Groundwater Monitoring Report
January 1 through March 31, 2009
SS-123 Area (AOC #8)
Hanson Aggregates Radum Facility
3000 Busch Road, Pleasanton, California
(ACEH Case #RO0002952 and
Geotracker Global ID #SL0600101555)

May 11, 2009
001-09567-06

Prepared for
Lehigh Hanson West Region
12667 Alcosta Boulevard, Suite 400
San Ramon, California 94583

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

Hanson
HEIDELBERGCEMENT Group
Hanson Aggregates West Region
12667 Alcosta Blvd., Suite 400
San Ramon, CA 94583

May 11, 2009

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, January 1 through March 31, 2009, SS-123 Area (AOC #8), Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California (ACEH Case #RO0002952 and Geotracker Global ID #SL0600101555)**

Dear Mr. Wickham:

The enclosed Groundwater Monitoring Report was prepared by LFR Inc. (LFR) on behalf of Lehigh Hanson West Region for the SS-123 area (located within area of concern [AOC] #8) of the Hanson Aggregates Radum Facility, located at 3000 Busch Road, Pleasanton, California ("the Site"). This report presents and discusses the results of the fourth of four planned quarterly groundwater monitoring events conducted at the Site, which was conducted during March 2009.

The four quarterly groundwater monitoring events were conducted in accordance with the February 6, 2008 work plan approved by Alameda County Environmental Health on February 26, 2008. Results of the four quarterly groundwater monitoring events conducted at the Site confirm that groundwater beneath the Site has not been affected by total petroleum hydrocarbons (TPH) or TPH-related compounds. LFR recommends that periodic groundwater monitoring be discontinued and that the two groundwater monitoring wells be properly abandoned. No additional investigations or sampling are recommended for the Site. Based on the findings of the quarterly groundwater monitoring and all previous investigations, LFR requests that a No Further Action letter be issued for the Site.

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) 244-6584 or Ron Goloubow of LFR at (510) 652-4500.

Sincerely,

Lee W. Cover
Environmental Manager
Hanson Aggregates Northern California

Attachment

CONTENTS

APPENDICES

CERTIFICATIONS

LFR Inc. has prepared this Groundwater Monitoring Report on behalf of Lehigh Hanson 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.

May 11, 2009

Katrin Schliewen, P.G. — Date
Senior Hydrogeologist
California Professional Geologist (7808)

May 11, 2009

Ron Goloubow — Date
Senior Associate Geologist

EXECUTIVE SUMMARY

This Groundwater Monitoring Report for the period January 1 through March 31, 2009 presents the results of the fourth of four planned groundwater monitoring events completed in the SS-123 area (located within Area of Concern [AOC] #8) of the former Hanson Aggregates Radum Facility located at 3000 Busch Road, Pleasanton, California ("the Site"). The first, second, and third groundwater monitoring events were conducted during June 2008, September 2008, and January 2009, respectively. The purpose of the quarterly groundwater monitoring program was to assess groundwater quality beneath the Site.

Wells MW-3(SS123) and MW-4(SS123) were purged and sampled on March 16, 2009. Analytical results for this groundwater monitoring event indicate that none of the analyzed constituents were detected above laboratory reporting limits in groundwater samples collected from these two wells. These analytical results are consistent with results from the previous three quarterly groundwater monitoring events and confirm that groundwater beneath the Site has not been affected by the total petroleum hydrocarbons (TPH) or TPH-related compounds previously detected in limited areas in soil.

Based on the results of the four quarterly groundwater monitoring events conducted at the Site, and in accordance with the recommendations in the June 20, 2008 Site Investigation and Well Installation Report approved by Alameda County Environmental Health (ACEH), LFR Inc. (LFR) recommends that periodic groundwater monitoring be discontinued and that the two groundwater monitoring wells be properly abandoned. No additional investigation, remediation, or sampling is recommended for the Site. Based on the findings of the quarterly groundwater monitoring events and all previous investigations, on behalf of Lehigh Hanson West Region, LFR requests that ACEH issue a No Further Action letter for the Site.

1.0 INTRODUCTION

This Groundwater Monitoring Report for the period January 1 through March 31, 2009 ("the reporting period") presents the results of the fourth of four planned groundwater monitoring events conducted by LFR Inc. (LFR) on behalf of Lehigh Hanson West Region ("Hanson") to monitor groundwater quality in the SS-123 Area of the former Hanson Aggregates Radum Facility located at 3000 Busch Road, Pleasanton, California ("the Site"; Figures 1 and 2). The SS-123 area is within Area of Concern (AOC) #8, which is located within the property now owned by Legacy Partners (Figure 2).

The quarterly groundwater monitoring as well as several previous soil and groundwater investigations were conducted on behalf of Hanson, which has retained the responsibility for characterizing the lateral and vertical extent of petroleum hydrocarbon-affected soil and groundwater at the Site. Previous subsurface investigations and the quarterly groundwater monitoring have been conducted in accordance with Alameda County Environmental Health (ACEH), which is the regulatory agency overseeing the environmental characterization of the Site under ACEH case number #RO0002952 (Geotracker Global ID #SL0600101555). The quarterly groundwater monitoring was initiated at AOC #8 in accordance with the recommendations made in the June 20, 2008 Site Investigation and Well Installation Report approved by ACEH.

After two new groundwater monitoring wells (MW-3(SS123) and MW-4(SS123)) were installed in May 2008, LFR initiated quarterly groundwater monitoring of these two wells to assess groundwater quality in AOC #8. The first, second, and third groundwater monitoring events were conducted in June 2008, September 2008, and January 2009, respectively. The final groundwater monitoring event was conducted in March 2009 and is the subject of this report.

2.0 QUARTERLY GROUNDWATER MONITORING

The fourth of the four planned quarterly groundwater monitoring events was conducted on March 16, 2009. 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).

2.1 Groundwater Elevation Monitoring

Depth to groundwater was measured prior to purging and sampling, using a Solinst water-level indicator, and relative to the top of casing (TOC). Depth-to-groundwater measurements were recorded on field sheets, copies of which are 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 2 and on Figure 3.

