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April 17, 2008

Mr. Jerry T. Wickham, P.G., CHG Hazardous Materials Specialist Alameda County Health Agency Department of Environmental Health 1131 Harbor Bay Parkway Alameda, California 94502-6577

SUBJECT: GROUNDWATER MONITORING WELL INSTALLATION, DEVELOPMENT, SAMPLING, AND SOIL EXCAVATION REPORT Legacy Hanson Radum Site 3000 Busch Road Pleasanton, California SLIC Case RO0002952 and Geotracker Global ID SL0600101555

Dear Mr. Wickham:

ENV America Incorporated (ENV America) has prepared this Groundwater Monitoring Well Installation, Development, Sampling, and Soil Excavation Report (Report) for the Legacy Hanson Radum Property located at 3000 Busch Road in Pleasanton, California (Site, Figure 1) on behalf of Legacy Partners Commercial, LLC (Legacy). The purpose of this Report is to describe the work conducted by ENV America and document the results. The work is described in ENV America's February 6, 2008 work plan, which was approved by ACEH in a letter dated February 26, 2008.

PROJECT BACKGROUND

In July 2007 LFR, Inc. (LFR), on behalf of Hanson Permanente Cement, Inc. (Hanson), conducted soil and groundwater investigations in areas previously identified as areas of concern (AOCs) at the Site. To facilitate investigation of the Site, LFR divided the site into nine AOCs. A report describing the results of those investigations was submitted to Alameda County Health Agency-Department of Environmental Health (ACEH) on October 26, 2007.

RECEIVED

1:37 pm, Apr 22, 2008

Alameda County Environmental Health



In the October 2007 report, LFR reported detecting total petroleum hydrocarbon quantified as diesel (TPHd) at a concentration of 79 micrograms per liter (μ g/l) and motor oil (TPHmo) at a concentration of 1,100 μ g/l in a grab groundwater sample collected from 68 feet below ground surface (bgs) in boring B-1(A), located in AOC 3 between Hanson's office, the heavy maintenance shop, and the lube shed.

In a November 28, 2007 letter ACEH requested that groundwater in the vicinity of this boring be further evaluated to assess whether the results from boring B-1(A) are representative of groundwater quality in that area and whether a significant subsurface source of total petroleum hydrocarbons (TPH) exists.

Also in AOC 3, TPHd and TPHmo were detected above commercial/industrial environmental screening levels (ESLs, Figure 2) established by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in 2007, in shallow soil samples collected at two and five feet bgs in the vicinity of borings EB35 and EB35(B), respectively. In the November 28th letter ACEH requested to either 1) provide plans for additional investigation of the extent of petroleum hydrocarbons in shallow soils, particularly less than five feet bgs, or 2) describe general plans for future soil removal and confirmation sampling.

MONITORING WELL INSTALLATION ACTIVITES

Consistent with the approved work plan, one monitoring well (ENV-1) was installed, developed, and sampled in the area of soil boring B-1(A). The following describes the work conducted during monitoring well installation, development, and sampling.

Pre-Field Activities

The following pre-field activities were conducted prior to commencement of field work:

- A monitoring well installation permit was obtained from Zone 7 Water Agency (Attachment A);
- Underground Service Alert (USA), a regional utility notification service for underground utility protection, was notified of the proposed drilling location after the proposed drilling location was outlined in white paint;



- Subsurface Locating Services of Petaluma, California, a private underground utility locating company, was retained to additionally screen the boring location for subsurface utilities;
- A site-specific health and safety plan was prepared for the project.

Field Work

On March 7, 2008, WDC Exploration and Wells of Richmond, California, a California C-57 licensed drilling company, provided monitoring well drilling services at the Site. A hollow-stem auger drill rig was used to advance the boring (Figure 2).

Soil samples were collected continuously to the total depth of the boring using a CME continuous core sampling device. All down-hole equipment was decontaminated prior to starting using either a steam cleaner/pressure washer or by washing and triple rinsing techniques using laboratory grade detergent.

The recovered soil samples were screened for staining and volatile compounds visually and using a photoionization detector (PID). The recovered soil was logged under the direction of a California professional geologist using the visual-manual procedures of ASTM Standard D-2488-06 as guidance and Munsell Soil Chart designations.

Water was first encountered at 15 feet bgs. ENV America oversaw the installation and construction of a groundwater monitoring well within the boring such that the screen extended approximately two feet above the observed water bearing zone. Two-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and 10 feet of matching 0.010-inch factory slot screen were used to construct the well to a total depth of 22.8 feet bgs. The screen interval was set between 12.8 and 22.2 feet bgs. Clean silica filter pack sand (Monterey #2/16) was placed in the annular space from the total depth of the well to approximately two feet above the screened interval. Approximately two feet of uncoated bentonite chips were placed in the annular space above the sand to create a seal, and neat cement grout was placed in the annular space above the bentonite seal to approximately one foot bgs. The well completion consists of a flush mounted well box rated for vehicular traffic. Soil cuttings were placed on visqueen and covered pending analytical results for proper disposal. Well construction details are presented on Figure 3.



