Groundwater Monitoring Report
July 1 through September 30, 2008
SS-123 Area (AOC #8)
Hanson Aggregates Radum Facility
3000 Busch Road
Pleasanton, California
(ACEH Case #RO0002952;
Geotracker Global ID #SL0600101555)

November 10, 2008
001-09567-06

Prepared for
Hanson Aggregates West Region
3000 Busch Road
Pleasanton, California 94566

Prepared by:
LFR Inc.
1900 Powell Street, 12th Floor
Emeryville, California 94608

Hanson Aggregates West Region
3000 Busch Road
Pleasanton, CA 94566-8403

November 10, 2008

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

Subject: **Groundwater Monitoring Report, July 1 through September 30, 2008, SS-123 Area (AOC #8), Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California (ACEH Case #RO0002952; Geotracker Global ID #SL0600101555)**

Dear Mr. Wickham:

The enclosed Groundwater Monitoring Report was prepared by LFR Inc. (LFR) on behalf of Hanson Aggregates West Region for the area located within area of concern (AOC) #8 of the Hanson Aggregates former Radum Facility, located at 3000 Busch Road, Pleasanton, California ("the Site"). This report presents and discusses the results of the second of four planned quarterly groundwater monitoring events conducted at the Site, which was conducted in September 2008. The investigation and groundwater monitoring were conducted in accordance with the "Work Plan for Additional Site Characterization at AOC #8, Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California" ("the Work Plan"), which was submitted to Alameda County Environmental Health (ACEH) on February 6, 2008. ACEH, as the regulatory agency overseeing the environmental characterization of the Site under ACEH case number #RO0002952 (Geotracker Global ID # SL0600101555), approved the Work Plan on February 26, 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 Ron Goloubow of LFR at (510) 652-4500.

Sincerely,

Lee W. Cover
Environmental Manager
Hanson Aggregates Northern California

Attachment

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FIGURES

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CERTIFICATIONS

LFR Inc. has prepared this 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.

11/10/08

J. Scott Seyfried, P.G., C.HG. — Date
Principal Hydrogeologist
California Professional Geologist (7374)
Registered Hydrogeologist (764)

November 10, 2008

Ron Goloubow — Date
Senior Associate Geologist

EXECUTIVE SUMMARY

This Groundwater Monitoring Report for the period of July 1 through September 30, 2008 presents the results of the second of four planned groundwater monitoring events at the former Hanson Aggregates Radum Facility located at 3000 Busch Road, Pleasanton, California ("the Site"). The purpose of this monitoring program is to assess groundwater quality in the SS-123 Area of the Site.

Quarterly Groundwater Monitoring Event

The groundwater monitoring event that was completed during this reporting period represents the second quarterly groundwater monitoring event for the Site. The first groundwater monitoring event was conducted in June 2008.

Wells MW-3(SS123) and MW-4(SS123) were purged and sampled on September 22, 2008. Analytical results of groundwater samples collected during this monitoring event indicate that none of the compounds analyzed for were detected above laboratory reporting limits. The quarterly groundwater monitoring results from this sampling event are consistent with results from the previous quarterly groundwater monitoring sampling event on June 5, 2008. LFR Inc. will conduct the third groundwater monitoring event during fourth quarter 2008 (October 1 through December 31, 2008). The groundwater samples collected will be analyzed for the same parameters analyzed for during the current quarter.

1.0 INTRODUCTION

This Groundwater Monitoring Report presents the results of a recent groundwater monitoring event conducted by LFR Inc. (LFR) on behalf of Hanson Aggregates West Region ("Hanson") to further characterize the extent of affected soil and groundwater in the SS-123 Area of the former Hanson Aggregates Radum Facility located at 3000 Busch Road, Pleasanton, California ("the Site"; Figure 1). This area is also referred to as Area of Concern (AOC) #8, and is located within the property now owned by Legacy Partners ("Legacy"; Figure 2). This groundwater monitoring event and previous soil and groundwater investigations were conducted on behalf of Hanson, who has retained the responsibility for characterizing the lateral and vertical extent of petroleum hydrocarbon-affected soil and groundwater at the Site.

The scope of work for previous investigations conducted at the Site was described in the "Work Plan for Additional Site Characterization at AOC #8, Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California" ("the Work Plan"), which was submitted to Alameda County Environmental Health (ACEH) on February 6, 2008. ACEH, as the regulatory agency overseeing the environmental characterization of the Site under ACEH case number #RO0002952 (Geotracker Global ID #SL0600101555), approved the Work Plan on February 26, 2008. In its approval letter, ACEH modified the proposed scope of work by requesting that two additional groundwater monitoring wells be installed to better assess the local groundwater flow direction.

LFR completed the investigation in May 2008 and conducted the first of four planned quarterly groundwater monitoring events on June 5, 2008. The results of the investigation and groundwater monitoring activities were presented in the report entitled "Site Investigation and Well Installation Report for the SS-123 Area (AOC #8), ACEH Case #RO0002952 and Geotracker Global ID #SL0600101555, Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California," dated June 20, 2008.

The second groundwater monitoring event was conducted in September 2008 and is the subject of this report. This Groundwater Monitoring Report is organized as follows:

- Section 1.0 presents the report introduction.
- 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 groundwater sampling activities.
- Section 4.0 presents and discusses the results of the second quarterly groundwater monitoring event.
- Section 5.0 summarizes the overall conclusions of environmental conditions at the Site based on the results of the 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 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 (AOC #8).

