil contamination is relatively free of petroleum hydrocarbons. Based on the results of these samples and previous investigations, there appears to be no significant effect to local groundwater quality from the deep soil contamination.

4.2 Groundwater Elevations

Depth to groundwater was measured in the 10 groundwater monitoring wells on June 16, 2008. Depth to groundwater ranged from approximately 48 to 58 feet bgs in six of the seven wells, and was approximately 70 feet bgs in well MW-5. The groundwater elevation in each well was calculated using the surveyed TOC elevation; results are summarized in Table 2. Groundwater elevation data and contours are presented on Figure 6. The groundwater elevation in well MW-5 was not used in the contouring because the elevation is anomalously low compared to elevations in the other nine wells. Based on field observations of first encountered groundwater in this location, well MW-5 likely is monitoring somewhat deeper groundwater than the other wells installed at the Site.

The groundwater elevation contours indicate that the groundwater flow direction beneath the Site was approximately to the west and northwest on July 16, 2008, with a horizontal groundwater gradient of approximately 0.015 to 0.025 foot per foot. These results are similar to results from groundwater monitoring conducted on October 22, 2007, after wells MW-1 through MW-7 were installed.

4.2 Groundwater Analytical Results

Analytical results from the June 16, 2008 quarterly groundwater sampling event are presented in Table 4 and on Figure 5. Table 5 presents all historical analytical data for the samples collected from the groundwater monitoring wells at the Site.

Groundwater samples were collected for laboratory analyses from nine of the ten groundwater monitoring wells during the current quarter. A sample could not be collected from well MW-4 due to insufficient water in the well. Analytical results indicate that none of the compounds analyzed for in the groundwater monitoring wells were detected above laboratory reporting limits (Table 4). These data are generally consistent with analytical results from groundwater samples collected from wells MW-1 through MW-7 on October 22, 2007. In the October 2007 groundwater samples, only low concentrations of toluene (estimated to be present at concentrations below the laboratory reporting limits) were reported for samples collected from wells MW-3 and MW-5 (Table 5). Toluene was not detected in any groundwater samples collected on June 16, 2008.

The analytical results from this quarterly groundwater monitoring event confirm that groundwater beneath the Site has not been affected by the TPH or TPH-related compounds detected in limited areas in soil. The next groundwater monitoring event will take place during third quarter 2008 (July through September 2008).

5.0 CONCLUSIONS AND RECOMMENDATIONS

Three new groundwater monitoring wells (wells MW-8 through MW-10) were successfully installed during June 9 through 11, 2008 to increase the groundwater monitoring network at the Site. During drilling, evidence of the presence of petroleum hydrocarbons in soil was identified in the soil boring for well MW-9 approximately between 27 and 32 feet bgs. This interval is consistent with the deep soil contamination previously encountered in temporary soil borings advanced in the northern portion of the Site. Two depth-discrete soil samples were collected for laboratory analyses from the boring for well MW-9, from approximately 27.5 and 33.5 feet bgs. The soil sample collected from approximately 27.5 feet bgs contained elevated concentrations of TPHd and TPHmo; the TPHd concentration exceeded the ESL. The soil sample collected from approximately 33.5 feet bgs did not contain significant concentrations of TPH. These results are consistent with results from previous subsurface investigations and confirm that the deep soil contamination is vertically limited to a few feet in thickness, consists of heavy petroleum hydrocarbon material such as asphalt material, and appears to be relatively immobile.

After well installation was completed, the three new wells were appropriately developed and surveyed. At least 15 casing volumes of water were removed from each well during well development and general water-quality parameters stabilized; however, turbidity remained high.

The first quarterly groundwater monitoring event was conducted on July 16, 2008. A round of depth-to-groundwater measurements was completed prior to sampling and groundwater elevations were calculated. Equipotential contours drawn based on groundwater elevations indicate that the local groundwater flow direction is approximately to the west and northwest, with a horizontal groundwater gradient of approximately 0.015 to 0.025 foot per foot. The groundwater elevation from well MW-5 was not used in the contouring because it is significantly lower than all other wells at the Site, likely because it is monitoring somewhat deeper groundwater. The results from the June 16, 2008 groundwater elevation monitoring event are consistent with groundwater monitoring data from wells MW-1 through MW-7 previously monitored on October 22, 2007.

Groundwater samples were collected from all groundwater monitoring wells, except for well MW-4. A sample could not be collected from well MW-4 due to an insufficient amount of groundwater present in this well. Analytical results show that none of the compounds analyzed for were detected above laboratory reporting limits in any of the wells sampled during the current quarter. These results are consistent with results from wells MW-1 through MW-7 previously sampled on October 22, 2007. The results of the current groundwater monitoring event confirm that groundwater beneath the Site has not been affected by the TPH or TPH-related compounds detected in limited areas in soil.

As described in the Work Plan and as approved by ACEH, LFR will conduct the next groundwater monitoring event during the period of July 1 through September 30, 2008. All groundwater samples collected will be analyzed for the same parameters analyzed for during the current quarter. In addition, during the next quarterly groundwater monitoring event, samples collected from wells MW-3, MW-8, and MW-9 will be analyzed for dissolved metals concentrations in accordance with the sample matrix presented in Table 1. The next groundwater monitoring report will be submitted to ACEH by November 7, 2008 (40 days after the end of third quarter 2008).

6.0 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 percent 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.

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Table 1
Quarterly Groundwater Monitoring Sample Matrix
Former Hot Mix Asphalt Plant Area
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Well ID	Date Installed	Approximate Screen Interval top (feet bgs)	bottom (feet bgs)	TPHd / TPHmo 8015	TPHg 8260	BTEX 8260	Fuel Ox 8260	Lead Scav 8260	SVOCs 8270	Dissolved Metals 6010B
Groundwater Monitoring Wells										
MW-1	10/3/2007	45	60	x	x	x	x	x	x	-
MW-2	10/2/2007	45	60	x	x	x	x	x	x	-
MW-3	10/4/2007	45	60	x	x	x	x	x	x	once [1]
MW-4	10/5/2007	43	48	x	x	x	x	x	x	-
MW-5	10/9/2007	69	74	x	x	x	x	x	x	-
MW-6	10/10/2007	45	55	x	x	x	x	x	x	-
MW-7	10/1/2007	50	65	x	x	x	x	x	x	-
MW-8	6/9/2008	51	61	x	x	x	x	x	x	once [1]
MW-9	6/10/2008	42	52	x	x	x	x	x	x	once [1]
MW-10	6/11/2008	44	54	x	x	x	x	x	x	-
Quality Assurance and Quality Control Samples [2]										
Field Blank	na	na	na	x	x	x	x	x	x	-
Trip Blank	na	na	na	-	x	x	x	x	-	-

Notes:

feet bgs = feet below ground surface

"x" = to be analyzed quarterly for four consecutive quarters

"-" = not analyzed

na = not applicable

[1] Samples for dissolved metals will be collected only once, during the second quarterly groundwater monitoring event.

[2] One field blank (FB) sample will be collected during each quarterly monitoring event, and one trip blank (TB) sample will be collected for every cooler of samples transported to the laboratory during every quarterly monitoring event.

TPHd = total petroleum hydrocarbons as diesel by EPA Method 8015 (with silica gel cleanup)

TPHmo = total petroleum hydrocarbons as motor oil by EPA Method 8015 (with silica gel cleanup)

TPHg = total petroleum hydrocarbons as gasoline by EPA Method 8260

BTEX = benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260

Fuel Ox = fuel oxygenates by EPA Method 8260

Lead Scav = lead scavengers by EPA Method 8260

SVOCs = semivolatile organic compounds by EPA Method 8270

Dissolved Metals = CAM 17 list of dissolved metals (laboratory filtered samples) by EPA Method 6010B

Table 2
Groundwater Monitoring Well Construction Details
Former Hot Mix Asphalt Plant Area
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Monitoring Well ID	Installation Date	Boring Hole Diameter (inches)	Casing Diameter (inches)	Approximate Total Well Depth (feet bgs)	Approximate Screened Interval (feet bgs)	Top of Casing Elevation[1] (feet msl)	Depth to Groundwater Measured on 6/16/08 (feet TOC)	Groundwater Elevation Measured on 6/16/08 (feet msl)
MW-1	10/3/07	8.0	2.0	60	45 - 60	374.67	57.35	317.32
MW-2	10/2/07	8.0	2.0	60	45 - 60	376.33	55.39	320.94
MW-3	10/4/07	8.0	2.0	60	45 - 60	374.95	54.53	320.42
MW-4	10/5/07	8.0	2.0	48	43 - 48	372.94	48.77	324.17
MW-5	10/9/07	8.0	2.0	74	69 - 74	374.35	70.16	304.19
MW-6	10/10/07	8.0	2.0	55	45 - 55	375.03	49.34	325.69
MW-7	10/1/07	8.0	2.0	65	50 - 65	377.68	57.21	320.47
MW-8	6/9/08	8.0	2.0	61	51 - 61	378.60	55.73	322.87
MW-9	6/10/08	8.0	2.0	52	42 - 52	375.75	51.48	324.27
MW-10	6/11/08	8.0	2.0	54	44 - 54	375.62	51.38	324.24

Notes:
ID = identification; monitoring well identification number
feet bgs = feet below ground surface
feet msl = feet relative to mean sea level
feet TOC = feet below top of casing
[1] Top of casing elevation and land survey conducted by Kier & Wright Civil Engineers & Surveyors, Inc.

Table 3

Petroleum Hydrocarbons and Associated Compounds Detected in Soil Samples Collected During Drilling in June 2008

Former Hot Mix Asphalt Plant Area

Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

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

Sample Location	Sample ID	Date Sampled	Sample Interval top (feet bgs)	Sample Interval bottom (feet bgs)	Matrix	Total Petroleum Hydrocarbons TPHd (mg/kg)	TPHmo (mg/kg)	TPHg (mg/kg)	BTEX compounds B (ug/kg)	T (ug/kg)	E (ug/kg)	m,p-X (ug/kg)	o-X (ug/kg)	Fuel Oxygenates MTBE (ug/kg)	TAME (ug/kg)	DIPE (ug/kg)	ETBE (ug/kg)	TBA (ug/kg)	Lead Scavengers EDB (ug/kg)	EDC (ug/kg)
Depth-Discrete Soil Samples from Soil Borings																				
	MW-9-27.5	6/10/2008	27	27.5	soil	**6,600 Y**	**4,700**	**28 Y**	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 25	< 1.3	< 1.3
	MW-9-33.5	6/10/2008	33	33.5	soil	**67 Y**	**69**	< 0.98	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.097	< 0.0048	< 0.0048
ESLs					deep soils	83	5,000	83	44	2,900	3,300	2,300	2,300	23	-	-	-	-	0.33	4.5

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

MTBE = methyl tertiary-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

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

6,600 Y boxed values exceed the respective ESL.

"<" = not detected above the laboratory report given

"-" = sample not analyzed or no ESL exists

Y = sample exhibits chromatographic pattern that does not resemble standard

ESLs = Environmental Screening Levels by San Francisco Bay Regional Water Quality Control Board, November 2007, for Deep Soils beneath Industrial/Commercial Land Use Areas where Groundwater is a Current or Potential Source of Drinking Water.

Table 4
Groundwater Monitoring Wells Analytical Results for Second Quarter 2008
Former Hot Mix Asphalt Plant Area
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

(Concentrations reported in micrograms per liter [ug/l])

Sample ID	Date Sampled	Approximate Screen Interval (feet bgs)	Matrix	Total Petroleum Hydrocarbons			BTEX compounds					Fuel Oxygenates					Lead Scavengers		SVOCs
				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)	MTBE (ug/l)	TAME (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TBA (ug/l)	EDB (ug/l)	EDC (ug/l)	(various) (ug/l)
Groundwater Monitoring Wells																			
MW-1	6/16/2008	45 - 60	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-2	6/16/2008	45 - 60	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-3	6/16/2008	45 - 60	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-4 [1]	6/16/2008	43 - 48	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	6/16/2008	69 - 74	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-5 (Dup)	6/16/2008	69 - 74	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-6	6/16/2008	45 - 55	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-7	6/16/2008	50 - 65	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-8	6/16/2008	51 - 61	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-9	6/16/2008	42 - 52	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
MW-10	6/16/2008	44 - 54	water	< 50	< 300	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 0.5	ND
Trip Blank [2]	6/16/2008	na	water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ESL groundwater		100	100	100	1	40	30	20	20	5	-	-	-	-	0.05	0.5	(various)

Notes:

feet bgs = feet below ground surface
ug/l = micrograms per liter
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
SVOCs = semivolatile organic compounds
(Dup) = a duplicate sample collected immediately after primary sample was collected
"-" = sample not analyzed or no ESL exists
"<" = not detected above the laboratory report given

B = benzene
T = toluene
E = ethylbenzene
m,p-X = m,p-xylenes
o-X = o-xylenes

MTBE = methyl tertiary-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

[1] No groundwater sample could be collected from well MW-4 because insufficient water was present in the well at the time of sampling.
[2] Due to a field oversight, the trip blank sample collected during this sampling event was not submitted to the laboratory for analysis.
ESLs = Environmental Screening Levels by San Francisco Bay Regional Water Quality Control Board, November 2007,
for Groundwater beneath Industrial/Commercial Land Use Areas where Groundwater is a Current or Potential Source of Drinking Water

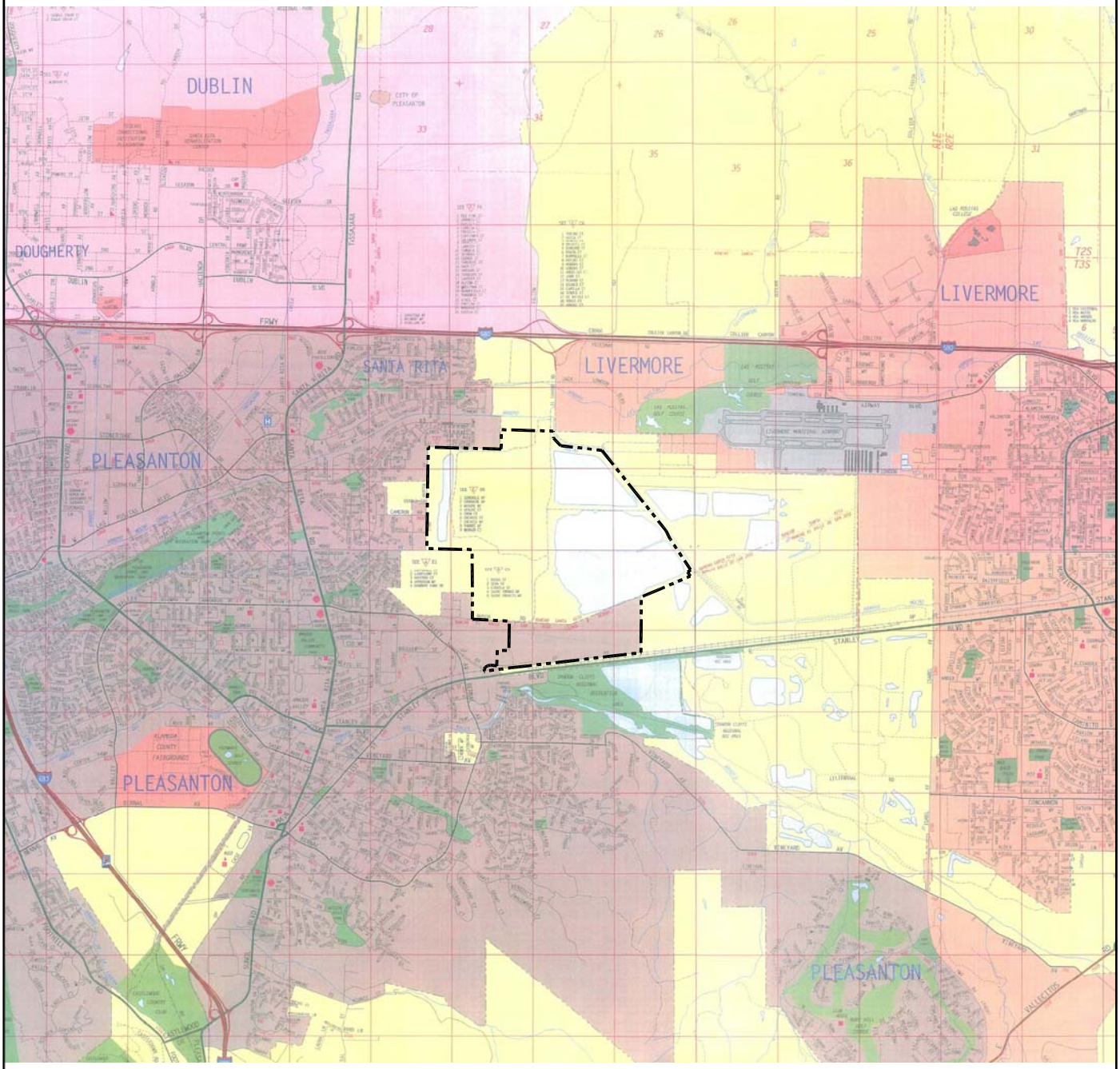
Table 5
Historical Data from Groundwater Monitoring Wells
Former Hot Mix Asphalt Plant Area
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Monitoring Well ID	Approximate Screened Interval (feet bgs)	Top of Casing Elevation (feet msl)	Date	Depth to Groundwater Measured on 6/16/08 (feet TOC)	Groundwater Elevation Measured on 6/16/08 (feet msl)	TPHd (ug/l)	TPHmo (ug/l)	TPHg (ug/l)	BTEX (ug/l)	Fuel Ox (ug/l)	Lead Scav (ug/l)	SVOCs (ug/l)
MW-1	45 - 60	374.67	10/22/07	57.22	317.45	< 50	< 300	< 50	ND	ND	ND	-
			6/16/08	57.35	317.32	< 50	< 300	< 50	ND	ND	ND	ND
MW-2	45 - 60	376.33	10/22/07	55.24	321.09	< 50	< 300	< 50	ND	ND	ND	-
			6/16/08	55.39	320.94	< 50	< 300	< 50	ND	ND	ND	ND
MW-3	45 - 60	374.95	10/22/07	54.32	320.63	<50/<50	<300/<300	<50/<50	0.3J / 0.3J [1]	ND/ND	ND/ND	-
			6/16/08	54.53	320.42	< 50	< 300	< 50	ND	ND	ND	ND
MW-4	43 - 48	372.94	10/22/07	47.37	325.57	-	-	-	-	-	-	-
			6/16/08	48.77	324.17	-	-	-	-	-	-	-
MW-5	69 - 74	374.35	10/22/07	68.40	305.95	< 50	< 300	< 50	0.4J [2]	ND	ND	-
			6/16/08	70.16	304.19	<50/<50	<300/<300	<50/<50	ND	ND	ND	ND
MW-6	45 - 55	375.03	10/22/07	49.19	325.84	< 50	< 300	< 50	ND	ND	ND	-
			6/16/08	49.34	325.69	< 50	< 300	< 50	ND	ND	ND	ND
MW-7	50 - 65	377.68	10/22/07	57.04	320.64	< 50	< 300	< 50	ND	ND	ND	-
			6/16/08	57.21	320.47	< 50	< 300	< 50	ND	ND	ND	ND
MW-8	51 - 61	378.60	6/16/08	55.73	322.87	< 50	< 300	< 50	ND	ND	ND	ND
MW-9	42 - 52	375.75	6/16/08	51.48	324.27	< 50	< 300	< 50	ND	ND	ND	ND
MW-10	44 - 54	375.62	6/16/08	51.38	324.24	< 50	< 300	< 50	ND	ND	ND	ND
					ESL groundwater	100	100	100	various	various	various	various

Table 5
Historical Data from Groundwater Monitoring Wells
Former Hot Mix Asphalt Plant Area
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Monitoring Well ID	Approximate Screened Interval (feet bgs)	Top of Casing Elevation (feet msl)	Date	Depth to Groundwater Measured on 6/16/08 (feet TOC)	Groundwater Elevation Measured on 6/16/08 (feet msl)	TPHd (ug/l)	TPHmo (ug/l)	TPHg (ug/l)	BTEX (ug/l)	Fuel Ox (ug/l)	Lead Scav (ug/l)	SVOCs (ug/l)

Notes:
ID = identification; monitoring well identification number
ug/l = micrograms per liter
ND = not detected; no compounds were detected above their respective laboratory reporting limits
feet bgs = feet below ground surface
feet msl = feet relative to mean sea level
feet TOC = feet below top of casing
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
Fuel Ox = fuel oxygenates
Lead scav = lead scavengers
SVOCs = semivolatile organic compounds
J = reported concentration is estimated below the laboratory reporting limit
"-" = sample not analyzed or no ESL exists
"<" = not detected above the laboratory report given
[1] Toluene was detected at a low concentration of 0.3 ug/l estimated below the laboratory reporting limit in both the primary and the duplicate samples collected from well MW-3 on 10/22/07.
[2] Toluene was detected at a low concentration of 0.4 ug/l estimated below the laboratory reporting limit in the sample collected from well MW-4 on 10/22/07
ESLs = Environmental Screening Levels by San Francisco Bay Regional Water Quality Control Board, November 2007,
for Groundwater beneath Industrial/Commercial Land Use Areas where Groundwater is a Current or Potential Source of Drinking Water.