On March 10, 2008 ENV America oversaw the development of the well. Surging, bailing, and pumping were used to develop the well until the water was visually clear and below 50 nephelometric turbidity units (NTU). Development water was contained in 55-gallon steel drums pending analytical results for proper disposal.

On March 13, 2008 ENV America sampled the groundwater from the monitoring well using low flow sampling techniques. Monitoring well ENV-1 was purged and sampled using a peristaltic pump. Groundwater parameters of temperature, specific conductivity, and temperature, as well as the water level, stabilized prior to sampling. Once groundwater parameters stabilized, laboratory-provided bottles were filled directly from the discharge of the pump. All sample containers were uniquely labeled, immediately placed on ice, and submitted to Test America of Pleasanton, California (Test America), a California-certified laboratory under chain-of-custody protocol for the analyses of TPHd and TPHmo in accordance with Environmental Protection Agency Method (EPA) Method 8015M following a silica gel cleanup in accordance with EPA Method 3630, and for TPH quantified as gasoline (TPHg) and benzene, toluene, ethyl benzene, and total xylenes (BTEX) in accordance with EPA method 8260B.

On March 13, 2008 the monitoring well location and elevation were surveyed by Kier and Wright Surveyors, a professionally licensed land surveyor, of Pleasanton, California.

SOIL EXCAVATION ACTIVITES

Pre-Field Activities

The following pre-field activities were conducted prior to commencement of potholing work:

- Underground Service Alert (USA), a regional utility notification service for underground utility protection, was notified of the proposed excavation locations after the proposed locations were outlined in white paint;
- Subsurface Locating Services of Petaluma, California, a private underground utility locating company, was retained to additionally screen the locations for subsurface utilities;
- A site-specific health and safety plan was prepared for the project.



<u>Field Work</u>

On March 25, 2008, ENV Environmental International of Richmond, California was retained to provide backhoe services for the excavations. The backhoe bucket was decontaminated prior to use. Excavations were dug at the previous locations of soil borings EB-35 and EB-35(B), where soil results indicated TPHd and TPHmo above ESL criteria (Figure 2).

The excavated soil was screened for staining and volatile compounds visually and using a PID. The soil was logged under the direction of a California professional geologist using the visualmanual procedures of ASTM Standard D-2488-06 as guidance and Munsell Soil Chart designations. Trench logs from the excavations are included as Figures 4 and 5.

Based on field conditions, buried asphalt was observed in the subsurface at similar depth intervals where TPHd and TPHmo were previously detected above ESLs and ENV America asked ACEH to observe the excavations. Mr. Jerry Wickham, P.G., CHG, of ACEH visited the Site to observe the excavations. The excavations in general were comprised of silty sandy gravel and asphalt cobbles of various sizes throughout the unit, underlain by a layer of asphalt, which was underlain by more silty sandy gravel.

ACEH requested that ENV America collect a sample of the asphaltic material as a well as a sample of the silty sandy gravel with no visible asphalt particles from directly below the asphaltic layer. Samples were collected using hand tools and placed in laboratory provided glass sampling jars.

The sample containers were uniquely labeled, immediately placed on ice, and submitted to Test America under chain-of-custody protocol for the analyses of TPHd and TPHmo in accordance with EPA Method 8015M following a silica gel cleanup in accordance with EPA Method 3630.

Following sampling the excavations were backfilled to ground surface and compacted using the backhoe bucket.



FINDINGS

Lithology and Hydrology

Lithology encountered in boring ENV-1 consisted primarily of fine-grained soil with varying amounts of sand and gravel with interbedded coarser zones at approximately 14.5, 19.5, and 20.5 feet bgs. First observed water encountered during drilling was at 15 feet bgs. The water level was measured at 15.70 feet below the top of the casing (btc) three days after development.

Soil in the area of EB35 consisted of silty sandy gravel with asphalt, and a distinct asphalt layer that occurred at corresponding depths of the samples previously collected from EB35 and EB35(B); this asphalt layer was underlain by another silty sandy gravel. There was no staining or odor and no PID readings that would indicate the presence of free phase or residual TPHd or TPHmo contamination in the locations potholed.

Groundwater Analytical Results

The groundwater sample was designated ENV-1 and analyzed for TPHd and TPHmo in accordance with EPA Method 8015M following a silica gel cleanup in accordance with EPA Method 3630, and for TPHg and BTEX in accordance with EPA Method 8260B. Analytes were not detected above their method detection limits. A complete laboratory report is included as Attachment A.

Excavation Soil Sample Results

Two soil samples were collected from the excavation location T-35, advanced at previous boring location EB-35. The samples were called T-35A, which was a soil sample collected from the asphaltic layer, and T-35B, which was a soil sample collected directly below the asphaltic layer. These samples were analyzed for TPHd and TPHmo in accordance with EPA Method 8015M following a silica gel cleanup in accordance with EPA Method 3630. The analytical results were as follows:

• Sample T-35A collected from the asphalt layer at 2.5 feet bgs, TPHd = 3,500 mg/kg, and TPHmo = 45,000 mg/kg; and



• Sample T-35B collected directly below the asphalt layer at 3.5 feet bgs in the silty sandy gravel, TPHd = 14 mg/kg, and TPHmo = 150 mg/kg.

