



**LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT  
1625-1635 CHESTNUT STREET  
LIVERMORE, CALIFORNIA**

PREPARED FOR:

MR. DANIEL ADAMS  
DIRECTOR OF DEVELOPMENT  
MIDPEN HOUSING  
303 VINTAGE PARK DRIVE, SUITE 250  
FOSTER CITY, CA 94404

DECEMBER 12, 2013

ACC PROJECT NUMBER 6988-003.00

PREPARED BY:

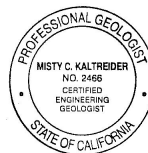
A handwritten signature in black ink, appearing to read 'Ian Sutherland', is positioned above a horizontal line.

IAN SUTHERLAND  
PROJECT GEOLOGIST

REVIEWED BY:

A handwritten signature in black ink, appearing to read 'Misty C. Kaltreider', is positioned above a horizontal line.

MISTY C. KALTREIDER  
ENGINEERING GEOLOGIST



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## **1.0 INTRODUCTION**

This report presents the findings of the limited Phase II Environmental Site Assessment (ESA) conducted by ACC Environmental Consultants, (ACC) at 1625-1635 Chestnut Street in Livermore, California (Site). The investigation was conducted at the request of MidPen Housing and focused specifically on soils the area of the former on-site gasoline service station.

## **2.0 BACKGROUND**

The Site located at 1625-1635 Chestnut Street, Livermore, California. Enercon Services, Inc. conducted a Phase I Environmental Site Assessment (ESA) for the Site dated July 24, 2009. The Phase I ESA identified one recognized environmental condition (REC):

- A gasoline service station formerly existed at the northwest corner of the Site from the 1960's to the mid 1970's.

A figure showing the approximate locations of the former gasoline service station features was copied from the Enercon Services, Inc. Phase I referenced above and is attached as Appendix E. To investigate this REC, ACC advanced six soil borings and submitted seven soil samples for chemical analyses. The findings of the investigation are presented below.

## **3.0 FIELD INVESTIGATION**

### **3.1 Pre-Field**

Prior to the advancement of the borings, ACC marked the area of the proposed drilling locations at the Site and contacted Underground Services Alert (USA) to mark the locations of underground public utilities. ACC additionally hired a private utility locator to clear the boring locations. In order to conduct the work a drilling permit was obtained from the Zone 7 Water Agency. The permit obtained for this investigation is attached as Appendix A.

### **3.2 Soil Sampling Methodology**

On October 24, 2013 ACC advanced six soil borings at the site using a GeoProbe direct-push hydraulic drilling rig equipped with two-inch-diameter hollow drill rods. Soil borings were advanced at the approximate location of the former tank basin (B1), the former pump islands (B2, B3, B4 and B5) and the former service station building (B6). Approximate soil boring locations are shown in the attached Figure 1. Based on field observations, boring B1 was advanced directly in the former underground fuel tank basin.

Soil borings were advanced to between approximately 20 and 48 feet below ground surface (ft bgs). Soil samples were collected in acetate or stainless steel liners capped with Teflon sheeting and tight-fitting plastic caps. Subsequent to collection, samples were labeled, logged on a chain-of-custody form and stored on ice in a cooler pending transport to the laboratory following standard chain-of-

custody protocol. The soils were then logged using the Unified Soil Classification System (visual method). Soil boring logs are attached as Appendix B.

Upon completion, borings were back-filled to surface grade with neat cement grout. Soil cuttings were stored on site in a labeled 55-gallon drum pending characterization.

### **3.3 PID Readings**

Soils recovered in the drill rods were field screened for volatile organic compounds (VOCs) using a hand-held photoionization detector (PID). Elevated PID readings were not observed during the investigation indicating that no significant concentrations of VOCs were encountered. PID readings are included in the soil boring logs attached as Appendix B.

## **4.0 GROUNDWATER SAMPLING**

Groundwater was not encountered during this investigation. Boring B1 was advanced until drill refusal was encountered (approximately 48 feet bgs). Only slight amounts of soil moisture were observed during soil logging. Slotted PVC piping was temporarily installed in the boring to facilitate the collection of groundwater. A Solinst water level meter was used to investigate the depth to groundwater in B1, however no groundwater was encountered prior to the conclusion of the fieldwork and the boring was backfilled to the surface with neat cement.

## **5.0 SOIL ANALYTICAL RESULTS**

Soil samples were delivered to Test America in Pleasanton, California following standard chain-of-custody protocol. Soil analytical results are summarized in the attached Table 1. The complete laboratory reports are attached as Appendix C. Soil analytical results were compared to commercial and residential Environmental Screening Levels (ESLs) of the California San Francisco Bay area Regional Water Quality Control Board (RWQCB) for sites where groundwater is not a source of drinking water, and to CalEPA residential and commercial California Human Health Screening Levels (CHHSLs).

No indication of impact from the former underground storage of gasoline was observed. As such, the samples collected from these borings at approximately four ft bgs were submitted for analyses to confirm a lack of impacts by the selected laboratory analytes at that depth.

Boring B1 was completed within the former UST basin. Fill material was observed to a depth of approximately 13 ft bgs in boring B1. Samples were analyzed from within the fill material (four ft bgs) and in native soil beneath the former underground fuel tank basin (16 feet bgs).

Select soil samples were submitted to the analytical laboratory. Soil samples not selected for initial analysis were placed on hold at the laboratory. Selected soil samples were analyzed for the following constituents:



- Gasoline-range Total Petroleum Hydrocarbon (TPH-g) by method 8260B;
- Diesel-range and motor oil-range Total Petroleum Hydrocarbons (TPH-d and TPH-mo) by method 8015B (with silica gel cleanup);
- Volatile Organic Compounds (VOCs) by method 8260B; and
- Total lead by method 6020.

TPH-g, TPH-mo, and VOCs (including MTBE, benzene, toluene, ethylbenzene, and total xylenes) were not detected above laboratory reporting limits.

Concentrations of TPH-d were detected up to 4.8 mg/kg, which is below the corresponding commercial and residential ESLs. No CHHSLs are currently listed for these chemical compounds.

Lead was detected up to 8.5 mg/kg, which is below the corresponding ESLs and CHHSLs and is within naturally occurring background concentrations (Appendix D – Regional Background Metals Concentrations Data).

## 6.0 CONCLUSIONS

Based on the analytical results for this investigation, significant soil impacts associated with the former on-site gasoline service station were not detected. Low concentrations of diesel-range total petroleum hydrocarbons were detected in soil up to 4.8 mg/kg, which does not exceed corresponding ESLs. Lead concentrations were reported in the soil within naturally occurring background concentrations and did not exceed corresponding ESLs and CHHSLs.

Soil boring B1 was advanced in the former tank basin. Analytical results and field observations for B1 suggest that the former underground fuel tanks did not cause a significant release of fuel into the subsurface, and that the former tank basin was backfilled with fill material not impacted by TPH, VOCs or lead.

## 7.0 RECOMMENDATIONS

No additional soil sampling for purposes of investigating the former on-site gasoline service station is recommended at this time.

## 8.0 LIMITATIONS

This sampling event does not constitute waste characterization for soil excavation and off-haul, nor does it confirm that all underground fuel tanks and product lines have been removed. If proposed Site redevelopment includes soil excavation and off-haul, ACC recommends that that excavated soils be stockpiled and characterized based on criteria of the proposed accepting

facility. If stockpiling is not feasible ACC recommends that an in situ soil sampling plan be developed based on the excavation location and dimensions.

The service performed by ACC has been conducted in a manner consistent with the levels of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

The conclusions presented in this report are professional opinions based on the indicated data described in this report and applicable regulations and guidelines currently in place. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study.

ACC has included analytical results from a state-certified laboratory, which performs analyses according to procedures suggested by the U.S. Environmental Protection Agency and the State of California. ACC is not responsible for laboratory errors in procedure or result reporting.

# FIGURES 1



Source: Google Earth, 2013

### Legend



Approximate Boundary of Subject Property



Sample ID and Approximate Location

Title: **Sample Location Map**  
**55 Howe Road**  
**Martinez, California**

Figure Number: 1

Scale: None

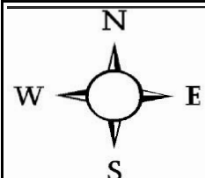
Project Number: 6988-003.00

Drawn By: DM

Date: 10/31/13



An Employee Owned Company



## **TABLE 1**

**TABLE 1**  
**Soil Analytical Results Summary (TPH, VOCs & Lead)**  
 1625 Chestnut Street, Livermore, CA  
 ACC Project Number: 6988-003.00

Sample Date	Sample ID	Matrix	Chemical Compound & Concentrations (mg/kg)													
			TPH-g	TPH-d	TPH-mo	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	Tetrachloroethene	Other VOCs	Total Lead		
7/23/13	B1-4'	Soil	<0.230	4.8	<49	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0091	<0.0091	<0.0045	<0.0045	7.2
	B1-16'	Soil	<0.230	<0.99	<49	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0090	<0.0090	<0.0045	<0.0045	8.1
	B2-4'	Soil	<0.240	<0.99	<50	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0097	<0.0097	<0.0049	<0.0049	7.9
	B3-4'	Soil	<0.240	<0.99	<50	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0097	<0.0097	<0.0048	<0.0048	8.0
	B4-4'	Soil	<0.240	4.2	<49	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0094	<0.0094	<0.0047	<0.0047	8.5
	B5-4'	Soil	<0.240	<1.0	<50	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0095	<0.0095	<0.0047	<0.0047	6.0
ESLs - Residential (Groundwater is not a Source of Drinking Water)	B6-4'	Soil	<0.230	<1.0	<50	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0094	<0.0094	<0.0047	<0.0047	6.8
		Shallow Soil (<3 m)	100	100	500	8.4	0.74	9.3	4.7	11	3.1	0.55	0.55	0.55	0.55	80
		Deep Soil (>3 m)	490	240	5,000	8.4	0.74	9.3	4.7	11	3.1	0.55	0.55	0.55	0.55	80
		ESLs - Commercial site usage (Groundwater is not a Source of Drinking Water)	500	500	2,500	8.4	1.2	9.3	4.7	11	4.8	2.6	2.6	2.6	2.6	320
		Deep Soil (>3 m)	500	500	2,500	8.4	1.2	9.3	4.7	11	4.8	2.6	2.6	2.6	2.6	320
		California Human Health Screening Levels (CHRSLs)	Residential	---	---	---	---	---	---	---	---	---	---	---	---	---
	Commercial	---	---	---	---	---	---	---	---	---	---	---	---	---	---	320

TPHs: Total Petroleum Hydrocarbons specified as gasoline-range (TPH-g), diesel-range (TPH-d) and motor oil-range (TPH-mo); VOCs = Volatile Organic Compounds; PCBs = Polychlorinated Biphenyls; SVOCs = Semi-Volatile Organic Compounds; mg/kg = milligrams per kilogram.

Samples were composited by the laboratory.

# **APPENDIX A**



# ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306  
E-MAIL [whong@zone7water.com](mailto:whong@zone7water.com)

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 1625-1635 Chestnut St  
Livermore, CA 94551

PERMIT NUMBER 2013128  
WELL NUMBER \_\_\_\_\_  
APN 98-0290-006-07 & 98-0290-011-01

Coordinates Source Google Earth ft. Accuracy ± 50 ft.  
LAT: 37° 40' 54" N ft. LONG: 121° 49' 39" W ft.  
APN 98-290-11-1

PERMIT CONDITIONS  
(Circled Permit Requirements Apply)

CLIENT  
Name Daniel Adams - Mid Pen Housing  
Address 303 Vintage Park Dr. Phone 650-358-2900  
City Rosser City, CA Zip 94404

- A. GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
  2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.**
  3. Permit is void if project not begun within 90 days of approval date.
  4. Notify Zone 7 at least 24 hours before the start of work.