Source: Thomas Guide

EXPLANATION

Approximate Site Boundary

N

0 5000 FEET

APPROXIMATE SCALE

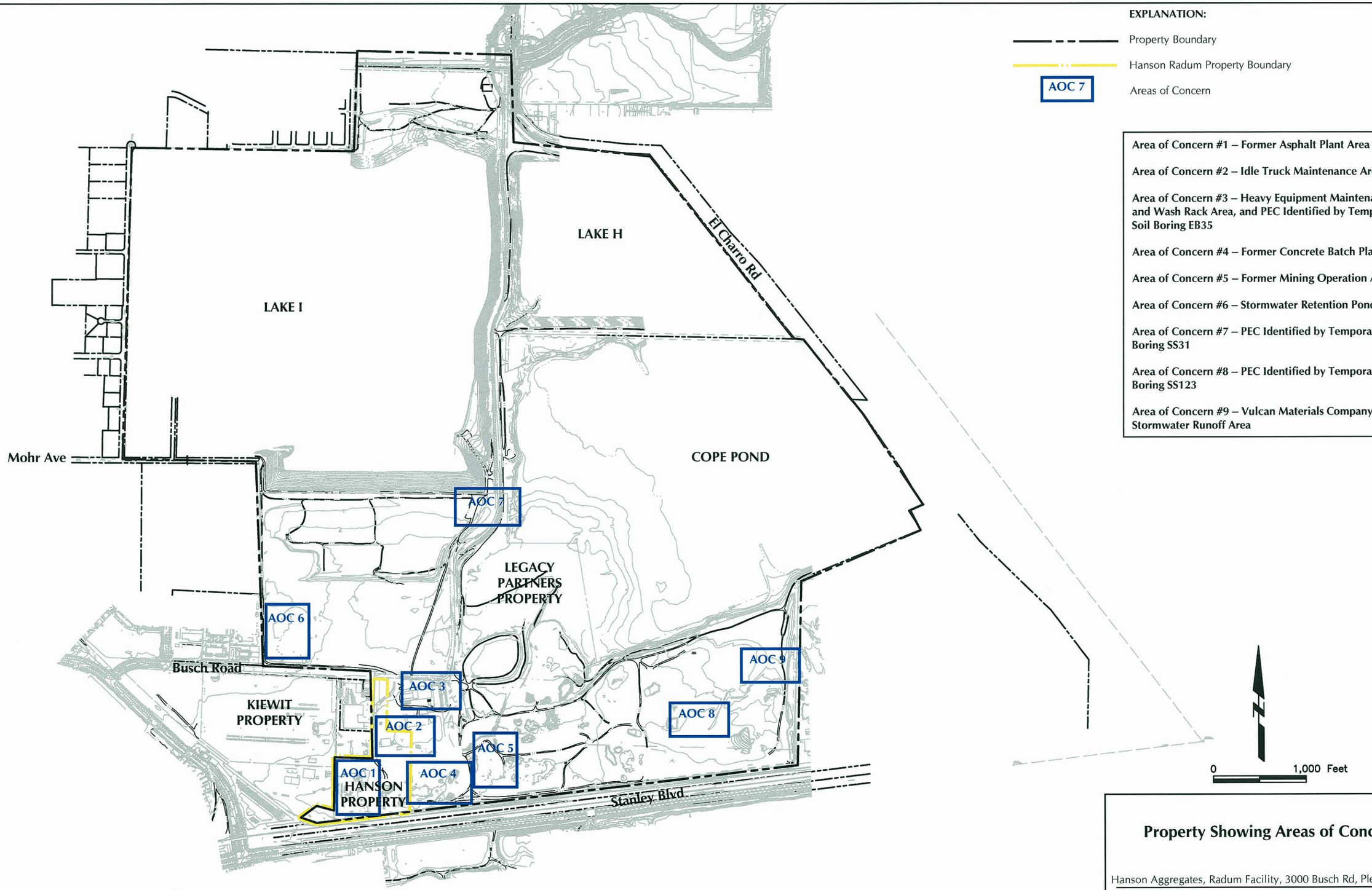
Site Location Map

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

LFR

Figure 1

I:\Design\001\09567\00\dwg\Pleasanton Drilling Locations.dwg Oct 23,2007-2:19pm



Property Showing Areas of Concern

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

LFR

Figure 2

I:\Design\001\09567\02\dwg\Site Plan w AOCs.dwg Jul 22,2008-10:36am

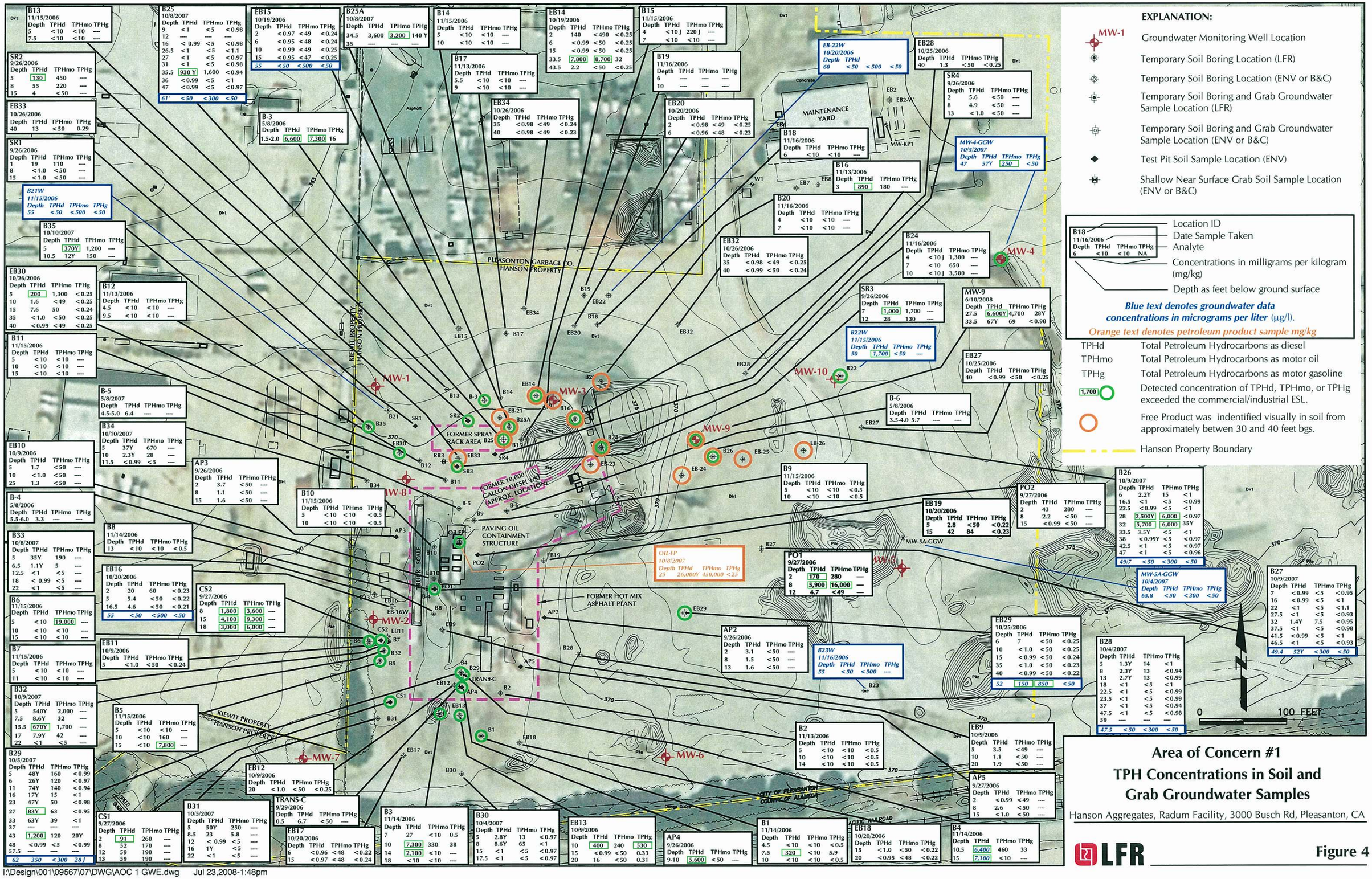
Area of Concern #1
Site Plan and Sample Location Map

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

LFR

Figure 3

I:\Design\001\09567\07\DWG\AOC 1 GWE.dwg Jul 22,2008-11:00am



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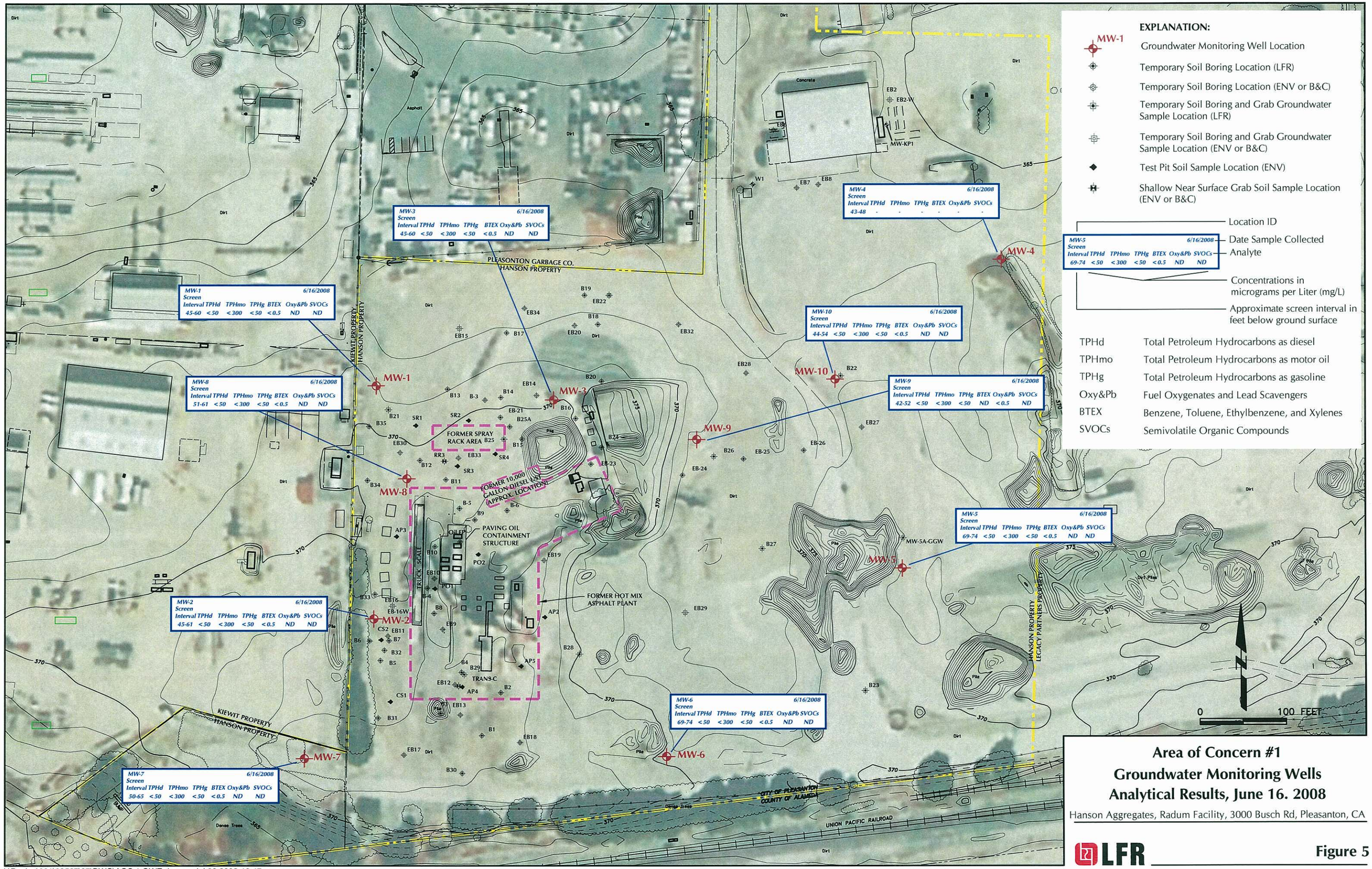

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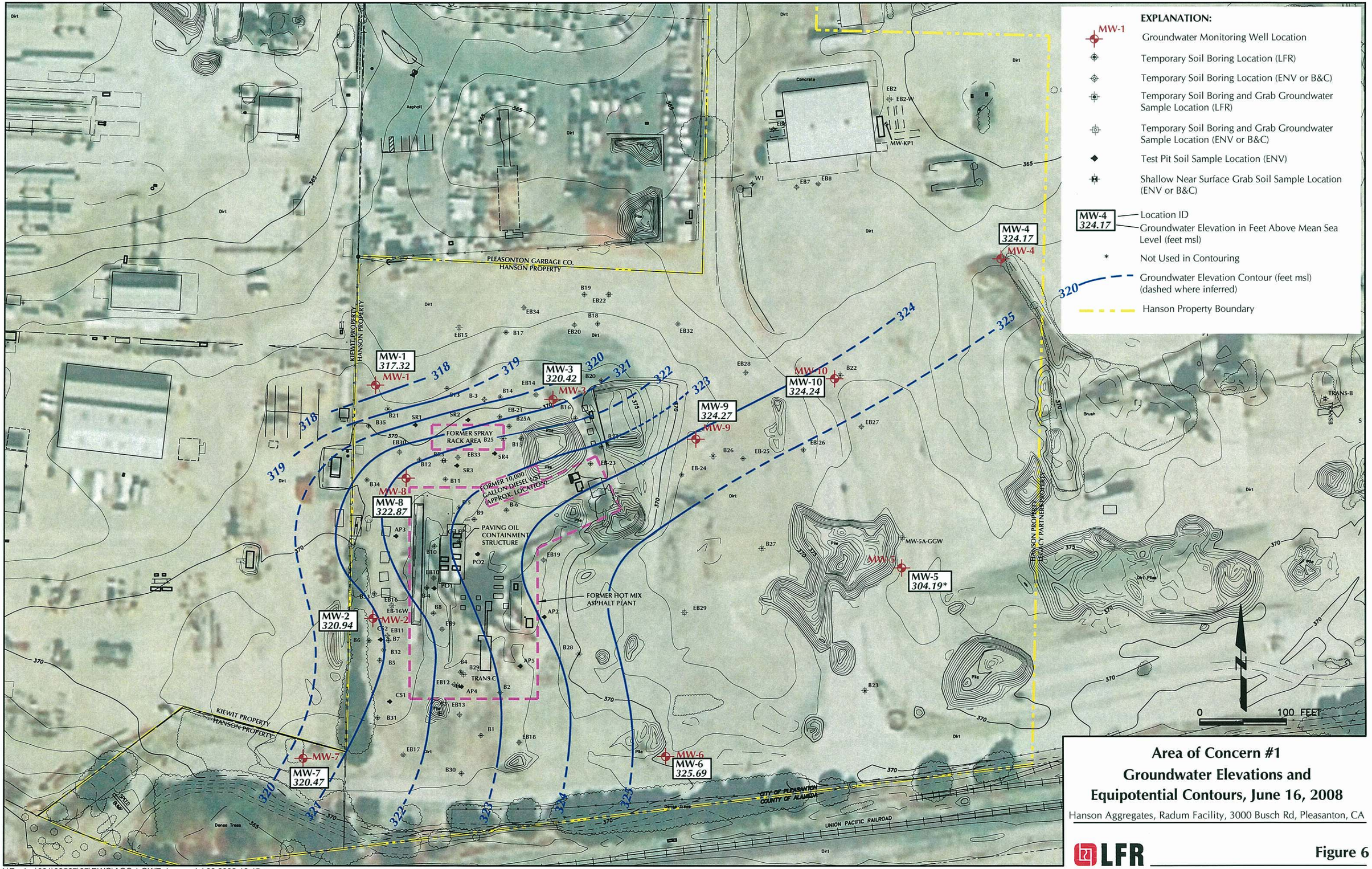
Area of Concern #1
Groundwater Monitoring Wells
Analytical Results, June 16. 2008

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

LFR

Figure 5



Area of Concern #1
Groundwater Elevations and Equipotential Contours, June 16, 2008

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

LFR

Figure 6

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APPENDIX A

Soil Boring Permit

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9308
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Former Hot Mix Asphalt Plant, Hanson Aldrum - Area of Concern #1

California Coordinates Source _____ ft. Accuracy _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name Hanson Aggregates
Address 3000 Busch Road Phone (925) 426-4170
City Pleasanton Zip 94566-0808

APPLICANT
Name LFR, Inc.
Email Larry.Lapuyade@lfr.com Fax (510) 652-4906
Address 1906 Powell St. 12th Fl. Phone (510) 596-9638
City Emeryville Zip 94608

TYPE OF PROJECT:

Well Construction	X	Geotechnical Investigation	
Well Destruction		Contamination Investigation	X
Cathodic Protection		Other	

PROPOSED WELL USE:

Domestic		Irrigation	
Municipal		Remediation	
Industrial		Groundwater Monitoring	X
Dewatering		Other	

DRILLING METHOD:

Mud Rotary		Air Rotary		Hollow Stem Auger	X
Cable Tool		Direct Push		Other	

DRILLING COMPANY Precision Sampling, Inc
DRILLER'S LICENSE NO. 636387

WELL SPECIFICATIONS:
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 65 ft.
Surface Seal Depth 50 ft. Number 3

SOIL BORINGS:
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 6-10-08
ESTIMATED COMPLETION DATE 6-11-08

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] Date 5-15-08

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 28074
WELL NUMBER 3S/1E-15F6 (MW-9), 15F7 (MW-10) &
APN 946-1250-019-01 15M5 (MW-8)

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller**.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

(G.) SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results**.

Approved [signature] Date 6/3/08
Wyman Hong

Revised: April 23, 2008

APPENDIX B

Soil Boring Logs and Well Completion Details

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-8

PROJECT LOCATION 3000 Busch Rd, Pleasanton, CA
DRILLING CONTRACTOR Precision Sampling, Inc.