A complete copy of the laboratory analytical package from the soil sampling activities is attached to this report as Attachment C.

CONCLUSION AND RECOMMENDATIONS

Groundwater by B-1(A)

Based on the groundwater analytical results, it is ENV America's opinion that groundwater in the vicinity of ENV-1 has not been affected by TPH constituents. Constituents detected in LFR's grab groundwater sample from boring B-1(A) may be caused by asphalt particulates suspended in the grab groundwater sample. Based on the findings, we recommend that the monitoring well be abandoned, and no further action be required with respect to the groundwater in this area of the Site.

Soil by EB-35

Excavation activities in the area of EB-35 and EB-35B were conducted to observe material in subsurface soil for a potential source of TPH. In both excavation locations, asphaltic material was observed. The analytical results indicate that when asphaltic material is sampled and the laboratory extracts the sample for analysis with aggressive solvents, TPHd and TPHmo from the material leach out at concentrations that exceed regulatory criteria. Based on the sample collected directly below the asphaltic layer (T-35B), it does not appear that the asphaltic material leaches out under normal conditions. The results of soil sample T-35B were at least two orders of magnitude below the results from T-35A and significantly below Environmental Screening Levels (ESLs) established by the RWQCB. The ESL for TPHd = 83 mg/kg and the ESL for TPHmo = 410 mg/kg.

Based on the results ENV America recommends no additional excavation or soil sampling in this area of the Site.



ENV America is pleased to provide this Groundwater Well Installation, Development, Sampling and Soil Excavation Report for the Site. If you have any questions regarding this report please call the undersigned at (415) 989-9933.

EXPIRATION DATE

No. 3515

OF CALL

Sincerely, ENV America Incorporated

Allan H. Atkinson, PG Principal

cc: Mr. Tom Jodry, Legacy Partners Commercial, Inc. Mr. Lee Cover, Hanson Permanente Cement, Inc.

PRO

Voytek Bajsarowicz Principal

Figures:

Figure 1: Site Vicinity Map Figure 2: Site Plan Figure 3: Well Log Figure 4: Trench Log T-35A Figure 5: Trench Log T-35B

Attachments:

Attachment A – Zone 7 Water Agency Well Permit

Attachment B – Laboratory Analytical Report and Chain-of-Custody Documentation for the Groundwater Sample

Attachment C - Laboratory Analytical Report and Chain-of-Custody Documentation for the Soil Samples

Figures













Attachment A – Zone 7 Water Agency Well Permit



ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306 E-MAIL <u>whong@zone7water.com</u>

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE	FOR OFFICE USE
Deasanton, CA 94566	PERMIT NUMBER28026 WELL NUMBER3S/1E-15F6 APN946-1250-019-01
California Coordinates Sourceft. Accuracy••ft. CCNft. CCEft. APN CLIENT Namefg. / Accs (Commerce, of Address 4000 E = 14 A-0 = 6000 Phone 650-571-2 City Foster City, CA Zip 99909 APPLICANT Name Cally American Charles Acons	 PERMIT CONDITIONS (Circled Permit Requirements Apply) GENERAL A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
_Email <u>Crowned Congression Con</u> Fax <u>475-989-9</u> Address <u>294 (collification of States</u> Phone <u>415-989-9</u> City <u>Then Brances co</u> Zip <u>19717</u> TYPE OF PROJECT:	 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.
Well Construction Geotechnical Investigation Well Destruction Contamination Investigation Cathodic Protection Other PROPOSED WELL USE: Irrigation Domestic Irrigation Municipal Remediation Industrial Groundwater Monitoring	 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. Grout placed by tremie. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements. A sample port is required on the discharge pipe near the wellhead
Dewatering ·· Other ·· ·· DRILLING METHOD: Mud Rotary ·· Air Rotary ·· Hollow Stem Auger ·· · Cable Tool ·· Direct Push ·· Other ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··	 C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
DRILLER'S LICENSE NO 3.3.2.4 WELL SPECIFICATIONS: Drill Hole Diameter in. Maximum Casing Diameter in. Depth ft. Surface Seal Depth ft. Number	 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.
SOIL BORINGS: Number of Borings Maximum	E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.
Hole Diameter in. Depth ft. ESTIMATED STARTING DATE ESTIMATED COMPLETION DATE April 1	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.
I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68. APPLICANT'S	Approved <u>Hyman Hong</u> Date <u>3/5/08</u> Wyman Hong

Charles Rome ATTACH SITE PLAN OR SKETCH Attachment B – Laboratory Analytical Report and Chain-of-Custody Documentation for the Groundwater Sample



ANALYTICAL REPORT

Job Number: 720-13440-1 Job Description: Legacy Hansen

For: ENV America, Incorporated 244 California St., Ste 500 San Francisco, CA 94111 Attention: Mr. David O Connor

arma

Dimple Sharma Project Manager I dimple.sharma@testamericainc.com 03/20/2008

cc: Mr. Charlie Rome

TestAmerica Laboratories, Inc. TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566 Tel (925) 484-1919 Fax (925) 484-1096 www.testamericainc.com

Comments

No additional comments.