APPLICANT  
Name Julia Sindyla - ACC Environmental Con.  
Email jsindyla@accenv.com Fax 510-638-8404  
Address 777 Copwell Dr. Ste 100 Phone 510-638-8400  
City Daly City, CA Zip 94006

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

TYPE OF PROJECT:  
Well Construction  Geotechnical Investigation   
Well Destruction  Contamination Investigation   
Cathodic Protection  Other

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

PROPOSED WELL USE: SOIL BORINGS ONLY  
Domestic  Irrigation   
Municipal  Remediation   
Industrial  Groundwater Monitoring   
Dewatering  Other

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

DRILLING METHOD:  
Mud Rotary  Air Rotary  Hollow Stem Auger   
Cable Tool  Direct Push  Other

DRILLING COMPANY EN Prob - Environmental  
Direct Push Drilling Services  
DRILLER'S LICENSE NO. C-57-777-007

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

WELL SPECIFICATIONS:  
Drill Hole Diameter 2 NA in. Maximum  
Casing Diameter NA in. Depth NA ft.  
Surface Seal Depth NA ft. Number NA

- F. WELL DESTRUCTION. See attached.


SOIL BORINGS:  
Number of Borings 6 Maximum  
Hole Diameter 2 in. Depth 25 ft.

- 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.**

ESTIMATED STARTING DATE OCT 24, 2013  
ESTIMATED COMPLETION DATE OCT 24, 2013

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




APPLICANT'S SIGNATURE  Date \_\_\_\_\_





Approved  Date 10/15/13  
Wyman Hong

ATTACH SITE PLAN OR SKETCH



## **APPENDIX B**

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				0	ASPHALT PAVEMENT
	0.0	B1-4'		1	GM LIGHT YELLOWISH-BROWN (2.5Y6/3) SANDY GRAVEL (50% GRAVEL) WITH SILT (10%), MEDIUM DENSITY, VERY SLIGHTLY MOIST. NO PETROLEUM HYDROCARBON DOR OR STAINING.
				2	
				3	
				4	
				5	
				6	
				7	
	0.0	B1-8'		8	
				9	
				10	
				11	
	0.0	B1-12'		12	
				13	
				14	CL YELLOWISH-BROWN (10YR5/6) SILTY-CLAY WITH TRACE SAND (<5%), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, STIFF, NO UNSUSAL ODOR OR STAINING.
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404	<b>BORING: B1</b>  PROJECT NUMBER 6988-003.00	ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED			

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA	
	0.0	B1-16'		14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	CL	YELLOWISH-BROWN (10YR5/6) SILTY-CLAY WITH TRACE SAND (<5%), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, STIFF, NO UNSUSAL ODOR OR STAINING.
	0.0	B1-20'				GRAYISH-BROWN (10YR5/2) WITH VERY DARK GRAYISH-BROWN (10YR3/2) MOTTLING
	0.0	B1-24'			GM	LIGHT YELLOWISH-BROWN (2.5Y6/3) SANDY GRAVEL WITH SILT TO GRAVELLY SILT WITH SAND, DENSE, DRY, NO PETROLEUM HYDROCARBON ODOR OR STAINING.
	0.0	B1-28'			CL	YELLOWISH-BROWN (10YR5/6) SILTY-CLAY WITH TRACE SAND (<5%), WITH GRAYISH-BROWN (10YR5/2) AND VERY DARK GRAYISH-BROWN (10YR3/2) MOTTLING, SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, STIFF, NO UNSUSAL ODOR OR STAINING.
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B1</b> <hr/> PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED	

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
	0.0	B1-32'	[Solid black bar]	28 29 30 31 32 33 34 35	CL YELLOWISH-BROWN (10YR5/6) SILTY-CLAY WITH TRACE SAND AND GRAVEL (<5%), GRAYISH-BROWN (10YR5/2) AND VERY DARK GRAYISH-BROWN (10YR3/2) MOTTLING, SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, STIFF, NO UNSUSAL ODOR OR STAINING.
	0.0	B1-36'	[Solid black bar]	36 37 38 39	
	0.0	B1-40'	[Solid black bar]	40 41 42	POOR RECOVERY FROM 40-44 FEET, A FEW INCHES OF COARSE ANGULAR GRAVEL IN LINER, >1", DRY, NO MOISTURE ON LINER, SAMPLED WHAT WAS IN LINER.
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B1</b> <hr/> PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				42	
				43	
	0.0	B1-44'		44	POOR RECOVERY FROM 40-44 FEET, A FEW INCHES OF COARSE ANGULAR GRAVEL IN LINER, >1", DRY, NO MOISTURE ON LINER, SAMPLED WHAT WAS IN LINER.
				44	SP GRAVELLY SAND, SLIGHT MOISTURE
				45	CL YELLOWISH-BROWN (10YR5/6) SILTY-CLAY WITH TRACE SAND AND GRAVEL (<5%), GRAYISH-BROWN (10YR5/2) AND VERY DARK GRAYISH-BROWN (10YR3/2) MOTTLING, SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, STIFF, NO UNSUSAL ODOR OR STAINING.
				46	
				47	GP GRAVEL (~70%) WITH SAND, NO MOISTURE, VERY DENSE, COARSE ANGULAR GRAVEL TIGHTLY COMPACTED IN LINER (>1").
				48	END OF BORING
				49	
				50	
				51	
				52	
				53	
				54	
				55	
				56	
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B1</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				0	ASPHALT PAVEMENT
	0.0	B2-4'	█	1	CL SILTY-CLAY, DARK-BROWN (10YR3/3), TRACE SAND (<5%), SLIGHT MOISTURE, MEDIUM PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				2	
				3	
				4	
				5	GP GRAVEL (~80%) WITH FINE SAND, DARK YELLOWISH-BROWN (10YR4/6), POORLY GRADED, COARSE, ANGULAR, DRY, NO UNSUSAL ODOR OR STAINING.
				6	
				7	
	0.1	B2-8'	█	8	CL SILTY-CLAY WITH GRAVEL (~30%), TRACE SAND (<5%), YELLOWISH-BROWN (10YR5/4), DRY, MEDIUM PLASTICITY, FIRM, DISPERSED SAND (<5%) NO UNSUSAL ODOR OR STAINING.
				9	
				10	
				11	
	0.0	B2-12'	█	12	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, DISPERSED GRAVEL (<5%) NO UNSUSAL ODOR OR STAINING.
				13	
				14	
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B2</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
	0.0	B2-16'	█	14 15 16 17 18 19	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
	0.1	B2-20'	█	20 21 22	
	0.0	B2-24'	█	23 24 25 26 27 28	END OF BORING
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B2</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				0	ASPHALT PAVEMENT
	0.0	B3-4'	█	1	CL SILTY-CLAY WITH TRACE SAND (<5%), DARK-BROWN (10YR3/3), SLIGHT MOISTURE, MEDIUM PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				2	
				3	
				4	
	0.1	B3-8'	█	5	CL SILTY-CLAY WITH GRAVEL (~30%), TRACE SAND (<5%), YELLOWISH-BROWN (10YR5/4), DRY, MEDIUM PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				6	
				7	
				8	
				9	GM SANDY-GRAVEL WITH SILT (10% SILT), LIGHT BROWNISH-GRAY (2.5Y6/2), POORLY GRADED, ANGULAR, DRY, NO UNSUSAL ODOR OR STAINING.
				10	
				11	
	0.0	B3-12'	█	12	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, DISPERSED GRAVEL (<5%) NO UNSUSAL ODOR OR STAINING.
				13	
				14	
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B3</b> <hr/> <b>PROJECT NUMBER</b> 6988-003.00		<b>ADDITIONAL NOTES:</b> BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED



ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
	0.0	B3-16'	█	14 15 16 17 18 19	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
	0.0	B3-20'	█	20 21 22 23 24 25 26 27 28	END OF BORING
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B3</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				0	ASPHALT PAVEMENT
	0.0	B4-4'	█	1	CL SILTY-CLAY WITH TRACE SAND (<5%), DARK-BROWN (10YR3/3), SLIGHT MOISTURE, MEDIUM PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				2	
				3	
				4	GP GRAVEL (~80%) WITH FINE SAND, DARK YELLOWISH-BROWN (10YR4/6), POORLY GRADED, ANGULAR, DRY, NO UNSUSAL ODOR OR STAINING.
				5	
				6	
				7	
	0.1	B4-8'	█	8	CL SILTY-CLAY WITH TRACE GRAVEL, DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				9	
				10	
				11	
	0.0	B4-12'	█	12	
				13	
				14	
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B4</b> <hr/> <b>PROJECT NUMBER</b> 6988-003.00		<b>ADDITIONAL NOTES:</b> BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
	0.0	B4-16'	█	14 15 16 17 18 19	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, DISPERSED GRAVEL (<5%) NO UNSUSAL ODOR OR STAINING.
	0.0	B4-20'	█	20 21 22 23 24 25 26 27 28	END OF BORING
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B4</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				0	ASPHALT PAVEMENT
	0.0	B5-4'	█	1	CL SILTY-CLAY WITH TRACE SAND (<5%), DARK-BROWN (10YR3/3), SLIGHT MOISTURE, MEDIUM PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				2	
				3	
				4	
				5	GM SANDY GRAVEL WITH SILT (10% SILT), LIGHT BROWNISH-GRAY (2.5Y6/2), POORLY GRADED, COARSE, ANGULAR, DRY, NO UNSUSAL ODOR OR STAINING.
				6	
				7	
	0.1	B5-8'	█	8	
				9	
				10	
				11	
	0.0	B5-12'	█	12	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, DISPERSED GRAVEL (<5%) NO UNSUSAL ODOR OR STAINING.
				13	
				14	
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B5</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
	0.0	B5-16'	█	14 15 16 17 18 19	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, DISPERSED GRAVEL (<5%) NO UNSUSAL ODOR OR STAINING.
	0.0	B5-20'	█	20 21 22 23 24 25 26 27 28	END OF BORING
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404	<b>BORING: B5</b>		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED		
		PROJECT NUMBER 6988-003.00			

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
				0	ASPHALT PAVEMENT
	0.0	B6-4'	█	1	CL SILTY-CLAY WITH TRACE SAND (<5%), DARK-BROWN (10YR3/3), SLIGHT MOISTURE, MEDIUM PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
				2	
				3	
				4	
				5	GP GRAVEL (~80%) WITH FINE SAND, DARK YELLOWISH-BROWN (10YR4/6), POORLY GRADED, DRY, ANGULAR, NO UNSUSAL ODOR OR STAINING.
				6	
				7	
	0.1	B6-8'	█	8	GM SANDY GRAVEL WITH SILT (10% SILT), LIGHT BROWNISH-GRAY (2.5Y6/2), DENSE, POORLY GRADED, DRY, COARSE, ANGULAR, NO UNSUSAL ODOR OR STAINING.
				9	
				10	
				11	
	0.0	B6-12'	█	12	CL SILTY-CLAY, DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, DISPERSED GRAVEL (<5%) NO UNSUSAL ODOR OR STAINING.
				13	
				14	
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B6</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

ADDITIONAL OBSERVATIONS	PID (PPM)	SAMPLE ID	SAMPLE INTERVAL	DEPTH (FEET)	EQUIPMENT: GEOPROBE DIRECT PUSH OPERATED BY: ENPROBE LOGGED BY: IAN SUTHERLAND WORK DATE: 10.24.13 LOCATION: 1625-1635 CHESTNUT STREET, LIVERMORE, CA
	0.0	B6-16'	█	14 15 16 17 18 19	CL SILTY-CLAY WITH TRACE GRAVEL (<5%), DARK YELLOWISH-BROWN (10YR4/6), SLIGHT MOISTURE, MEDIUM TO LOW PLASTICITY, FIRM, NO UNSUSAL ODOR OR STAINING.
	0.0	B6-20'	█	20 21 22 23 24 25 26 27 28	END OF BORING
<b>ACC ENVIRONMENTAL CONSULTANTS</b> 7977 CAPWELL DRIVE, SUITE 100 OAKLAND, CALIFORNIA 94621 (510)638-8400 FAX: (510)638-8404			<b>BORING: B6</b>  PROJECT NUMBER 6988-003.00		ADDITIONAL NOTES: BORING BACKFILLED WITH NEAT CEMENT, NO GROUNDWATER ENCOUNTERED

## **APPENDIX C**



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

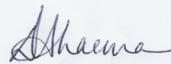
## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Pleasanton  
1220 Quarry Lane  
Pleasanton, CA 94566  
Tel: (925)484-1919

TestAmerica Job ID: 720-53309-1  
Client Project/Site: Chestnut

For:  
ACC Environmental Consultants  
7977 Capwell Drive  
Suite 100  
Oakland, California 94621

Attn: Julia Siudyla



Authorized for release by:  
11/4/2013 5:43:22 PM

Dimple Sharma, Project Manager I  
(925)484-1919  
[dimple.sharma@testamericainc.com](mailto:dimple.sharma@testamericainc.com)



### LINKS

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Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Case Narrative

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

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**Job ID: 720-53309-1**

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**Laboratory: TestAmerica Pleasanton**

### Narrative

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**Job Narrative**  
**720-53309-1**

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/24/2013 3:53 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9° C.