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 areas.

A review of air photos provided as Exhibit B of ENV's Phase I ESA report shows that approximately during the 1950s to 1980s, one or more aggregate mine pits existed in the SS-123 Area. The lithology of the soil cores collected during drilling in the SS-123 Area is consistent with lithology of a former aggregate mine pit, filled with fine-grained sediments that have settled out of wash water and debris backfill material.

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 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 ENV at the Site have encountered unconsolidated sediments consisting predominantly of fine-grained sediments (clays and silts) with intervals of coarser-grained sediments (mostly gravels and to a lesser extent sands) and of what appear to be large pieces of concrete. Soil borings advanced in the SS-123 Area also have encountered asphalt materials, characterized as a black and in some cases "sticky" material covering generally coarser-grained sediment. Because of the historical aggregate mining activities throughout the property, and evidence of aggregate mine pits at the Site, the subsurface likely consists of imported fill material in addition to native sediments.

First groundwater beneath the Site has been encountered between approximately 14 and 30 feet bgs in temporary soil borings advanced by LFR and ENV during the previous and current investigations. In previous reports, ENV concluded that a perched zone likely exists in the SS-123 Area, a result of fine-grained sediment settling out of aggregate wash water stored in the former mine pits (ENV 2007c). As described below, one objective of the subsurface investigations completed during May 2008 by LFR was to confirm the potential presence of a perched groundwater zone. Results of the May 2008 investigation do indicate the possible presence of a perched groundwater zone and the presence of a former mining pit that has been backfilled with fill material. Depth to groundwater measured in the two new groundwater monitoring wells was

approximately 22 feet bgs in the shallow well and approximately 40 feet bgs in the deep well. Although the groundwater flow direction in the SS-123 Area could not be confirmed by this investigation, the local groundwater flow direction in the AOC #1 area appears to be generally to the northwest (LFR 2007d).

3.0 QUARTERLY GROUNDWATER MONITORING

The second of four planned quarterly groundwater monitoring events was completed on September 22, 2008. This monitoring event consisted of measuring depth to groundwater and collecting groundwater samples from monitoring wells MW-3(SS123) and MW-4(SS123; Figure 3).

3.1 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 top of casing (TOC). Depth-to-groundwater measurements were recorded on a field sheet, a copy of which is included in Appendix B. Groundwater elevations were calculated by subtracting the depth-to-groundwater measurement from the TOC elevation. Groundwater elevations are presented in Table 1 and on Figure 4.

3.2 Groundwater Monitoring Well Purging and Sampling

Wells MW-3(SS123) and MW-4(SS123) were purged and sampled using low-flow sampling techniques on September 22, 2008. Low-flow purging and sampling were conducted using small-diameter submersible Grunfos pumps lowered to within the well screens. Drawdown and general water-quality parameters were monitored during purging, and parameters were recorded on field sheets, copies of which are included in Appendix B.

Well MW-3(SS123)

Well MW-3(SS123) is located approximately west-northwest of former boring SS-123(F2; Figure 3) and was installed as a deep groundwater monitoring well to a total depth of approximately 70 feet bgs with a 10-foot-long well screen. Prior to the collection of a groundwater sample, well MW-3(SS123) was purged using a low-flow purging method, keeping the water level in the well above the top of the screened interval. Purging was stopped when inorganic water-quality parameters stabilized (except dissolved oxygen).

Well MW-4(SS123)

Well MW-4(SS123) is located adjacent to well MW-3(SS123) and approximately west of former boring SS-123(F2; Figure 3) and was installed as a shallow groundwater

monitoring well to a total depth of approximately 28 feet bgs with a 10-foot-long well screen. Prior to the collection of a groundwater sample, well MW-4(SS123) was purged using a low-flow purging method, keeping the water level above the top of the well screen. Purging was stopped when inorganic water-quality parameters stabilized.

Groundwater samples were collected in clean, laboratory-provided sample containers, properly labeled, and stored in an ice-chilled cooler for transport to the analytical laboratory under chain-of-custody protocol. One trip blank sample was collected and submitted to the laboratory for quality control purposes.

3.2.1 Laboratory Analyses

Groundwater samples selected for laboratory analyses were submitted to Curtis & Tompkins, Ltd., a California-certified analytical laboratory located in Berkeley, California. Samples were analyzed for one or more of the following parameters, according to the sample matrix presented in Table 2:

- total petroleum hydrocarbons as diesel (TPHd) and as motor oil (TPHmo) by EPA Method 8015 (after undergoing silica gel cleanup)
- benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260

Analytical results are summarized in Table 2 and on Figure 3, based on laboratory-certified analytical reports included in Appendix A.

4.0 RESULTS

Analytical results for groundwater samples collected during this quarterly groundwater monitoring event are presented in Table 2 and on Figure 3. Groundwater elevation data are presented on Figure 4. Analytical results were compared to the May 2008 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 2008). Relevant ESLs are included in Table 2.

4.1 Groundwater Elevations

Results of groundwater elevation monitoring are summarized in Table 1 and presented on Figure 4.

Groundwater elevations collected from MW-3(SS123) and MW-4(SS123) during June and September 2008 confirm that these two wells are completed in different groundwater zones. The approximately 24-foot difference in groundwater elevation in these two adjacent wells (Table 1), indicates that MW-4 is completed in a shallow,

perched groundwater zone, and MW-3 is completed in a deeper (possibly regional) groundwater zone.