2.2 Groundwater Monitoring Well Purging and Sampling

Low-flow purging and sampling techniques were intended to be used to collect groundwater samples during this groundwater monitoring event. However, wells MW-3(SS123) and MW-4(SS123) could not sustain a consistent water level during low-flow sampling; therefore, the wells were purged dry using a submersible pump as described below and allowed to recharge for approximately two hours prior to collection of the samples.

Well MW-3(SS123)

Well MW-3(SS123) was installed as a deep groundwater monitoring well to a total depth of approximately 70 feet below ground surface (bgs) with a 10-foot-long well screen. Prior to the collection of groundwater samples on March 16, 2009, well MW-3(SS123) was purged using a submersible pump. Purging was stopped when the well dewatered. Samples were collected using a single-use, disposable bailer after approximately two hours had elapsed and the groundwater level had recovered to approximately 80 percent of the pre-purge water level.

Well MW-4(SS123)

Well MW-4(SS123) is located adjacent to well MW-3(SS123) 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 on March 16, 2009, well MW-4(SS123) was purged using a submersible pump. Purging was stopped when the well dewatered. Samples were collected using a single-use, disposable bailer after approximately two hours had elapsed and the groundwater level had recovered to approximately 80 percent of the pre-purge water level.

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.

2.2.1 Laboratory Analyses

Groundwater samples selected for laboratory analyses were submitted to TestAmerica Laboratories, Inc., a California-certified analytical laboratory located in Pleasanton, California. Samples were analyzed for the following parameters:

- Total petroleum hydrocarbons (TPH) as diesel (TPHd) and as motor oil (TPHmo) by U.S. Environmental Protection Agency (EPA) Method 8015 (after undergoing silica-gel cleanup)[1]
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260

3.0 RESULTS

Results from the current reporting period and from previous quarterly groundwater monitoring events are presented in this report. Historical groundwater elevation data are summarized in Table 2. Historical analytical results are summarized in Table 3, and analytical results for the reporting period are presented on Figure 4. Relevant San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (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.

3.1 Groundwater Elevations

Groundwater elevation data collected from wells MW-3(SS123) and MW-4(SS123) during this event and the three previous groundwater monitoring events confirm that these two wells likely are completed in different groundwater flow zones. The difference in groundwater elevations in these two wells has ranged from approximately 18 to 23 feet over the four quarterly monitoring events. The approximately 20-foot difference in groundwater elevation in these two adjacent wells confirms that well MW-4(SS123) is completed in a shallow (possibly perched) groundwater zone, whereas well MW-3(SS123) is completed in a deeper (possibly regional) groundwater zone.

Groundwater elevations appear to fluctuate seasonally, with relatively higher groundwater elevations observed during and after the rainy season. 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 is believed to be to the west-northwest. A summary of historical groundwater elevation data is provided in Table 2, and elevation data for the March 2009 event are presented on Figure 3.

[1] Due to a field oversight, silica-gel cleanup was not performed on the groundwater samples collected during March 2009. At LFR's request, the samples collected on March 16, 2009 from wells MW-3(SS123) and MW-4(SS123) were re-analyzed within analytical hold times for TPHd and TPHmo after silica-gel cleanup. Analytical results confirmed that TPHd and TPHmo were not detected in these samples.

3.2 Groundwater Analytical Results

Analytical results from the current groundwater sampling event are included in Table 3 and are presented on Figure 4. None of the compounds analyzed were detected above laboratory reporting limits. These results are consistent with analytical results from the three previous groundwater monitoring events. Only one instance of a detection was reported during the four quarterly groundwater monitoring events: TPHd was reportedly detected in a sample collected from well MW-3(SS123) on January 12, 2009 (Table 3). However, quality control and quality analysis procedures indicated possible laboratory contamination was associated with this groundwater sample. Well MW-3(SS123) was re-sampled on January 29, 2009, and analytical results were non-detect for all compounds including TPHd, confirming that the January 12, 2009 result was a false positive result.

Analytical results for the current and previous quarterly groundwater monitoring events confirm that groundwater beneath the Site has not been affected by TPH or TPH-related compounds that have been detected in soil samples collected from temporary soil borings advanced previously at the Site.

4.0 SUMMARY AND RECOMMENDATIONS

The results from this event and the three previous quarterly groundwater monitoring events confirm that shallow and deeper groundwater has not been affected by TPH detected in soil and grab groundwater samples collected from temporary soil borings in the SS-123 area during previous subsurface investigations. In addition, results from the quarterly groundwater monitoring confirm the presence of two distinct groundwater intervals, with a shallow groundwater zone apparently perched above a deeper groundwater zone.

Based on results of the four quarterly groundwater monitoring events completed at the Site and in accordance with the June 20, 2008 Site Investigation and Well Installation Report, LFR recommends that quarterly groundwater monitoring and reporting be discontinued and that the two groundwater monitoring wells be properly abandoned. No additional investigation, sampling, or remediation is recommended for the Site. Based on the findings of the quarterly groundwater monitoring event and the previous investigations, on behalf of Hanson, LFR requests that ACEH issue a No Further Action letter for the Site.

5.0 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.

6.0 REFERENCES

Alameda County Environmental Health (ACEH). 2008. Letter from Jerry Wickham to Lee Cover of Hanson Aggregates West Region, re: SLIC Case RO0002952 and Geotracker Global ID STL0600101555, Hanson Aggregates Radum Plant, 3000 Busch Road, Pleasanton, CA 94566. February 26.

LFR Inc. (LFR). 2008a. Work Plan for Additional Site Characterization at AOC #8, Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California. February 6.

———. 2008b. 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. June 20.

———. 2008c. 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.

———. 2009. Groundwater Monitoring Report, October 1 through December 31, 2008, SS-123 Area (AOC #8), Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California (ACEH Case #RO0002952 and Geotracker Global ID #SL0600101555). February 10.