#### GC/MS VOA

Method 8260B: The laboratory control sample duplicate (LCSD) for batch #147339 recovered outside control limits for the following analytes: MEK,2-HEXANONE. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

No other analytical or quality issues were noted.

#### GC VOA

No analytical or quality issues were noted.

#### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### Organic Prep

No analytical or quality issues were noted.

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## Detection Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

### Client Sample ID: B1-4'

Lab Sample ID: 720-53309-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.8		0.98		mg/Kg	1		8015B	Silica Gel
Lead	7.2		1.6		mg/Kg	4		6010B	Cleanup Total/NA

### Client Sample ID: B1-16'

Lab Sample ID: 720-53309-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	8.1		1.9		mg/Kg	4		6010B	Total/NA

### Client Sample ID: B2-4'

Lab Sample ID: 720-53309-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	7.9		1.8		mg/Kg	4		6010B	Total/NA

### Client Sample ID: B3-4'

Lab Sample ID: 720-53309-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	8.0		1.8		mg/Kg	4		6010B	Total/NA

### Client Sample ID: B4-4'

Lab Sample ID: 720-53309-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.2		0.99		mg/Kg	1		8015B	Silica Gel
Lead	8.5		2.0		mg/Kg	4		6010B	Cleanup Total/NA

### Client Sample ID: B5-4'

Lab Sample ID: 720-53309-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	6.0		1.9		mg/Kg	4		6010B	Total/NA

### Client Sample ID: B6-4'

Lab Sample ID: 720-53309-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	6.8		1.9		mg/Kg	4		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B1-4'**

**Lab Sample ID: 720-53309-1**

**Date Collected: 10/24/13 08:53**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Acetone	ND		45		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Benzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Dichlorobromomethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Bromobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Chlorobromomethane	ND		18		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Bromoform	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Bromomethane	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
2-Butanone (MEK)	ND		45		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
n-Butylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
sec-Butylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
tert-Butylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Carbon disulfide	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Carbon tetrachloride	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Chlorobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Chloroethane	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Chloroform	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Chloromethane	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
2-Chlorotoluene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
4-Chlorotoluene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Chlorodibromomethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2-Dichlorobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,3-Dichlorobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,4-Dichlorobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,3-Dichloropropane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1-Dichloropropene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2-Dibromo-3-Chloropropane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Ethylene Dibromide	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Dibromomethane	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Dichlorodifluoromethane	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1-Dichloroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2-Dichloroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1-Dichloroethene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
cis-1,2-Dichloroethene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
trans-1,2-Dichloroethene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2-Dichloropropane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
cis-1,3-Dichloropropene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
trans-1,3-Dichloropropene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Ethylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Hexachlorobutadiene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
2-Hexanone	ND		45		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Isopropylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
4-Isopropyltoluene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Methylene Chloride	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
4-Methyl-2-pentanone (MIBK)	ND		45		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Naphthalene	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
N-Propylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Styrene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1,1,2-Tetrachloroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1

TestAmerica Pleasanton



# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B1-4'**

**Lab Sample ID: 720-53309-1**

Date Collected: 10/24/13 08:53

Matrix: Solid

Date Received: 10/24/13 15:53

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Tetrachloroethene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Toluene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2,3-Trichlorobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2,4-Trichlorobenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1,1-Trichloroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1,2-Trichloroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Trichloroethene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Trichlorofluoromethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2,3-Trichloropropane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,2,4-Trimethylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
1,3,5-Trimethylbenzene	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Vinyl acetate	ND		45		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Vinyl chloride	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Xylenes, Total	ND		9.1		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
2,2-Dichloropropane	ND		4.5		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		10/30/13 22:04	10/30/13 23:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		45 - 131				10/30/13 22:04	10/30/13 23:03	1
1,2-Dichloroethane-d4 (Surr)	91		60 - 140				10/30/13 22:04	10/30/13 23:03	1
Toluene-d8 (Surr)	95		58 - 140				10/30/13 22:04	10/30/13 23:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4.8		0.98		mg/Kg		10/30/13 15:21	10/31/13 02:30	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		10/30/13 15:21	10/31/13 02:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 1				10/30/13 15:21	10/31/13 02:30	1
p-Terphenyl	102		38 - 148				10/30/13 15:21	10/31/13 02:30	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.2		1.6		mg/Kg		10/28/13 17:52	10/29/13 20:33	4

TestAmerica Pleasanton

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B1-16'**

**Lab Sample ID: 720-53309-4**

**Date Collected: 10/24/13 09:12**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Acetone	ND		45		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Benzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Dichlorobromomethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Bromobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Chlorobromomethane	ND		18		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Bromoform	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Bromomethane	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
2-Butanone (MEK)	ND		45		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
n-Butylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
sec-Butylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
tert-Butylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Carbon disulfide	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Carbon tetrachloride	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Chlorobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Chloroethane	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Chloroform	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Chloromethane	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
2-Chlorotoluene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
4-Chlorotoluene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Chlorodibromomethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2-Dichlorobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,3-Dichlorobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,4-Dichlorobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,3-Dichloropropane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1-Dichloropropene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2-Dibromo-3-Chloropropane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Ethylene Dibromide	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Dibromomethane	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Dichlorodifluoromethane	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1-Dichloroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2-Dichloroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1-Dichloroethene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
cis-1,2-Dichloroethene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
trans-1,2-Dichloroethene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2-Dichloropropane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
cis-1,3-Dichloropropene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
trans-1,3-Dichloropropene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Ethylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Hexachlorobutadiene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
2-Hexanone	ND		45		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Isopropylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
4-Isopropyltoluene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Methylene Chloride	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
4-Methyl-2-pentanone (MIBK)	ND		45		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Naphthalene	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
N-Propylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Styrene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1,1,2-Tetrachloroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1

TestAmerica Pleasanton





# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B1-16'**

**Lab Sample ID: 720-53309-4**

**Date Collected: 10/24/13 09:12**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Tetrachloroethene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Toluene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2,3-Trichlorobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2,4-Trichlorobenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1,1-Trichloroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1,2-Trichloroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Trichloroethene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Trichlorofluoromethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2,3-Trichloropropane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,2,4-Trimethylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
1,3,5-Trimethylbenzene	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Vinyl acetate	ND		45		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Vinyl chloride	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Xylenes, Total	ND		9.0		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
2,2-Dichloropropane	ND		4.5		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		10/29/13 16:35	10/30/13 00:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	66		45 - 131				10/29/13 16:35	10/30/13 00:25	1
1,2-Dichloroethane-d4 (Surr)	108		60 - 140				10/29/13 16:35	10/30/13 00:25	1
Toluene-d8 (Surr)	82		58 - 140				10/29/13 16:35	10/30/13 00:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		10/30/13 15:21	10/31/13 00:53	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		10/30/13 15:21	10/31/13 00:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.01		0 - 1				10/30/13 15:21	10/31/13 00:53	1
p-Terphenyl	96		38 - 148				10/30/13 15:21	10/31/13 00:53	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	8.1		1.9		mg/Kg		10/28/13 17:52	10/29/13 20:37	4

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B2-4'**

**Lab Sample ID: 720-53309-12**

**Date Collected: 10/24/13 11:01**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Acetone	ND		49		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Benzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Dichlorobromomethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Bromobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Chlorobromomethane	ND		19		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Bromoform	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Bromomethane	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
2-Butanone (MEK)	ND		49		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
n-Butylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
sec-Butylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
tert-Butylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Carbon disulfide	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Carbon tetrachloride	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Chlorobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Chloroethane	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Chloroform	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Chloromethane	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
2-Chlorotoluene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
4-Chlorotoluene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Chlorodibromomethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,3-Dichloropropane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1-Dichloropropene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Ethylene Dibromide	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Dibromomethane	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Dichlorodifluoromethane	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1-Dichloroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2-Dichloroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1-Dichloroethene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2-Dichloropropane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Ethylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Hexachlorobutadiene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
2-Hexanone	ND		49		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Isopropylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
4-Isopropyltoluene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Methylene Chloride	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Naphthalene	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
N-Propylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Styrene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1

TestAmerica Pleasanton



# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B2-4'**

**Lab Sample ID: 720-53309-12**

Date Collected: 10/24/13 11:01

Matrix: Solid

Date Received: 10/24/13 15:53

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Tetrachloroethene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Toluene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Trichloroethene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Trichlorofluoromethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Vinyl acetate	ND		49		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Vinyl chloride	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Xylenes, Total	ND		9.7		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
2,2-Dichloropropane	ND		4.9		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		10/30/13 22:04	10/30/13 23:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	89		45 - 131				10/30/13 22:04	10/30/13 23:30	1
1,2-Dichloroethane-d4 (Surr)	87		60 - 140				10/30/13 22:04	10/30/13 23:30	1
Toluene-d8 (Surr)	94		58 - 140				10/30/13 22:04	10/30/13 23:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		10/30/13 15:21	10/31/13 01:17	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		10/30/13 15:21	10/31/13 01:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.008		0 - 1				10/30/13 15:21	10/31/13 01:17	1
p-Terphenyl	102		38 - 148				10/30/13 15:21	10/31/13 01:17	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	7.9		1.8		mg/Kg		10/28/13 17:52	10/29/13 20:42	4

TestAmerica Pleasanton

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B3-4'**

**Lab Sample ID: 720-53309-18**

**Date Collected: 10/24/13 11:42**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Acetone	ND		48		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Benzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Dichlorobromomethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Bromobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Chlorobromomethane	ND		19		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Bromoform	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Bromomethane	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
2-Butanone (MEK)	ND		48		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
n-Butylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
sec-Butylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
tert-Butylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Carbon disulfide	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Carbon tetrachloride	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Chlorobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Chloroethane	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Chloroform	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Chloromethane	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
2-Chlorotoluene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
4-Chlorotoluene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Chlorodibromomethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,3-Dichloropropane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1-Dichloropropene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2-Dibromo-3-Chloropropane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Ethylene Dibromide	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Dibromomethane	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Dichlorodifluoromethane	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1-Dichloroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2-Dichloroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1-Dichloroethene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2-Dichloropropane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Ethylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Hexachlorobutadiene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
2-Hexanone	ND		48		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Isopropylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
4-Isopropyltoluene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Methylene Chloride	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
4-Methyl-2-pentanone (MIBK)	ND		48		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Naphthalene	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
N-Propylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Styrene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1

TestAmerica Pleasanton



# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B3-4'**

**Lab Sample ID: 720-53309-18**

Date Collected: 10/24/13 11:42

Matrix: Solid

Date Received: 10/24/13 15:53

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Tetrachloroethene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Toluene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2,3-Trichlorobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1,2-Trichloroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Trichloroethene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Trichlorofluoromethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Vinyl acetate	ND		48		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Vinyl chloride	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Xylenes, Total	ND		9.7		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
2,2-Dichloropropane	ND		4.8		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		10/29/13 16:35	10/30/13 01:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	64		45 - 131				10/29/13 16:35	10/30/13 01:22	1
1,2-Dichloroethane-d4 (Surr)	105		60 - 140				10/29/13 16:35	10/30/13 01:22	1
Toluene-d8 (Surr)	81		58 - 140				10/29/13 16:35	10/30/13 01:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		10/30/13 15:21	10/31/13 01:42	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		10/30/13 15:21	10/31/13 01:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.02		0 - 1				10/30/13 15:21	10/31/13 01:42	1
p-Terphenyl	98		38 - 148				10/30/13 15:21	10/31/13 01:42	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	8.0		1.8		mg/Kg		10/28/13 17:52	10/29/13 20:55	4