PROJECT NUMBER 001-09567-07
DRILLING METHOD Hollow Stem Auger

LOCATION Former Hot Mix Asphalt Plant Area (AOC #1)
STAMP (IF APPLICABLE) AND/OR NOTES

OVA EQUIPMENT Mini RAE 2000

GROUND ELEVATION 375.68 ft-msl **HOLE DIAMETER** 8 inches

TOP OF CASING ELEVATION 378.60 ft-msl **HOLE DEPTH** 65.0 ft

▽ **FIRST ENCOUNTERED WATER** 43.0 ft

▼ **STABILIZED WATER** 50.5 ft

LOGGED BY L. Lapuyade & R. Moniz **DATE** 6/9/08

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
				SM		4.0	SILTY SAND WITH GRAVEL (SM), dark grayish brown (2.5Y 4/2), moist, 40% fine sand, 40% fines, 20% gravel.	371.7	0.0	Concrete	
5				GP			POORLY GRADED GRAVEL (GP), dark grayish brown (2.5Y 4/2), moist, 90% fine gravel, 1/4 to 1/2" dia., subangular to subrounded (pea gravel), 10% sand.		0.0	8" dia. Borehole	5
10							-as above, trace sand.		0.0	2" dia. SCH40 PVC Blank Casing	10
15									0.0	Cement Grout	15
20											20

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-8

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
				GP			-as above.		0.0		
25										8" dia. Borehole	25
						26.0	-as above, color change to light olive brown (2.5Y 5/3), trace fines.	349.7	0.0		
						27.0	At 26 to 27 feet, concrete slab.	348.7			
				GP		29.0		346.7			
30				SM			SILTY SAND WITH GRAVEL (SM), olive brown (2.5Y 4/3), moist, 45% fines, 30% fine to coarse sand, 25% fine to coarse gravel up to 2" dia.			2" dia. SCH40 PVC Blank Casing	30
						31.0		344.7	0.0		
				CL			LEAN CLAY (CL), dark grayish brown (2.5Y 5/2), moist, hard consistency, low plasticity.				
						32.5		343.2	0.0		
				SM			SILTY SAND WITH GRAVEL (SM), olive brown (2.5Y 4/3), moist, 45% fines, 30% fine to coarse sand, 25% fine to coarse gravel up to 2" dia.				
35							-as above, gravel up to 3" dia.			Cement Grout	35
						38.0		337.7	0.0		
40				SP			POORLY GRADED SAND WITH GRAVEL (SP), grayish brown (2.5Y 5/3), moist to wet, 55% fine to coase sand, 40% subangular to angular fine to coarse gravel up to 2" dia., 5% fines.				40
			10 25 43						0.0		
			25 50-6"			42.5		333.2	0.0		
			31 22 50-4.5'	GW		▽	WELL GRADED GRAVEL WITH SAND (GW), grayish brown (2.5Y 5/3), wet, 50% subangular to subrounded fine to coarse gravel up to 2" dia., 45% fine to coarse sand, 5% fines. Depth to water in sediments at approximately 43 feet during drilling. -as above, moist.		0.0		
45			36 20 22						0.0	Bentonite Seal (coated bentonite pellets)	45
						48.0		327.7			
				SP-SM			POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM), olive brown (2.5Y 4/3), moist to wet, 65% angular to subangular fine to coarse gravel up to 2" dia., 25% fine			#3 Sand	
50											50

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-8

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
55				SP-SM		55.5	sand, 10% fines. Depth to water measured at 50.5 feet with solinst after drilling. Depth to water measured in well on 6/10/08 (52.81' TOC) before development.	320.2	0.0	2" dia. SCH40 PVC Blank Casing; #3 Sand	55
60				SC		60.0	CLAYEY SAND WITH GRAVEL (SC), wet, 50% fine to coarse sand, 35% angular to subangular fine to coarse gravel up to 2" dia., 15% fines.	315.7	0.0 0.0	2" dia. SCH40 PVC Perforated Well Screen (0.020" slot)	60
65				CH		65.0	FAT CLAY (CH), moist, firm to hard consistency, low plasticity.	310.7	0.0 0.0 0.0	End Cap; Bentonite Seal (coated bentonite pellets)	65
							Bottom of boring at approximately 65 feet bgs. Bottom of well MW-8 at approximately 61 feet bgs.				

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-9

PROJECT LOCATION 3000 Busch Rd, Pleasanton, CA
DRILLING CONTRACTOR Precision Sampling, Inc.

PROJECT NUMBER 001-09567-07
DRILLING METHOD Hollow Stem Auger

LOCATION Former Hot Mix Asphalt Plant Area (AOC #1)
STAMP (IF APPLICABLE) AND/OR NOTES

OVA EQUIPMENT Mini RAE 2000

GROUND ELEVATION 373.56 ft-msl **HOLE DIAMETER** 8 inches

TOP OF CASING ELEVATION 375.75 ft-msl **HOLE DEPTH** 60.0 ft

▽ **FIRST ENCOUNTERED WATER** 41.2 ft

▼ **STABILIZED WATER** 41.5 ft

LOGGED BY L. Lapuyade & R. Moniz **DATE** 6/10/08

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
5						5.0	No recovery; assume fill.	368.6		Concrete	5
							POORLY GRADED GRAVEL WITH SAND (GP), dark grayish brown (2.5Y 4/2), dry, 80% fine to coarse subangular to subrounded gravel up to 1.5" dia., 15% fine to coarse sand, 5% fines.		0.0	8" dia. Borehole	
10				GP			-as above.		0.0	2" dia. SCH40 PVC Blank Casing	10
15							-as above.		0.0	Cement Grout	15
20											20

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-9

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
25				GP			POORLY GRADED GRAVEL WITH SAND (GP), dark grayish brown (2.5Y 4/2), dry, 80% fine to coarse subangular to subrounded gravel up to 1.5" dia., 15% fine to coarse sand, 5% fines.		0.0	8" dia. Borehole	25
30	MW-9-27.5						-color change to light brownish gray (2.5Y 6/2), increasing moisture content to moist. -between approximately 27 and 32 feet bgs, observe petroleum hydrocarbons in sediment.		10.8 56 48		30
			4 5 7						0.0	2" dia. SCH40 PVC Blank Casing	
			4 3 5			32.0		341.6	0.0		
	MW-9-33.5		2 6 9				LEAN CLAY (CL), greenish black (10Y 2.5/1), moist, firm to hard consistency, medium plasticity.		0.0		
35										Cement Grout	35
40				CL			-color change to brown (10YR 4/3).		0.0 0.0 0.0	Bentonite Seal (coated bentonite pellets)	40
						41.2 ▽			0.0		
45				GC			CLAYEY GRAVEL WITH SAND (GC), yellowish brown (10YR 4/4), wet, 50% gravel, 30% sand, 20% fines. Depth to water in sediments at approximately 41.2 feet during drilling. Depth to water measured at 41.5 feet with solinst after drilling.	332.4		2" dia. SCH40 PVC Perforated Well Screen (0.020" slot)	45
						45.5		328.1	0.0		
50				SP-SC			POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), yellowish brown (10YR 4/4), wet, 60% fine to coarse sand, 30% subangular to subrounded gravel up to 2.5" dia., 10% fines.		0.0	#3 Sand	50

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-9

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	BLOW COUNTS (per 6 inches)	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
				SP-SC		51.5		322.1	0.0	#3 Sand	
				ML		52.8	SANDY SILT (ML), yellowish brown (10YR 4/4), moist, 70% low plasticity fines, 20% fine sand, 10% fine gravel (pea gravel).	320.8	0.0	End Cap	
55				CL			LEAN CLAY (CL), light olive brown (2.5Y 5/6), moist.		0.0	Bentonite Seal (coated bentonite pellets)	55
60						60.0		313.6			60
							Bottom of boring at approximately 60 feet bgs. Bottom of well MW-9 at approximately 52 feet bgs.				

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

BORING NUMBER MW-10A

PROJECT LOCATION 3000 Busch Rd, Pleasanton, CA
PROJECT NUMBER 001-09567-07
LOCATION Former Hot Mix Asphalt Plant Area (AOC #1)
OVA EQUIPMENT Mini RAE 2000
GROUND ELEVATION NM **HOLE DIAMETER** 8 inches
TOP OF CASING ELEVATION NM **HOLE DEPTH** 75.0 ft
▽ **FIRST ENCOUNTERED WATER** 34.5 ft
▼ **STABILIZED WATER** 45.0 ft
LOGGED BY Larry Lapuyade **DATE** 6/11/08

DRILLING CONTRACTOR Precision Sampling, Inc.
DRILLING METHOD Hollow Stem Auger
STAMP (IF APPLICABLE) AND/OR NOTES

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)
5				GC		9.0	CLAYEY GRAVEL (GC), brown (10YR 5/3), dry, subangular to subrounded gravel up to 2" dia.		5
10								0.9 0.2	10
15				GP			POORLY GRADED GRAVEL WITH SAND (GP), light brownish gray (2.5Y 6/2), moist, 85% subangular to subrounded gravel up to 3/4" dia., 15% fine to coarse sand.	0.0 1.1	15
20							No recovery, log from cuttings.	0.0	20

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COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

BORING NUMBER MW-10A

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)
25							No recovery, log from cuttings.	0.0	25
30				GP			No recovery, log from cuttings.	0.0	30
			2 4 7			31.0	POORLY GRADED GRAVEL (GP), moist, 95% gravel, 5% fines.	0.2	
			6 8 9	SP			POORLY GRADED SAND (SP), olive brown (2.5Y 4/4), moist, fine sand.	0.0	
			5 8 3			34.5 ▽		0.0	
35				ML		35.0	SILT (ML), dark olive brown (2.5Y 3/3), wet, non-plastic fines.	0.8	35
				SP			Depth to water in sediments at approximately 34.5 feet during drilling. POORLY GRADED SAND (SP), olive brown (2.5Y 4/4), wet, fine sand.	0.0	
						36.3		0.0	
40				CL			LEAN CLAY (CL), very dark gray (GLEY1 3/N), moist, very soft consistency, medium plasticity.		40
45				CL			-as above, low plasticity.	0.0 0.0	45
						44.5			
				SP		▼	POORLY GRADED SAND (SP), olive brown (2.5Y 4/4), wet, 95% fine to coarse sand, 5% fine to coarse gravel up to 1" dia., trace fines.	0.0	
50				SP-SC		48.5	POORLY GRADED SAND WITH CLAY (SP-SC), 80% sand, 10% fine to coarse gravel up to 2" dia., 10% fines.		50

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

BORING NUMBER MW-10A

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)
			16 28 20	SP-SC		51.5	POORLY GRADED SAND WITH CLAY (SP-SC), 80% sand, 10% fine to coarse gravel up to 2" dia., 10% fines.	0.0	
			3 6 8	CL			LEAN CLAY (CL), light olive brown (2.5Y 5/4), moist, firm consistency, low to medium plasticity.	0.0	
			3 8 8					0.0	
55									55
								0.0	
60								0.0 0.0	60
								0.0	
65								0.0 0.0	65
70									70
								0.0	
75						75.0		0.0 0.0	75
							Bottom of boring at approximately 75 feet bgs. Borehole abandoned after total depth was reached.		

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-10

PROJECT LOCATION 3000 Busch Rd, Pleasanton, CA
PROJECT NUMBER 001-09567-07
LOCATION Former Hot Mix Asphalt Plant Area (AOC #1)
OVA EQUIPMENT Mini RAE 2000
GROUND ELEVATION 373.18 ft-msl **HOLE DIAMETER** 8 inches
TOP OF CASING ELEVATION 375.62 ft-msl **HOLE DEPTH** 55.0 ft bgs
▽ **FIRST ENCOUNTERED WATER** 34.5 ft bgs
STABILIZED WATER NM
LOGGED BY Larry Lapuyade **DATE** 6/11/08

DRILLING CONTRACTOR Precision Sampling, Inc.
DRILLING METHOD Hollow Stem Auger
STAMP (IF APPLICABLE) AND/OR NOTES

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
						Drill to approximately 40 feet bgs without coring; see boring log for MW-10A for lithology from ground surface to 40 feet bgs.			Concrete	
5									8" dia. Borehole	5
10									2" dia. SCH40 PVC Blank Casing	10
15									Cement Grout	15
20										20

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-10

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
						Drill to approximately 40 feet bgs without coring; see boring log for MW-10A for lithology from ground surface to 40 feet bgs.				
25									8" dia. Borehole	25
30									2" dia. SCH40 PVC Blank Casing	30
35					▽	Depth to water in sediments at approximately 34.5 feet during drilling.			Cement Grout	35
40					40.0		333.2		Bentonite Seal (coated bentonite pellets)	40
45			CL		45.0	LEAN CLAY (CL), very dark gray (GLEY1 3/N), moist, low to medium plasticity.	328.2	0.0 0.0 0.0	#3 Sand	45
50			SP			POORLY GRADED SAND (SP), olive brown (2.5Y 4/4), wet, 90% fine to coarse sand, 10% fine to coarse subangular to subrounded gravel up to 2.5" dia., trace fines.		0.0 0.0	2" dia. SCH40 PVC Perforated Well Screen (0.020" slot)	50

(Continued Next Page)

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

PROJECT NAME Hanson Radum, AOC #1
CLIENT Hanson Aggregates West Region

WELL NUMBER MW-10

DEPTH (feet)	SAMPLE TYPE NUMBER	SAMPLE RECOVERY	U.S.C.S.	GRAPHIC LOG	DEPTHS (feet)	LITHOLOGIC DESCRIPTION	ELEVATIONS (feet)	PID (ppm)	WELL DIAGRAM	DEPTH (feet)
			SP			POORLY GRADED SAND (SP), olive brown (2.5Y 4/4), wet, 90% fine to coarse sand, 10% fine to coarse subangular to subrounded gravel up to 2.5" dia., trace fines.		0.0	2" dia. SCH40 PVC Perforated Well Screen (0.020" slot)	
								0.0		
					53.5		319.7			
			CL			LEAN CLAY (CL), light olive brown (2.5Y 5/4), moist, firm to hard consistency, low to medium plasticity.			End Cap	
55					55.0		318.2		Bentonite Seal (coated bentonite pellets)	55
						Bottom of boring at approximately 55 feet bgs. Bottom of well MW-10 at approximately 54 feet bgs.				

COMMENTS

APPROVED BY: _____ **DATE:** _____

LFR

BORING+WELL 2007 001-09567-07.GPJ LFR SEPT 2006.GDT 7/21/08

APPENDIX C

Groundwater Monitoring Well Development and Sampling Field Sheets

LFR

FIELD REPORT

Project No. 001-09567-04 Date 6/13/08 Page 1 of 4

Project Name Hanson Radum Day: ☐ Sun ☐ Mon ☐ Tues ☐ Weds ☐ Thurs ☒ Fri ☐ Sat

Personnel Inspector Rob Moniz Weather/Site Conditions Sunny, 70-90°

Task No. and Description Well Development MW-8→10.

WORK FORCE

COMPANY NAME	SUPERVISORS/WORKERS	ON SITE FROM	TO	COMMENTS
Del-Tech	1	0900	1615	Don Light

EQUIPMENT

ITEM	OWNER	USED FROM	TO	COMMENTS
1 Ton Pickup w/ trailer	Del-Tech	0900	1615	

TIME	ACTIVITIES
0910	MW-8
	55.60 DTW TOC — After Development = 55.59 DTW
	64.29 TD TOC — (20-15g casing Vols) 64.43 TD
0940	After purging ~4 gal - DTW = 55.90
0955	Surge / pump
1045	Taking readings
1120	Moved to MW-9
	51.36 DTW TOC, 55.07 TD TOC
1212	57.48 after bailing

continue on reverse as needed

Route Copies To: SIGNED

001-09567-04 6/13/08 Field Report Continued.
Hanson Radom

MW-8

- Hand bailed w/ some surging of the bailer removed ~4 gal.
- Surge block fastened to pump. Surging/Pumping continued for ~1 hour. Well appeared to become very clean after ~10 casing volumes (45 gallons) so testing began. Shortly thereafter the water resumed its muddy appearance, and kept it until parameters stabalized (and I convinced Don to give up.) :)
  * Total water removed = ~30 gallons (20 casing volumes)

MW-9

- Same development approach w/ hand bailing/surging a few well volumes followed by surging/pumping.
- well took longer to stabalize.
- Had to remind developer to lower pumping speed a couple times.
  * Total water removed = ~12 gallons (15 casing volumes)
- Water remained murky w/ NTU = >1000, as did MW-8.

MW-10

- Same techniques as previous 2 wells.
- Water remained murky w/ NTU = >1000
  * Total water removed = 25 gal (25 casing Volumes)

001-09567-04
Hanson Radum

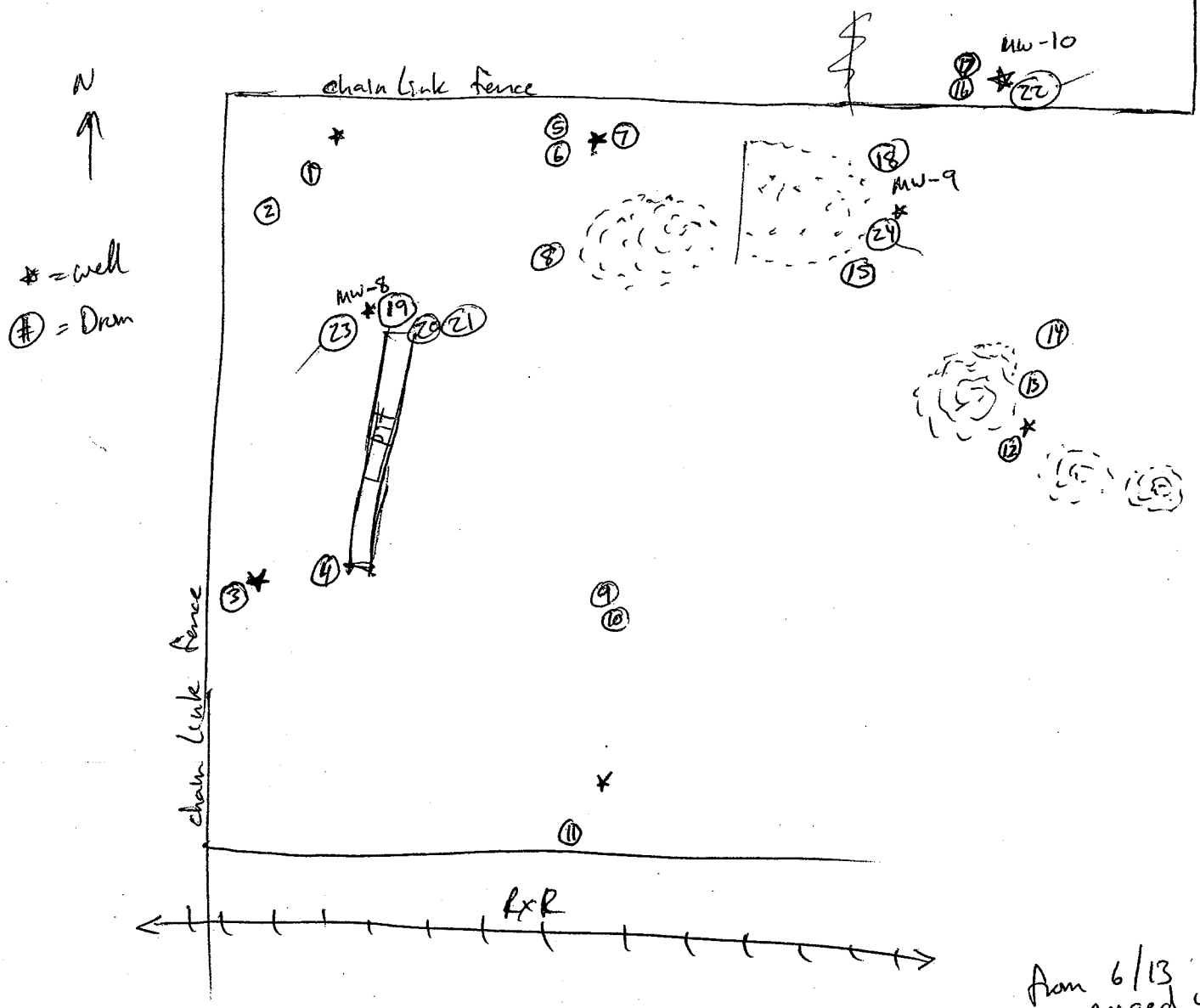
6/13/08 Field Report Continued

Summary of Well Results

	Initial DTW TOC	Post Devel DTW TOC	Initial TD TOC	Post TD TOC	TOC AGS	Vol H2O Removed
MW-8	55.60	55.59	64.29	64.43	2.89	30 gal (20 casing vol)
MW-9	51.36	51.35	55.07	55.08	2.35	12 gal (15 casing vol)
MW-10	51.27	~~51.34~~ PEM 51.34	~~57.08~~ PEM 57.08	57.02	2.50	25 gal (25 casing vol)

(All in feet)

001-09567 6/13/08 Map of Drums on Site 4/4
Hanson Radam



① full water
② " "
③ 1/2 full water
④ full water
⑤ 1/2 full water
⑥ 1/2 full water
⑦ full water
⑧ " "
⑨ " "
⑩ " "
⑪ full soil cuttings 10/10/07
⑫ full water
⑯ " "
⑭ 1/4 full water
⑮ 1/2 full water
⑯ full water 6/11 water rinsate (steam cleaner
⑰ " " 6/11 water rinsate " "
⑱ " " "
⑲ full H2O 6/9 steam cleaner rinsate
⑳ ㉑ Empty Polys

from 6/13 purged water (Poly)
㉒ 1/2 full H2O
㉓ " "
㉔ " "

DEL-TECH GEOTECHNICAL SUPPORT

(209) 847-8757 (OFFICE) * (209) 847-7744 (FAX) * deltech1@pacbell.net (Email)

LFR / HANSON AGGREGATE WELLS

MONITORING WELL FIELD SUMMARY LOG 2007

NEW WELL DEVELOPMENT

				GROUT				TOTAL DEPTH - FEET.10TH's			
DATE	CASING	MONUMENT	D.T.W.	SEAL	RECHARGE	ODOR	SHEEN	SURGING	SURGING	TOTAL	WATERRA
6/13/2008	DIAMETER	TYPE	FT. / IN.	DROPPED	↓	↓	↓	BEFORE	AFTER	DIFF.	INSTALLED
LOCATION											
MW - 8	2"	**POST**	55.60	NO	GOOD	NONE	NONE	64.29	64.27	**-0.02**	NO
MW - 9	2"	**POST**	51.36	NO	GOOD	MUSTY	NONE	55.07	55.10	**0.03**	NO
MW - 10	2"	**POST**	51.27	NO	GOOD	MUSTY	NONE	57.08	57.02	**-0.06**	NO

NOTES:

ALL MEASUREMENTS ARE MADE FROM THE NORTH SIDE AND TOP EDGE OF THE WELL CASING. THE TOP OF CASING WITH A NOTCH OR PERMENANT MARKINGS, WHICH EVER ONE CONDITION IS APPROPRIATE.