Receipt

All 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: The method blank for preparation batch 32994 contained a target compound above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: ENV America, Incorporated

Job Number: 720-13440-1

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

No Detections

METHOD SUMMARY

Client: ENV America, Incorporated

Job Number: 720-13440-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS Purge-and-Trap	TAL SF TAL SF	SW846 8260B	SW846 5030B
Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	TAL SF	SW846 8015B	
Separatory Funnel Liquid-Liquid Extraction	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.

SAMPLE SUMMARY

Client: ENV America, Incorporated

Job Number: 720-13440-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-13440-1	ENV-1-031308	Water	03/13/2008 1245	03/13/2008 1305

Client: ENV America, Incorporated Job Number: 720-13440-1 **Client Sample ID:** ENV-1-031308 Lab Sample ID: 720-13440-1 Date Sampled: 03/13/2008 1245 **Client Matrix:** Water Date Received: 03/13/2008 1305 8260B Volatile Organic Compounds by GC/MS Method: 8260B Analysis Batch: 720-33226 Instrument ID: Varian 3900E Preparation: 5030B c:\varianws\data\200803\03 Lab File ID: Dilution: 1.0 Initial Weight/Volume: 10 mL Date Analyzed: 03/19/2008 1532 Final Weight/Volume: 10 mL Date Prepared: 03/19/2008 1532 Result (ug/L) Qualifier RL Analyte Benzene ND 0.50 Ethylbenzene ND 0.50 Toluene ND 0.50 Xylenes, Total ND 1.0 Gasoline Range Organics (GRO)-C5-C12 50 ND %Rec Acceptance Limits Surrogate Toluene-d8 (Surr) 95 77 - 121 1,2-Dichloroethane-d4 (Surr) 87 73 - 130

Analytical Data

Analytical Data

Client: ENV America, Incorporated

Job Number: 720-13440-1

Client Sample ID: ENV-1-031308

Lab Sample ID: Client Matrix:	720-13440-1 Water	Date Sampled: Date Received:	03/13/2008 1245 03/13/2008 1305

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)-Silica Gel Cleanup

Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3510C SGC 1.0 03/17/2008 1634 03/14/2008 1247	Analysis Batch: 720-33211 Prep Batch: 720-32994	Instrument ID: Lab File ID: Initial Weight/Vo Final Weight/Vol Injection Volume Column ID:	HP DRO5 N/A lume: 250 mL ume: 1 mL e: PRIMARY
Analyte		Result (ug/L)	Qualifier	RL
Diesel Range Orga	inics [C10-C28]	ND		50
Motor Oil Range O	rganics [C24-C36]	ND		500
Surrogate		%Rec	Ac	ceptance Limits
Capric Acid (Surr)		0	0	- 5
p-Terphenyl		67	4	6 - 114

DATA REPORTING QUALIFIERS

Client: ENV America, Incorporated

Job Number: 720-13440-1

Lab Section	Qualifier	Description
GC Semi VOA		
	В	Compound was found in the blank and sample.

Client: ENV America, Incorporated

Job Number: 720-13440-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-332	26				
LCS 720-33226/2	Lab Control Spike	Т	Water	8260B	
LCSD 720-33226/1	Lab Control Spike Duplicate	Т	Water	8260B	
MB 720-33226/3	Method Blank	Т	Water	8260B	
720-13440-1	ENV-1-031308	Т	Water	8260B	
720-13449-B-2 MS	Matrix Spike	Т	Water	8260B	
720-13449-B-2 MSD	Matrix Spike Duplicate	Т	Water	8260B	
<u>Report Basis</u> T = Total					
GC Semi VOA					
Prep Batch: 720-32994					
LCS 720-32994/2-A	Lab Control Spike	Α	Water	3510C SGC	
LCSD 720-32994/3-A	Lab Control Spike Duplicate	Α	Water	3510C SGC	
MB 720-32994/1-A	Method Blank	Α	Water	3510C SGC	
720-13440-1	ENV-1-031308	Α	Water	3510C SGC	
720-13449-G-2-B MS	Matrix Spike	Α	Water	3510C SGC	
720-13449-G-2-C MSD	Matrix Spike Duplicate	А	Water	3510C SGC	
Analysis Batch:720-332	11				
LCS 720-32994/2-A	Lab Control Spike	А	Water	8015B	720-32994
LCSD 720-32994/3-A	Lab Control Spike Duplicate	А	Water	8015B	720-32994
MB 720-32994/1-A	Method Blank	А	Water	8015B	720-32994
720-13440-1	ENV-1-031308	А	Water	8015B	720-32994
720-13449-G-2-B MS	Matrix Spike	А	Water	8015B	720-32994
720-13449-G-2-C MSD	Matrix Spike Duplicate	А	Water	8015B	720-32994