Based on groundwater monitoring well data from the AOC #1 area (located approximately 3,500 feet west-southwest of the Site), the local groundwater flow direction of deeper groundwater beneath the Site appears to be to the west-northwest.

4.2 Groundwater Analytical Results

Analytical results from the September 22, 2008 quarterly groundwater sampling event are presented on Figure 3 and in Table 2. The results of this groundwater sampling event are consistent with the June 2008 quarterly sampling event. TPHd- and TPHmo-range hydrocarbons or BTEX compounds were not reported above laboratory detection limits in the groundwater samples collected during either of the sampling events. These results confirm that groundwater beneath the Site has not been affected by the TPH or TPH-related compounds that has been detected in limited areas in soil.

The next groundwater monitoring event will be conducted during fourth quarter 2008 (October 1 through December 31, 2008).

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The results of the May 2008 and June 2008 investigations confirm that shallow and deeper groundwater has not been affected by TPH detected in the subsurface in the SS-123 Area. Groundwater elevation data collected from MW-3 and MW-4 indicate the presence of two distinct groundwater intervals, with the shallow interval apparently perched above the deeper (possibly more regional) groundwater interval.

This finding is consistent with the results of the subsurface investigations completed at the Site to date, and supports the conclusion that a perched groundwater zone is present beneath the Site, and that the deeper (possibly regional) groundwater is separated from the perched groundwater zone by approximately 24 feet. Grab groundwater samples previously collected from the perched groundwater interval in a localized area contained elevated concentrations of TPHd- and TPHmo-range hydrocarbons associated with asphalt material observed in soil. The deeper groundwater does not appear to have been affected by the asphalt material.

In summary, LFR maintains that TPH concentrations detected in soil and grab groundwater samples collected during previous subsurface investigations including the May and June 2008 sampling events are likely associated with asphalt material observed in soil cores during drilling and do not appear to present an environmental risk to regional groundwater.

5.2 Recommendations

LFR recommends that a periodic groundwater monitoring and reporting program continue for the two wells installed at the Site. The groundwater monitoring program shall continue to include measuring depth to groundwater and collecting groundwater samples for laboratory analyses of TPHd and TPHmo on a quarterly basis for up to one year. If TPHd and TPHmo concentrations in groundwater samples from the two wells continue to be below the analytical reporting limits and/or below the ESLs after approximately four consecutive quarterly monitoring events, the two groundwater monitoring wells should be properly abandoned.

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.

7.0 REFERENCES

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Table 1
Groundwater Monitoring Well Construction Details
Area of Concern #8/SS-123 Area (Legacy Partners Property)
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Monitoring Well ID	Installation Date	Drilling Technology	Borehole Diameter (inches)	Approximate Borehole Depth (feet bgs)	Casing Diameter (inches)	Approximate Screened Interval (feet bgs)	Top of Casing Elevation[1] (feet msl)	Depth to Groundwater Measured on 9/22/08 (feet TOC)	Groundwater Elevation on 9/22/08 (feet msl)
MW-3(SS123)	5/22/08	sonic	8.0	71	2.0	60 - 70	373.71	47.96	325.75
MW-4(SS123)	5/23/08	hollow-stem auger	6.0	30	2.0	18 - 28	373.30	24.14	349.16

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 Kim & Wright Civil Engineers & Surveyors, Inc.

Table 2
Petroleum Hydrocarbons and Associated Compounds Detected in Groundwater Samples
Area of Concern #8/SS-123 Area (Legacy Partners Property)
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Groundwater Monitoring Well	Date Sampled	Well Screen Interval (feet bgs)	Matrix	Total Petroleum Hydrocarbons		BTEX Compounds				
				TPHd (µg/L)	TPHmo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	m,p-X (µg/L)	o-X (µg/L)
MW-3(SS123)	6/5/2008	60 - 70	water	< 50	< 300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	9/22/2008	60 - 70	water	< 50	< 300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-4(SS123)	6/5/2008	18 - 28	water	< 50	< 300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	9/22/2008	18 - 28	water	< 50	< 300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Quality Assurance and Quality Control Sample										
Trip Blank	9/22/2008	--	water	< 50	< 300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ESLs				100	100	1	40	30	20	20

Notes:

feet bgs = feet below ground surface

µg/L = micrograms per liter

TPHd = total petroleum hydrocarbons as diesel

TPHmo = total petroleum hydrocarbons as motor oil

BTEX = benzene, toluene, ethylbenzene, and total xylenes

"<" = not detected above the laboratory reporting limit given

B = benzene

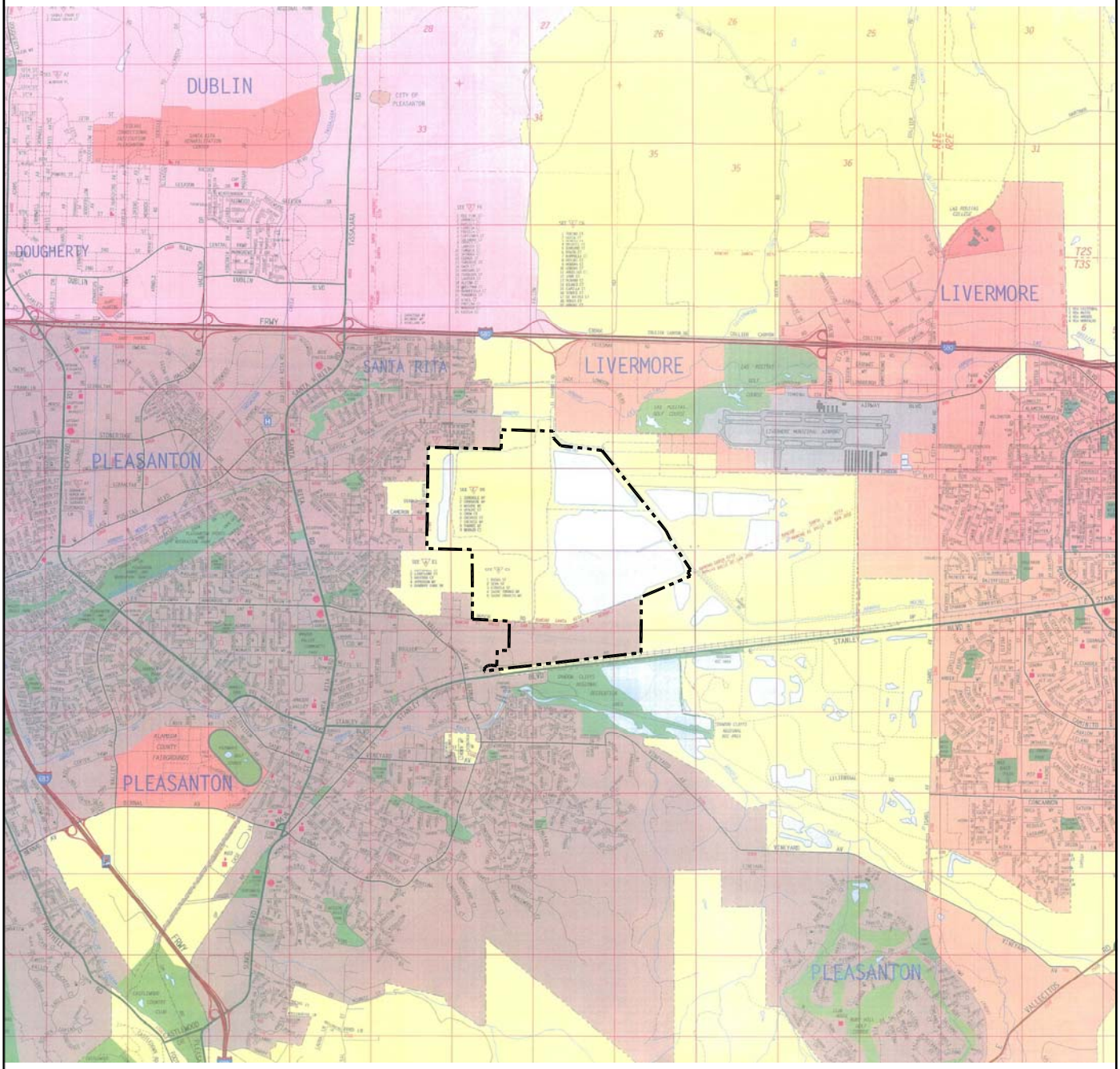
T = toluene

E = ethylbenzene

m,p-X = m,p-xylenes

o-X = o-xylenes

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

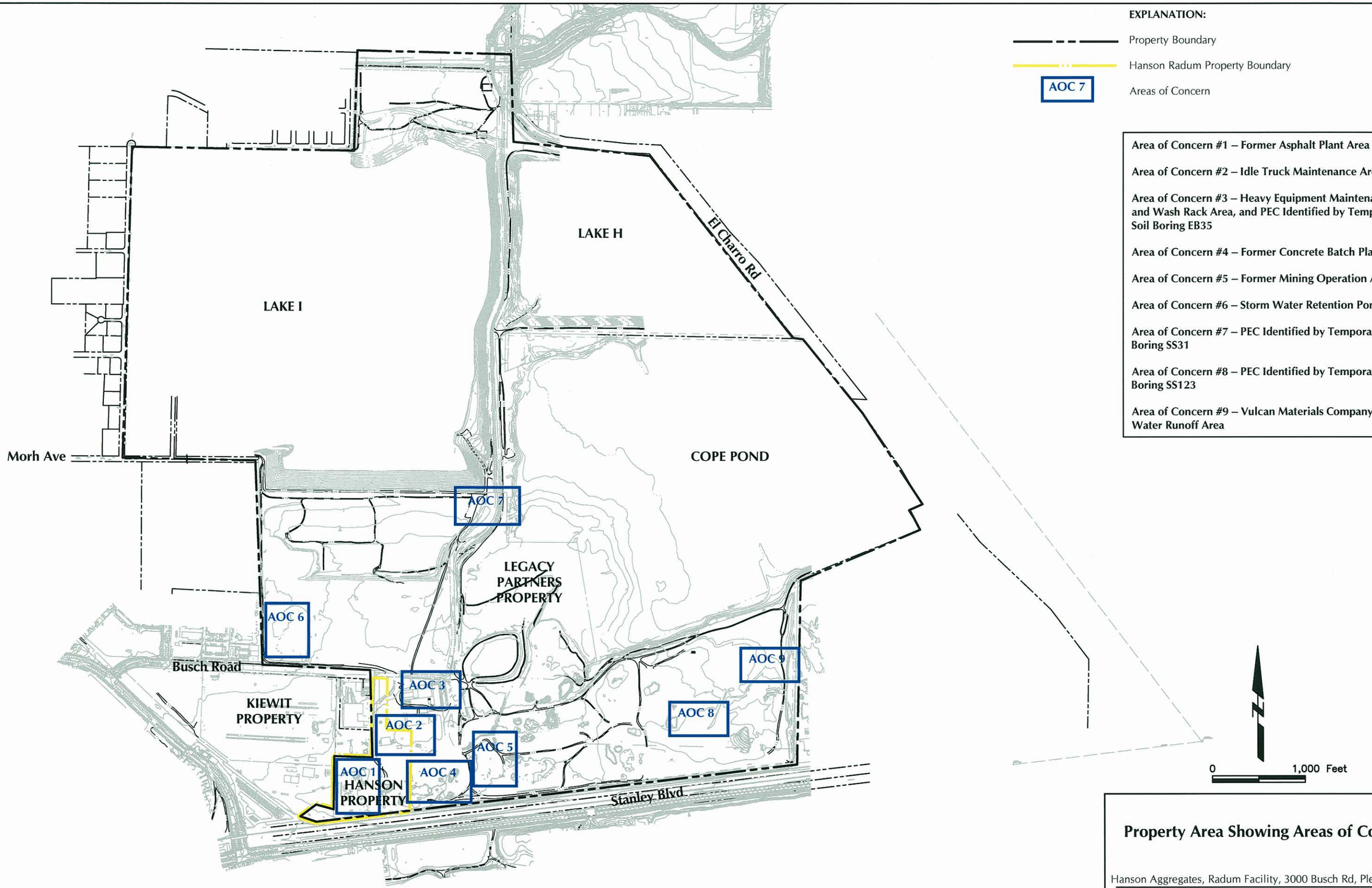
Site Location Map

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



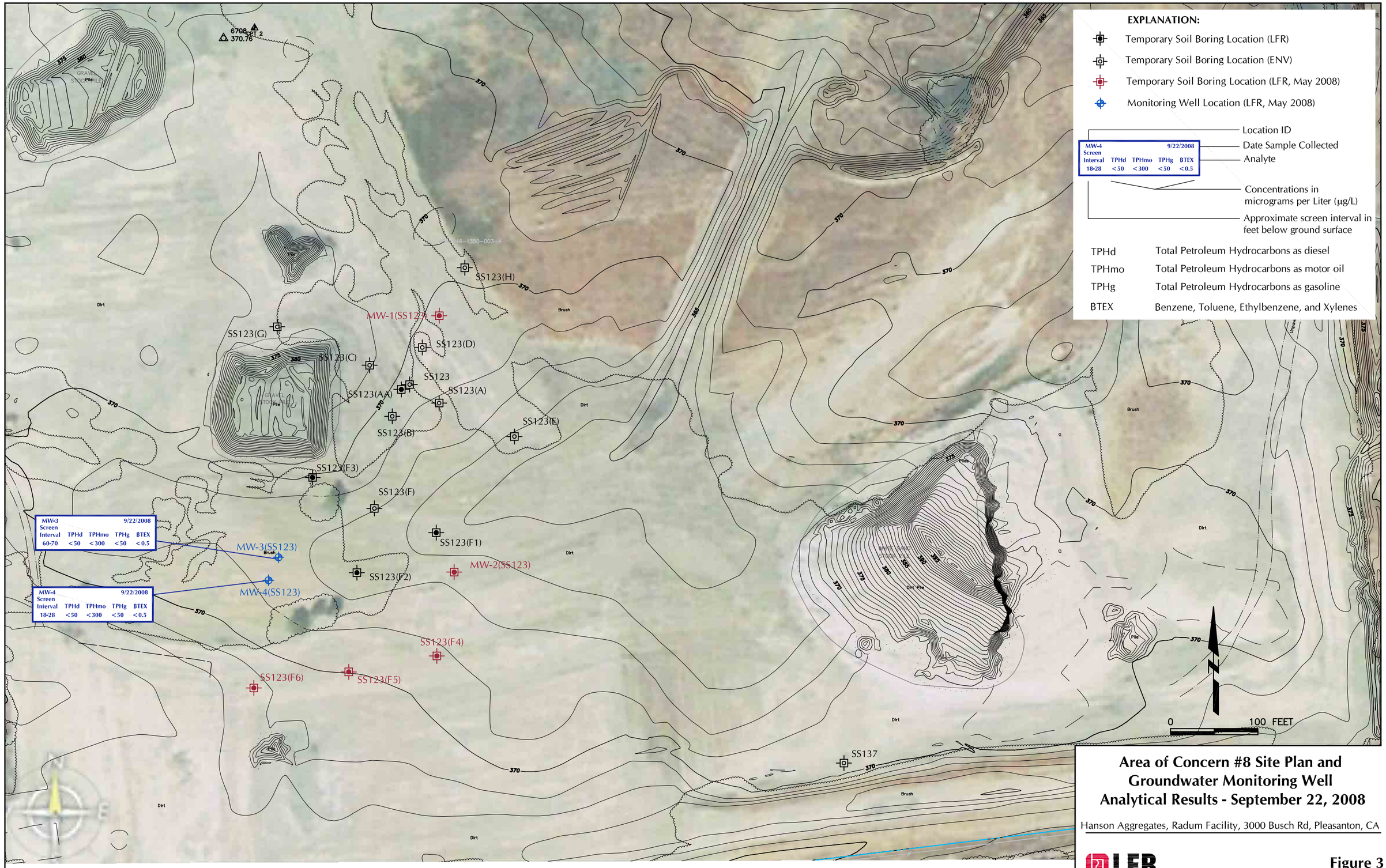
Property Area Showing Areas of Concern

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