TestAmerica Pleasanton

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B4-4'**

**Lab Sample ID: 720-53309-23**

**Date Collected: 10/24/13 12:14**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Acetone	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Benzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Dichlorobromomethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Bromobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Chlorobromomethane	ND		19		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Bromoform	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Bromomethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
2-Butanone (MEK)	ND	*	4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
n-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
sec-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
tert-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Carbon disulfide	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Carbon tetrachloride	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Chlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Chloroethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Chloroform	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Chloromethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
2-Chlorotoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
4-Chlorotoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Chlorodibromomethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,3-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Ethylene Dibromide	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Dibromomethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Dichlorodifluoromethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1-Dichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2-Dichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Ethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Hexachlorobutadiene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
2-Hexanone	ND	*	4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Isopropylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
4-Isopropyltoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Methylene Chloride	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
4-Methyl-2-pentanone (MIBK)	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Naphthalene	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
N-Propylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Styrene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1

TestAmerica Pleasanton



# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B4-4'**

**Lab Sample ID: 720-53309-23**

**Date Collected: 10/24/13 12:14**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Tetrachloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Toluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Trichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Trichlorofluoromethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Vinyl acetate	ND		47		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Vinyl chloride	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Xylenes, Total	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
2,2-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		10/30/13 10:00	10/30/13 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		45 - 131				10/30/13 10:00	10/30/13 16:49	1
1,2-Dichloroethane-d4 (Surr)	111		60 - 140				10/30/13 10:00	10/30/13 16:49	1
Toluene-d8 (Surr)	107		58 - 140				10/30/13 10:00	10/30/13 16:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Diesel Range Organics [C10-C28]</b>	<b>4.2</b>		0.99		mg/Kg		10/30/13 15:21	10/31/13 02:06	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		10/30/13 15:21	10/31/13 02:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 1				10/30/13 15:21	10/31/13 02:06	1
p-Terphenyl	93		38 - 148				10/30/13 15:21	10/31/13 02:06	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>8.5</b>		2.0		mg/Kg		10/28/13 17:52	10/29/13 21:00	4

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B5-4'**

**Lab Sample ID: 720-53309-28**

**Date Collected: 10/24/13 13:03**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Acetone	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Benzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Dichlorobromomethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Bromobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Chlorobromomethane	ND		19		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Bromoform	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Bromomethane	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
2-Butanone (MEK)	ND	*	4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
n-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
sec-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
tert-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Carbon disulfide	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Carbon tetrachloride	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Chlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Chloroethane	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Chloroform	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Chloromethane	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
2-Chlorotoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
4-Chlorotoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Chlorodibromomethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,3-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Ethylene Dibromide	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Dibromomethane	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Dichlorodifluoromethane	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1-Dichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2-Dichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Ethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Hexachlorobutadiene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
2-Hexanone	ND	*	4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Isopropylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
4-Isopropyltoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Methylene Chloride	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
4-Methyl-2-pentanone (MIBK)	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Naphthalene	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
N-Propylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Styrene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1

TestAmerica Pleasanton





# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B5-4'**

**Lab Sample ID: 720-53309-28**

**Date Collected: 10/24/13 13:03**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Tetrachloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Toluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Trichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Trichlorofluoromethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Vinyl acetate	ND		47		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Vinyl chloride	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Xylenes, Total	ND		9.5		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
2,2-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		10/30/13 10:00	10/30/13 17:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	82		45 - 131				10/30/13 10:00	10/30/13 17:18	1
1,2-Dichloroethane-d4 (Surr)	122		60 - 140				10/30/13 10:00	10/30/13 17:18	1
Toluene-d8 (Surr)	101		58 - 140				10/30/13 10:00	10/30/13 17:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/02/13 14:22	11/04/13 13:51	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/02/13 14:22	11/04/13 13:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.004		0 - 1				11/02/13 14:22	11/04/13 13:51	1
p-Terphenyl	105		38 - 148				11/02/13 14:22	11/04/13 13:51	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.0		1.9		mg/Kg		10/28/13 17:52	10/29/13 21:04	4

TestAmerica Pleasanton

# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B6-4'**

**Lab Sample ID: 720-53309-33**

**Date Collected: 10/24/13 13:43**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Acetone	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Benzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Dichlorobromomethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Bromobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Chlorobromomethane	ND		19		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Bromoform	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Bromomethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
2-Butanone (MEK)	ND	*	4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
n-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
sec-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
tert-Butylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Carbon disulfide	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Carbon tetrachloride	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Chlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Chloroethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Chloroform	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Chloromethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
2-Chlorotoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
4-Chlorotoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Chlorodibromomethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,3-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Ethylene Dibromide	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Dibromomethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Dichlorodifluoromethane	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1-Dichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2-Dichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Ethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Hexachlorobutadiene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
2-Hexanone	ND	*	4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Isopropylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
4-Isopropyltoluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Methylene Chloride	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
4-Methyl-2-pentanone (MIBK)	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Naphthalene	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
N-Propylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Styrene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1

TestAmerica Pleasanton



# Client Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B6-4'**

**Lab Sample ID: 720-53309-33**

Date Collected: 10/24/13 13:43

Matrix: Solid

Date Received: 10/24/13 15:53

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Tetrachloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Toluene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Trichloroethene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Trichlorofluoromethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Vinyl acetate	ND		47		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Vinyl chloride	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Xylenes, Total	ND		9.4		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
2,2-Dichloropropane	ND		4.7		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		10/30/13 10:00	10/30/13 14:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	80		45 - 131				10/30/13 10:00	10/30/13 14:54	1
1,2-Dichloroethane-d4 (Surr)	118		60 - 140				10/30/13 10:00	10/30/13 14:54	1
Toluene-d8 (Surr)	101		58 - 140				10/30/13 10:00	10/30/13 14:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		10/31/13 09:10	10/31/13 18:34	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		10/31/13 09:10	10/31/13 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.002		0 - 1				10/31/13 09:10	10/31/13 18:34	1
p-Terphenyl	119		38 - 148				10/31/13 09:10	10/31/13 18:34	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.8		1.9		mg/Kg		10/28/13 17:52	10/29/13 21:09	4

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS**

**Lab Sample ID: MB 720-147272/4**  
**Matrix: Solid**  
**Analysis Batch: 147272**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Methyl tert-butyl ether	ND		5.0		ug/Kg			10/29/13 15:19	1
Acetone	ND		50		ug/Kg			10/29/13 15:19	1
Benzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Dichlorobromomethane	ND		5.0		ug/Kg			10/29/13 15:19	1
Bromobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Chlorobromomethane	ND		20		ug/Kg			10/29/13 15:19	1
Bromoform	ND		5.0		ug/Kg			10/29/13 15:19	1
Bromomethane	ND		10		ug/Kg			10/29/13 15:19	1
2-Butanone (MEK)	ND		50		ug/Kg			10/29/13 15:19	1
n-Butylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
sec-Butylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
tert-Butylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Carbon disulfide	ND		5.0		ug/Kg			10/29/13 15:19	1
Carbon tetrachloride	ND		5.0		ug/Kg			10/29/13 15:19	1
Chlorobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Chloroethane	ND		10		ug/Kg			10/29/13 15:19	1
Chloroform	ND		5.0		ug/Kg			10/29/13 15:19	1
Chloromethane	ND		10		ug/Kg			10/29/13 15:19	1
2-Chlorotoluene	ND		5.0		ug/Kg			10/29/13 15:19	1
4-Chlorotoluene	ND		5.0		ug/Kg			10/29/13 15:19	1
Chlorodibromomethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,3-Dichloropropane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,1-Dichloropropene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg			10/29/13 15:19	1
Ethylene Dibromide	ND		5.0		ug/Kg			10/29/13 15:19	1
Dibromomethane	ND		10		ug/Kg			10/29/13 15:19	1
Dichlorodifluoromethane	ND		10		ug/Kg			10/29/13 15:19	1
1,1-Dichloroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2-Dichloroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,1-Dichloroethene	ND		5.0		ug/Kg			10/29/13 15:19	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			10/29/13 15:19	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2-Dichloropropane	ND		5.0		ug/Kg			10/29/13 15:19	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			10/29/13 15:19	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			10/29/13 15:19	1
Ethylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Hexachlorobutadiene	ND		5.0		ug/Kg			10/29/13 15:19	1
2-Hexanone	ND		50		ug/Kg			10/29/13 15:19	1
Isopropylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
4-Isopropyltoluene	ND		5.0		ug/Kg			10/29/13 15:19	1
Methylene Chloride	ND		10		ug/Kg			10/29/13 15:19	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			10/29/13 15:19	1
Naphthalene	ND		10		ug/Kg			10/29/13 15:19	1
N-Propylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Styrene	ND		5.0		ug/Kg			10/29/13 15:19	1

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-147272/4**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
Tetrachloroethene	ND		5.0		ug/Kg			10/29/13 15:19	1
Toluene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
Trichloroethene	ND		5.0		ug/Kg			10/29/13 15:19	1
Trichlorofluoromethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			10/29/13 15:19	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			10/29/13 15:19	1
Vinyl acetate	ND		50		ug/Kg			10/29/13 15:19	1
Vinyl chloride	ND		5.0		ug/Kg			10/29/13 15:19	1
Xylenes, Total	ND		10		ug/Kg			10/29/13 15:19	1
2,2-Dichloropropane	ND		5.0		ug/Kg			10/29/13 15:19	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg			10/29/13 15:19	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	80		45 - 131		10/29/13 15:19	1
1,2-Dichloroethane-d4 (Surr)	112		60 - 140		10/29/13 15:19	1
Toluene-d8 (Surr)	87		58 - 140		10/29/13 15:19	1

**Lab Sample ID: LCS 720-147272/5**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Methyl tert-butyl ether	50.0	59.5		ug/Kg		119	70 - 144
Acetone	250	288		ug/Kg		115	30 - 162
Benzene	50.0	50.2		ug/Kg		100	70 - 130
Dichlorobromomethane	50.0	56.6		ug/Kg		113	70 - 131
Bromobenzene	50.0	48.6		ug/Kg		97	70 - 130
Chlorobromomethane	50.0	56.0		ug/Kg		112	70 - 130
Bromoform	50.0	60.2		ug/Kg		120	59 - 158
Bromomethane	50.0	48.3		ug/Kg		97	59 - 132
2-Butanone (MEK)	250	311		ug/Kg		124	53 - 124
n-Butylbenzene	50.0	52.3		ug/Kg		105	70 - 142
sec-Butylbenzene	50.0	49.0		ug/Kg		98	70 - 136
tert-Butylbenzene	50.0	50.1		ug/Kg		100	70 - 130
Carbon disulfide	50.0	52.4		ug/Kg		105	60 - 140
Carbon tetrachloride	50.0	51.8		ug/Kg		104	70 - 138
Chlorobenzene	50.0	52.1		ug/Kg		104	70 - 130
Chloroethane	50.0	48.9		ug/Kg		98	65 - 130
Chloroform	50.0	54.4		ug/Kg		109	77 - 127