Regional Water Quality Control Board, San Francisco Bay Region. 2008. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (Interim Final – November 2007); Environmental Screening Levels ("ESLs"). Technical Document. May.

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)
MW-3(SS123)	5/22/08	sonic	6.0	71	2.0	60 - 70	373.71
MW-4(SS123)	5/23/08	hollow-stem auger	8.0	30	2.0	18 - 28	373.30

Notes:

ID = identification; monitoring well identification number

feet bgs = feet below ground surface

feet msl = feet relative to mean sea level

[1] Top of casing elevation and land survey conducted by Kim & Wright Civil Engineers & Surveyors, Inc.

Table 2
Groundwater Elevations
Area of Concern #8/SS-123 Area (Legacy Partners Property)
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

Monitoring Well ID	Top of Casing Elevation[1] (feet msl)	Approximate Screened Interval (feet bgs)	Measurement Date	Depth to Groundwater (feet TOC)	Groundwater Elevation (feet msl)
MW-3(SS123)	373.71	60 - 70	6/5/08	40.18	333.53
			9/22/08	47.96	325.75
			1/12/09	43.68	330.03
			3/16/09	39.49	334.22
MW-4(SS123)	373.30	18 - 28	6/5/08	21.95	351.35
			9/22/08	24.14	349.16
			1/12/09	24.87	348.43
			3/16/09	16.61	356.69

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

Table 3
Analytical Results
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
	1/12/2009 *	60 - 70	water	410	< 500	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	1/29/2009	60 - 70	water	< 50	< 300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	3/16/2009	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
	1/12/2009	18 - 28	water	< 50	< 500	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	3/16/2009	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

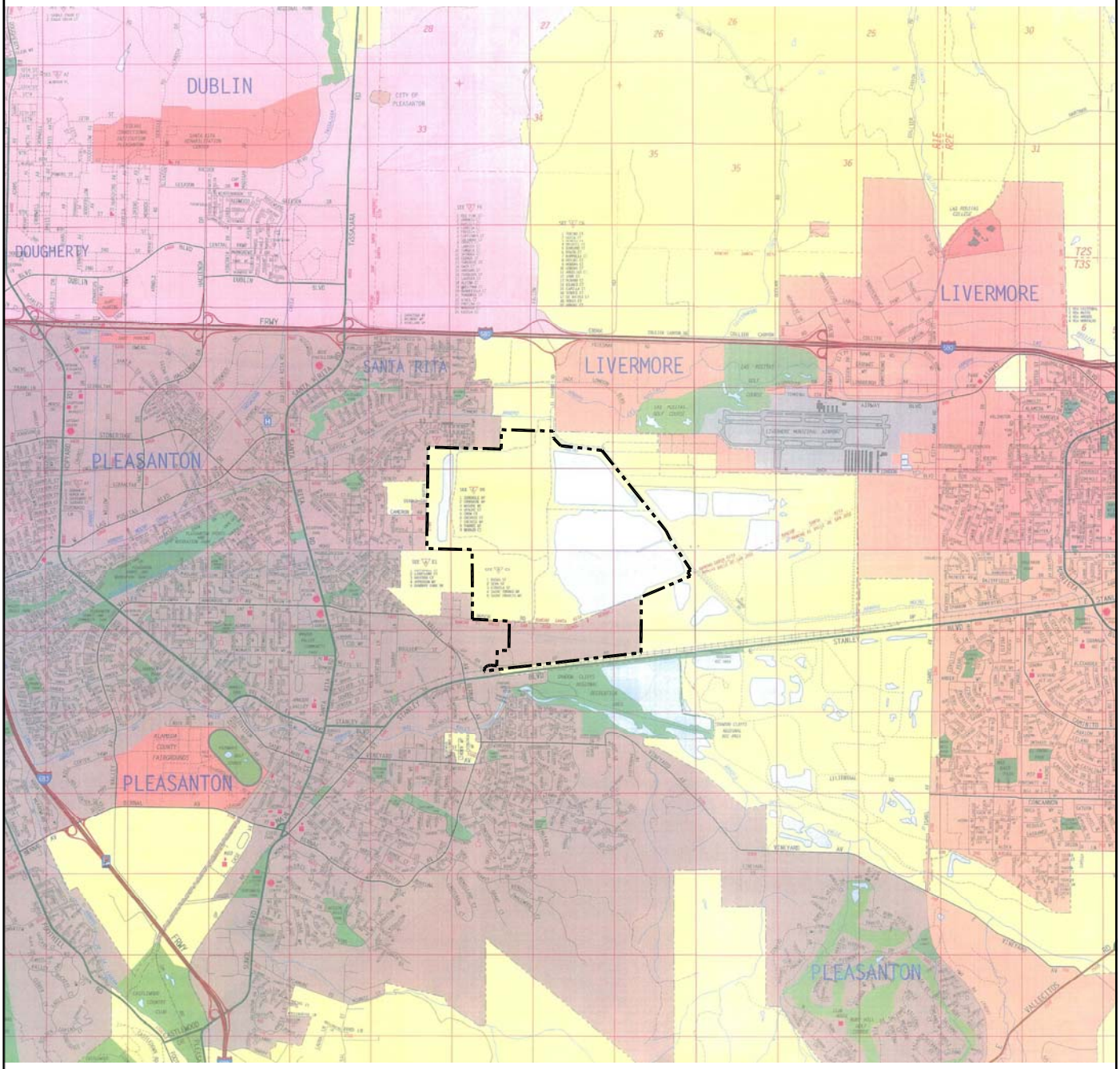
E = ethylbenzene

m,p-X = m,p-xylenes

o-X = o-xylenes

* = Quality control and quality analysis (QA/QC) procedures indicated possible laboratory contamination was associated with the groundwater sample collected from MW-3(SS123) on January 12, 2009. As a result, another groundwater sample was collected from well MW-3(SS123) on January 29, 2009.