LFR

Figure 2

I:\Design\001\09567\02\dwg\Site Plan w AOCs.dwg Mar 21,2008-3:35pm



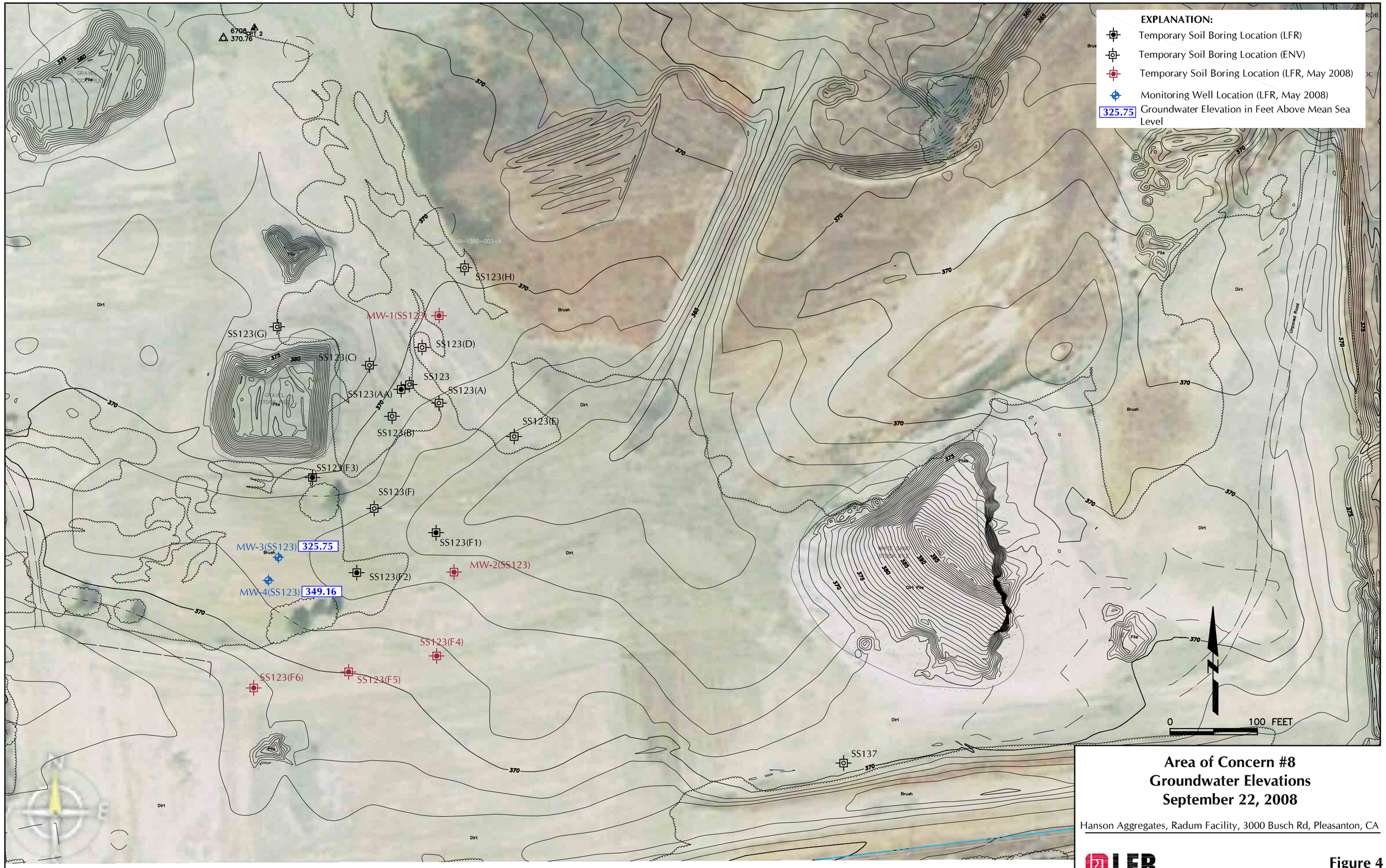
Area of Concern #8 Site Plan and Groundwater Monitoring Well Analytical Results - September 22, 2008

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

LFR

Figure 3

I:\Design\001\09567\07\DWG\AOC 8 TPH BTEX in GW Sept 2008.dwg Nov 10,2008-1:59pm



Area of Concern #8
Groundwater Elevations
September 22, 2008

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

LFR

Figure 4

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APPENDIX A

Laboratory Certified Analytical Reports

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	206226	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567	Analysis:	EPA 8021B
Matrix:	Water	Sampled:	09/22/08
Units:	ug/L	Received:	09/22/08
Diln Fac:	1.000	Analyzed:	09/23/08
Batch#:	142797		

Field ID: MW-3 Lab ID: 206226-001
Type: SAMPLE

Analyte	Result	RL
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	84	52-143
Bromofluorobenzene (PID)	94	56-141

Field ID: MW-4 Lab ID: 206226-002
Type: SAMPLE

Analyte	Result	RL
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	86	52-143
Bromofluorobenzene (PID)	94	56-141

Type: BLANK Lab ID: QC461537

Analyte	Result	RL
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	91	52-143
Bromofluorobenzene (PID)	98	56-141