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-147272/5**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Chloromethane	50.0	47.0		ug/Kg		94	55 - 140
2-Chlorotoluene	50.0	50.9		ug/Kg		102	70 - 138
4-Chlorotoluene	50.0	51.1		ug/Kg		102	70 - 136
Chlorodibromomethane	50.0	61.9		ug/Kg		124	70 - 146
1,2-Dichlorobenzene	50.0	49.7		ug/Kg		99	70 - 130
1,3-Dichlorobenzene	50.0	49.9		ug/Kg		100	70 - 131
1,4-Dichlorobenzene	50.0	49.6		ug/Kg		99	70 - 130
1,3-Dichloropropane	50.0	59.6		ug/Kg		119	70 - 140
1,1-Dichloropropane	50.0	54.1		ug/Kg		108	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	53.2		ug/Kg		106	60 - 145
Ethylene Dibromide	50.0	60.3		ug/Kg		121	70 - 140
Dibromomethane	50.0	59.9		ug/Kg		120	70 - 139
Dichlorodifluoromethane	50.0	46.6		ug/Kg		93	37 - 158
1,1-Dichloroethane	50.0	52.5		ug/Kg		105	70 - 130
1,2-Dichloroethane	50.0	58.4		ug/Kg		117	70 - 130
1,1-Dichloroethene	50.0	49.3		ug/Kg		99	76 - 122
cis-1,2-Dichloroethene	50.0	54.8		ug/Kg		110	70 - 138
trans-1,2-Dichloroethene	50.0	49.7		ug/Kg		99	67 - 130
1,2-Dichloropropane	50.0	52.8		ug/Kg		106	73 - 127
cis-1,3-Dichloropropene	50.0	58.6		ug/Kg		117	68 - 147
trans-1,3-Dichloropropene	50.0	58.6		ug/Kg		117	70 - 136
Ethylbenzene	50.0	51.7		ug/Kg		103	80 - 137
Hexachlorobutadiene	50.0	44.8		ug/Kg		90	70 - 132
2-Hexanone	250	312		ug/Kg		125	44 - 133
Isopropylbenzene	50.0	55.8		ug/Kg		112	88 - 128
4-Isopropyltoluene	50.0	49.7		ug/Kg		99	70 - 133
Methylene Chloride	50.0	52.5		ug/Kg		105	70 - 134
4-Methyl-2-pentanone (MIBK)	250	316		ug/Kg		126	60 - 160
Naphthalene	50.0	54.6		ug/Kg		109	60 - 147
N-Propylbenzene	50.0	49.1		ug/Kg		98	70 - 130
Styrene	50.0	59.5		ug/Kg		119	70 - 130
1,1,1,2-Tetrachloroethane	50.0	53.8		ug/Kg		108	70 - 130
1,1,2,2-Tetrachloroethane	50.0	56.1		ug/Kg		112	70 - 146
Tetrachloroethene	50.0	52.6		ug/Kg		105	70 - 132
Toluene	50.0	50.6		ug/Kg		101	80 - 128
1,2,3-Trichlorobenzene	50.0	51.5		ug/Kg		103	60 - 140
1,2,4-Trichlorobenzene	50.0	51.8		ug/Kg		104	60 - 140
1,1,1-Trichloroethane	50.0	51.9		ug/Kg		104	70 - 130
1,1,2-Trichloroethane	50.0	58.5		ug/Kg		117	70 - 130
Trichloroethene	50.0	50.7		ug/Kg		101	70 - 133
Trichlorofluoromethane	50.0	50.6		ug/Kg		101	60 - 140
1,2,3-Trichloropropane	50.0	54.4		ug/Kg		109	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.7		ug/Kg		97	60 - 140
1,2,4-Trimethylbenzene	50.0	53.6		ug/Kg		107	70 - 130
1,3,5-Trimethylbenzene	50.0	51.9		ug/Kg		104	70 - 131
Vinyl acetate	50.0	77.9		ug/Kg		156	38 - 176
Vinyl chloride	50.0	47.1		ug/Kg		94	58 - 125

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-147272/5**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
m-Xylene & p-Xylene	100	108		ug/Kg		108	70 - 146	
o-Xylene	50.0	58.2		ug/Kg		116	70 - 140	
2,2-Dichloropropane	50.0	53.8		ug/Kg		108	70 - 162	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	104		45 - 131
1,2-Dichloroethane-d4 (Surr)	111		60 - 140
Toluene-d8 (Surr)	97		58 - 140

**Lab Sample ID: LCS 720-147272/7**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Gasoline Range Organics (GRO) -C5-C12	1000	1160		ug/Kg		116	61 - 128	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	96		45 - 131
1,2-Dichloroethane-d4 (Surr)	106		60 - 140
Toluene-d8 (Surr)	99		58 - 140

**Lab Sample ID: LCSD 720-147272/6**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
Methyl tert-butyl ether	50.0	58.5		ug/Kg		117	70 - 144	2	20	
Acetone	250	258		ug/Kg		103	30 - 162	11	30	
Benzene	50.0	51.1		ug/Kg		102	70 - 130	2	20	
Dichlorobromomethane	50.0	56.6		ug/Kg		113	70 - 131	0	20	
Bromobenzene	50.0	49.9		ug/Kg		100	70 - 130	3	20	
Chlorobromomethane	50.0	55.2		ug/Kg		110	70 - 130	1	20	
Bromoform	50.0	58.1		ug/Kg		116	59 - 158	3	20	
Bromomethane	50.0	49.5		ug/Kg		99	59 - 132	3	20	
2-Butanone (MEK)	250	273		ug/Kg		109	53 - 124	13	20	
n-Butylbenzene	50.0	56.1		ug/Kg		112	70 - 142	7	20	
sec-Butylbenzene	50.0	52.5		ug/Kg		105	70 - 136	7	20	
tert-Butylbenzene	50.0	53.8		ug/Kg		108	70 - 130	7	20	
Carbon disulfide	50.0	55.2		ug/Kg		110	60 - 140	5	20	
Carbon tetrachloride	50.0	54.0		ug/Kg		108	70 - 138	4	20	
Chlorobenzene	50.0	53.1		ug/Kg		106	70 - 130	2	20	
Chloroethane	50.0	52.4		ug/Kg		105	65 - 130	7	20	
Chloroform	50.0	55.2		ug/Kg		110	77 - 127	1	20	
Chloromethane	50.0	49.6		ug/Kg		99	55 - 140	5	20	
2-Chlorotoluene	50.0	54.0		ug/Kg		108	70 - 138	6	20	
4-Chlorotoluene	50.0	53.3		ug/Kg		107	70 - 136	4	20	
Chlorodibromomethane	50.0	60.0		ug/Kg		120	70 - 146	3	20	

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-147272/6**

**Matrix: Solid**

**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
1,2-Dichlorobenzene	50.0	50.8		ug/Kg		102	70 - 130	2	20
1,3-Dichlorobenzene	50.0	51.5		ug/Kg		103	70 - 131	3	20
1,4-Dichlorobenzene	50.0	51.6		ug/Kg		103	70 - 130	4	20
1,3-Dichloropropane	50.0	58.4		ug/Kg		117	70 - 140	2	20
1,1-Dichloropropene	50.0	56.5		ug/Kg		113	70 - 130	4	20
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/Kg		106	60 - 145	0	20
Ethylene Dibromide	50.0	58.2		ug/Kg		116	70 - 140	4	20
Dibromomethane	50.0	59.5		ug/Kg		119	70 - 139	1	20
Dichlorodifluoromethane	50.0	49.2		ug/Kg		98	37 - 158	5	20
1,1-Dichloroethane	50.0	53.8		ug/Kg		108	70 - 130	2	20
1,2-Dichloroethane	50.0	57.0		ug/Kg		114	70 - 130	2	20
1,1-Dichloroethene	50.0	51.5		ug/Kg		103	76 - 122	4	20
cis-1,2-Dichloroethene	50.0	56.2		ug/Kg		112	70 - 138	3	20
trans-1,2-Dichloroethene	50.0	51.2		ug/Kg		102	67 - 130	3	20
1,2-Dichloropropane	50.0	52.8		ug/Kg		106	73 - 127	0	20
cis-1,3-Dichloropropene	50.0	58.9		ug/Kg		118	68 - 147	1	20
trans-1,3-Dichloropropene	50.0	58.9		ug/Kg		118	70 - 136	1	20
Ethylbenzene	50.0	53.6		ug/Kg		107	80 - 137	3	20
Hexachlorobutadiene	50.0	47.7		ug/Kg		95	70 - 132	6	20
2-Hexanone	250	282		ug/Kg		113	44 - 133	10	20
Isopropylbenzene	50.0	58.2		ug/Kg		116	88 - 128	4	20
4-Isopropyltoluene	50.0	52.8		ug/Kg		106	70 - 133	6	20
Methylene Chloride	50.0	52.2		ug/Kg		104	70 - 134	1	20
4-Methyl-2-pentanone (MIBK)	250	287		ug/Kg		115	60 - 160	10	20
Naphthalene	50.0	55.2		ug/Kg		110	60 - 147	1	20
N-Propylbenzene	50.0	52.5		ug/Kg		105	70 - 130	7	20
Styrene	50.0	59.7		ug/Kg		119	70 - 130	0	20
1,1,1,2-Tetrachloroethane	50.0	55.0		ug/Kg		110	70 - 130	2	20
1,1,2,2-Tetrachloroethane	50.0	54.3		ug/Kg		109	70 - 146	3	20
Tetrachloroethene	50.0	54.1		ug/Kg		108	70 - 132	3	20
Toluene	50.0	52.9		ug/Kg		106	80 - 128	4	20
1,2,3-Trichlorobenzene	50.0	53.0		ug/Kg		106	60 - 140	3	20
1,2,4-Trichlorobenzene	50.0	52.8		ug/Kg		106	60 - 140	2	20
1,1,1-Trichloroethane	50.0	54.4		ug/Kg		109	70 - 130	5	20
1,1,2-Trichloroethane	50.0	57.1		ug/Kg		114	70 - 130	2	20
Trichloroethene	50.0	52.7		ug/Kg		105	70 - 133	4	20
Trichlorofluoromethane	50.0	52.5		ug/Kg		105	60 - 140	4	20
1,2,3-Trichloropropane	50.0	54.5		ug/Kg		109	70 - 146	0	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	51.2		ug/Kg		102	60 - 140	5	20
1,2,4-Trimethylbenzene	50.0	55.5		ug/Kg		111	70 - 130	4	20
1,3,5-Trimethylbenzene	50.0	55.4		ug/Kg		111	70 - 131	6	20
Vinyl acetate	50.0	74.3		ug/Kg		149	38 - 176	5	20
Vinyl chloride	50.0	48.8		ug/Kg		98	58 - 125	3	20
m-Xylene & p-Xylene	100	111		ug/Kg		111	70 - 146	3	20
o-Xylene	50.0	59.1		ug/Kg		118	70 - 140	2	20
2,2-Dichloropropane	50.0	57.0		ug/Kg		114	70 - 162	6	20

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS D 720-147272/6**  
**Matrix: Solid**  
**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Surrogate	LCS D %Recovery	LCS D Qualifier	Limits
4-Bromofluorobenzene	101		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	96		58 - 140

**Lab Sample ID: LCS D 720-147272/8**  
**Matrix: Solid**  
**Analysis Batch: 147272**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS D Result	LCS D Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	1000	1130		ug/Kg		113	61 - 128	3	20

Surrogate	LCS D %Recovery	LCS D Qualifier	Limits
4-Bromofluorobenzene	98		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	99		58 - 140

**Lab Sample ID: MB 720-147339/4**  
**Matrix: Solid**  
**Analysis Batch: 147339**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg			10/30/13 08:50	1
Acetone	ND		50		ug/Kg			10/30/13 08:50	1
Benzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Dichlorobromomethane	ND		5.0		ug/Kg			10/30/13 08:50	1
Bromobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Chlorobromomethane	ND		20		ug/Kg			10/30/13 08:50	1
Bromoform	ND		5.0		ug/Kg			10/30/13 08:50	1
Bromomethane	ND		10		ug/Kg			10/30/13 08:50	1
2-Butanone (MEK)	ND		50		ug/Kg			10/30/13 08:50	1
n-Butylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
sec-Butylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
tert-Butylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Carbon disulfide	ND		5.0		ug/Kg			10/30/13 08:50	1
Carbon tetrachloride	ND		5.0		ug/Kg			10/30/13 08:50	1
Chlorobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Chloroethane	ND		10		ug/Kg			10/30/13 08:50	1
Chloroform	ND		5.0		ug/Kg			10/30/13 08:50	1
Chloromethane	ND		10		ug/Kg			10/30/13 08:50	1
2-Chlorotoluene	ND		5.0		ug/Kg			10/30/13 08:50	1
4-Chlorotoluene	ND		5.0		ug/Kg			10/30/13 08:50	1
Chlorodibromomethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,3-Dichloropropane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1-Dichloropropene	ND		5.0		ug/Kg			10/30/13 08:50	1