Report Basis

A = Silica Gel Cleanup

Method Blank - Batch: 720-33226

Lab Sample ID: MB 720-33226/3 Client Matrix: Water Dilution: 1.0 Date Analyzed: 03/19/2008 0902 Date Prepared: 03/19/2008 0902 Analysis Batch: 720-33226 Prep Batch: N/A Units: ug/L

Quality Control Results

Job Number: 720-13440-1

Method: 8260B Preparation: 5030B

Instrument ID: Varian 3900E Lab File ID: c:\varianws\data\200803\03 Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
Surrogate	% Rec	Acceptance Limi	ts
Toluene-d8 (Surr)	93	77 - 121	
1,2-Dichloroethane-d4 (Surr)	83	73 - 130	

Lab Control Spike/

Client Matrix:

Dilution:

Water

1.0

Lab Control Spike Duplicate Recovery Report - Batch: 720-33226

Method: 8260B Preparation: 5030B

Lab File ID: c:\varianws\data\200803\031

73 - 130

Initial Weight/Volume: 10 mL

LCSD Lab Sample	e ID: LCSD 720-33226/1	Analysis Batch: 720-33226	Instrument ID: Varian 3900E		
Date Prepared:	03/19/2008 0937				
Data Dranaradi	00/40/0000 0007		0		
Date Analyzed:	03/19/2008 0937		Final Weight/Volume: 10 mL		
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 10 mL		
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: c:\varianws\data\200803\03		
LCS Lab Sample ID: LCS 720-33226/2		Analysis Batch: 720-33226	Instrument ID: Varian 3900E		

Prep Batch: N/A

Units: ug/L

Date Analyzed: Date Prepared:				Final Weight/Volume: 10 mL				
Analyte		LCS	<u>% Rec.</u> LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene		93	98	64 - 140	5	20		
Toluene		105	111	52 - 120	5	20		
Surrogate		L	CS % Rec	LCSD %	Rec	Accep	otance Limits	3
Toluene-d8 (Surr)		ç	97	104		7	7 - 121	

Toluene-d8 (Surr) 97 104 1,2-Dichloroethane-d4 (Surr) 79 84

Client: ENV America, Incorporated

MS Lab Sample ID: 720-13449-B-2 MS

Water

03/19/2008 1303

1.0

Matrix Spike/

Client Matrix:

Date Analyzed:

Dilution:

Matrix Spike Duplicate Recovery Report - Batch: 720-33226

Date Prepared:	03/19/2008 1303							
MSD Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	720-13449-B-2 MSD Water 1.0 03/19/2008 1327 03/19/2008 1327	Analysis Batch: Prep Batch: N/A		720-33226	Instrument ID: Varian 3900E Lab File ID: c:\varianws\data\200803\03 Initial Weight/Volume: 10 mL Final Weight/Volume: 10 mL			
Analyte		<u>%</u> MS	<u>Rec.</u> MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Benzene		111	106	64 - 140	5	20		
Toluene		114	106	52 - 120	6	20		

Analysis Batch: 720-33226

Prep Batch: N/A

Toluene	114	106	52 - 120	6	20		
Surrogate		MS % Rec	MSD 9	% Rec		Acceptance Limits	
Toluene-d8 (Surr) 1 2-Dichloroethane-d4 (Surr)		96 85	96 76			77 - 121 73 - 130	

Quality Control Results

Method: 8260B

Lab File ID:

Preparation: 5030B

Instrument ID: Varian 3900E

Initial Weight/Volume: 10 mL

Final Weight/Volume: 10 mL

Job Number: 720-13440-1

c:\varianws\data\200803\(

Client: ENV A	merica, Incorporated					Job Number: 720-1344	.0-1
Method Blank	- Batch: 720-32994					Method: 8015B Preparation: 3510C SGC Silica Gel Cleanup	
Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	MB 720-32994/1-A Water 1.0 03/17/2008 1822 03/14/2008 1247	Analysis I Prep Bato Units: ug	Batch: 72 ch: 720-3: g/L	0-33211 2994		Instrument ID: HP DRO5 Lab File ID: N/A Initial Weight/Volume: 250 mL Final Weight/Volume: 1 mL Injection Volume: Column ID: PRIMARY	
Analyte			Result		Qual	RL	
Diesel Range Or Motor Oil Range	ganics [C10-C28] Organics [C24-C36]		54 ND			50 500	
Surrogate			% Rec			Acceptance Limits	
Capric Acid (Suri p-Terphenyl	r)		0 90			0 - 5 46 - 114	
Lab Control S Lab Control S	pike/ pike Duplicate Recovery	Report - I	Batch: 7	20-32994		Method: 8015B Preparation: 3510C SGC Silica Gel Cleanup	
LCS Lab Sample Client Matrix: Dilution: Date Analyzed: Date Prepared:	E ID: LCS 720-32994/2-A Water 1.0 03/17/2008 1728 03/14/2008 1247	Analysis Prep Ba Units:	s Batch: 7 atch: 720- ug/L	720-33211 32994		Instrument ID: HP DRO5 Lab File ID: N/A Initial Weight/Volume: 250 mL Final Weight/Volume: 1 mL Injection Volume: Column ID: PRIMARY	
LCSD Lab Samp Client Matrix: Dilution: Date Analyzed: Date Prepared:	ole ID: LCSD 720-32994/3-A Water 1.0 03/17/2008 1755 03/14/2008 1247	Analysis Prep Ba Units:	s Batch: 7 atch: 720- ug/L	720-33211 32994		Instrument ID: HP DRO5 Lab File ID: N/A Initial Weight/Volume: 250 mL Final Weight/Volume: 1 mL Injection Volume: Column ID: PRIMARY	
Analyte		<u>% </u> LCS	<u>Rec.</u> LCSD	Limit	RP	PD RPD Limit LCS Qual LCSD C	≀ual
Diesel Range Or	ganics [C10-C28]	87	82	41 - 103	5 7	30	
Surrogate		LC	S % Rec	LCSD	% Rec	Acceptance Limits	
p-Terphenyl		96		90		46 - 114	