ESLs = Environmental Screening Levels by San Francisco Bay Regional Water Quality Control Board, May 2008, 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

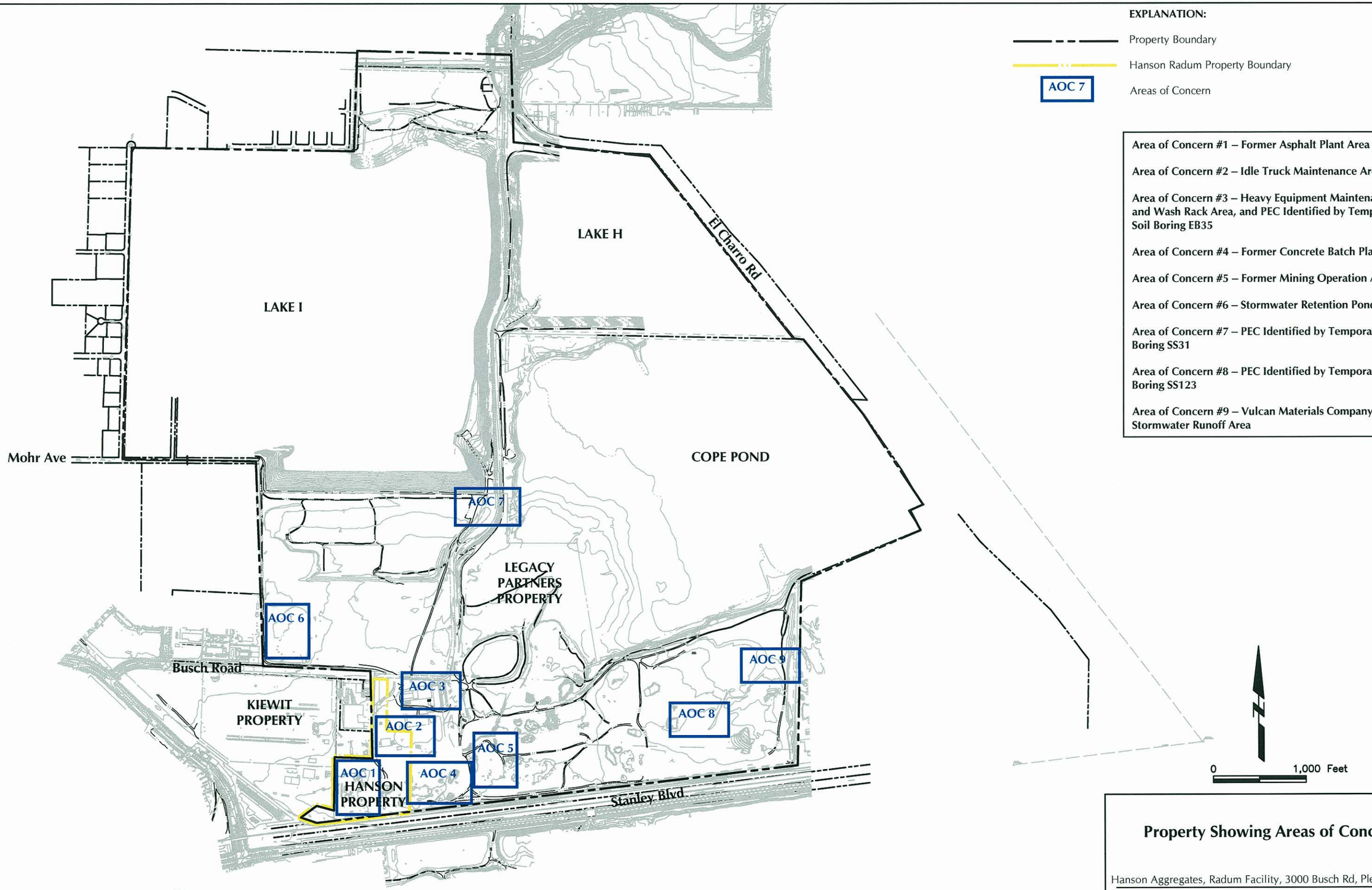
Site Location Map

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



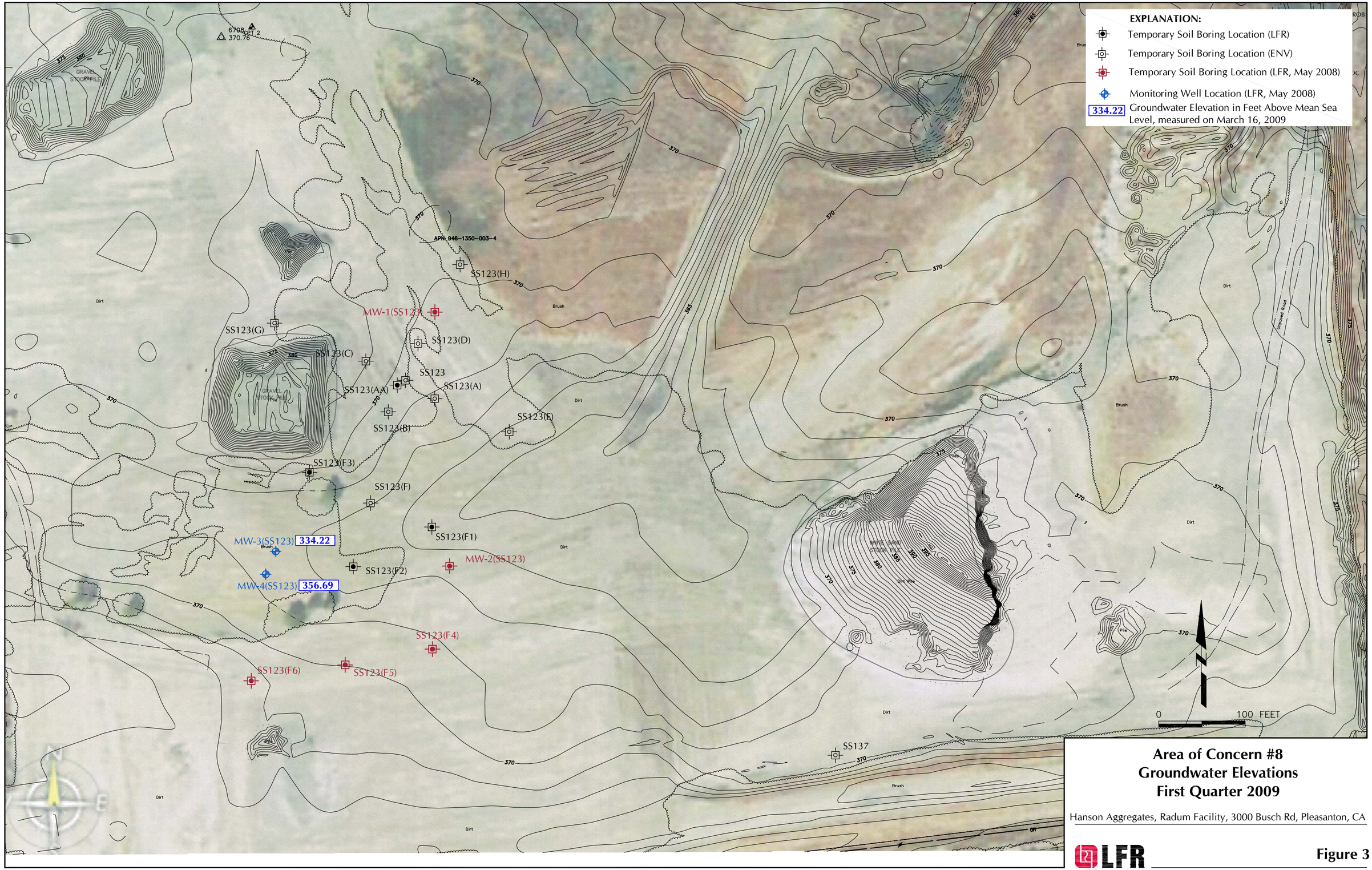
Property Showing Areas of Concern

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



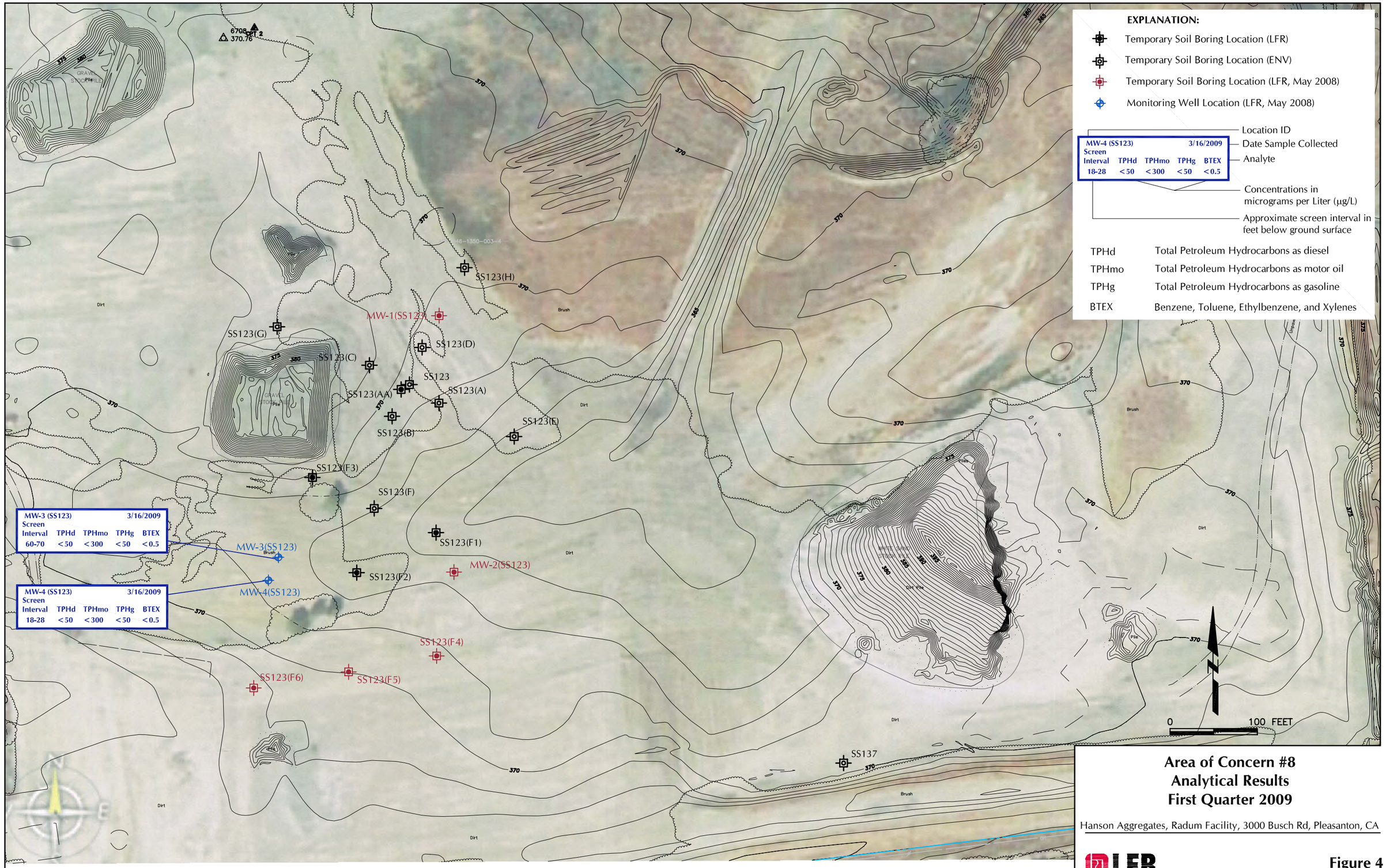
Area of Concern #8
Groundwater Elevations
First Quarter 2009

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

LFR

Figure 3

I:\Design\001\09567\07\DWG\AOC 8 TPH BTEX in GW Q1 March 2009.dwg May 08,2009-1:09pm



Area of Concern #8
Analytical Results
First Quarter 2009

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

LFR

Figure 4

I:\Design\001\09567\07\DWG\AOC 8 TPH BTEX in GW Q1 March 2009.dwg Apr 30,2009-12:07pm

APPENDIX A

Laboratory Certified Analytical Reports

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-18554-2

Job Description: Hanson Radum

For:
LFR, Inc.
1900 Powell St 12th Floor
Emeryville, CA 94608-1827

Attention: Mr. Ron Goloubow

Approved for release.
Afsaneh Salimpour
Project Manager I
4/30/2009 12:47 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com
04/30/2009
Revision: 1

Job Narrative
720-J18554-2

Comments
No additional comments.