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2008

SAMPLE LOCATION / MW - 8 **DATE:** 6/13/2008

PROJECT NAME:	LFR / HANSON	**ANALYSIS PERFORMED:**	N/A
ADDRESS:	EL CHARRO ROAD	**SAMPLE TIME:**	NO SAMPLE TAKEN
CITY, STATE:	PLEASANTON, CA.	**SAMPLE CONTAINERS:**	N/A
SITE CONTACT:	ROB MONIZ	**PRESERVATIVES:**	N/A
CONSULTANT:	L F R	**LAB. ANALYSIS BY:**	N/A

PROJECT MANAGER:	JASON TRIOLO		**MONUMENT:**	POST	
SAMPLER:	DEL-TECH / DON LIGHT		**WELL CASING MATERIAL :**	PVC	
SIGNED:	Don Light		**WELL CASING DIA. :**	2" /	0.1632
SAMPLE MEDIA:	GROUNDWATER		**P.I.D. READING / ODOR:**	N/A	NONE
TOP OF CASING ELEVATION:		MSL	**COLOR:**	LIGHT BROWN	
DEPTH TO WATER:	**(feet.100th's)**	55.60 FEET	**CALC. PURGE VOL.:**	1.42	GAL.
DEPTH OF WELL:	**(feet.100th's)**	64.29 FEET	**TOTAL VOLUME PURGED:**	4.25	GAL.
STANDING WATER COLUMN:		8.69 FEET	**DEPTH OF PUMP:**	64	FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.5 GPM	6.83	1674	20.8	78	3.9	887
	1.42	"	"	6.58	1625	20.1	73	2.8	900
	2.84	"	"	6.52	1594	20.1	67	2.8	1000
	4.25	"	"	6.51	1593	20.1	69	3.0	"
	5.67	"	"	6.50	1593	20.1	68	3	"
	7.09	"	"	6.50	1590	20.1	65	2.3	"

PURGE METHOD:	4 FOOT STAINLESS STEEL BAILER.
SAMPLE METHOD:	WATERRA PUMP / W SURGE BLOCK
D. T. W. AFTER PURGE:	55.96'
TOTAL DEPTH AFTER PURGE:	64.27'
WELL INTEGRITY:	CAP & SEAL ARE SECURE.
WELL LOCATION:	SEE SITE MAP.
REMARKS:	
WEATHER:	WARM & SUNNY. **WIND:** NONE
QUALITY CONTROL:	*ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.*
CONTAINMENT:	*D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.*
INSTRUMENTATION:	Y.S.I. 3560 FLOWCELL — Y.S.I. DISSOLVED OXYGEN METER
	SOLINIST SLOPE METER — THERMODINE 580B P.I.D.
	KECK INTERFACE METER — TURBIDITY METER
# OF DRUMS ON SIGHT:	**WATER:** 0 **SOIL:** 0

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2008

SAMPLE LOCATION / MW - 9 **DATE:** 6/13/2008

PROJECT NAME:	LFR / HANSON	**ANALYSIS PERFORMED:**	N/A
ADDRESS:	EL CHARRO ROAD	**SAMPLE TIME:**	NO SAMPLE TAKEN
CITY, STATE:	PLEASANTON, CA.	**SAMPLE CONTAINERS:**	N/A
SITE CONTACT:	ROB MONIZ	**PRESERVATIVES:**	N/A
CONSULTANT:	L F R	**LAB. ANALYSIS BY:**	N/A

PROJECT MANAGER:	JASON TRIOLO		**MONUMENT:**	POST	
SAMPLER:	DEL-TECH / DON LIGHT		**WELL CASING MATERIAL :**	PVC	
SIGNED:	Don Light		**WELL CASING DIA. :**	2" /	0.1632
SAMPLE MEDIA:	GROUNDWATER		**P.I.D. READING / ODOR:**	N/A	NONE
TOP OF CASING ELEVATION:		MSL	**COLOR:**	LIGHT BROWN	
DEPTH TO WATER: (feet.100th's)	51.36	FEET	**CALC. PURGE VOL.:**	0.61	GAL.
DEPTH OF WELL: (feet.100th's)	55.07	FEET	**TOTAL VOLUME PURGED:**	1.82	GAL.
STANDING WATER COLUMN:	3.71	FEET	**DEPTH OF PUMP:**	55	FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.2 GPM	6.01	2283	20.2	114	4.3	1000 +
	0.61	"	"	6.55	2007	19.4	128	4.2	"
	1.21	"	"	6.56	1894	19.4	129	4.0	"
	1.82	"	"	6.53	1726	19.4	134	4.8	"
	2.42	"	"	6.50	1640	19.4	139	4.7	"
	3.03	"	"	6.50	1600	19.2	140	5.5	"

PURGE METHOD:	4 FOOT STAINLESS STEEL BAILER.		
SAMPLE METHOD:	WATERRA PUMP / W SURGE BLOCK		
D. T. W. AFTER PURGE:	51.50'		
TOTAL DEPTH AFTER PURGE:	55.10'		
WELL INTEGRITY:	CAP & SEAL ARE SECURE.		
WELL LOCATION:	SEE SITE MAP.		
REMARKS:	**MUSTY ODOR / FAIR RECHARGE.**		
WEATHER:	WARM & SUNNY.	**WIND:**	NONE
QUALITY CONTROL:	*ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.*		
CONTAINMENT:	*D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.*		
INSTRUMENTATION:	Y.S.I. 3560 FLOWCELL	Y.S.I. DISSOLVED OXYGEN METER	
	SOLINIST SLOPE METER	THERMODINE 580B P.I.D.	
	KECK INTERFACE METER	TURBIDITY METER	
# OF DRUMS ON SIGHT:	**WATER:** 0	**SOIL:** 0	

DEL-TECH GEOTECHNICAL SUPPORT SERVICES

MONITORING WELL FIELD LOG 2008

SAMPLE LOCATION / MW - 10 **DATE:** 6/13/2008

PROJECT NAME:	LFR / HANSON	**ANALYSIS PERFORMED:**	N/A
ADDRESS:	EL CHARRO ROAD	**SAMPLE TIME:**	NO SAMPLE TAKEN
CITY, STATE:	PLEASANTON, CA.	**SAMPLE CONTAINERS:**	N/A
SITE CONTACT:	ROB MONIZ	**PRESERVATIVES:**	N/A
CONSULTANT:	L F R	**LAB. ANALYSIS BY:**	N/A

PROJECT MANAGER:	JASON TRIOLO		**MONUMENT:**	POST	
SAMPLER:	DEL-TECH / DON LIGHT		**WELL CASING MATERIAL :**	PVC	
SIGNED:	Don Light		**WELL CASING DIA. :**	2" /	0.1632
SAMPLE MEDIA:	GROUNDWATER		**P.I.D. READING / ODOR:**	N/A	NONE
TOP OF CASING ELEVATION:		MSL	**COLOR:**	LIGHT BROWN	
DEPTH TO WATER: (feet.100th's)	51.27	FEET	**CALC. PURGE VOL.:**	0.95	GAL.
DEPTH OF WELL: (feet.100th's)	57.08	FEET	**TOTAL VOLUME PURGED:**	2.84	GAL.
STANDING WATER COLUMN:	5.81	FEET	**DEPTH OF PUMP:**	57	FEET

FIELD PARAMETERS

TIME	CUMULATIVE CASING VOLUME PER PURGE	DRAW DOWN (D.T.W.)	PUMPING RATE (GPM/LPM)	pH (units)	E. C. (UmMHOS)	TEMP. (Celsius)	O.R.P. (Mvolts)	DISSOLVED OXYGEN (PPM)	TURBIDITY COLOR (N.T.U.)
	0	N/A	0.5 GPM	6.64	2275	22.1	117	6.2	1000 +
	0.95	"	"	6.60	2113	21.0	119	6.2	"
	1.90	"	"	6.50	2103	20.2	123	5.2	"
	2.84	"	"	6.57	2300	23.0	119	5.6	"
	3.79	"	"	6.60	2271	22.7	119	5.9	"
	4.74	"	"	6.60	2150	20.3	117	5.8	"

PURGE METHOD:	4 FOOT STAINLESS STEEL BAILER.
SAMPLE METHOD:	WATERRA PUMP / W SURGE BLOCK
D. T. W. AFTER PURGE:	51.34'
TOTAL DEPTH AFTER PURGE:	57.02'
WELL INTEGRITY:	CAP & SEAL ARE SECURE.
WELL LOCATION:	SEE SITE MAP.
REMARKS:	**PURGE WATER IS FOAMY**
WEATHER:	WARM & SUNNY. **WIND:** NONE
QUALITY CONTROL:	*ALL PURGING EQUIPMENT AND SAMPLING EQUIPMENT WAS CLEANED IN THE FIELD WITH A STEAMCLEANER & ALCONOX SOAP. NEW NITRILE GLOVES.*
CONTAINMENT:	*D.O.T. 17 55 GAL. STEEL DRUM OR 60 GAL. POLY DRUM.*
INSTRUMENTATION:	Y.S.I. 3560 FLOWCELL / Y.S.I. DISSOLVED OXYGEN METER
	SOLINIST SLOPE METER / THERMODINE 580B P.I.D.
	KECK INTERFACE METER / TURBIDITY METER
# OF DRUMS ON SIGHT:	**WATER:** 0 **SOIL:** 0

LFR LEVINE • FRICKE

WATER-LEVEL MEASUREMENTS LOG

Project No. 001-09567-07 Date: 6/16/08 Page 1 of 1

Project Name: Hanson Radum, AOC-1 Area Day: ☐ Sun ☒ Mon ☐ Tues ☐ Weds ☐ Thurs ☐ Fri ☐ Sat

Field Personnel: Tom + Larry

General Observations: Sunny Clear Breezy

WELL NO.	WELL ELEVATION	DEPTH TO WATER 1	DEPTH TO WATER 2	WATER ELEVATION	WELL SECURE? Y	WELL SECURE? N	REMARKS (is extraction well operational?) (UNITS = FEET)
MW-1		57.35	57.35				10:43
MW-2		55.39	55.39				10:34
MW-3		54.53	54.53				10:47
MW-4		48.77	48.77				10:05 measured in mud in bott. of well
MW-5		70.16	70.16				10:17
MW-6		49.34	49.34				10:21
MW-7		57.21	57.21				10:30
MW-8		55.73	55.73				10:38
MW-9		51.48	51.48				10:25
MW-10		51.38	51.38				10:10

LFR LEVINE-FRICKE

WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6-16-08 Page ___ of ___

Project Name HANSON RADIUM Sampling Location AOC #1 Well MW-1

Sampler's Name LPL Sample No. MW-1 ☐ FB

Sampling Plan By JT Dated 6/13/08 C.O.C. No. ___ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other ___

Purge Water Storage Container Type 55-GAL Im DRUM Storage Location Near Well

Date Purge Water Disposed ___ Where Disposed ___

Analyses Requested	No. and Type of Bottles Used
TPH-d/mo / SVOCs	1 l amb / 1 l Amb
TPH-g / BTEX / Fuel ox	3 VOA w/ HCl

Lab Name C&T

Delivery By ☐ Courier ___ ☒ Hand ___

62.90
57.24
5.66
x.16
3396
566
.9056

Well No. MW-1 Depth of Water 57.24

Well Diameter: 2" Well Depth 62.90

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 5.66

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 0.9

80% DTW ___

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	~~Turb~~ DO (NTU)	Remarks
11:15							ecm/cm		BEGIN BAILING
11:20			1		19.46	6.82	1209/1205	1.94	TURB'D
11:26			2		19.73	6.76	1402/1155	81.88	TURB'D
11:32			3		18.99	6.79	1291/1142	1.77	TURB'D
11:40			4		18.78	6.75	1285/1132	1.75	TURB'D
11:50									Collect Sample
12:15		57.36							

Continue remarks on reverse, if needed

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WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6/16/08 Page ___ of ___

Project Name ~~HANSON RADUM AOC #1~~ Sampling Location Well MW-2

Sampler's Name LPL Sample No. MW-2 ☐ FB

Sampling Plan By ~~FJ~~ JT Dated 6/13/08 C.O.C. No. ___ ☐ DUP ___

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other ___

Purge Water Storage Container Type 55 GAL DRUM Storage Location Near Wells

Date Purge Water Disposed ___ Where Disposed ___

Analyses Requested	No. and Type of Bottles Used
TPH-d/mo / SVOCs	1 l Amber / 1 l Amber
TPH-g / BTEX / Fuel ox	3 VOA w/ HCl

Lab Name CAT

Delivery By ☐ Courier ___ ☒ Hand ___

Well No. MW-2 Depth of Water 55.39

Well Diameter: 2" Well Depth ~~60.00~~ 62.5

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.11

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.1

62.50
55.39
7.11
x.16
4266
711
1.1376

80% DTW ___

Ccm/cm DO

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	~~Turb~~ (NTU)	Remarks
1243									Begin Sampling
1247			1		18.84	6.66	686/605	2.81	TURBID
1254			2		19.32	6.52	666/581	2.40	TURBID
1300			3		18.26	6.52	665/580	2.80	TURBID
1306			4		18.22	6.53	664/579	2.76	TURBID TURBID
1310									Sample well
1326		55.31							

Continue remarks on reverse, if needed.

LFR EVINE • FRICKE

WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6/16/08 Page 1 of 1

Project Name Hanson Radum Sampling Location Hanson Radum

Sampler's Name Tom Collins Sample No. MW-3 ☐ FB

Sampling Plan By JT Dated 6/13/08 C.O.C. No. _____ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☒ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type Drum Storage Location _____

Date Purge Water Disposed _____ Where Disposed _____

Analyses Requested	No. and Type of Bottles Used
TPHd/mo / SVOCs	1 l Amber / 1 l Amber
TPHg / BTEX / Fuel OX	3 VOAs w/ HCl

Lab Name C&T

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-3 Depth of Water 54.53

Well Diameter: 2" Well Depth 62.40

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.87

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.25

7.87 x .8

6.296 + 62.40

80% DTW 56.11

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	~~Totalizer~~ ORP Reading	Temperature (C°)	pH (SU)	Cond (µmhos) MS/cm	Turb (NTU)	DO	Remarks
11:05		Start								DO not working
11:20			1.25	77.5	18.49	6.66	.721			5.03
11:28			2.5	115.4	18.47	6.52	.679			5.78
11:35			3.75	165.2	18.12	6.52	.686			6.28
11:45			5.0		16.09	6.51	.683			~~5.80~~ 5.84
11:55			6.25		16.03	6.48	.685			4.81
12:00			7.5		17.98	6.48	.674			6.82
12:10		54.49	SAMPLE							
		54.96	After	Sample						
				TRC						

Continue remarks on reverse, if needed.

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WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6/16/08 Page 1 of 1

Project Name HANSON RADUM Sampling Location Area 1 MW-5

Sampler's Name LPL Sample No. MW-5 ☐ FB

Sampling Plan By JT Dated 6/13/08 C.O.C. No. _____ ☒ DUP MW-5D

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type 55-GALLON DRUM Storage Location NEW WELLS

Date Purge Water Disposed _____ Where Disposed _____

Analyses Requested	No. and Type of Bottles Used
TPH-d/mo / SVOC,	1 L Amb / 1 L Amb
TPH-g / BTEX / TOTAL OX	3 VOA W/ HCl

Lab Name C&T

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-5 Depth of Water 70.16

Well Diameter: 2 Well Depth 77.2

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.04

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.1

77.20
-70.16
7.04
x.16
4224
704
1.1264

80% DTW _____

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	~~Turb~~ DO (NTU)	Remarks
							Cond/Cm		
1549									BEGIN PURGING
1554			1.25		19.19	7.26	780/693	3.25	TURBID
1601			2.50		18.41	7.21	777/679	3.56	TURBID
1608			3.75		18.34	7.20	766/669	3.33	TURBID
1630									COLLECT SAMPLE
1640									COLLECT DUPLICATE
1644		70.06							

Continue remarks on reverse, if needed.