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-147339/4**

**Matrix: Solid**

**Analysis Batch: 147339**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg			10/30/13 08:50	1
Ethylene Dibromide	ND		5.0		ug/Kg			10/30/13 08:50	1
Dibromomethane	ND		10		ug/Kg			10/30/13 08:50	1
Dichlorodifluoromethane	ND		10		ug/Kg			10/30/13 08:50	1
1,1-Dichloroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2-Dichloroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1-Dichloroethene	ND		5.0		ug/Kg			10/30/13 08:50	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			10/30/13 08:50	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2-Dichloropropane	ND		5.0		ug/Kg			10/30/13 08:50	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			10/30/13 08:50	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			10/30/13 08:50	1
Ethylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Hexachlorobutadiene	ND		5.0		ug/Kg			10/30/13 08:50	1
2-Hexanone	ND		50		ug/Kg			10/30/13 08:50	1
Isopropylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
4-Isopropyltoluene	ND		5.0		ug/Kg			10/30/13 08:50	1
Methylene Chloride	ND		10		ug/Kg			10/30/13 08:50	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			10/30/13 08:50	1
Naphthalene	ND		10		ug/Kg			10/30/13 08:50	1
N-Propylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Styrene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
Tetrachloroethene	ND		5.0		ug/Kg			10/30/13 08:50	1
Toluene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
Trichloroethene	ND		5.0		ug/Kg			10/30/13 08:50	1
Trichlorofluoromethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			10/30/13 08:50	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			10/30/13 08:50	1
Vinyl acetate	ND		50		ug/Kg			10/30/13 08:50	1
Vinyl chloride	ND		5.0		ug/Kg			10/30/13 08:50	1
Xylenes, Total	ND		10		ug/Kg			10/30/13 08:50	1
2,2-Dichloropropane	ND		5.0		ug/Kg			10/30/13 08:50	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg			10/30/13 08:50	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	79		45 - 131		10/30/13 08:50	1
1,2-Dichloroethane-d4 (Surr)	106		60 - 140		10/30/13 08:50	1
Toluene-d8 (Surr)	86		58 - 140		10/30/13 08:50	1

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-147339/5**

**Matrix: Solid**

**Analysis Batch: 147339**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	55.2		ug/Kg		110	70 - 144
Acetone	250	303		ug/Kg		121	30 - 162
Benzene	50.0	49.9		ug/Kg		100	70 - 130
Dichlorobromomethane	50.0	57.3		ug/Kg		115	70 - 131
Bromobenzene	50.0	49.2		ug/Kg		98	70 - 130
Chlorobromomethane	50.0	54.5		ug/Kg		109	70 - 130
Bromoform	50.0	58.3		ug/Kg		117	59 - 158
Bromomethane	50.0	52.7		ug/Kg		105	59 - 132
2-Butanone (MEK)	250	309		ug/Kg		123	53 - 124
n-Butylbenzene	50.0	52.8		ug/Kg		106	70 - 142
sec-Butylbenzene	50.0	49.7		ug/Kg		99	70 - 136
tert-Butylbenzene	50.0	50.8		ug/Kg		102	70 - 130
Carbon disulfide	50.0	50.0		ug/Kg		100	60 - 140
Carbon tetrachloride	50.0	51.5		ug/Kg		103	70 - 138
Chlorobenzene	50.0	49.8		ug/Kg		100	70 - 130
Chloroethane	50.0	54.3		ug/Kg		109	65 - 130
Chloroform	50.0	53.2		ug/Kg		106	77 - 127
Chloromethane	50.0	56.8		ug/Kg		114	55 - 140
2-Chlorotoluene	50.0	50.5		ug/Kg		101	70 - 138
4-Chlorotoluene	50.0	51.8		ug/Kg		104	70 - 136
Chlorodibromomethane	50.0	62.0		ug/Kg		124	70 - 146
1,2-Dichlorobenzene	50.0	50.7		ug/Kg		101	70 - 130
1,3-Dichlorobenzene	50.0	50.2		ug/Kg		100	70 - 131
1,4-Dichlorobenzene	50.0	49.5		ug/Kg		99	70 - 130
1,3-Dichloropropane	50.0	59.4		ug/Kg		119	70 - 140
1,1-Dichloropropene	50.0	50.2		ug/Kg		100	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/Kg		106	60 - 145
Ethylene Dibromide	50.0	60.0		ug/Kg		120	70 - 140
Dibromomethane	50.0	60.2		ug/Kg		120	70 - 139
Dichlorodifluoromethane	50.0	62.1		ug/Kg		124	37 - 158
1,1-Dichloroethane	50.0	49.7		ug/Kg		99	70 - 130
1,2-Dichloroethane	50.0	57.3		ug/Kg		115	70 - 130
1,1-Dichloroethene	50.0	48.4		ug/Kg		97	76 - 122
cis-1,2-Dichloroethene	50.0	52.4		ug/Kg		105	70 - 138
trans-1,2-Dichloroethene	50.0	48.7		ug/Kg		97	67 - 130
1,2-Dichloropropane	50.0	52.3		ug/Kg		105	73 - 127
cis-1,3-Dichloropropene	50.0	57.3		ug/Kg		115	68 - 147
trans-1,3-Dichloropropene	50.0	57.3		ug/Kg		115	70 - 136
Ethylbenzene	50.0	50.3		ug/Kg		101	80 - 137
Hexachlorobutadiene	50.0	44.8		ug/Kg		90	70 - 132
2-Hexanone	250	330		ug/Kg		132	44 - 133
Isopropylbenzene	50.0	52.7		ug/Kg		105	88 - 128
4-Isopropyltoluene	50.0	49.7		ug/Kg		99	70 - 133
Methylene Chloride	50.0	51.9		ug/Kg		104	70 - 134
4-Methyl-2-pentanone (MIBK)	250	326		ug/Kg		130	60 - 160
Naphthalene	50.0	53.6		ug/Kg		107	60 - 147
N-Propylbenzene	50.0	50.4		ug/Kg		101	70 - 130
Styrene	50.0	57.2		ug/Kg		114	70 - 130

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-147339/5** **Client Sample ID: Lab Control Sample**  
**Matrix: Solid** **Prep Type: Total/NA**  
**Analysis Batch: 147339**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
1,1,1,2-Tetrachloroethane	50.0	52.1		ug/Kg		104	70 - 130	
1,1,2,2-Tetrachloroethane	50.0	58.7		ug/Kg		117	70 - 146	
Tetrachloroethene	50.0	51.6		ug/Kg		103	70 - 132	
Toluene	50.0	48.6		ug/Kg		97	80 - 128	
1,2,3-Trichlorobenzene	50.0	49.3		ug/Kg		99	60 - 140	
1,2,4-Trichlorobenzene	50.0	49.3		ug/Kg		99	60 - 140	
1,1,1-Trichloroethane	50.0	51.3		ug/Kg		103	70 - 130	
1,1,2-Trichloroethane	50.0	59.6		ug/Kg		119	70 - 130	
Trichloroethene	50.0	51.5		ug/Kg		103	70 - 133	
Trichlorofluoromethane	50.0	55.4		ug/Kg		111	60 - 140	
1,2,3-Trichloropropane	50.0	58.8		ug/Kg		118	70 - 146	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	47.3		ug/Kg		95	60 - 140	
1,2,4-Trimethylbenzene	50.0	53.0		ug/Kg		106	70 - 130	
1,3,5-Trimethylbenzene	50.0	51.9		ug/Kg		104	70 - 131	
Vinyl acetate	50.0	69.0		ug/Kg		138	38 - 176	
Vinyl chloride	50.0	55.3		ug/Kg		111	58 - 125	
m-Xylene & p-Xylene	100	102		ug/Kg		102	70 - 146	
o-Xylene	50.0	53.5		ug/Kg		107	70 - 140	
2,2-Dichloropropane	50.0	55.0		ug/Kg		110	70 - 162	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	110		60 - 140
Toluene-d8 (Surr)	95		58 - 140

**Lab Sample ID: LCS 720-147339/7** **Client Sample ID: Lab Control Sample**  
**Matrix: Solid** **Prep Type: Total/NA**  
**Analysis Batch: 147339**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
Gasoline Range Organics (GRO) -C5-C12	1000	1110		ug/Kg		111	61 - 128	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	95		45 - 131
1,2-Dichloroethane-d4 (Surr)	104		60 - 140
Toluene-d8 (Surr)	99		58 - 140

**Lab Sample ID: LCSD 720-147339/6** **Client Sample ID: Lab Control Sample Dup**  
**Matrix: Solid** **Prep Type: Total/NA**  
**Analysis Batch: 147339**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
Methyl tert-butyl ether	50.0	60.1		ug/Kg		120	70 - 144	8	20	
Acetone	250	327		ug/Kg		131	30 - 162	7	30	
Benzene	50.0	53.9		ug/Kg		108	70 - 130	8	20	
Dichlorobromomethane	50.0	61.6		ug/Kg		123	70 - 131	7	20	

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-147339/6**

**Matrix: Solid**

**Analysis Batch: 147339**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
Bromobenzene	50.0	54.7		ug/Kg		109	70 - 130	11	20
Chlorobromomethane	50.0	57.6		ug/Kg		115	70 - 130	5	20
Bromoform	50.0	62.7		ug/Kg		125	59 - 158	7	20
Bromomethane	50.0	57.9		ug/Kg		116	59 - 132	9	20
2-Butanone (MEK)	250	327 *		ug/Kg		131	53 - 124	6	20
n-Butylbenzene	50.0	57.5		ug/Kg		115	70 - 142	8	20
sec-Butylbenzene	50.0	54.2		ug/Kg		108	70 - 136	9	20
tert-Butylbenzene	50.0	55.1		ug/Kg		110	70 - 130	8	20
Carbon disulfide	50.0	54.2		ug/Kg		108	60 - 140	8	20
Carbon tetrachloride	50.0	55.3		ug/Kg		111	70 - 138	7	20
Chlorobenzene	50.0	54.0		ug/Kg		108	70 - 130	8	20
Chloroethane	50.0	58.3		ug/Kg		117	65 - 130	7	20
Chloroform	50.0	57.4		ug/Kg		115	77 - 127	8	20
Chloromethane	50.0	63.6		ug/Kg		127	55 - 140	11	20
2-Chlorotoluene	50.0	55.7		ug/Kg		111	70 - 138	10	20
4-Chlorotoluene	50.0	56.6		ug/Kg		113	70 - 136	9	20
Chlorodibromomethane	50.0	64.5		ug/Kg		129	70 - 146	4	20
1,2-Dichlorobenzene	50.0	54.5		ug/Kg		109	70 - 130	7	20
1,3-Dichlorobenzene	50.0	54.7		ug/Kg		109	70 - 131	9	20
1,4-Dichlorobenzene	50.0	53.2		ug/Kg		106	70 - 130	7	20
1,3-Dichloropropane	50.0	62.4		ug/Kg		125	70 - 140	5	20
1,1-Dichloropropene	50.0	53.8		ug/Kg		108	70 - 130	7	20
1,2-Dibromo-3-Chloropropane	50.0	56.2		ug/Kg		112	60 - 145	6	20
Ethylene Dibromide	50.0	64.6		ug/Kg		129	70 - 140	7	20
Dibromomethane	50.0	62.8		ug/Kg		126	70 - 139	4	20
Dichlorodifluoromethane	50.0	69.7		ug/Kg		139	37 - 158	11	20
1,1-Dichloroethane	50.0	54.2		ug/Kg		108	70 - 130	9	20
1,2-Dichloroethane	50.0	61.9		ug/Kg		124	70 - 130	8	20
1,1-Dichloroethene	50.0	51.8		ug/Kg		104	76 - 122	7	20
cis-1,2-Dichloroethene	50.0	56.4		ug/Kg		113	70 - 138	7	20
trans-1,2-Dichloroethene	50.0	52.7		ug/Kg		105	67 - 130	8	20
1,2-Dichloropropane	50.0	55.9		ug/Kg		112	73 - 127	7	20
cis-1,3-Dichloropropene	50.0	61.8		ug/Kg		124	68 - 147	8	20
trans-1,3-Dichloropropene	50.0	61.8		ug/Kg		124	70 - 136	8	20
Ethylbenzene	50.0	54.7		ug/Kg		109	80 - 137	8	20
Hexachlorobutadiene	50.0	47.8		ug/Kg		96	70 - 132	6	20
2-Hexanone	250	350 *		ug/Kg		140	44 - 133	6	20
Isopropylbenzene	50.0	56.6		ug/Kg		113	88 - 128	7	20
4-Isopropyltoluene	50.0	53.9		ug/Kg		108	70 - 133	8	20
Methylene Chloride	50.0	55.4		ug/Kg		111	70 - 134	7	20
4-Methyl-2-pentanone (MIBK)	250	345		ug/Kg		138	60 - 160	6	20
Naphthalene	50.0	59.2		ug/Kg		118	60 - 147	10	20
N-Propylbenzene	50.0	55.3		ug/Kg		111	70 - 130	9	20
Styrene	50.0	61.4		ug/Kg		123	70 - 130	7	20
1,1,1,2-Tetrachloroethane	50.0	56.3		ug/Kg		113	70 - 130	8	20
1,1,2,2-Tetrachloroethane	50.0	63.6		ug/Kg		127	70 - 146	8	20
Tetrachloroethene	50.0	54.1		ug/Kg		108	70 - 132	5	20
Toluene	50.0	52.7		ug/Kg		105	80 - 128	8	20