Quality Control Results

Quality Control Results

Job Number: 720-13440-1

Client: ENV America, Incorporated

Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 720-329

MS Lab Sample ID: 720-13449-G-2-B MS

1.0

Water

Client Matrix:

Dilution:

- Batch: 720-32994	Method: 8015B Preparation: 3510C SGC Silica Gel Cleanup	
Analysis Batch: 720-33211	Instrument ID: HP DRO5	
Prep Batch: 720-32994	Lab File ID: N/A	

Initial Weight/Volume: 250 mL

Date Analyzed:	03/18/2008 0106		Final Weight/Vol	ume: 1 mL
Date Prepared:	03/14/2008 1247		Injection Volume	:
			Column ID:	PRIMARY
MSD Lab Sample ID:	720-13449-G-2-C MSD	Analysis Batch: 720-33211	Instrument ID: H	IP DRO5
Client Matrix:	Water	Prep Batch: 720-32994	Lab File ID: N	I/A
Dilution:	1.0		Initial Weight/Vo	lume: 250 mL
Date Analyzed:	03/18/2008 0133		Final Weight/Vol	ume: 1 mL
Date Prepared:	03/14/2008 1247		Injection Volume	:
-			Column ID:	PRIMARY

	<u>%</u>	Rec.					
Analyte	MS	MSD	Limit	RPD) RPD Limit	MS Qual	MSD Qual
Diesel Range Organics [C10-C28]	76	71	50 - 130	7	30	В	В
Surrogate		MS % Rec	M	SD % Rec	Ac	ceptance Limit	S
p-Terphenyl		90	87	,		46 - 114	

TestAnerica TESTAMERICA San Francisco Chain of Custody 1220 Quarry Lane • Pleasanton CA 94566-4756

Phone: (925) 484-19/9 Fax: (925) 660-3002

Reference #: 10984 Data 3/12/28

THE LEADER IN ENVIRONMENTAL TESTING

														1121	00	Ра	ge	<u>/</u> of	
the Charles Rome								Ana	alysis	Requ	est								
Impany:ENVAvnevicadress:244 $(a i a : n a s s s s s s s s s$	$\begin{array}{c c} & & & & \\ & & & \\ SF, CH (94) \\ SF,$	BTEX EPA -	Fuel Tests EPA 8260B: CG Gas C BTEX Five Oxyenates C DCA, EDB C	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs)	Semivolatiles GC/MS	Oil and Grease	Pesticides EPA 8081 608 PCBs EPA 8082 608	PNAs by 🛛 3270 🗍 3310	CAM17 Metals (EPA 6010/7470/7471)	Metais: Lead LUFT CRRA Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS):	UNET (STLC)	 ☐ Hexavalent Chromium □ pH (24h hold time for H₂O) 	Spec Cond. Alkalinity TSS TDS	Anions : [] CI [] SO4 [] NO3 [] F [] Br [] NO2 [] PO4			
LIP BUNK LABI	Pipiciped 1-																	-	
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Project Info. Sar	mple Receipt	1) Re	linguishe	ad by:		L													
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ect#: How		Signa	iture	1		<u>/>0</u> Time	5	Sign											
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Tem	p: 172.0.	Printe	d Name	2 nc	<u> </u>	Dai	/ <i>5/0</i> 0 ie	Print	ted Nan	ne				_ _					
dit Card#: Conf	forms to record:	$-\frac{c}{c}$	NX	' A1	<u>nevi</u>	ca						U	ale		inted N	ame		D)at
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Dort: CRoutine CLevel 3 CLevel 4		jē	Saul	Mm	lle	4 1	305	+						3)	Receiv	ed by:			
ecial Instructions / Comments:		Signą		I)	1	Time	e	Sign	ature			 Tir	ne	- <u>Sid</u>	nature				
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estAmerica SF reports 8015M from C _a -C ₂₄ (in	dustry norm). Default for 80159	ie Comr	any					1 2											

Client: ENV America, Incorporated

Login Number: 13440 Creator: Mullen, Joan 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.	True	
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	

Job Number: 720-13440-1

List Source: TestAmerica San Francisco

Attachment C – Laboratory Analytical Report and Chain-of-Custody Documentation for the Soil Samples



ANALYTICAL REPORT

Job Number: 720-13599-1 Job Description: Legacy Hansen

For: ENV America, Incorporated 244 California St., Ste 500 San Francisco, CA 94111 Attention: Mr. David O Connor

arma

Dimple Sharma Project Manager I dimple.sharma@testamericainc.com 03/31/2008

cc: Mr. Charlie Rome

TestAmerica Laboratories, Inc. TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566 Tel (925) 484-1919 Fax (925) 484-1096 www.testamericainc.com

Comments

No additional comments.