Receipt
No client label on the one Trip Blank TAL-SF TB: 021709 received, no sample date collected provided used 03/16/09.

All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC Semi VOA
Method(s) 8015B: Results pending closing ccv's on 3-23-09 around 18:00.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: LFR, Inc. Job Number: 720-18554-2

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method

No Detections

METHOD SUMMARY

Client: LFR, Inc. Job Number: 720-18554-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: LFR, Inc. Job Number: 720-18554-2

Method	Analyst	Analyst ID
SW846 8260B/CA_LUFTMS	Zhao, June	JZ

SAMPLE SUMMARY

Client: LFR, Inc. Job Number: 720-18554-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-18554-3	MW-3-8	Water	03/16/2009 1540	03/16/2009 1630
720-18554-4	MW-4-8	Water	03/16/2009 1224	03/16/2009 1630

Client: LFR, Inc. Job Number: 720-18554-2

Client Sample ID: MW-3-8

Lab Sample ID: 720-18554-3
Client Matrix: Water

Date Sampled: 03/16/2009 1540
Date Received: 03/16/2009 1630

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 03/19/2009 1918
Date Prepared: 03/19/2009 1918

Analysis Batch: 720-47847

Instrument ID: Varian 3900A
Lab File ID: e:\data\2009\200903\03190
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Ethylbenzene	ND		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	91	78 - 112
1,2-Dichloroethane-d4 (Surr)	87	67 - 126

Client: LFR, Inc. Job Number: 720-18554-2

Client Sample ID: MW-4-8

Lab Sample ID: 720-18554-4
Client Matrix: Water

Date Sampled: 03/16/2009 1224
Date Received: 03/16/2009 1630

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS

Method: 8260B/CA_LUFTMS
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 03/19/2009 1941
Date Prepared: 03/19/2009 1941

Analysis Batch: 720-47847

Instrument ID: Varian 3900A
Lab File ID: e:\data\2009\200903\03190
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Ethylbenzene	ND		0.50

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	90	78 - 112
1,2-Dichloroethane-d4 (Surr)	94	67 - 126

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: LFR, Inc. Job Number: 720-18554-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-47847					
LCS 720-47847/2	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-47847/1	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-47847/3	Method Blank	T	Water	8260B/CA_LUFT	
720-18554-3	MW-3-8	T	Water	8260B/CA_LUFT	
720-18554-4	MW-4-8	T	Water	8260B/CA_LUFT	

Report Basis
T = Total

Client: LFR, Inc.

Job Number: 720-18554-2

Method Blank - Batch: 720-47847

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-47847/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2009 1000
Date Prepared: 03/19/2009 1000

Analysis Batch: 720-47847
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900A
Lab File ID: e:\data\2009\200903\0319(
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Gasoline Range Organics (GRO)-C5-C12	ND		50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
MTBE	ND		0.50
Ethylbenzene	ND		0.50

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	90	78 - 112
1,2-Dichloroethane-d4 (Surr)	92	67 - 126

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: LFR, Inc. Job Number: 720-18554-2

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-47847

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-47847/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2009 1036
Date Prepared: 03/19/2009 1036

Analysis Batch: 720-47847
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900A
Lab File ID: e:\data\2009\200903\0319(
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-47847/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2009 1059
Date Prepared: 03/19/2009 1059

Analysis Batch: 720-47847
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian 3900A
Lab File ID: e:\data\2009\200903\031909
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	84	89	74 - 112	5	20		
Gasoline Range Organics (GRO)-C5-C12	61	63	42 - 80	4	20		
Toluene	72	76	65 - 98	4	20		
MTBE	84	80	69 - 104	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	93	92	78 - 112
1,2-Dichloroethane-d4 (Surr)	90	84	67 - 126

Calculations are performed before rounding to avoid round-off errors in calculated results.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

11506)

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

PROJECT NO.: 001-04567-07 | SECTION NO.: | DATE: 3/16/09 | SAMPLER'S INITIALS: TRC | SERIAL NO.: Nº 203315

PROJECT NAME: Hanson Radium | SAMPLER (Signature): Tom Collins

720-18554

	SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	Soil	Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA 8015M)	BTEX (EPA 8021/802)	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	SVOC 8270	Fuel Oxis	Lead Scavengers	Standard	RUSH:	HOLD	REMARKS
1.	MW-1	3/16	14:40		6		X	X	X	X	X			X	X	X	X			
2.	MW-3	3/16	15:05		6		X	X	X	X	X			X	X	X	X			
3.	MW-3-8	3/16	15:40		4		X	X	X		X						X			
4.	MW-4-8	3/16	12:24		4		X	X	X		X						X			
5.	TB-021709	—	—														X		X	

TAT: Standard / RUSH: / HOLD

*VOCs: ☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List
**Metals: ☐ CAM17 ☐ RCRA ☐ LUFT

SAMPLE RECEIPT: ☐ Intact ☐ Cold ☐ On Ice ☐ Ambient | Cooler Temp: 2.7°C | Cooler No: | Preservative Correct? ☐ Yes ☐ No ☐ N/A

METHOD OF SHIPMENT: Hand
LAB REPORT NO.: Ron Goldman
FAX COC CONFIRMATION TO:

RELINQUISHED BY: 1
(SIGNATURE) Tom Collins (DATE) 3/16/09
(PRINTED NAME) Tom Collins (TIME) 16:30
(COMPANY) LFR

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

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

ANALYTICAL LABORATORY: Test America

FAX RESULTS TO: "
SEND HARDCOPY TO: "
SEND EDD TO: EMV.LABEDDS.COM

RECEIVED BY: 1
(SIGNATURE) T. Bullock (DATE) 3/16/09
(PRINTED NAME) T. Bullock (TIME) 16:30
(COMPANY) TEST AMERICA

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

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

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

CHAIN of CUSTODY - ANALYSES FORM.CDR 5/2003

Login Sample Receipt Check List

Client: LFR, Inc.