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WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6/16/08 Page 1 of 1

Project Name Hanscom Radum Sampling Location Hanscom Radum

Sampler's Name Tom Collins Sample No. MW-6 ☐ FB

Sampling Plan By JT Dated 6/13/08 C.O.C. No. ____ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☒ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other ____

Purge Water Storage Container Type Drum Storage Location ____

Date Purge Water Disposed ____ Where Disposed ____

Analyses Requested	No. and Type of Bottles Used
TPHd/mo / SVOCs	1l Amber / 1l Amber
TPHg/BTEX / Fuel OX	3 VOAs w/ HCl

Lab Name C&T

Delivery By ☐ Courier ____ ☒ Hand ____

Well No. MW-6 Depth of Water 49.34

Well Diameter: 2" Well Depth 55' (57.85)

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 5.66 (8.51)

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume .90 ~(1.36) Ms/cm²

(.8) 8.51 = 6.8

~~49.34~~ 57.85

~~6.80~~ 6.80

51.05

80% DTW 51.05

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	Turb (NTU)	DO Remarks
14:00									Do not working Properly
14:04			1		18.53	6.61	675		3.05
14:09			2		18.28	6.44	671		3.70
14:14			3		18.17	6.42	668		4.63
14:18			4		18.08	6.42	654		4.94
14:30			5		18.00	~~6.45~~ 6.42	655		5.71
14:35			6		18.08	6.44	651		6.14
14:40	SAMPLE								
14:50		49.40				The First Well Depth Value is From Table 2. The (Second Value) is the actual Value			
				TRC					

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

LFR LEVINE-FRICKE

Project No. 001-09567-07 Date 6/16/08 Page 1 of 1

Project Name HUNSON RADUM Sampling Location AOC #1 MW-7

Sampler's Name LPL Sample No. MW-7 ☐ FB

Sampling Plan By JT Dated 6/13/08 C.O.C. No. _____ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type 55-GAL/m Drum Storage Location NRA Wells

Date Purge Water Disposed _____ Where Disposed _____

Analyses Requested	No. and Type of Bottles Used
TPHd/mo / SVOCs	1l Amb / 1l Amb
TPHg / BTEX / Fuel Ox	3 VOA w/ HCl

Lab Name C&T

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-7 Depth of Water 57.21

Well Diameter: 2 Well Depth 67.05

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 9.84

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.5

80% DTW _____

67.05
57.21
9.84
x.16
5904
984
1.5744

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	~~DO~~ ~~Turb~~ (NTU)	Remarks
1404							~~Cond~~ ~~Cm~~ ~~697~~		Begin Bailing
1411			1.5		19.38	6.55	614	2.46	TURBID
1420			3		18.39	6.45	668/584	2.76	TURBID
1430			4.5		18.31	6.42	668/583	3.30	TURBID
1443			6		18.41	6.44	668/584	3.40	TURBID
1513		57.12							Sample well

Continue remarks on reverse, if needed.

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WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6/16/08 Page 1 of 1

Project Name Hanson Radium Sampling Location Hanson Radium

Sampler's Name Tom Collins Sample No. MW-8 ☐ FB

Sampling Plan By _____ Dated _____ C.O.C. No. _____ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☒ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type Drum Storage Location _____

Date Purge Water Disposed _____ Where Disposed _____

Analyses Requested	No. and Type of Bottles Used
TPHd/mo / SVOCs	1L Amber / 1L Amber
TPHg / BTEX / Fuel ox	3 VOAs w/ HCl

Lab Name C&T

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-8 Depth of Water 55.73

Well Diameter: Well Depth 61 : 64.31

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 5.27 (8.58)

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume .84 gal (1.37) ft³

(5.27) .8

4.216

56.78

8.58 - (1.8) = 6.864

64.31 - 6.86

80% DTW 57.45

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	Turb (NTU)	DO	Remarks
12:42		Start								
12:46			1		19.61	6.81	946		2.11	
12:53			2		18.90	6.58	950		2.26	
12:59			3		18.84	6.56	953		3.06	
13:06			4		18.96	6.55	952		2.44	
13:15			5		18.96	6.52	947		2.94	
13:20		SAMPLE								
13:30		55.82								
										The First Well Depth Value is From Table #2 the (Second Value) is the actual Value
				TRC						

Continue remarks on reverse, if needed.

LFR LEVINE • FRICKE

WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date 6/16/08 Page 1 of 1

Project Name Hasson Radium Sampling Location Hasson Radium

Sampler's Name TOM COLLINS Sample No. MW-9 ☐ FB

Sampling Plan By _____ Dated _____ C.O.C. No. _____ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☒ Hand Bail ☐ Submersible Pump ☒ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type DRUM Storage Location _____

Date Purge Water Disposed _____ Where Disposed _____

Analyses Requested	No. and Type of Bottles Used
TPHd/mo / SVOCs	1l Amb / 1l amb
TPHg / BTEX / Fuel OX	3 VOAs w/ HCl

Lab Name CTI

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-9 Depth of Water 51.48

Well Diameter: Well Depth ~~55.0~~ 55.0

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 3.52

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume .56 ~ .50

3.52(.8) = 2.816

55 - 2.816

80% DTW 52.19

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	Turb (NTU)	DO Remarks
15:20	Start								
15:21			.5		19.75	6.66	872		3.41
15:23			1.0		19.33	6.52	864		3.92
15:26			1.5		18.90	6.47	866		4.06
15:28			2.0		18.84	6.44	865		3.89
15:31			2.5		18.80	6.37	860		3.61
15:33			3.0		18.76	6.37	863		4.16
15:35		SAMPLE							
15:41		51.52							

TRC

Continue remarks on reverse, if needed.

0925

WATER-QUALITY SAMPLING LOG

LFR LEVINE-FRICKE

Project No. 001-09567-07 Date 6/18/08 Page 1 of 1

Project Name Hanson Radum Sampling Location MW-10

Sampler's Name LPL / TRE Sample No. MW-10 ☐ FB

Sampling Plan By IT Dated 6/13/08 C.O.C. No. _____ ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type 55-Gallon Drum Storage Location Near Wells

Date Purge Water Disposed _____ Where Disposed _____

Analyses Requested	No. and Type of Bottles Used
TPHd/mo/SVOCs	1 l amber / 1 l amber
TPHg/BTEX/Fuel ox	3 VOAs w/ HCl

Lab Name C&T

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-10 Depth of Water 51.38

Well Diameter: _____ Well Depth 57.09

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 5.71

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 0.9

57.09
51.38
5.71
x.16
3426
571
9136

80% DTW _____

DO

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	Totalizer Reading	Temperature (C°)	pH (SU)	Cond (µmhos)	Turb (NTU)	Remarks
16:58									begin Stabilizing
17:00			1.0		19.01	7.01	1187/1207	2.33	~~Turbid~~
17:04			2.0		19.15	6.87	1207/1075	1.97	Turbid
17:08			3.25		19.18	6.88	1214/1080	2.43	Turbid
17:11			4.25		19.16	6.87	1218/1081	2.45	Turbid
17:20	SAMPLE								
		51.55							

Continue remarks on reverse, if needed.

APPENDIX D

Laboratory Certified Analytical Reports

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	139150
Units:	mg/Kg	Sampled:	06/10/08
Basis:	as received	Received:	06/10/08
Diln Fac:	1.000	Analyzed:	06/11/08

Field ID: MW-9-27.5 Lab ID: 203859-001
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	28 Y	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	66-139
Bromofluorobenzene (FID)	141	67-149

Field ID: MW-9-33.5 Lab ID: 203859-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	66-139
Bromofluorobenzene (FID)	108	67-149

Type: BLANK Lab ID: QC446058

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	66-139
Bromofluorobenzene (FID)	94	67-149

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC446059	Diln Fac:	1.000
Matrix:	Soil	Batch#:	139150
Units:	mg/Kg	Analyzed:	06/11/08

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	5.000	5.625	112	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	66-139
Bromofluorobenzene (FID)	99	67-149

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	203856-001	Batch#:	139150
Matrix:	Soil	Sampled:	06/10/08
Units:	mg/Kg	Received:	06/10/08
Basis:	as received	Analyzed:	06/11/08

Type: MS Lab ID: QC446060

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1847	9.434	8.522	88	45-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	66-139
Bromofluorobenzene (FID)	102	67-149

Type: MSD Lab ID: QC446061

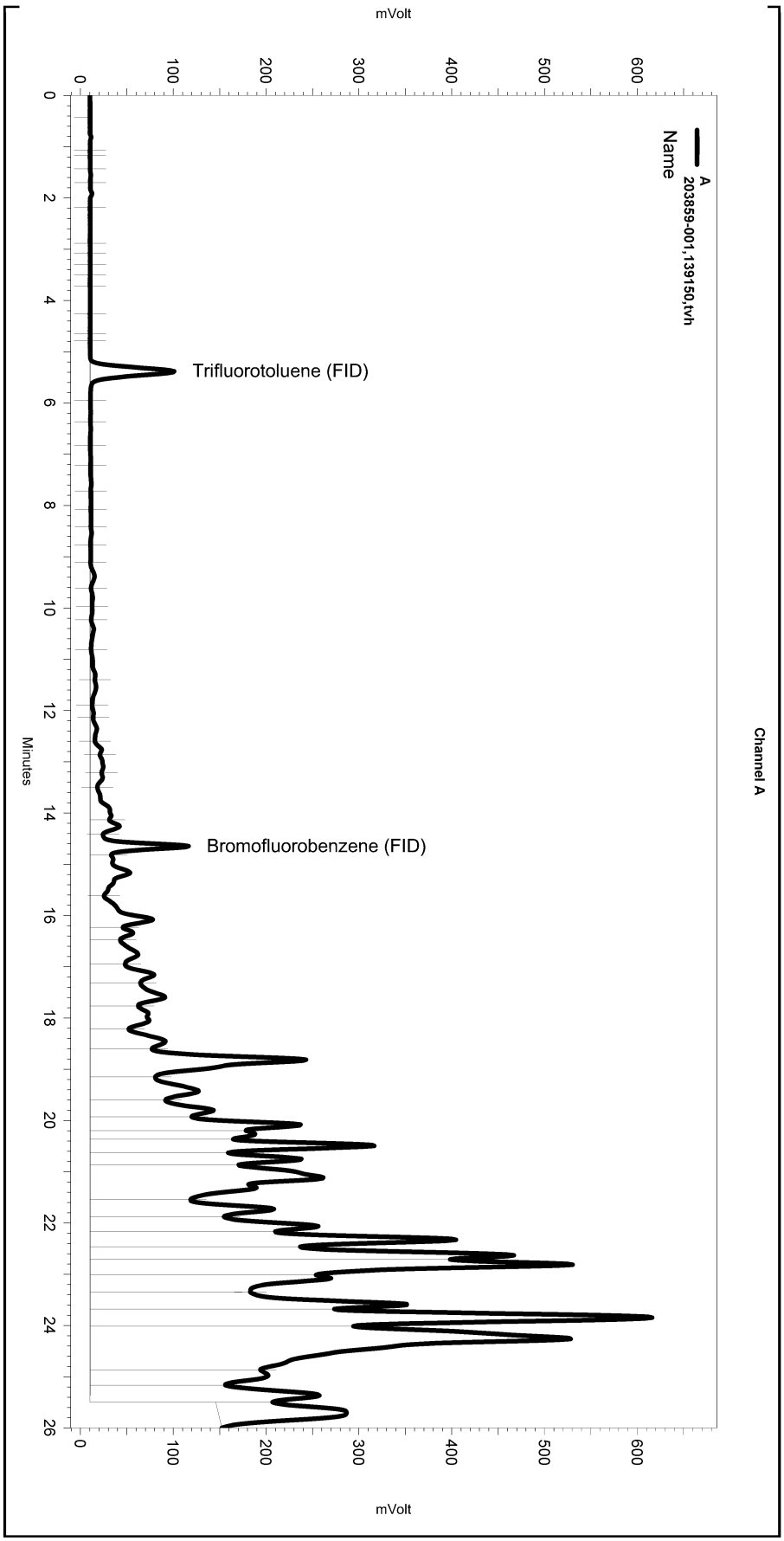
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.615	8.986	92	45-120	3	24

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	66-139
Bromofluorobenzene (FID)	103	67-149

RPD= Relative Percent Difference

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC07\Sequence\163.seq**
Sample Name: **203859-001,139150,tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC07\Data\163_006**
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbtxe157.met

Software Version 3.1.7
Run Date: 6/11/2008 2:59:40 PM
Analysis Date: 6/12/2008 8:38:51 AM
Sample Amount: 1.08 Multiplier: 1.08
Vial & pH or Core ID: A



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No items selected for this section

---< A >---

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

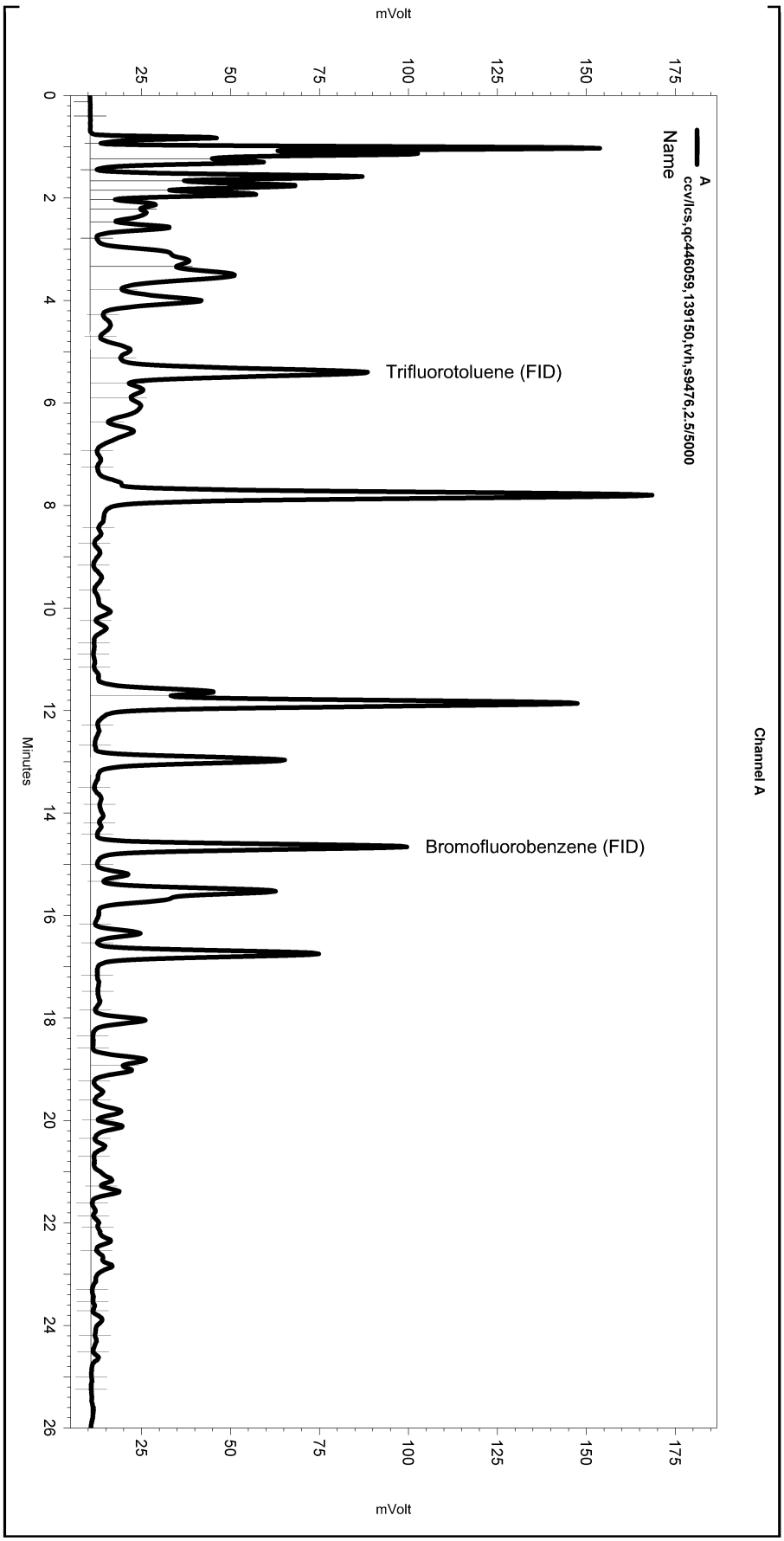
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\163_006

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.594	25.66	0

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC07\Sequence\163.seq**
Sample Name: **ccv/lcs,qc446059,139150,tvh,s9476,2.5/5000**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC07\Data\163_004**
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbtxe157.met

Software Version 3.1.7
Run Date: 6/11/2008 1:11:06 PM
Analysis Date: 6/12/2008 7:17:26 AM
Sample Amount: 1 Multiplier: 1
Vial & pH or Core ID: {Data Description}



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No items selected for this section

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No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\163_004

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value

None

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-07	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	06/10/08
Units:	mg/Kg	Received:	06/10/08
Basis:	as received	Prepared:	06/12/08
Batch#:	139179		

Field ID:	MW-9-27.5	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	06/14/08
Lab ID:	203859-001	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	6,600 Y	10
Motor Oil C24-C36	4,700	50

Surrogate	%REC	Limits
Hexacosane	DO	48-128

Field ID:	MW-9-33.5	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	06/14/08
Lab ID:	203859-002	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	67 Y	1.0
Motor Oil C24-C36	69	5.0

Surrogate	%REC	Limits
Hexacosane	76	48-128

Type:	BLANK	Analyzed:	06/16/08
Lab ID:	QC446154	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	94	48-128

Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-07	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC446155	Batch#:	139179
Matrix:	Soil	Prepared:	06/12/08
Units:	mg/Kg	Analyzed:	06/16/08
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.52	41.00	83	54-126

Surrogate	%REC	Limits
Hexacosane	102	48-128

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3550B
Project#:	001-09567-07	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	139179
MSS Lab ID:	203895-001	Sampled:	06/11/08
Matrix:	Soil	Received:	06/11/08
Units:	mg/Kg	Prepared:	06/12/08
Basis:	as received	Analyzed:	06/16/08
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC446156

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	53.74	49.69	83.23	59	34-144

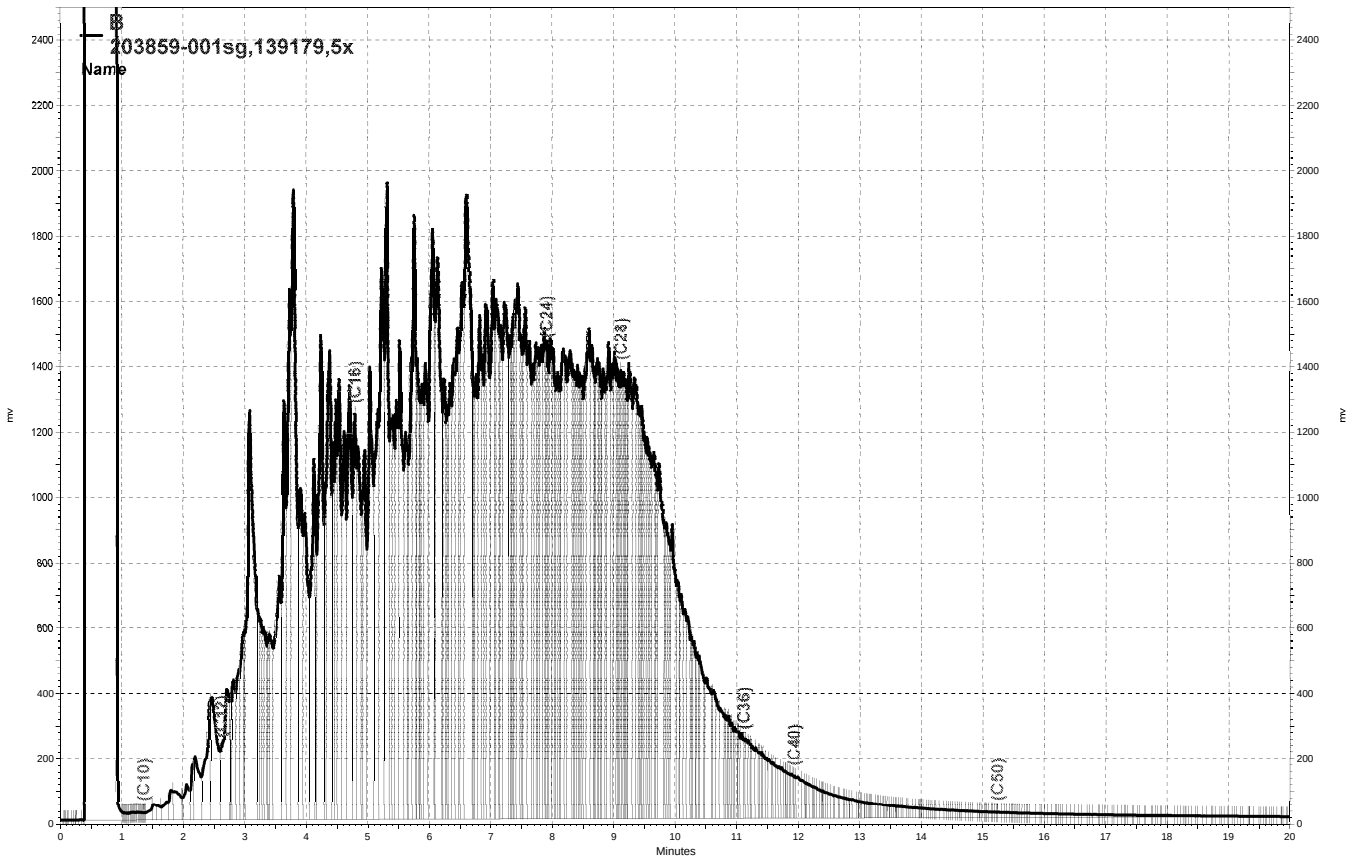
Surrogate	%REC	Limits
Hexacosane	106	48-128