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

GC Semi VOA

No analytical or quality issues were noted.

Organic Prep No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: ENV America, Incorporated

Job Number: 720-13599-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method	
720-13599-1	T-35A					
Suica Gei Cleanup)					
Diesel Range Orga	nics [C10-C28]	3500	740	mg/Kg	8015B	
Motor Oil Range Or	ganics [C24-C36]	45000	37000	mg/Kg	8015B	
720-13599-2	T-35B					
Silica Gel Cleanup)					
Diesel Range Orga	nics [C10-C28]	14	2.0	ma/Ka	8015B	
Motor Oil Range Or	rganics [C24-C36]	150	100	mg/Kg	8015B	

METHOD SUMMARY

Client: ENV America, Incorporated

Job Number: 720-13599-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Nonhalogenated Organics using GC/FID -Modified (Diesel	TAL SF	SW846 8015B	
Ultrasonic Extraction	TAL SF		SW846 3550B
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.

SAMPLE SUMMARY

Lab Sample ID Client Sample	ID Client Matrix	Sampled	Received
720-13599-1 T-35A	Solid	03/25/2008 1450	03/25/2008 1510

Client: ENV America, Incorporated Job Number: 720-13599-1 **Client Sample ID:** T-35A Lab Sample ID: 720-13599-1 Date Sampled: 03/25/2008 1450 **Client Matrix:** Solid Date Received: 03/25/2008 1510 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)-Silica Gel Cleanup 8015B HP DRO5 Method: Analysis Batch: 720-33542 Instrument ID: Preparation: 3550B Prep Batch: 720-33496 Lab File ID: N/A 10.19 g Dilution: 50 Initial Weight/Volume: Date Analyzed: 03/29/2008 0457 Final Weight/Volume: 25 mL Date Prepared: 03/26/2008 1616 Injection Volume: Column ID: PRIMARY DryWt Corrected: N Result (mg/Kg) Qualifier Analyte RL Diesel Range Organics [C10-C28] 3500 740 Motor Oil Range Organics [C24-C36] 45000 37000 Surrogate %Rec Acceptance Limits Capric Acid (Surr) 0 0 - 5 41 - 105 p-Terphenyl 0 D

Analytical Data

Client: ENV America, Incorporated Job Number: 720-13599-1 **Client Sample ID:** T-35B Lab Sample ID: 720-13599-2 Date Sampled: 03/25/2008 1450 **Client Matrix:** Solid Date Received: 03/25/2008 1510 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)-Silica Gel Cleanup 8015B HP DRO5 Method: Analysis Batch: 720-33542 Instrument ID: Preparation: 3550B Prep Batch: 720-33496 Lab File ID: N/A 30.15 g Dilution: 2.0 Initial Weight/Volume: Date Analyzed: 03/29/2008 1551 Final Weight/Volume: 5 mL Date Prepared: 03/26/2008 1616 Injection Volume: Column ID: PRIMARY DryWt Corrected: N Result (mg/Kg) Qualifier Analyte RL Diesel Range Organics [C10-C28] 14 2.0 Motor Oil Range Organics [C24-C36] 150 100 %Rec Surrogate Acceptance Limits Capric Acid (Surr) 0 0 - 5 41 - 105 p-Terphenyl 75

Analytical Data

DATA REPORTING QUALIFIERS

Client: ENV America, Incorporated

Job Number: 720-13599-1

Lab Section	Qualifier	Description
GC Semi VOA		
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Client: ENV America, Incorporated

Job Number: 720-13599-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 720-33496					
LCS 720-33496/2-A	Lab Control Spike	А	Solid	3550B	
LCSD 720-33496/3-A	Lab Control Spike Duplicate	А	Solid	3550B	
MB 720-33496/1-A	Method Blank	А	Solid	3550B	
720-13599-1	T-35A	А	Solid	3550B	
720-13599-2	T-35B	А	Solid	3550B	
Analysis Batch:720-33	542				
LCS 720-33496/2-A	Lab Control Spike	А	Solid	8015B	720-33496
LCSD 720-33496/3-A	Lab Control Spike Duplicate	А	Solid	8015B	720-33496
MB 720-33496/1-A	Method Blank	А	Solid	8015B	720-33496
720-13599-1	T-35A	А	Solid	8015B	720-33496
720-13599-2	T-35B	А	Solid	8015B	720-33496