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCSD 720-147339/6**  
**Matrix: Solid**  
**Analysis Batch: 147339**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichlorobenzene	50.0	53.2		ug/Kg		106	60 - 140	8	20
1,2,4-Trichlorobenzene	50.0	53.3		ug/Kg		107	60 - 140	8	20
1,1,1-Trichloroethane	50.0	54.9		ug/Kg		110	70 - 130	7	20
1,1,2-Trichloroethane	50.0	62.1		ug/Kg		124	70 - 130	4	20
Trichloroethene	50.0	54.1		ug/Kg		108	70 - 133	5	20
Trichlorofluoromethane	50.0	60.5		ug/Kg		121	60 - 140	9	20
1,2,3-Trichloropropane	50.0	60.5		ug/Kg		121	70 - 146	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	51.2		ug/Kg		102	60 - 140	8	20
1,2,4-Trimethylbenzene	50.0	57.8		ug/Kg		116	70 - 130	9	20
1,3,5-Trimethylbenzene	50.0	56.7		ug/Kg		113	70 - 131	9	20
Vinyl acetate	50.0	75.3		ug/Kg		151	38 - 176	9	20
Vinyl chloride	50.0	61.7		ug/Kg		123	58 - 125	11	20
m-Xylene & p-Xylene	100	111		ug/Kg		111	70 - 146	8	20
o-Xylene	50.0	57.6		ug/Kg		115	70 - 140	7	20
2,2-Dichloropropane	50.0	57.8		ug/Kg		116	70 - 162	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	101		45 - 131
1,2-Dichloroethane-d4 (Surr)	109		60 - 140
Toluene-d8 (Surr)	96		58 - 140

**Lab Sample ID: LCSD 720-147339/8**  
**Matrix: Solid**  
**Analysis Batch: 147339**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	1000	1140		ug/Kg		114	61 - 128	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	93		45 - 131
1,2-Dichloroethane-d4 (Surr)	103		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: MB 720-147393/4**  
**Matrix: Solid**  
**Analysis Batch: 147393**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg			10/30/13 20:45	1
Acetone	ND		50		ug/Kg			10/30/13 20:45	1
Benzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Dichlorobromomethane	ND		5.0		ug/Kg			10/30/13 20:45	1
Bromobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Chlorobromomethane	ND		20		ug/Kg			10/30/13 20:45	1
Bromoform	ND		5.0		ug/Kg			10/30/13 20:45	1
Bromomethane	ND		10		ug/Kg			10/30/13 20:45	1

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-147393/4**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Butanone (MEK)	ND		50		ug/Kg			10/30/13 20:45	1
n-Butylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
sec-Butylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
tert-Butylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Carbon disulfide	ND		5.0		ug/Kg			10/30/13 20:45	1
Carbon tetrachloride	ND		5.0		ug/Kg			10/30/13 20:45	1
Chlorobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Chloroethane	ND		10		ug/Kg			10/30/13 20:45	1
Chloroform	ND		5.0		ug/Kg			10/30/13 20:45	1
Chloromethane	ND		10		ug/Kg			10/30/13 20:45	1
2-Chlorotoluene	ND		5.0		ug/Kg			10/30/13 20:45	1
4-Chlorotoluene	ND		5.0		ug/Kg			10/30/13 20:45	1
Chlorodibromomethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,3-Dichloropropane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1-Dichloropropene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg			10/30/13 20:45	1
Ethylene Dibromide	ND		5.0		ug/Kg			10/30/13 20:45	1
Dibromomethane	ND		10		ug/Kg			10/30/13 20:45	1
Dichlorodifluoromethane	ND		10		ug/Kg			10/30/13 20:45	1
1,1-Dichloroethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2-Dichloroethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1-Dichloroethene	ND		5.0		ug/Kg			10/30/13 20:45	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			10/30/13 20:45	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2-Dichloropropane	ND		5.0		ug/Kg			10/30/13 20:45	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			10/30/13 20:45	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			10/30/13 20:45	1
Ethylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Hexachlorobutadiene	ND		5.0		ug/Kg			10/30/13 20:45	1
2-Hexanone	ND		50		ug/Kg			10/30/13 20:45	1
Isopropylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
4-Isopropyltoluene	ND		5.0		ug/Kg			10/30/13 20:45	1
Methylene Chloride	ND		10		ug/Kg			10/30/13 20:45	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			10/30/13 20:45	1
Naphthalene	ND		10		ug/Kg			10/30/13 20:45	1
N-Propylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Styrene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			10/30/13 20:45	1
Tetrachloroethene	ND		5.0		ug/Kg			10/30/13 20:45	1
Toluene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			10/30/13 20:45	1

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: MB 720-147393/4**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	ND		5.0		ug/Kg			10/30/13 20:45	1
Trichlorofluoromethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			10/30/13 20:45	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			10/30/13 20:45	1
Vinyl acetate	ND		50		ug/Kg			10/30/13 20:45	1
Vinyl chloride	ND		5.0		ug/Kg			10/30/13 20:45	1
Xylenes, Total	ND		10		ug/Kg			10/30/13 20:45	1
2,2-Dichloropropane	ND		5.0		ug/Kg			10/30/13 20:45	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg			10/30/13 20:45	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	93		45 - 131		10/30/13 20:45	1
1,2-Dichloroethane-d4 (Surr)	100		60 - 140		10/30/13 20:45	1
Toluene-d8 (Surr)	95		58 - 140		10/30/13 20:45	1

**Lab Sample ID: LCS 720-147393/5**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Methyl tert-butyl ether	50.0	50.2		ug/Kg		100	70 - 144
Acetone	250	199		ug/Kg		80	30 - 162
Benzene	50.0	46.3		ug/Kg		93	70 - 130
Dichlorobromomethane	50.0	48.4		ug/Kg		97	70 - 131
Bromobenzene	50.0	48.7		ug/Kg		97	70 - 130
Chlorobromomethane	50.0	53.2		ug/Kg		106	70 - 130
Bromoform	50.0	53.8		ug/Kg		108	59 - 158
Bromomethane	50.0	41.7		ug/Kg		83	59 - 132
2-Butanone (MEK)	250	226		ug/Kg		91	53 - 124
n-Butylbenzene	50.0	47.9		ug/Kg		96	70 - 142
sec-Butylbenzene	50.0	48.3		ug/Kg		97	70 - 136
tert-Butylbenzene	50.0	49.8		ug/Kg		100	70 - 130
Carbon disulfide	50.0	46.8		ug/Kg		94	60 - 140
Carbon tetrachloride	50.0	51.6		ug/Kg		103	70 - 138
Chlorobenzene	50.0	49.8		ug/Kg		100	70 - 130
Chloroethane	50.0	39.8		ug/Kg		80	65 - 130
Chloroform	50.0	48.4		ug/Kg		97	77 - 127
Chloromethane	50.0	39.0		ug/Kg		78	55 - 140
2-Chlorotoluene	50.0	47.1		ug/Kg		94	70 - 138
4-Chlorotoluene	50.0	46.3		ug/Kg		93	70 - 136
Chlorodibromomethane	50.0	55.8		ug/Kg		112	70 - 146
1,2-Dichlorobenzene	50.0	50.4		ug/Kg		101	70 - 130
1,3-Dichlorobenzene	50.0	49.3		ug/Kg		99	70 - 131
1,4-Dichlorobenzene	50.0	49.9		ug/Kg		100	70 - 130
1,3-Dichloropropane	50.0	49.6		ug/Kg		99	70 - 140

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-147393/5**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	50.0	48.8		ug/Kg		98	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	55.2		ug/Kg		110	60 - 145
Ethylene Dibromide	50.0	53.7		ug/Kg		107	70 - 140
Dibromomethane	50.0	52.5		ug/Kg		105	70 - 139
Dichlorodifluoromethane	50.0	40.1		ug/Kg		80	37 - 158
1,1-Dichloroethane	50.0	46.7		ug/Kg		93	70 - 130
1,2-Dichloroethane	50.0	48.0		ug/Kg		96	70 - 130
1,1-Dichloroethene	50.0	49.2		ug/Kg		98	76 - 122
cis-1,2-Dichloroethene	50.0	47.4		ug/Kg		95	70 - 138
trans-1,2-Dichloroethene	50.0	48.2		ug/Kg		96	67 - 130
1,2-Dichloropropane	50.0	45.9		ug/Kg		92	73 - 127
cis-1,3-Dichloropropene	50.0	48.4		ug/Kg		97	68 - 147
trans-1,3-Dichloropropene	50.0	51.5		ug/Kg		103	70 - 136
Ethylbenzene	50.0	46.5		ug/Kg		93	80 - 137
Hexachlorobutadiene	50.0	46.6		ug/Kg		93	70 - 132
2-Hexanone	250	222		ug/Kg		89	44 - 133
Isopropylbenzene	50.0	50.9		ug/Kg		102	88 - 128
4-Isopropyltoluene	50.0	49.1		ug/Kg		98	70 - 133
Methylene Chloride	50.0	43.6		ug/Kg		87	70 - 134
4-Methyl-2-pentanone (MIBK)	250	228		ug/Kg		91	60 - 160
Naphthalene	50.0	53.8		ug/Kg		108	60 - 147
N-Propylbenzene	50.0	46.6		ug/Kg		93	70 - 130
Styrene	50.0	43.8		ug/Kg		88	70 - 130
1,1,1,2-Tetrachloroethane	50.0	52.0		ug/Kg		104	70 - 130
1,1,2,2-Tetrachloroethane	50.0	47.1		ug/Kg		94	70 - 146
Tetrachloroethene	50.0	54.3		ug/Kg		109	70 - 132
Toluene	50.0	47.1		ug/Kg		94	80 - 128
1,2,3-Trichlorobenzene	50.0	50.6		ug/Kg		101	60 - 140
1,2,4-Trichlorobenzene	50.0	49.5		ug/Kg		99	60 - 140
1,1,1-Trichloroethane	50.0	50.1		ug/Kg		100	70 - 130
1,1,2-Trichloroethane	50.0	50.3		ug/Kg		101	70 - 130
Trichloroethene	50.0	51.4		ug/Kg		103	70 - 133
Trichlorofluoromethane	50.0	47.1		ug/Kg		94	60 - 140
1,2,3-Trichloropropane	50.0	50.4		ug/Kg		101	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	54.1		ug/Kg		108	60 - 140
1,2,4-Trimethylbenzene	50.0	49.2		ug/Kg		98	70 - 130
1,3,5-Trimethylbenzene	50.0	48.9		ug/Kg		98	70 - 131
Vinyl acetate	50.0	55.1		ug/Kg		110	38 - 176
Vinyl chloride	50.0	36.6		ug/Kg		73	58 - 125
m-Xylene & p-Xylene	100	94.7		ug/Kg		95	70 - 146
o-Xylene	50.0	50.7		ug/Kg		101	70 - 140
2,2-Dichloropropane	50.0	47.3		ug/Kg		95	70 - 162