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	206226	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 5030B
Project#:	001-09567	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	142797
Units:	ug/L	Analyzed:	09/23/08
Diln Fac:	1.000		

Type: BS Lab ID: QC461538

Analyte	Spiked	Result	%REC	Limits
Benzene	10.00	9.170	92	80-120
Toluene	10.00	10.35	103	77-120
Ethylbenzene	10.00	10.50	105	79-123
m,p-Xylenes	10.00	10.15	101	78-123
o-Xylene	10.00	10.47	105	78-122

Surrogate	%REC	Limits
Trifluorotoluene (PID)	90	52-143
Bromofluorobenzene (PID)	99	56-141

Type: BSD Lab ID: QC461539

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	20.00	16.72	84	80-120	9	20
Toluene	20.00	19.20	96	77-120	7	20
Ethylbenzene	20.00	19.23	96	79-123	9	20
m,p-Xylenes	20.00	19.01	95	78-123	7	21
o-Xylene	20.00	19.13	96	78-122	9	20

Surrogate	%REC	Limits
Trifluorotoluene (PID)	93	52-143
Bromofluorobenzene (PID)	101	56-141

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	206226	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/22/08
Units:	ug/L	Received:	09/22/08
Diln Fac:	1.000	Prepared:	09/29/08
Batch#:	143059		

Field ID:	MW-3	Analyzed:	10/01/08
Type:	SAMPLE	Cleanup Method:	EPA 3630C
Lab ID:	206226-001		

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

Surrogate	%REC	Limits
Hexacosane	102	58-127

Field ID:	MW-4	Analyzed:	10/01/08
Type:	SAMPLE	Cleanup Method:	EPA 3630C
Lab ID:	206226-002		

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

Surrogate	%REC	Limits
Hexacosane	103	58-127

Type:	BLANK	Analyzed:	09/30/08
Lab ID:	QC462704	Cleanup Method:	EPA 3630C

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

Surrogate	%REC	Limits
Hexacosane	101	58-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	206226	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC462705	Batch#:	143059
Matrix:	Water	Prepared:	09/29/08
Units:	ug/L	Analyzed:	09/30/08

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,963	79	52-120

Surrogate	%REC	Limits
Hexacosane	94	58-127

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	206226	Location:	Hanson Radum
Client:	LFR Levine Fricke	Prep:	EPA 3520C
Project#:	001-09567	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	143059
MSS Lab ID:	206261-004	Sampled:	09/23/08
Matrix:	Water	Received:	09/23/08
Units:	ug/L	Prepared:	09/29/08
Diln Fac:	1.000	Analyzed:	09/30/08

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC462706

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	2,754	2,500	5,545	112	43-121

Surrogate	%REC	Limits
Hexacosane	98	58-127

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC462707

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	4,954	88	43-121	11	36

Surrogate	%REC	Limits
Hexacosane	101	58-127

RPD= Relative Percent Difference

206226

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR:	PROJECT NO.:	SECTION NO.:	DATE:	SAMPLER'S INITIALS:	SERIAL NO.:
LFR LEVINE•FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 Fax: (510) 652-2246	001-09567		9-22-08	TRC	Nº 101383
	PROJECT NAME: Hasson Radum		SAMPLER (Signature): Tom Collins		

SAMPLE								ANALYSES															REMARKS
					TYPE														TAT			* VOCs: ** Metals:
Sample ID.	Date	Time	Lab Sample No.	No. of Containers	Soil	Water	TPHd (EPA 8015M)	TPHg (EPA 8015M)	BTEX (EPA 8021/602)	VOCs (EPA 8260/624)*	Metals (EPA 6010/7000)**	TPHMO 8015M							Standard	RUSH:	HOLD	☐ 8260 List ☐ CAM17 ☐ 8240 List ☐ RCRA ☐ 8010 List ☐ LUFT ☐ 624 List
MW-3	9-22	16:30		4		X	X		X			X							X			Silica gel citrate-H
MW-4	↓	14:20		4		X	X		X			X							X			For TPHd + MO
TRIP	↓			2		X															X	
																						Decant Amber
																						Before Sampling

SAMPLE RECEIPT:	Cooler Temp:	METHOD OF SHIPMENT:	RELINQUISHED BY: 1	RELINQUISHED BY: 2	RELINQUISHED BY: 3
☒ Intact ☒ Cold ☒ On Ice ☐ Ambient	Cooler No:	LAB REPORT NO.:	(SIGNATURE) Tom Collins 9-22-08 (DATE)	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
Preservative Correct? ☐ Yes ☐ No ☐ N/A		FAX COC CONFIRMATION TO:	(PRINTED NAME) Tom Collins (TIME) 17:50	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			(COMPANY) LFR	(COMPANY)	(COMPANY)
ANALYTICAL LABORATORY: C+T		FAX RESULTS TO:	RECEIVED BY: 1	RECEIVED BY: 2	RECEIVED BY (LABORATORY): 3
		SEND HARDCOPY TO:	(SIGNATURE) Sam Evans 9-22-08 (DATE)	(SIGNATURE) (DATE)	(SIGNATURE) (DATE)
		SEND EDD TO: EMV.LABEDDS.COM	(PRINTED NAME) Sam Evans (TIME) 1750	(PRINTED NAME) (TIME)	(PRINTED NAME) (TIME)
			(COMPANY) C+T	(COMPANY)	(LABORATORY)