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC446157

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.82	70.88	34	34-144	16	47

Surrogate	%REC	Limits
Hexacosane	99	48-128

RPD= Relative Percent Difference



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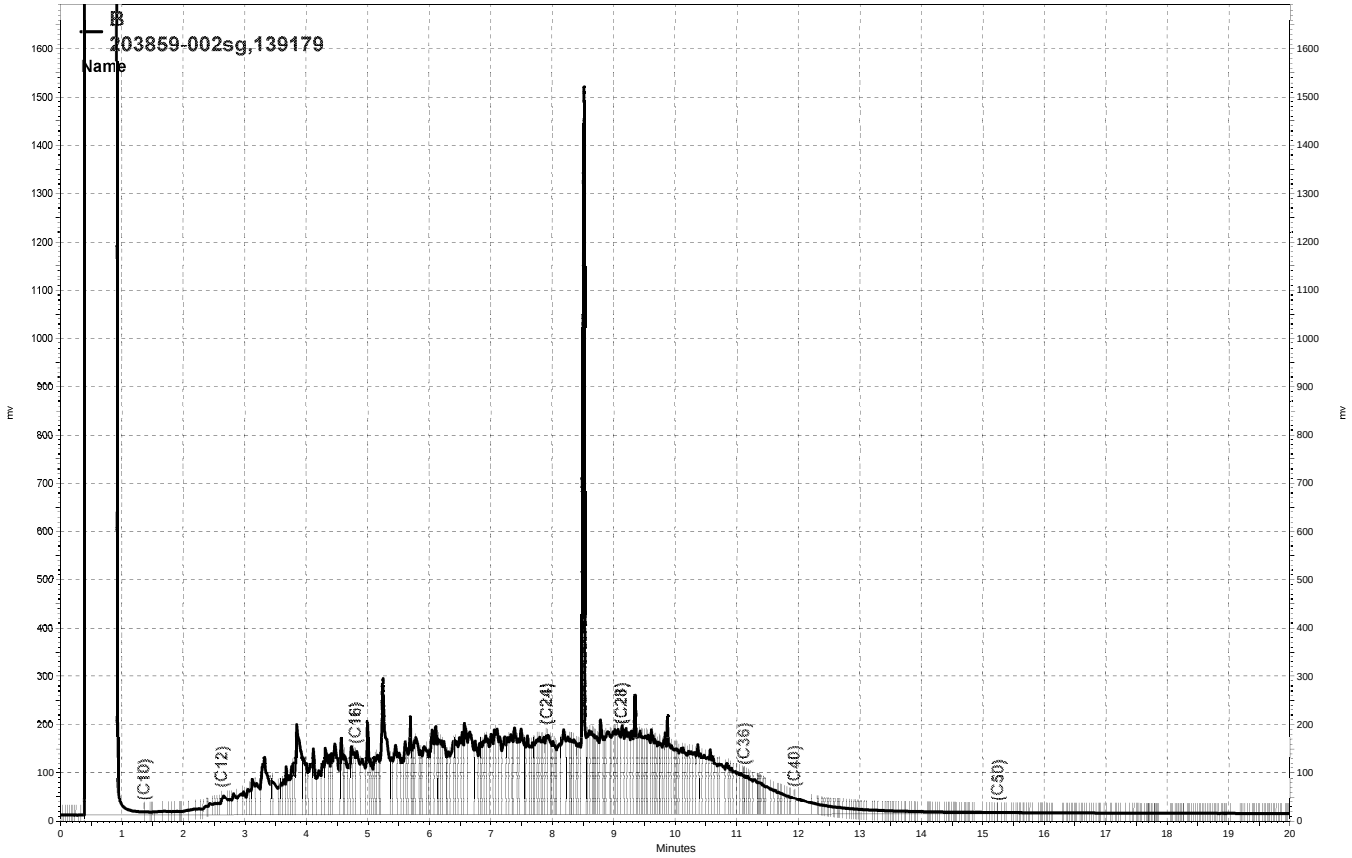

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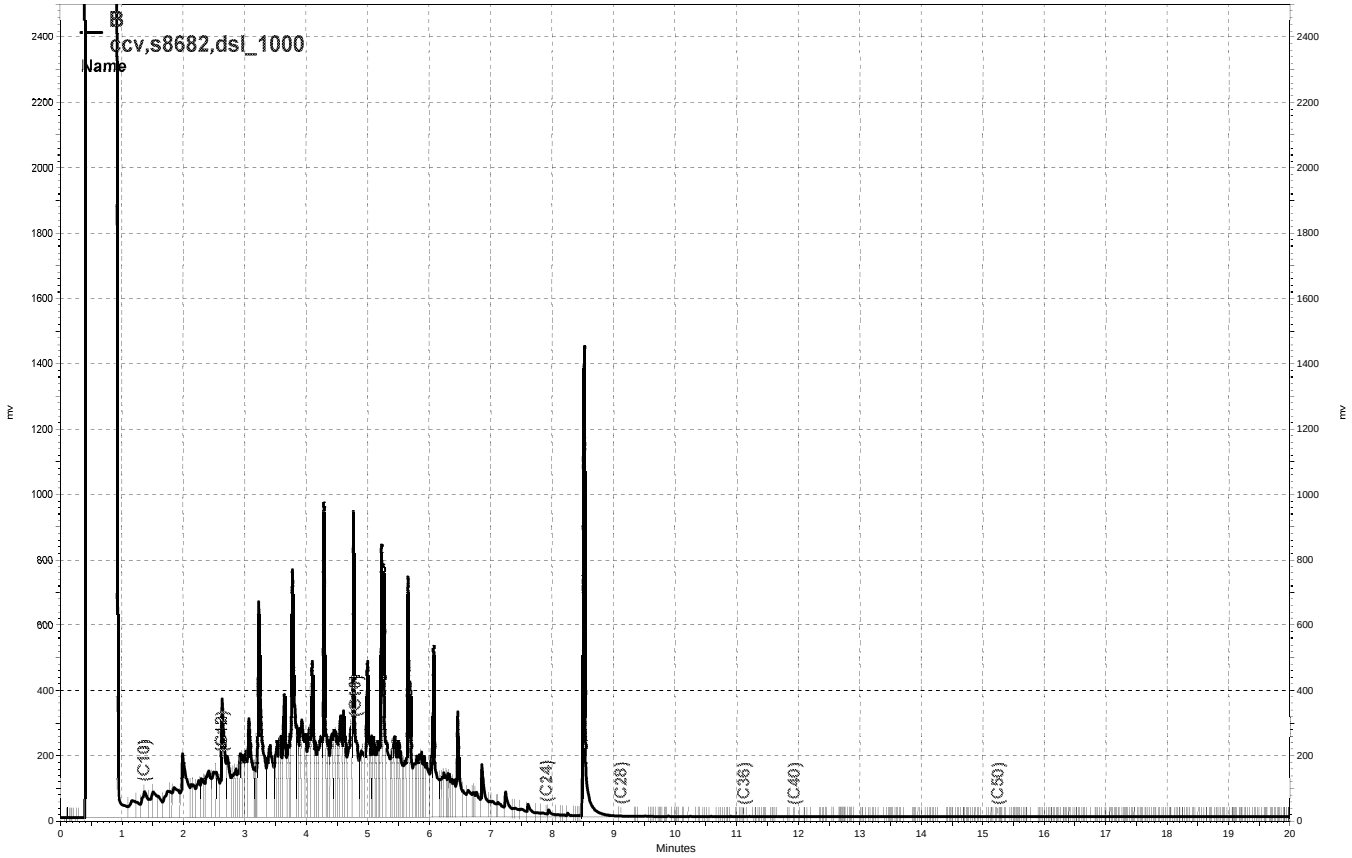

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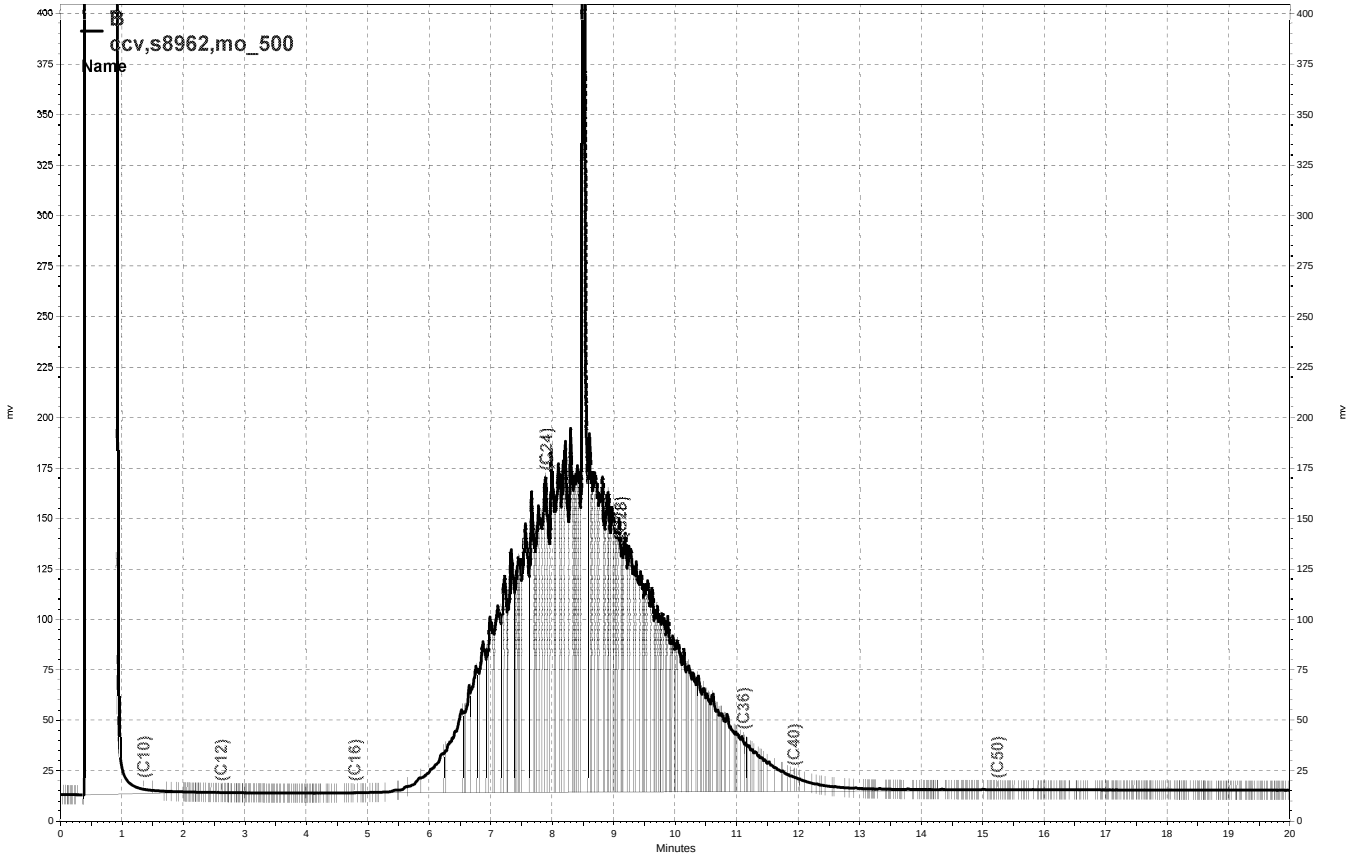

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Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-9-27.5	Diln Fac:	250.0
Lab ID:	203859-001	Batch#:	139147
Matrix:	Soil	Sampled:	06/10/08
Units:	ug/Kg	Received:	06/10/08
Basis:	as received	Analyzed:	06/11/08

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	25,000
MTBE	ND	1,300
Isopropyl Ether (DIPE)	ND	1,300
Ethyl tert-Butyl Ether (ETBE)	ND	1,300
1,2-Dichloroethane	ND	1,300
Benzene	ND	1,300
Methyl tert-Amyl Ether (TAME)	ND	1,300
Toluene	ND	1,300
1,2-Dibromoethane	ND	1,300
Ethylbenzene	ND	1,300
m,p-Xylenes	ND	1,300
o-Xylene	ND	1,300

Surrogate	%REC	Limits
Dibromofluoromethane	111	78-126
1,2-Dichloroethane-d4	97	76-137
Toluene-d8	90	80-120
Bromofluorobenzene	94	80-121
Trifluorotoluene (MeOH)	118	52-145

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-9-33.5	Diln Fac:	0.9690
Lab ID:	203859-002	Batch#:	139228
Matrix:	Soil	Sampled:	06/10/08
Units:	ug/Kg	Received:	06/10/08
Basis:	as received	Analyzed:	06/13/08

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	97
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	90	78-126
1,2-Dichloroethane-d4	105	76-137
Toluene-d8	105	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC446043	Diln Fac:	1.000
Matrix:	Soil	Batch#:	139147
Units:	ug/Kg	Analyzed:	06/11/08

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	106	78-126
1,2-Dichloroethane-d4	88	76-137
Toluene-d8	91	80-120
Bromofluorobenzene	104	80-121

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Matrix:	Soil	Dil'n Fac:	1.000
Units:	ug/Kg	Batch#:	139147
Basis:	as received	Analyzed:	06/11/08

Type: BS Lab ID: QC446044

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	112.9 b	90	58-135
MTBE	25.00	22.08	88	66-120
Isopropyl Ether (DIPE)	25.00	23.87	95	62-120
Ethyl tert-Butyl Ether (ETBE)	25.00	21.63	87	65-121
1,2-Dichloroethane	25.00	24.39	98	70-126
Benzene	25.00	27.16	109	79-123
Methyl tert-Amyl Ether (TAME)	25.00	22.09	88	71-122
Toluene	25.00	25.04	100	80-123
1,2-Dibromoethane	25.00	24.63	99	77-121
Ethylbenzene	25.00	23.20	93	80-126
m,p-Xylenes	50.00	51.15	102	80-127
o-Xylene	25.00	23.24	93	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	110	78-126
1,2-Dichloroethane-d4	95	76-137
Toluene-d8	95	80-120
Bromofluorobenzene	92	80-121

Type: BSD Lab ID: QC446045

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	102.5 b	82	58-135	10	27
MTBE	25.00	22.88	92	66-120	4	20
Isopropyl Ether (DIPE)	25.00	24.78	99	62-120	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	22.15	89	65-121	2	20
1,2-Dichloroethane	25.00	24.07	96	70-126	1	20
Benzene	25.00	27.05	108	79-123	0	20
Methyl tert-Amyl Ether (TAME)	25.00	22.50	90	71-122	2	20
Toluene	25.00	25.59	102	80-123	2	20
1,2-Dibromoethane	25.00	24.76	99	77-121	0	20
Ethylbenzene	25.00	24.08	96	80-126	4	20
m,p-Xylenes	50.00	52.96	106	80-127	3	20
o-Xylene	25.00	24.37	97	80-123	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	110	78-126
1,2-Dichloroethane-d4	92	76-137
Toluene-d8	94	80-120
Bromofluorobenzene	91	80-121

b= See narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC446360	Diln Fac:	1.000
Matrix:	Soil	Batch#:	139228
Units:	ug/Kg	Analyzed:	06/13/08

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	155.3	124	58-135
MTBE	25.00	28.32	113	66-120
Isopropyl Ether (DIPE)	25.00	25.69	103	62-120
Ethyl tert-Butyl Ether (ETBE)	25.00	26.95	108	65-121
1,2-Dichloroethane	25.00	24.77	99	70-126
Benzene	25.00	25.36	101	79-123
Methyl tert-Amyl Ether (TAME)	25.00	28.92	116	71-122
Toluene	25.00	25.35	101	80-123
1,2-Dibromoethane	25.00	27.29	109	77-121
Ethylbenzene	25.00	25.41	102	80-126
m,p-Xylenes	50.00	49.69	99	80-127
o-Xylene	25.00	25.70	103	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-126
1,2-Dichloroethane-d4	94	76-137
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-121

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC446361	Diln Fac:	1.000
Matrix:	Soil	Batch#:	139228
Units:	ug/Kg	Analyzed:	06/13/08

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	87	78-126
1,2-Dichloroethane-d4	98	76-137
Toluene-d8	103	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

BTXE & Oxygenates

Lab #:	203859	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-9-33.5	Dil'n Fac:	0.9690
MSS Lab ID:	203859-002	Batch#:	139228
Matrix:	Soil	Sampled:	06/10/08
Units:	ug/Kg	Received:	06/10/08
Basis:	as received	Analyzed:	06/13/08

Type: MS Lab ID: QC446486

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<7.174	242.2	231.7	96	43-126
MTBE	<0.5884	48.45	48.63	100	51-120
Isopropyl Ether (DIPE)	<0.5489	48.45	44.21	91	48-120
Ethyl tert-Butyl Ether (ETBE)	<0.5943	48.45	46.74	96	51-121
1,2-Dichloroethane	<0.8057	48.45	44.89	93	51-120
Benzene	<0.6866	48.45	45.96	95	55-120
Methyl tert-Amyl Ether (TAME)	<0.6809	48.45	49.13	101	55-120
Toluene	<0.5064	48.45	46.35	96	52-121
1,2-Dibromoethane	<0.6798	48.45	47.19	97	49-120
Ethylbenzene	<0.6522	48.45	44.58	92	50-123
m,p-Xylenes	<1.191	96.90	86.12	89	47-122
o-Xylene	<0.4972	48.45	44.62	92	48-120

Surrogate	%REC	Limits
Dibromofluoromethane	92	78-126
1,2-Dichloroethane-d4	92	76-137
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-121

Type: MSD Lab ID: QC446487

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	242.2	221.9	92	43-126	4	39
MTBE	48.45	47.94	99	51-120	1	29
Isopropyl Ether (DIPE)	48.45	44.22	91	48-120	0	30
Ethyl tert-Butyl Ether (ETBE)	48.45	45.89	95	51-121	2	30
1,2-Dichloroethane	48.45	44.71	92	51-120	0	28
Benzene	48.45	45.36	94	55-120	1	26
Methyl tert-Amyl Ether (TAME)	48.45	48.76	101	55-120	1	29
Toluene	48.45	46.10	95	52-121	1	29
1,2-Dibromoethane	48.45	46.13	95	49-120	2	30
Ethylbenzene	48.45	43.75	90	50-123	2	30
m,p-Xylenes	96.90	83.97	87	47-122	3	30
o-Xylene	48.45	44.00	91	48-120	1	30

Surrogate	%REC	Limits
Dibromofluoromethane	93	78-126
1,2-Dichloroethane-d4	93	76-137
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-121

RPD= Relative Percent Difference

203859

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR:
LFR LEVINE•FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608-1827
(510) 652-4500 Fax: (510) 652-2246

PROJECT NO.:	SECTION NO.:	DATE:	SAMPLER'S INITIALS:	SERIAL NO.:
001-09567-07	~~XXXX~~ ###	6/10/08	LPL	Nº 201975

PROJECT NAME: HANSON RADUM AOC #1

SAMPLER (Signature):

SAMPLE								ANALYSES											REMARKS
					TYPE											TAT			*VOCs: **Metals:
SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	Soil	Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA 8015M)	BTEX (EPA 8021/602)	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	SILICA Gel CLEAN UP	BTOX 8260	TVH 8015	Standard	RUSH:	HOLD	☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List ☐ CAM17 ☐ RCRA ☐ LUFT
1 MW-9-27.5	6/10/8	10:00		1	X		X	X				X	X	X	X	X			
2 MW-9-33.5	↓	10:15		1	X		X	X				X	X	X	X	X			