Job Number: 720-18554-2

Login Number: 18554
List Source: TestAmerica San Francisco
Creator: Bullock, Tracy
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	see NCM
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-18554-4

Job Description: Hanson Radum

For:
LFR, Inc.
1900 Powell St 12th Floor
Emeryville, CA 94608-1827

Attention: Mr. Ron Goloubow

Approved for release.
Afsaneh Salimpour
Project Manager I
3/31/2009 3:45 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com
03/31/2009

EXECUTIVE SUMMARY - Detections

Client: LFR, Inc. Job Number: 720-18554-4

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method

No Detections

METHOD SUMMARY

Client: LFR, Inc. Job Number: 720-18554-4

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL SF		SW846 3510C SGC

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: LFR, Inc. Job Number: 720-18554-4

Method	Analyst	Analyst ID
SW846 8015B	Hayashi, Derek	DH

SAMPLE SUMMARY

Client: LFR, Inc. Job Number: 720-18554-4

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-18554-3	MW-3-8	Water	03/16/2009 1540	03/16/2009 1630
720-18554-4	MW-4-8	Water	03/16/2009 1224	03/16/2009 1630

Client: LFR, Inc. Job Number: 720-18554-4

Client Sample ID: MW-3-8

Lab Sample ID: 720-18554-3
Client Matrix: Water

Date Sampled: 03/16/2009 1540
Date Received: 03/16/2009 1630

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B
Preparation: 3510C SGC
Dilution: 1.0
Date Analyzed: 03/27/2009 0235
Date Prepared: 03/26/2009 1221

Analysis Batch: 720-48168
Prep Batch: 720-48032

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 500 mL
Final Weight/Volume: 2 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Motor Oil Range Organics [C24-C36]	ND		300
Diesel Range Organics [C9-C24]	ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	85	31 - 120

Client: LFR, Inc. Job Number: 720-18554-4

Client Sample ID: MW-4-8

Lab Sample ID: 720-18554-4
Client Matrix: Water

Date Sampled: 03/16/2009 1224
Date Received: 03/16/2009 1630

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B
Preparation: 3510C SGC
Dilution: 1.0
Date Analyzed: 03/27/2009 0302
Date Prepared: 03/26/2009 1221

Analysis Batch: 720-48168
Prep Batch: 720-48032

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 500 mL
Final Weight/Volume: 2 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Motor Oil Range Organics [C24-C36]	ND		300
Diesel Range Organics [C9-C24]	ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	92	31 - 120

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: LFR, Inc. Job Number: 720-18554-4

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 720-48032					
LCS 720-48032/2-A	Lab Control Spike	A	Water	3510C SGC	
LCSD 720-48032/3-A	Lab Control Spike Duplicate	A	Water	3510C SGC	
MB 720-48032/1-A	Method Blank	A	Water	3510C SGC	
720-18554-3	MW-3-8	A	Water	3510C SGC	
720-18554-4	MW-4-8	A	Water	3510C SGC	
Analysis Batch:720-48168					
LCS 720-48032/2-A	Lab Control Spike	A	Water	8015B	720-48032
LCSD 720-48032/3-A	Lab Control Spike Duplicate	A	Water	8015B	720-48032
MB 720-48032/1-A	Method Blank	A	Water	8015B	720-48032
720-18554-3	MW-3-8	A	Water	8015B	720-48032
720-18554-4	MW-4-8	A	Water	8015B	720-48032

Report Basis
A = Silica Gel Cleanup

Method Blank - Batch: 720-48032

Method: 8015B
Preparation: 3510C SGC
Silica Gel Cleanup

Lab Sample ID: MB 720-48032/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/27/2009 0112
Date Prepared: 03/26/2009 1221

Analysis Batch: 720-48168
Prep Batch: 720-48032
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 500 mL
Final Weight/Volume: 2 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
Motor Oil Range Organics [C24-C36]	ND		300
Diesel Range Organics [C9-C24]	ND		50

Surrogate	% Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	85	31 - 120

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-48032

Method: 8015B
Preparation: 3510C SGC
Silica Gel Cleanup

LCS Lab Sample ID: LCS 720-48032/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/27/2009 0017
Date Prepared: 03/26/2009 1221

Analysis Batch: 720-48168
Prep Batch: 720-48032
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 500 mL
Final Weight/Volume: 2 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-48032/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/27/2009 0045
Date Prepared: 03/26/2009 1221

Analysis Batch: 720-48168
Prep Batch: 720-48032
Units: ug/L

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 500 mL
Final Weight/Volume: 2 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diesel Range Organics [C9-C24]	78	105	49 - 120	29	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
p-Terphenyl	95	93	31 - 120

Calculations are performed before rounding to avoid round-off errors in calculated results.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

11506)

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

PROJECT NO.: 001-04567-07 | SECTION NO.: | DATE: 3/16/09 | SAMPLER'S INITIALS: TRC | SERIAL NO.: Nº 203315

PROJECT NAME: Hanson Radum | SAMPLER (Signature): Tom Collins

720-18554

	SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	Soil	Water	TYPE	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA 8015M)	BTEX (EPA 8021/802)	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	SVOC 8270	Fuel Oxis	Lead Scavengers	TAT Standard	RUSH	HOLD	REMARKS
1.	MW-1	3/16	14:40		6		X		X	X	X	X			X	X	X	X			
2.	MW-3	3/16	15:05		6		X		X	X	X	X			X	X	X	X			
3.	MW-3-8	3/16	15:40		4		X		X	X		X						X			
4.	MW-4-8	3/16	12:24		4		X		X	X		X						X			
5.	TB-021709	—	—															X		X	