Report Basis

A = Silica Gel Cleanup

Page 10 of 12

Lab Sample ID: M Client Matrix: S Dilution: 1 Date Analyzed: 0 Date Prepared: 0	/IB 720-33496/1-A Solid .0 3/27/2008 1338 3/26/2008 1616	Analys Prep E Units:	sis Batch: 720 Batch: 720-33 mg/Kg)-33542 496		Instrument ID: HP DRO5 Lab File ID: N/A Initial Weight/Volume: 30.10 g Final Weight/Volume: 5 mL Injection Volume: Column ID: PRIMARY							
Analyte			Result		Qual	RL							
Diesel Range Org Motor Oil Range (anics [C10-C28] Drganics [C24-C36]		ND ND			1.0 50							
Surrogate			% Rec			Acceptance Limits							
Capric Acid (Surr) p-Terphenyl			0 97			0 - 5 41 - 105							
Lab Control Sp Lab Control Sp	oike/ oike Duplicate Recovery	Report	:-Batch: 72	0-33496		Method: 8015B Preparation: 3550B Silica Gel Cleanup							
LCS Lab Sample Client Matrix: Dilution: Date Analyzed: Date Prepared:	ID: LCS 720-33496/2-A Solid 1.0 03/27/2008 1245 03/26/2008 1616	Anal Prep Units	ysis Batch: 7/ Batch: 720-3 s: mg/Kg	20-33542 33496		Instrument ID: HP DRO5 Lab File ID: N/A Initial Weight/Volume: 30.07 g Final Weight/Volume: 5 mL Injection Volume: Column ID: PRIMARY							
LCSD Lab Sample Client Matrix: Dilution: Date Analyzed: Date Prepared:	e ID: LCSD 720-33496/3-A Solid 1.0 03/27/2008 1311 03/26/2008 1616	Anal Prep Units	ysis Batch: 72 Batch: 720-3 s: mg/Kg	20-33542 33496		Instrument ID: HP DRO5 Lab File ID: N/A Initial Weight/Volume: 30.08 g Final Weight/Volume: 5 mL Injection Volume: Column ID: PRIMARY							
Analyte		LCS	<u>% Rec.</u> LCSD	Limit	RPI	D RPD Limit LCS Qual LCSD Qual							
Diesel Range Org	anics [C10-C28]	77	80	50 - 130	4	30							
Surrogate			LCS % Rec	LCSD	% Rec	Acceptance Limits							
p-Terphenyl			93	97		41 - 105							

Method Blank - Batch: 720-33496

Client: ENV America, Incorporated

-

Quality Control Results

Method: 8015B Preparation: 3550B Silica Gel Cleanup

Job Number: 720-13599-1

Reference #:	1100	12	2	
Date 3/25/08	Page	1	of	1

TestAmerica THE LEADER IN ENVIRON

Attn: C C C C C C C C C C C C C C C C C C C							1			Analysis Request											1		
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Address: 244 California St SF, CA GyIII Phone: 15-989-9933 Email: Bill To: C, Rome Sampled By: C. Rome		4111	C 8015/8021 C 826	tics 21-11 8260B	R015M * Silice Motor OI [] Othe	B: C) Gas (C) (DCA, EDB (C)	Helbcarbons PA. 8021 by 62606	GC/MS (VC	# GCMS	7 Petroleut	A 3681 [] A 8682 []	0 [] 8310	(12)	470/7471) ad El LUFT El RC	etals by EPA 200.0/	stlei	hromium firme far H ₂ C	C Akalint C TDS C	0, II NO, I 0, II PO,		Sac		
		Sampled By:				Aroma D 80		A 82601		amics I	D BSE	I EP	1 827 IIs				als 1470/7-	stent C hold	ond.	02 00		ontai	
In: Ci Rome Sample ID	PL	159 Time	F9 C Mat nx	Pres erv.	TPH EPA	Purgeable BTEX EPA	TEPH EPA	Fuel Tests EF	Purgeable ((HVOCs) E	Valatile Org	Semivolatile	Oil and Gre EPA 1664	Posticides PCBs	PNAs by	CAM17 Met (EPA 6010/)	Metals: D.Le	Low Level M (ICP-MS):	D WET	DH (24)	C Spec C	Amons DC		burther of C
7-35A 3	25/08	1450	5	1 1			+											100			-		1
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T Controms to record:					(Company					Company					Co	Company						
A 5 72h 48h Day 72h 48h	24h	Other:	4 17	EDD	-		1) Received by: 2) Received by: 2) Received by:						3) Received by:										
Fund EDF Special Instructions / Comments: Globel ID			LI State	Tank	Bullocy 3/25/19				Signature Time					Sig	Signature Time								
							Printed	Manle	AZ.	ST	Date	0	Printed Name Date			Pri	Printed Name Date						
	See Teams and Conditions on reverse					Company					Company						Company						

Client: ENV America, Incorporated

Login Number: 13599 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.	True	
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	

Job Number: 720-13599-1

List Source: TestAmerica San Francisco