SAMPLE RECEIPT: ☐ Intact ☐ Cold ☒ On Ice ☐ Ambient
Cooler Temp:
Cooler No:
WET-ICE
Preservative Correct? ☐ Yes ☐ No ☐ N/A

ANALYTICAL LABORATORY: CTT

METHOD OF SHIPMENT: HAND DELIVER
LAB REPORT NO.:
FAX COC CONFIRMATION TO:
FAX RESULTS TO: KATHY SCHLIEWEN
SEND HARDCOPY TO:
SEND EDD TO: EMV.LABEDDS.COM

	1	2	3
RELINQUISHED BY:	(SIGNATURE) (DATE) 6/10/08	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
	(PRINTED NAME) LARRY LAPHAM (TIME) 1731	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
	(COMPANY) LFR INC	(COMPANY)	(COMPANY)
RECEIVED BY:	(SIGNATURE) (DATE) 6/10/08	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
	(PRINTED NAME) SAM EVANS (TIME) 1731	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
	(COMPANY) CTT	(COMPANY)	(COMPANY)

Shipping Copy (White) File Copy (Yellow) Field Copy (Pink)

CHAIN of CUSTODY - ANALYSES FORM.CDR 5/2003

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 203859 Date Received 6/10/08 Number of coolers 1
Client LFR Project NELSON RADUM AOG#1

Date Opened 6/10/08 By (print) M. VILLANUEVA (sign)
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc)?..... YES (NO)
Shipping info_____

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☐ (NO)
How many _____ Name_____ Date_____

2B. Were custody seals intact upon arrival? ..... YES NO ~~N/A~~

3. Were custody papers dry and intact when received?..... (YES) NO

4. Were custody papers filled out properly (ink, signed, etc)?..... (YES) NO

5. Is the project identifiable from custody papers? (If so fill out top of form)..... (YES) NO

6. Indicate the packing in cooler: (if other, describe)_____

☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☒ ~~None~~

☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. If required, was sufficient ice used? Samples should be < or = 6°C .....YES NO N/A

Type of ice used: ☐ Wet ☐ Blue ☐ None Temp(°C)_____

☒ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? .....YES (NO)
If YES, what time were they transferred to freezer?_____

9. Did all bottles arrive unbroken/unopened?..... (YES) NO

10. Are samples in the appropriate containers for indicated tests? ..... (YES) NO

11. Are sample labels present, in good condition and complete? ..... (YES) NO

12. Do the sample labels agree with custody papers? ..... (YES) NO

13. Was sufficient amount of sample sent for tests requested? ..... (YES) NO

14. Are the samples appropriately preserved? .....YES NO (N/A)

15. Are bubbles > 6mm absent in VOA samples?.....YES NO (N/A)

16. Was the client contacted concerning this sample delivery?.....YES NO
If YES, Who was called?_____ By_____ Date:_____

COMMENTS

_____

_____

_____

_____

_____

_____

_____

_____

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/16/08
Units:	ug/L	Received:	06/16/08
Diln Fac:	1.000	Prepared:	06/17/08
Batch#:	139370		

Field ID: MW-1
Type: SAMPLE
Lab ID: 204017-001
Analyzed: 06/19/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	111	63-130

Field ID: MW-2
Type: SAMPLE
Lab ID: 204017-002
Analyzed: 06/19/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	93	63-130

Field ID: MW-3
Type: SAMPLE
Lab ID: 204017-003
Analyzed: 06/20/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	93	63-130

Field ID: MW-5
Type: SAMPLE
Lab ID: 204017-004
Analyzed: 06/20/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	97	63-130

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/16/08
Units:	ug/L	Received:	06/16/08
Diln Fac:	1.000	Prepared:	06/17/08
Batch#:	139370		

Field ID: MW-5D
Type: SAMPLE
Lab ID: 204017-005
Analyzed: 06/20/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	90	63-130

Field ID: MW-6
Type: SAMPLE
Lab ID: 204017-006
Analyzed: 06/20/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	81	63-130

Field ID: MW-7
Type: SAMPLE
Lab ID: 204017-007
Analyzed: 06/20/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	105	63-130

Field ID: MW-8
Type: SAMPLE
Lab ID: 204017-008
Analyzed: 06/20/08
Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	110	63-130

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/16/08
Units:	ug/L	Received:	06/16/08
Diln Fac:	1.000	Prepared:	06/17/08
Batch#:	139370		

Field ID: MW-9 Analyzed: 06/20/08
Type: SAMPLE Cleanup Method: EPA 3630C
Lab ID: 204017-009

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

Surrogate	%REC	Limits
Hexacosane	95	63-130

Field ID: MW-10 Analyzed: 06/20/08
Type: SAMPLE Cleanup Method: EPA 3630C
Lab ID: 204017-010

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

Surrogate	%REC	Limits
Hexacosane	99	63-130

Type: BLANK Analyzed: 06/19/08
Lab ID: QC446940 Cleanup Method: EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	97	63-130

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC446941	Batch#:	139370
Matrix:	Water	Prepared:	06/17/08
Units:	ug/L	Analyzed:	06/19/08

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,151	86	61-120

Surrogate	%REC	Limits
Hexacosane	102	63-130

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	139370
MSS Lab ID:	203988-002	Sampled:	06/13/08
Matrix:	Water	Received:	06/13/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Type: MS Lab ID: QC446942

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	40.69	2,500	1,877	73	58-126

Surrogate	%REC	Limits
Hexacosane	104	63-130

Type: MSD Lab ID: QC446943

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,953	76	58-126	4	31

Surrogate	%REC	Limits
Hexacosane	109	63-130

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	139327
Lab ID:	204017-001	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	86	80-123
1,2-Dichloroethane-d4	94	76-138
Toluene-d8	95	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	139327
Lab ID:	204017-002	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	87	80-123
1,2-Dichloroethane-d4	96	76-138
Toluene-d8	95	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	139327
Lab ID:	204017-003	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	88	80-123
1,2-Dichloroethane-d4	101	76-138
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	139327
Lab ID:	204017-004	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-123
1,2-Dichloroethane-d4	102	76-138
Toluene-d8	95	80-120
Bromofluorobenzene	98	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-5D	Batch#:	139327
Lab ID:	204017-005	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-123
1,2-Dichloroethane-d4	108	76-138
Toluene-d8	95	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-6	Batch#:	139327
Lab ID:	204017-006	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-123
1,2-Dichloroethane-d4	114	76-138
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	139428
Lab ID:	204017-007	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-123
1,2-Dichloroethane-d4	122	76-138
Toluene-d8	99	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-8	Batch#:	139428
Lab ID:	204017-008	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-123
1,2-Dichloroethane-d4	126	76-138
Toluene-d8	101	80-120
Bromofluorobenzene	113	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-9	Batch#:	139428
Lab ID:	204017-009	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-123
1,2-Dichloroethane-d4	126	76-138
Toluene-d8	99	80-120
Bromofluorobenzene	115	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	MW-10	Batch#:	139428
Lab ID:	204017-010	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Analyzed:	06/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-123
1,2-Dichloroethane-d4	132	76-138
Toluene-d8	100	80-120
Bromofluorobenzene	113	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC446755	Batch#:	139327
Matrix:	Water	Analyzed:	06/17/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	102.1	82	55-158
Isopropyl Ether (DIPE)	25.00	17.74	71	63-122
Ethyl tert-Butyl Ether (ETBE)	25.00	21.00	84	62-133
Methyl tert-Amyl Ether (TAME)	25.00	23.60	94	69-137
MTBE	25.00	21.87	87	60-136
1,2-Dichloroethane	25.00	30.52	122	77-125
Benzene	25.00	21.99	88	80-120
Toluene	25.00	22.94	92	80-121
1,2-Dibromoethane	25.00	23.97	96	80-120
Ethylbenzene	25.00	25.41	102	80-124
m,p-Xylenes	50.00	48.80	98	80-128
o-Xylene	25.00	24.40	98	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-123
1,2-Dichloroethane-d4	103	76-138
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-120

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC446756	Batch#:	139327
Matrix:	Water	Analyzed:	06/17/08
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	89	80-123
1,2-Dichloroethane-d4	101	76-138
Toluene-d8	95	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	139327
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Type: BS Lab ID: QC446806

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,009	101	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-123
1,2-Dichloroethane-d4	103	76-138
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

Type: BSD Lab ID: QC446807

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	929.1	93	80-120	8	20

Surrogate	%REC	Limits
Dibromofluoromethane	89	80-123
1,2-Dichloroethane-d4	99	76-138
Toluene-d8	96	80-120
Bromofluorobenzene	96	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	139327
MSS Lab ID:	203902-003	Sampled:	06/11/08
Matrix:	Water	Received:	06/11/08
Units:	ug/L	Analyzed:	06/17/08
Diln Fac:	1.000		

Type: MS Lab ID: QC446851

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<2.000	125.0	119.4	96	66-153
Isopropyl Ether (DIPE)	<0.1000	25.00	16.47	66 *	72-124
Ethyl tert-Butyl Ether (ETBE)	<0.1000	25.00	19.98	80	72-131
Methyl tert-Amyl Ether (TAME)	<0.1000	25.00	23.82	95	76-128
MTBE	<0.1000	25.00	22.04	88	72-129
1,2-Dichloroethane	<0.1000	25.00	32.91	132 *	80-129
Benzene	0.7856	25.00	21.36	82	80-122
Toluene	1.473	25.00	22.55	84	80-120
1,2-Dibromoethane	<0.1000	25.00	23.71	95	80-120
Ethylbenzene	0.2235	25.00	24.77	98	80-123
m,p-Xylenes	0.6283	50.00	45.73	90	80-126
o-Xylene	0.2794	25.00	23.25	92	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-123
1,2-Dichloroethane-d4	121	76-138
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

Type: MSD Lab ID: QC446852

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	118.9	95	66-153	0	23
Isopropyl Ether (DIPE)	25.00	16.78	67 *	72-124	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	20.71	83	72-131	4	20
Methyl tert-Amyl Ether (TAME)	25.00	24.01	96	76-128	1	20
MTBE	25.00	21.69	87	72-129	2	20
1,2-Dichloroethane	25.00	33.41	134 *	80-129	1	20
Benzene	25.00	22.05	85	80-122	3	20
Toluene	25.00	23.31	87	80-120	3	20
1,2-Dibromoethane	25.00	24.25	97	80-120	2	20
Ethylbenzene	25.00	25.08	99	80-123	1	20
m,p-Xylenes	50.00	47.89	95	80-126	5	20
o-Xylene	25.00	24.17	96	80-122	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-123
1,2-Dichloroethane-d4	119	76-138
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-120

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	139428
Units:	ug/L	Analyzed:	06/19/08
Diln Fac:	1.000		

Type: BS Lab ID: QC447177

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	144.7	116	55-158
Isopropyl Ether (DIPE)	25.00	22.71	91	63-122
Ethyl tert-Butyl Ether (ETBE)	25.00	25.26	101	62-133
Methyl tert-Amyl Ether (TAME)	25.00	25.51	102	69-137
MTBE	25.00	25.78	103	60-136
1,2-Dichloroethane	25.00	29.54	118	77-125
Benzene	25.00	23.11	92	80-120
Toluene	25.00	22.21	89	80-121
1,2-Dibromoethane	25.00	22.66	91	80-120
Ethylbenzene	25.00	25.55	102	80-124
m,p-Xylenes	50.00	48.34	97	80-128
o-Xylene	25.00	23.82	95	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-123
1,2-Dichloroethane-d4	105	76-138
Toluene-d8	101	80-120
Bromofluorobenzene	109	80-120

Type: BSD Lab ID: QC447178

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	166.6	133	55-158	14	20
Isopropyl Ether (DIPE)	25.00	23.27	93	63-122	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.57	102	62-133	1	20
Methyl tert-Amyl Ether (TAME)	25.00	26.70	107	69-137	5	20
MTBE	25.00	26.65	107	60-136	3	20
1,2-Dichloroethane	25.00	30.53	122	77-125	3	20
Benzene	25.00	23.51	94	80-120	2	20
Toluene	25.00	23.16	93	80-121	4	20
1,2-Dibromoethane	25.00	23.66	95	80-120	4	20
Ethylbenzene	25.00	26.43	106	80-124	3	20
m,p-Xylenes	50.00	49.18	98	80-128	2	20
o-Xylene	25.00	24.82	99	80-123	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-123
1,2-Dichloroethane-d4	106	76-138
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	139428
Units:	ug/L	Analyzed:	06/19/08
Diln Fac:	1.000		

Type: BS Lab ID: QC447179

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,112	111	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-123
1,2-Dichloroethane-d4	108	76-138
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-120

Type: BSD Lab ID: QC447180

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,084	108	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-123
1,2-Dichloroethane-d4	107	76-138
Toluene-d8	101	80-120
Bromofluorobenzene	107	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567-07	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC447181	Batch#:	139428
Matrix:	Water	Analyzed:	06/19/08
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-123
1,2-Dichloroethane-d4	112	76-138
Toluene-d8	99	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-1	Batch#:	139353
Lab ID:	204017-001	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-1	Batch#:	139353
Lab ID:	204017-001	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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	87	42-120
Phenol-d5	90	46-120
2,4,6-Tribromophenol	103	48-124
Nitrobenzene-d5	106	55-120
2-Fluorobiphenyl	98	56-120
Terphenyl-d14	56	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-2	Batch#:	139353
Lab ID:	204017-002	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-2	Batch#:	139353
Lab ID:	204017-002	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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	71	42-120
Phenol-d5	65	46-120
2,4,6-Tribromophenol	90	48-124
Nitrobenzene-d5	112	55-120
2-Fluorobiphenyl	106	56-120
Terphenyl-d14	79	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-3	Batch#:	139353
Lab ID:	204017-003	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.5
Phenol	ND	9.5
bis(2-Chloroethyl)ether	ND	9.5
2-Chlorophenol	ND	9.5
1,3-Dichlorobenzene	ND	9.5
1,4-Dichlorobenzene	ND	9.5
Benzyl alcohol	ND	9.5
1,2-Dichlorobenzene	ND	9.5
2-Methylphenol	ND	9.5
bis(2-Chloroisopropyl) ether	ND	9.5
4-Methylphenol	ND	9.5
N-Nitroso-di-n-propylamine	ND	9.5
Hexachloroethane	ND	9.5
Nitrobenzene	ND	9.5
Isophorone	ND	9.5
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.5
Benzoic acid	ND	48
bis(2-Chloroethoxy)methane	ND	9.5
2,4-Dichlorophenol	ND	9.5
1,2,4-Trichlorobenzene	ND	9.5
Naphthalene	ND	9.5
4-Chloroaniline	ND	9.5
Hexachlorobutadiene	ND	9.5
4-Chloro-3-methylphenol	ND	9.5
2-Methylnaphthalene	ND	9.5
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.5
2,4,5-Trichlorophenol	ND	9.5
2-Chloronaphthalene	ND	9.5
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.5
Acenaphthylene	ND	9.5
2,6-Dinitrotoluene	ND	9.5
3-Nitroaniline	ND	19
Acenaphthene	ND	9.5
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.5
2,4-Dinitrotoluene	ND	9.5
Diethylphthalate	ND	9.5
Fluorene	ND	9.5
4-Chlorophenyl-phenylether	ND	9.5
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.5
Azobenzene	ND	9.5
4-Bromophenyl-phenylether	ND	9.5
Hexachlorobenzene	ND	9.5
Pentachlorophenol	ND	19
Phenanthrene	ND	9.5
Anthracene	ND	9.5
Di-n-butylphthalate	ND	9.5
Fluoranthene	ND	9.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-3	Batch#:	139353
Lab ID:	204017-003	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
Pyrene	ND	9.5
Butylbenzylphthalate	ND	9.5
3,3'-Dichlorobenzidine	ND	19
Benzo(a)anthracene	ND	9.5
Chrysene	ND	9.5
bis(2-Ethylhexyl)phthalate	ND	9.5
Di-n-octylphthalate	ND	9.5
Benzo(b)fluoranthene	ND	9.5
Benzo(k)fluoranthene	ND	9.5
Benzo(a)pyrene	ND	9.5
Indeno(1,2,3-cd)pyrene	ND	9.5
Dibenz(a,h)anthracene	ND	9.5
Benzo(g,h,i)perylene	ND	9.5

Surrogate	%REC	Limits
2-Fluorophenol	72	42-120
Phenol-d5	70	46-120
2,4,6-Tribromophenol	87	48-124
Nitrobenzene-d5	105	55-120
2-Fluorobiphenyl	99	56-120
Terphenyl-d14	57	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-5	Batch#:	139455
Lab ID:	204017-004	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/19/08
Diln Fac:	1.000	Analyzed:	06/20/08

Analyte	Result	RL
N-Nitrosodimethylamine	ND	20
Phenol	ND	20
bis(2-Chloroethyl)ether	ND	20
2-Chlorophenol	ND	20
1,3-Dichlorobenzene	ND	20
1,4-Dichlorobenzene	ND	20
Benzyl alcohol	ND	20
1,2-Dichlorobenzene	ND	20
2-Methylphenol	ND	20
bis(2-Chloroisopropyl) ether	ND	20
4-Methylphenol	ND	20
N-Nitroso-di-n-propylamine	ND	20
Hexachloroethane	ND	20
Nitrobenzene	ND	20
Isophorone	ND	20
2-Nitrophenol	ND	40
2,4-Dimethylphenol	ND	20
Benzoic acid	ND	100
bis(2-Chloroethoxy)methane	ND	20
2,4-Dichlorophenol	ND	20
1,2,4-Trichlorobenzene	ND	20
Naphthalene	ND	20
4-Chloroaniline	ND	20
Hexachlorobutadiene	ND	20
4-Chloro-3-methylphenol	ND	20
2-Methylnaphthalene	ND	20
Hexachlorocyclopentadiene	ND	40
2,4,6-Trichlorophenol	ND	20
2,4,5-Trichlorophenol	ND	20
2-Chloronaphthalene	ND	20
2-Nitroaniline	ND	40
Dimethylphthalate	ND	20
Acenaphthylene	ND	20
2,6-Dinitrotoluene	ND	20
3-Nitroaniline	ND	40
Acenaphthene	ND	20
2,4-Dinitrophenol	ND	40
4-Nitrophenol	ND	40
Dibenzofuran	ND	20
2,4-Dinitrotoluene	ND	20
Diethylphthalate	ND	20
Fluorene	ND	20
4-Chlorophenyl-phenylether	ND	20
4-Nitroaniline	ND	40
4,6-Dinitro-2-methylphenol	ND	40
N-Nitrosodiphenylamine	ND	20
Azobenzene	ND	20
4-Bromophenyl-phenylether	ND	20
Hexachlorobenzene	ND	20
Pentachlorophenol	ND	40
Phenanthrene	ND	20
Anthracene	ND	20
Di-n-butylphthalate	ND	20
Fluoranthene	ND	20

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-5	Batch#:	139455
Lab ID:	204017-004	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/19/08
Diln Fac:	1.000	Analyzed:	06/20/08

Analyte	Result	RL
Pyrene	ND	20
Butylbenzylphthalate	ND	20
3,3'-Dichlorobenzidine	ND	40
Benzo(a)anthracene	ND	20
Chrysene	ND	20
bis(2-Ethylhexyl)phthalate	ND	20
Di-n-octylphthalate	ND	20
Benzo(b)fluoranthene	ND	20
Benzo(k)fluoranthene	ND	20
Benzo(a)pyrene	ND	20
Indeno(1,2,3-cd)pyrene	ND	20
Dibenz(a,h)anthracene	ND	20
Benzo(g,h,i)perylene	ND	20