*VOCs: ☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List
**Metals: ☐ CAM17 ☐ RCRA ☐ LUFT

SAMPLE RECEIPT: ☐ Intact ☐ Cold ☑ On Ice ☐ Ambient
Cooler Temp: 2.7°C
Cooler No:
Preservative Correct? ☐ Yes ☐ No ☐ N/A

METHOD OF SHIPMENT: Hand
LAB REPORT NO.: Ron Goldman
FAX COC CONFIRMATION TO:

RELINQUISHED BY: 1
(SIGNATURE) Tom Collins (DATE) 3/16/09
(PRINTED NAME) Tom Collins (TIME) 16:30
(COMPANY) LFR

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

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

ANALYTICAL LABORATORY: Test America

FAX RESULTS TO: "
SEND HARDCOPY TO: "
SEND EDD TO: EMV.LABEDDS.COM

RECEIVED BY: 1
(SIGNATURE) (DATE) 3/16/09
(PRINTED NAME) T. Bullock (TIME) 16:30
(COMPANY) TEST AMERICA

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

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

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

CHAIN of CUSTODY - ANALYSES FORM.CDR 5/2003

03/31/2009

Page 11 of 12

Login Sample Receipt Check List

Client: LFR, Inc.

Job Number: 720-18554-4

Login Number: 18554
List Source: TestAmerica San Francisco
Creator: Bullock, Tracy
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	see NCM
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

APPENDIX B

Groundwater Monitoring Well Sampling Field Sheets

LFR LEVINE • FRICKE

WATER-LEVEL MEASUREMENTS LOG

Project No. 001-09567-07 Date 3/16/09 Page ___ of ___

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

Field Personnel Tom Collins Ashley Gilreath

General Observations Cloudy

WELL NO.	WELL ELEVATION	DEPTH TO WATER 1	DEPTH TO WATER 2	WATER ELEVATION	WELL SECURE? Y	WELL SECURE? N	REMARKS (UNITS = FEET)
MW-10	8:25	50.35	50.35		X		
MW-4	8:30	48.54	48.54		X		well is dry/muddy
MW-5	8:45	71.36	71.36		X		
MW-6	8:48	48.89	48.84		X		
MW-7	8:50	56.54	56.54		X		
MW-2	8:53	54.56	54.56		X		
MW-8	8:56	54.61	54.61		~~X~~	X	Needs a lock
MW-1	9:00	55.92	55.92		X		
MW-3	9:03	53.64	53.64		X		
MW-9	9:05	50.46	50.45		X		
MW-3		39.49	39.49		X		AOC-8
MW-4		16.61	16.61		X		~~AOC-8~~
		17.19					

LFR LEVINE•FRICKE

WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07-*** Date: March 16, 2009 Page 1 of

Project Name: Hanson Radum Sampling Location: Pleasanton Hanson site

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

Sampling Plan By: Ron Golobow 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: On Site

Date Purge Water Disposed: Where Disposed: On Site

Analyses Requested	No. and Type of Bottles Used
TPHg, TPHd, TPHmo	
BTEX, SVOC's, Lead Scavengers, Fuel Oxy's	
Lab Name: ~~Curtis & Tompkins~~ Test America	
Delivery By ☐ Courier	☒ Hand

Well No. MW-3 @ 10C8 Depth of Water

Well Diameter: 2" Well Depth

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

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

67.83 - 44.51
23.32 (.2)
4.66

80% DTW 49.17

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	ORP	Temperature (C°)	PH (SU)	Cond (µs/cmc)	DO (mg/l)	Remarks
10:55	start	pumping							
10:58		44.51		-206.5	18.72	6.99	1697	6.07	
11:02				-217.6	18.81	6.94	1699	2.33	
11:09		67.37	5 gallons	-281.0	19.56	7.30	1290	.58	
11:11		67.83	7 gal	-275.5	19.80	7.49	1245	.71	well dry
1540	Sample	54.91							

TRC

Continue remarks on reverse, if needed.

LFR LEVINE•FRICKE

WATER-QUALITY SAMPLING LOG

Project No. 001-09567-07-*** Date: March 16, 2009 Page 1 of

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

Sampler's Name: Tom Collins Sample No.: MW-4 ☐ FB

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

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

Purge Water Storage Container Type: Storage Location: On Site

Date Purge Water Disposed: Where Disposed: On Site

Analyses Requested	No. and Type of Bottles Used
TPHg, TPHd, TPHmo	
BTEX, SVOC's, Lead Scavengers, Fuel Oxy's	
Lab Name: ~~Curtis & Tompkins~~ Test america	
Delivery By ☐ Courier	☐ Hand

Well No. MW-4 @AOC 8 Depth of Water 16.20

Well Diameter: Well Depth

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

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

30.35 - 16.20

14.15 (~~3~~ .2)

80% DTW 19.03

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	ORP	Temperature (C°)	PH (SU)	Cond (µs/cmc)	DO (mg/l)	Remarks
9:49	Start	pump							
9:59		17.76	.25	-178.1	18.57	7.13	1584	5.11	
10:02		17.84	2.5	-178.5	18.83	7.11	1585	4.82	
10:05		17.88	5.0	-177.1	18.79	7.12	1580	4.92	
10:14		22.46	7.5	-209.0	19.94	7.11	1606	1.89	
10:18		25.90	10	-204.4	19.40	7.09	1620	.68	
10 22		29.5	10.00	-212.3	19.61	7.08	1619	.40	Well is Dry
12:24		18.61	Sample						Wait for 80%
				TRC					

Continue remarks on reverse, if needed.