Lab/Shipping Copy (White) File Copy (Yellow) Field Copy (Pink) FORM NO: 2001/COC/SXS

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 206226 Date Received 9-22-08 Number of coolers 1
Client LFR Project HANSON RADUM

Date Opened 9-22-08 By (print) F Nichols (sign)
Date Logged in √ By (print) M. Villareal (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. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ 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

_____
_____
_____
_____
_____
_____
_____
_____

APPENDIX B

Groundwater Monitoring Well Sampling Field Sheets

LFR

FIELD REPORT

Project No. 001-09567-07 Date 9-22-08 Page 1 of 1

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

Personnel Inspector _____ Weather/Site Conditions Sunny

Task No. and Description _____

WORK FORCE

COMPANY NAME	SUPERVISORS/WORKERS	ON SITE FROM	TO	COMMENTS
LFR	Tom Collins			

EQUIPMENT

ITEM	OWNER	USED FROM	TO	COMMENTS
Sounder, Gloves				
Generator				
Tubing ~ 15'				

TIME	ACTIVITIES
7:15	Review old Field docs
7:30	Call Ashted for Rental
8:30	Go to C+T For bottle Ware
10:00 ~~Leave~~	~~Leave~~ Arrive @ Ashted for equip
10:50	Arrive on Site
11:30	Setup on wells
12:00	Missing Part for YSI call ashted
12:30	Leave for Lowes for missing Part
13:15	Return to Site & Start MW-4
14:20	Sample MW-4
16:30	Sample MW-3
7:00	Off Site
7:50	Drop Samples @ C+T
:10	Back @ Shed
45	Back @ office

continue on reverse as needed

Copies To: _____ SIGNED Tom Collins

LFR LEVINE·FRICKE — WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date: 9-22-08 Page 1 of 1

Project Name: Hanson Radum Sampling Location: SS 123 AOC 8

Sampler's Name: Tom Collins Sample No.: ☐ FB

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

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☒ Submersible Pump ☐ Teflon Bailer ☐ Other Low-Flow

Purge Water Storage Container Type: 55 gal drum Storage Location: near well

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHd / MO	1 1L Amber
BTEX	3 Voas w/HCl

Lab Name: CT

Delivery By ☐ Courier ☒ Hand

Well No. MW-3 Depth of Water 47.96

Well Diameter: 2" Well Depth ~73.70

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 25.47

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 4.11

80% DTW 53.05

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
15:10	~70'								White bits look like
15:13	~70	50.91	.5	2.43	26.41	6.06	1.95	-184	PVC cuttings in
15:17	~70	51.41	~.75	2.16	27.73	6.06	1.92	-184	Water
15:20	~70	51.89	1.0	2.30	26.72	6.06	1.91	-183	
15:23	~70	52.50	1.125	2.12	26.76	6.03	1.84	-186	
15:28	~70	53.43	1.25	2.01	26.23	6.01	1.75	-191	
15:33	~70	53.95	1.5	1.81	28.28	6.02	1.71	-191	
15:38	~70	55.39	2.0	1.52	26.48	6.00	1.66	-197	
15:43	~70	55.98	2.25	1.62	28.20	6.02	1.64	-200	
15:48	~70	57.25	2.5	1.40	26.61	6.02	1.63	-207	
16:30		54.84							Sample
		54.84							well was
				TRC					recharging very
									slowly

Continue remarks on reverse, if needed.

LFR LEVINE•FRICKE — WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07 Date: 9-22-08 Page 1 of 1

Project Name: Hanson Radum Sampling Location: SS123 AOC 8

Sampler's Name: Tom Collins Sample No.: ☐ FB

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

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☒ Submersible Pump ☐ Teflon Bailer ☐ Other Low-Flow

Purge Water Storage Container Type: 55 gal Drum Storage Location: Near Well

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHd /MO	1 1L Amber
BTEX	3 Voas w/HCl

Lab Name: C+T

Delivery By ☐ Courier ☐ Hand

Well No. MW-4 Depth of Water 24.14

Well Diameter: 2" Well Depth 30.4

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 6.26

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.00

6.26 (.2)

1.25 + 24.14

80% DTW 25.392

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (mS/cm C)	ORP (mV)	Remarks
13:15	~~25~~ 25.5	24.14	0						START
13:20	25.5	24.91	.25	5.16	25.06	6.11	2.03	-176	
13:25	25.5	25.43	.5	4.85	26.30	6.07	2.04	-176	Lower inlet to 26'
13:30	~~25~~ 26.0	25.84	.75	.79	26.32	6.06	2.05	-196	
13:35	26.5	26.19	1.25	.62	26.59	6.08	2.06	-197	
13:40	27.0	26.55	1.75	.57	26.31	6.10	2.06	-189	Lower inlet
13:45	27.5	27.14	2.25	1.01	26.22	6.08	2.07	-173	lower inlet ~~to 27.5~~
13:50	28	27.60	2.75	1.15	27.75	6.23	2.08	-158	lower inlet ~~to 28~~
13:57	~~28.1~~ 28	27.70	3.25	.38	27.43	6.20	2.08	-194	
14:00	~~29.1~~ 29	28.40	3.5	.39	26.72	6.21	2.09	-192	
14:03	29	28.64	4.0	.37	26.52	6.22	2.10	-184	
14:20	29	28.65	4.5						Sample
			TRC						

Continue remarks on reverse, if needed.