Surrogate	%REC	Limits
2-Fluorophenol	55	42-120
Phenol-d5	55	46-120
2,4,6-Tribromophenol	70	48-124
Nitrobenzene-d5	96	55-120
2-Fluorobiphenyl	83	56-120
Terphenyl-d14	64	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-5D	Batch#:	139353
Lab ID:	204017-005	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-5D	Batch#:	139353
Lab ID:	204017-005	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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	58	42-120
Phenol-d5	59	46-120
2,4,6-Tribromophenol	65	48-124
Nitrobenzene-d5	87	55-120
2-Fluorobiphenyl	85	56-120
Terphenyl-d14	46	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-6	Batch#:	139353
Lab ID:	204017-006	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.6
Phenol	ND	9.6
bis(2-Chloroethyl)ether	ND	9.6
2-Chlorophenol	ND	9.6
1,3-Dichlorobenzene	ND	9.6
1,4-Dichlorobenzene	ND	9.6
Benzyl alcohol	ND	9.6
1,2-Dichlorobenzene	ND	9.6
2-Methylphenol	ND	9.6
bis(2-Chloroisopropyl) ether	ND	9.6
4-Methylphenol	ND	9.6
N-Nitroso-di-n-propylamine	ND	9.6
Hexachloroethane	ND	9.6
Nitrobenzene	ND	9.6
Isophorone	ND	9.6
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.6
Benzoic acid	ND	48
bis(2-Chloroethoxy)methane	ND	9.6
2,4-Dichlorophenol	ND	9.6
1,2,4-Trichlorobenzene	ND	9.6
Naphthalene	ND	9.6
4-Chloroaniline	ND	9.6
Hexachlorobutadiene	ND	9.6
4-Chloro-3-methylphenol	ND	9.6
2-Methylnaphthalene	ND	9.6
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.6
2,4,5-Trichlorophenol	ND	9.6
2-Chloronaphthalene	ND	9.6
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.6
Acenaphthylene	ND	9.6
2,6-Dinitrotoluene	ND	9.6
3-Nitroaniline	ND	19
Acenaphthene	ND	9.6
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.6
2,4-Dinitrotoluene	ND	9.6
Diethylphthalate	ND	9.6
Fluorene	ND	9.6
4-Chlorophenyl-phenylether	ND	9.6
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.6
Azobenzene	ND	9.6
4-Bromophenyl-phenylether	ND	9.6
Hexachlorobenzene	ND	9.6
Pentachlorophenol	ND	19
Phenanthrene	ND	9.6
Anthracene	ND	9.6
Di-n-butylphthalate	ND	9.6
Fluoranthene	ND	9.6

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-6	Batch#:	139353
Lab ID:	204017-006	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
Pyrene	ND	9.6
Butylbenzylphthalate	ND	9.6
3,3'-Dichlorobenzidine	ND	19
Benzo(a)anthracene	ND	9.6
Chrysene	ND	9.6
bis(2-Ethylhexyl)phthalate	ND	9.6
Di-n-octylphthalate	ND	9.6
Benzo(b)fluoranthene	ND	9.6
Benzo(k)fluoranthene	ND	9.6
Benzo(a)pyrene	ND	9.6
Indeno(1,2,3-cd)pyrene	ND	9.6
Dibenz(a,h)anthracene	ND	9.6
Benzo(g,h,i)perylene	ND	9.6

Surrogate	%REC	Limits
2-Fluorophenol	55	42-120
Phenol-d5	53	46-120
2,4,6-Tribromophenol	48	48-124
Nitrobenzene-d5	77	55-120
2-Fluorobiphenyl	85	56-120
Terphenyl-d14	52	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-7	Batch#:	139353
Lab ID:	204017-007	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-7	Batch#:	139353
Lab ID:	204017-007	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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	62	42-120
Phenol-d5	60	46-120
2,4,6-Tribromophenol	51	48-124
Nitrobenzene-d5	77	55-120
2-Fluorobiphenyl	86	56-120
Terphenyl-d14	51	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-8	Batch#:	139353
Lab ID:	204017-008	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.5
Phenol	ND	9.5
bis(2-Chloroethyl)ether	ND	9.5
2-Chlorophenol	ND	9.5
1,3-Dichlorobenzene	ND	9.5
1,4-Dichlorobenzene	ND	9.5
Benzyl alcohol	ND	9.5
1,2-Dichlorobenzene	ND	9.5
2-Methylphenol	ND	9.5
bis(2-Chloroisopropyl) ether	ND	9.5
4-Methylphenol	ND	9.5
N-Nitroso-di-n-propylamine	ND	9.5
Hexachloroethane	ND	9.5
Nitrobenzene	ND	9.5
Isophorone	ND	9.5
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.5
Benzoic acid	ND	48
bis(2-Chloroethoxy)methane	ND	9.5
2,4-Dichlorophenol	ND	9.5
1,2,4-Trichlorobenzene	ND	9.5
Naphthalene	ND	9.5
4-Chloroaniline	ND	9.5
Hexachlorobutadiene	ND	9.5
4-Chloro-3-methylphenol	ND	9.5
2-Methylnaphthalene	ND	9.5
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.5
2,4,5-Trichlorophenol	ND	9.5
2-Chloronaphthalene	ND	9.5
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.5
Acenaphthylene	ND	9.5
2,6-Dinitrotoluene	ND	9.5
3-Nitroaniline	ND	19
Acenaphthene	ND	9.5
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.5
2,4-Dinitrotoluene	ND	9.5
Diethylphthalate	ND	9.5
Fluorene	ND	9.5
4-Chlorophenyl-phenylether	ND	9.5
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.5
Azobenzene	ND	9.5
4-Bromophenyl-phenylether	ND	9.5
Hexachlorobenzene	ND	9.5
Pentachlorophenol	ND	19
Phenanthrene	ND	9.5
Anthracene	ND	9.5
Di-n-butylphthalate	ND	9.5
Fluoranthene	ND	9.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-8	Batch#:	139353
Lab ID:	204017-008	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
Pyrene	ND	9.5
Butylbenzylphthalate	ND	9.5
3,3'-Dichlorobenzidine	ND	19
Benzo(a)anthracene	ND	9.5
Chrysene	ND	9.5
bis(2-Ethylhexyl)phthalate	ND	9.5
Di-n-octylphthalate	ND	9.5
Benzo(b)fluoranthene	ND	9.5
Benzo(k)fluoranthene	ND	9.5
Benzo(a)pyrene	ND	9.5
Indeno(1,2,3-cd)pyrene	ND	9.5
Dibenz(a,h)anthracene	ND	9.5
Benzo(g,h,i)perylene	ND	9.5

Surrogate	%REC	Limits
2-Fluorophenol	70	42-120
Phenol-d5	71	46-120
2,4,6-Tribromophenol	75	48-124
Nitrobenzene-d5	92	55-120
2-Fluorobiphenyl	91	56-120
Terphenyl-d14	39	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-9	Batch#:	139353
Lab ID:	204017-009	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
N-Nitrosodimethylamine	ND	9.5
Phenol	ND	9.5
bis(2-Chloroethyl)ether	ND	9.5
2-Chlorophenol	ND	9.5
1,3-Dichlorobenzene	ND	9.5
1,4-Dichlorobenzene	ND	9.5
Benzyl alcohol	ND	9.5
1,2-Dichlorobenzene	ND	9.5
2-Methylphenol	ND	9.5
bis(2-Chloroisopropyl) ether	ND	9.5
4-Methylphenol	ND	9.5
N-Nitroso-di-n-propylamine	ND	9.5
Hexachloroethane	ND	9.5
Nitrobenzene	ND	9.5
Isophorone	ND	9.5
2-Nitrophenol	ND	19
2,4-Dimethylphenol	ND	9.5
Benzoic acid	ND	48
bis(2-Chloroethoxy)methane	ND	9.5
2,4-Dichlorophenol	ND	9.5
1,2,4-Trichlorobenzene	ND	9.5
Naphthalene	ND	9.5
4-Chloroaniline	ND	9.5
Hexachlorobutadiene	ND	9.5
4-Chloro-3-methylphenol	ND	9.5
2-Methylnaphthalene	ND	9.5
Hexachlorocyclopentadiene	ND	19
2,4,6-Trichlorophenol	ND	9.5
2,4,5-Trichlorophenol	ND	9.5
2-Chloronaphthalene	ND	9.5
2-Nitroaniline	ND	19
Dimethylphthalate	ND	9.5
Acenaphthylene	ND	9.5
2,6-Dinitrotoluene	ND	9.5
3-Nitroaniline	ND	19
Acenaphthene	ND	9.5
2,4-Dinitrophenol	ND	19
4-Nitrophenol	ND	19
Dibenzofuran	ND	9.5
2,4-Dinitrotoluene	ND	9.5
Diethylphthalate	ND	9.5
Fluorene	ND	9.5
4-Chlorophenyl-phenylether	ND	9.5
4-Nitroaniline	ND	19
4,6-Dinitro-2-methylphenol	ND	19
N-Nitrosodiphenylamine	ND	9.5
Azobenzene	ND	9.5
4-Bromophenyl-phenylether	ND	9.5
Hexachlorobenzene	ND	9.5
Pentachlorophenol	ND	19
Phenanthrene	ND	9.5
Anthracene	ND	9.5
Di-n-butylphthalate	ND	9.5
Fluoranthene	ND	9.5

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-9	Batch#:	139353
Lab ID:	204017-009	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Analyte	Result	RL
Pyrene	ND	9.5
Butylbenzylphthalate	ND	9.5
3,3'-Dichlorobenzidine	ND	19
Benzo(a)anthracene	ND	9.5
Chrysene	ND	9.5
bis(2-Ethylhexyl)phthalate	ND	9.5
Di-n-octylphthalate	ND	9.5
Benzo(b)fluoranthene	ND	9.5
Benzo(k)fluoranthene	ND	9.5
Benzo(a)pyrene	ND	9.5
Indeno(1,2,3-cd)pyrene	ND	9.5
Dibenz(a,h)anthracene	ND	9.5
Benzo(g,h,i)perylene	ND	9.5

Surrogate	%REC	Limits
2-Fluorophenol	80	42-120
Phenol-d5	85	46-120
2,4,6-Tribromophenol	83	48-124
Nitrobenzene-d5	99	55-120
2-Fluorobiphenyl	93	56-120
Terphenyl-d14	50	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-10	Batch#:	139353
Lab ID:	204017-010	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Field ID:	MW-10	Batch#:	139353
Lab ID:	204017-010	Sampled:	06/16/08
Matrix:	Water	Received:	06/16/08
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

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	80	42-120
Phenol-d5	85	46-120
2,4,6-Tribromophenol	89	48-124
Nitrobenzene-d5	97	55-120
2-Fluorobiphenyl	94	56-120
Terphenyl-d14	45	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC446868	Batch#:	139353
Matrix:	Water	Prepared:	06/17/08
Units:	ug/L	Analyzed:	06/18/08

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

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC446868	Batch#:	139353
Matrix:	Water	Prepared:	06/17/08
Units:	ug/L	Analyzed:	06/18/08

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	80	42-120
Phenol-d5	82	46-120
2,4,6-Tribromophenol	90	48-124
Nitrobenzene-d5	97	55-120
2-Fluorobiphenyl	90	56-120
Terphenyl-d14	79	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	139353
Units:	ug/L	Prepared:	06/17/08
Diln Fac:	1.000	Analyzed:	06/19/08

Type: BS Lab ID: QC446869

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	61.77	77	47-120
2-Chlorophenol	80.00	65.62	82	53-120
1,4-Dichlorobenzene	40.00	30.91	77	50-120
N-Nitroso-di-n-propylamine	40.00	28.93	72	41-120
1,2,4-Trichlorobenzene	40.00	30.82	77	54-120
4-Chloro-3-methylphenol	80.00	62.41	78	55-120
Acenaphthene	40.00	29.23	73	54-120
4-Nitrophenol	80.00	72.22	90	46-120
2,4-Dinitrotoluene	40.00	34.90	87	58-120
Pentachlorophenol	80.00	83.99	105	53-120
Pyrene	40.00	32.05	80	53-120

Surrogate	%REC	Limits
2-Fluorophenol	75	42-120
Phenol-d5	80	46-120
2,4,6-Tribromophenol	92	48-124
Nitrobenzene-d5	91	55-120
2-Fluorobiphenyl	80	56-120
Terphenyl-d14	82	28-120

Type: BSD Lab ID: QC446870

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	61.21	77	47-120	1	22
2-Chlorophenol	80.00	64.23	80	53-120	2	23
1,4-Dichlorobenzene	40.00	28.56	71	50-120	8	27
N-Nitroso-di-n-propylamine	40.00	28.85	72	41-120	0	24
1,2,4-Trichlorobenzene	40.00	29.55	74	54-120	4	25
4-Chloro-3-methylphenol	80.00	63.94	80	55-120	2	21
Acenaphthene	40.00	29.79	74	54-120	2	21
4-Nitrophenol	80.00	73.42	92	46-120	2	23
2,4-Dinitrotoluene	40.00	35.82	90	58-120	3	25
Pentachlorophenol	80.00	85.61	107	53-120	2	27
Pyrene	40.00	32.66	82	53-120	2	23

Surrogate	%REC	Limits
2-Fluorophenol	75	42-120
Phenol-d5	80	46-120
2,4,6-Tribromophenol	92	48-124
Nitrobenzene-d5	90	55-120
2-Fluorobiphenyl	72	56-120
Terphenyl-d14	84	28-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC447290	Batch#:	139455
Matrix:	Water	Prepared:	06/19/08
Units:	ug/L	Analyzed:	06/20/08

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

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC447290	Batch#:	139455
Matrix:	Water	Prepared:	06/19/08
Units:	ug/L	Analyzed:	06/20/08

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	76	42-120
Phenol-d5	82	46-120
2,4,6-Tribromophenol	85	48-124
Nitrobenzene-d5	95	55-120
2-Fluorobiphenyl	90	56-120
Terphenyl-d14	80	28-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS

Lab #:	204017	Location:	Hanson Radum AOG#1
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567-07	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	139455
Units:	ug/L	Prepared:	06/19/08
Diln Fac:	1.000	Analyzed:	06/20/08

Type: BS Lab ID: QC447291

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	65.07	81	47-120
2-Chlorophenol	80.00	65.13	81	53-120
1,4-Dichlorobenzene	40.00	34.35	86	50-120
N-Nitroso-di-n-propylamine	40.00	33.96	85	41-120
1,2,4-Trichlorobenzene	40.00	34.91	87	54-120
4-Chloro-3-methylphenol	80.00	69.41	87	55-120
Acenaphthene	40.00	31.48	79	54-120
4-Nitrophenol	80.00	63.53	79	46-120
2,4-Dinitrotoluene	40.00	34.75	87	58-120
Pentachlorophenol	80.00	67.18	84	53-120
Pyrene	40.00	33.58	84	53-120

Surrogate	%REC	Limits
2-Fluorophenol	81	42-120
Phenol-d5	84	46-120
2,4,6-Tribromophenol	101	48-124
Nitrobenzene-d5	91	55-120
2-Fluorobiphenyl	89	56-120
Terphenyl-d14	90	28-120

Type: BSD Lab ID: QC447292

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	64.18	80	47-120	1	22
2-Chlorophenol	80.00	64.46	81	53-120	1	23
1,4-Dichlorobenzene	40.00	35.92	90	50-120	4	27
N-Nitroso-di-n-propylamine	40.00	33.55	84	41-120	1	24
1,2,4-Trichlorobenzene	40.00	36.44	91	54-120	4	25
4-Chloro-3-methylphenol	80.00	68.48	86	55-120	1	21
Acenaphthene	40.00	31.10	78	54-120	1	21
4-Nitrophenol	80.00	63.43	79	46-120	0	23
2,4-Dinitrotoluene	40.00	34.67	87	58-120	0	25
Pentachlorophenol	80.00	68.88	86	53-120	3	27
Pyrene	40.00	34.10	85	53-120	2	23

Surrogate	%REC	Limits
2-Fluorophenol	80	42-120
Phenol-d5	82	46-120
2,4,6-Tribromophenol	100	48-124
Nitrobenzene-d5	88	55-120
2-Fluorobiphenyl	87	56-120
Terphenyl-d14	89	28-120

RPD= Relative Percent Difference

204017

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR:
LFR
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500 Fax: (510) 652-2246

PROJECT NO.: 001-09567-07
SECTION NO.: ***
DATE: 6/16/08
SAMPLER'S INITIALS: LPL
PROJECT NAME: HANSON RADUM
SAMPLER (Signature):
SERIAL NO.: Nº 204227

SAMPLE						ANALYSES														REMARKS
				TYPE														TAT		*VOCs: **Metals: ☐ 8260 List ☐ CAM17 ☐ 8240 List ☐ RCRA ☐ 8010 List ☐ LUFT ☐ 624 List
SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	Soil	Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA 8015M)	BTEX (EPA 8021/602)	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	SILICA GEL CLEANUP	BTEX/TPH-g (EPA 8260) & MTBE	SVOCs	Standard	RUSH:	HOLD	
1 MW-1	6/16/08	1150		5	X		X	X					X	X	X	X	X		
2 MW-2		1310		5															
3 MW-3		1210																	
4 MW-5		1630																	
5 MW-5D		1640																	
6 MW-6		1440																	
7 MW-7		1450 1515																	
8 MW-8		1320																	
9 MW-9		1535																	
10 MW-10		1720																	

SAMPLE RECEIPT: Cooler Temp:
☒ Intact ☐ Cold
☒ On-Ice ☐ Ambient
Cooler No:

Preservative Correct?
☐ Yes ☐ No ☐ N/A

ANALYTICAL LABORATORY:
C&T

METHOD OF SHIPMENT:
LAB REPORT NO.:
FAX COC CONFIRMATION TO:
KATRIN SCHLIEWEN
FAX RESULTS TO:
SEND HARDCOPY TO:
SEND EDD TO:
EMV.LABEDDS.COM

RELINQUISHED BY: 1
(SIGNATURE) (DATE) 6/16/08
LARRY LAPUYADE 1823
(PRINTED NAME) (TIME)
LFR INC.
(COMPANY)

RECEIVED BY:
(SIGNATURE) (DATE) 6/16/08
AMY EVANS 1823
(PRINTED NAME) (TIME)
C&T
(COMPANY)

RELINQUISHED BY: 2
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RECEIVED BY: 2
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RELINQUISHED BY: 3
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RECEIVED BY (LABORATORY): 3
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

CHAIN of CUSTODY - ANALYSES FORM.CDR 5/2003

Shipping Copy (White) File Copy (Yellow) Field Copy (Pink)

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 204017 Date Received 6/16/08 Number of coolers 2
Client LFR Project HANSON REDUM

Date Opened 6/16/08 By (print) M. VILLANUEVA (sign)
Date Logged in 6-17-08 By (print) F Nichols (sign)

1. Did cooler come with a shipping slip (airbill, etc)?..... YES NO
Shipping info

2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☐ NO
How many Name Date
2B. Were custody seals intact upon arrival? ..... YES NO N/A
3. Were custody papers dry and intact when received?..... YES NO
4. Were custody papers filled out properly (ink, signed, etc)?..... YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form)..... YES NO
6. Indicate the packing in cooler: (if other, describe)

☑ Bubble Wrap ☑ Foam blocks ☑ Bags ☐ None

☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels
7. If required, was sufficient ice used? Samples should be < or = 6°C ..... YES NO N/A

Type of ice used: ☑ Wet ☐ Blue ☐ None Temp(°C)

☑ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? ..... YES NO
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened?..... YES NO
10. Are samples in the appropriate containers for indicated tests? ..... YES NO
11. Are sample labels present, in good condition and complete? ..... YES NO
12. Do the sample labels agree with custody papers? ..... YES NO
13. Was sufficient amount of sample sent for tests requested? ..... YES NO
14. Are the samples appropriately preserved? ..... YES NO N/A
15. Are bubbles > 6mm absent in VOA samples?..... YES NO N/A
16. Was the client contacted concerning this sample delivery?..... YES NO
If YES, Who was called? By Date:

COMMENTS