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		45 - 131
1,2-Dichloroethane-d4 (Surr)	95		60 - 140
Toluene-d8 (Surr)	98		58 - 140

TestAmerica Pleasanton



# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS 720-147393/7**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	886		ug/Kg		89	61 - 128
<b>Surrogate</b>		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>
4-Bromofluorobenzene		97					45 - 131
1,2-Dichloroethane-d4 (Surr)		96					60 - 140
Toluene-d8 (Surr)		97					58 - 140

**Lab Sample ID: LCS 720-147393/6**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	50.0	50.5		ug/Kg		101	70 - 144	0	20
Acetone	250	214		ug/Kg		86	30 - 162	7	30
Benzene	50.0	46.2		ug/Kg		92	70 - 130	0	20
Dichlorobromomethane	50.0	48.5		ug/Kg		97	70 - 131	0	20
Bromobenzene	50.0	50.3		ug/Kg		101	70 - 130	3	20
Chlorobromomethane	50.0	53.0		ug/Kg		106	70 - 130	0	20
Bromoform	50.0	54.0		ug/Kg		108	59 - 158	0	20
Bromomethane	50.0	45.3		ug/Kg		91	59 - 132	8	20
2-Butanone (MEK)	250	222		ug/Kg		89	53 - 124	2	20
n-Butylbenzene	50.0	48.9		ug/Kg		98	70 - 142	2	20
sec-Butylbenzene	50.0	49.7		ug/Kg		99	70 - 136	3	20
tert-Butylbenzene	50.0	51.3		ug/Kg		103	70 - 130	3	20
Carbon disulfide	50.0	46.4		ug/Kg		93	60 - 140	1	20
Carbon tetrachloride	50.0	51.1		ug/Kg		102	70 - 138	1	20
Chlorobenzene	50.0	50.1		ug/Kg		100	70 - 130	1	20
Chloroethane	50.0	42.0		ug/Kg		84	65 - 130	6	20
Chloroform	50.0	48.2		ug/Kg		96	77 - 127	1	20
Chloromethane	50.0	41.1		ug/Kg		82	55 - 140	5	20
2-Chlorotoluene	50.0	48.9		ug/Kg		98	70 - 138	4	20
4-Chlorotoluene	50.0	47.4		ug/Kg		95	70 - 136	2	20
Chlorodibromomethane	50.0	55.1		ug/Kg		110	70 - 146	1	20
1,2-Dichlorobenzene	50.0	51.1		ug/Kg		102	70 - 130	1	20
1,3-Dichlorobenzene	50.0	50.3		ug/Kg		101	70 - 131	2	20
1,4-Dichlorobenzene	50.0	51.0		ug/Kg		102	70 - 130	2	20
1,3-Dichloropropane	50.0	49.8		ug/Kg		100	70 - 140	0	20
1,1-Dichloropropene	50.0	49.0		ug/Kg		98	70 - 130	0	20
1,2-Dibromo-3-Chloropropane	50.0	55.9		ug/Kg		112	60 - 145	1	20
Ethylene Dibromide	50.0	54.6		ug/Kg		109	70 - 140	2	20
Dibromomethane	50.0	52.2		ug/Kg		104	70 - 139	1	20
Dichlorodifluoromethane	50.0	42.1		ug/Kg		84	37 - 158	5	20
1,1-Dichloroethane	50.0	46.5		ug/Kg		93	70 - 130	1	20
1,2-Dichloroethane	50.0	47.7		ug/Kg		95	70 - 130	1	20
1,1-Dichloroethene	50.0	49.2		ug/Kg		98	76 - 122	0	20
cis-1,2-Dichloroethene	50.0	47.1		ug/Kg		94	70 - 138	1	20
trans-1,2-Dichloroethene	50.0	48.2		ug/Kg		96	67 - 130	0	20

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

**Lab Sample ID: LCS D 720-147393/6**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloropropane	50.0	45.4		ug/Kg		91	73 - 127	1	20
cis-1,3-Dichloropropene	50.0	49.4		ug/Kg		99	68 - 147	2	20
trans-1,3-Dichloropropene	50.0	51.5		ug/Kg		103	70 - 136	0	20
Ethylbenzene	50.0	46.5		ug/Kg		93	80 - 137	0	20
Hexachlorobutadiene	50.0	48.1		ug/Kg		96	70 - 132	3	20
2-Hexanone	250	218		ug/Kg		87	44 - 133	2	20
Isopropylbenzene	50.0	50.4		ug/Kg		101	88 - 128	1	20
4-Isopropyltoluene	50.0	50.5		ug/Kg		101	70 - 133	3	20
Methylene Chloride	50.0	43.9		ug/Kg		88	70 - 134	1	20
4-Methyl-2-pentanone (MIBK)	250	226		ug/Kg		91	60 - 160	1	20
Naphthalene	50.0	54.6		ug/Kg		109	60 - 147	1	20
N-Propylbenzene	50.0	47.8		ug/Kg		96	70 - 130	3	20
Styrene	50.0	44.2		ug/Kg		88	70 - 130	1	20
1,1,1,2-Tetrachloroethane	50.0	51.6		ug/Kg		103	70 - 130	1	20
1,1,2,2-Tetrachloroethane	50.0	46.4		ug/Kg		93	70 - 146	1	20
Tetrachloroethene	50.0	53.5		ug/Kg		107	70 - 132	1	20
Toluene	50.0	47.1		ug/Kg		94	80 - 128	0	20
1,2,3-Trichlorobenzene	50.0	51.9		ug/Kg		104	60 - 140	2	20
1,2,4-Trichlorobenzene	50.0	51.3		ug/Kg		103	60 - 140	4	20
1,1,1-Trichloroethane	50.0	49.6		ug/Kg		99	70 - 130	1	20
1,1,2-Trichloroethane	50.0	50.7		ug/Kg		101	70 - 130	1	20
Trichloroethene	50.0	51.2		ug/Kg		102	70 - 133	0	20
Trichlorofluoromethane	50.0	46.3		ug/Kg		93	60 - 140	2	20
1,2,3-Trichloropropane	50.0	51.6		ug/Kg		103	70 - 146	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	53.8		ug/Kg		108	60 - 140	1	20
1,2,4-Trimethylbenzene	50.0	50.7		ug/Kg		101	70 - 130	3	20
1,3,5-Trimethylbenzene	50.0	51.0		ug/Kg		102	70 - 131	4	20
Vinyl acetate	50.0	ND		ug/Kg		91	38 - 176	20	20
Vinyl chloride	50.0	39.8		ug/Kg		80	58 - 125	8	20
m-Xylene & p-Xylene	100	94.0		ug/Kg		94	70 - 146	1	20
o-Xylene	50.0	50.3		ug/Kg		101	70 - 140	1	20
2,2-Dichloropropane	50.0	47.8		ug/Kg		96	70 - 162	1	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	96		45 - 131
1,2-Dichloroethane-d4 (Surr)	96		60 - 140
Toluene-d8 (Surr)	98		58 - 140

**Lab Sample ID: LCS D 720-147393/8**

**Matrix: Solid**

**Analysis Batch: 147393**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	1000	888		ug/Kg		89	61 - 128	0	20

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8260B/CA\_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-147393/8  
Matrix: Solid  
Analysis Batch: 147393

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	97		45 - 131
1,2-Dichloroethane-d4 (Surr)	93		60 - 140
Toluene-d8 (Surr)	96		58 - 140

## Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-147350/1-A  
Matrix: Solid  
Analysis Batch: 147340

Client Sample ID: Method Blank  
Prep Type: Silica Gel Cleanup  
Prep Batch: 147350

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		10/30/13 08:46	10/31/13 01:42	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		10/30/13 08:46	10/31/13 01:42	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Capric Acid (Surr)	0.0009		0 - 1	10/30/13 08:46	10/31/13 01:42	1
p-Terphenyl	113		38 - 148	10/30/13 08:46	10/31/13 01:42	1

Lab Sample ID: MB 720-147350/1-A  
Matrix: Solid  
Analysis Batch: 147348

Client Sample ID: Method Blank  
Prep Type: Silica Gel Cleanup  
Prep Batch: 147350

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		10/30/13 08:46	10/31/13 02:13	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		10/30/13 08:46	10/31/13 02:13	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Capric Acid (Surr)	0.007		0 - 1	10/30/13 08:46	10/31/13 02:13	1
p-Terphenyl	100		38 - 148	10/30/13 08:46	10/31/13 02:13	1

Lab Sample ID: LCS 720-147350/2-A  
Matrix: Solid  
Analysis Batch: 147348

Client Sample ID: Lab Control Sample  
Prep Type: Silica Gel Cleanup  
Prep Batch: 147350

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Diesel Range Organics [C10-C28]	82.5	61.5		mg/Kg		75	36 - 112

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
p-Terphenyl	106		38 - 148

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: LCSD 720-147350/3-A**  
**Matrix: Solid**  
**Analysis Batch: 147348**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147350**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	82.4	66.5		mg/Kg		81	36 - 112	8	35
		<b>LCSD</b>	<b>LCSD</b>						
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>p-Terphenyl</i>	108		38 - 148						

**Lab Sample ID: MB 720-147447/1-A**  
**Matrix: Solid**  
**Analysis Batch: 147436**

**Client Sample ID: Method Blank**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147447**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		10/31/13 09:10	11/01/13 01:52	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		10/31/13 09:10	11/01/13 01:52	1
		<b>MB</b>	<b>MB</b>						
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>			
<i>Capric Acid (Surr)</i>	0.001		0 - 1	10/31/13 09:10	11/01/13 01:52	1			
<i>p-Terphenyl</i>	124		38 - 148	10/31/13 09:10	11/01/13 01:52	1			

**Lab Sample ID: LCS 720-147447/2-A**  
**Matrix: Solid**  
**Analysis Batch: 147436**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147447**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	83.3	66.2		mg/Kg		80	36 - 112		
		<b>LCS</b>	<b>LCS</b>						
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>p-Terphenyl</i>	97		38 - 148						

**Lab Sample ID: LCSD 720-147447/3-A**  
**Matrix: Solid**  
**Analysis Batch: 147436**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147447**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Diesel Range Organics [C10-C28]	82.9	71.9		mg/Kg		87	36 - 112	8	35
		<b>LCSD</b>	<b>LCSD</b>						
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>p-Terphenyl</i>	98		38 - 148						

**Lab Sample ID: MB 720-147566/1-A**  
**Matrix: Solid**  
**Analysis Batch: 147624**

**Client Sample ID: Method Blank**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147566**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		11/02/13 14:22	11/04/13 15:27	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		11/02/13 14:22	11/04/13 15:27	1

TestAmerica Pleasanton

# QC Sample Results

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

**Lab Sample ID: MB 720-147566/1-A**  
**Matrix: Solid**  
**Analysis Batch: 147624**

**Client Sample ID: Method Blank**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147566**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Capric Acid (Surr)	0.003		0 - 1	11/02/13 14:22	11/04/13 15:27	1
p-Terphenyl	125		38 - 148	11/02/13 14:22	11/04/13 15:27	1

**Lab Sample ID: LCS 720-147566/2-A**  
**Matrix: Solid**  
**Analysis Batch: 147624**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147566**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits	
		Result	Qualifier				Limits	RPD
Diesel Range Organics [C10-C28]	82.7	71.1		mg/Kg		86	36 - 112	
Surrogate	LCS LCS		Limits					
%Recovery	Qualifier	Result		Qualifier	Unit	D	%Rec	Limits
p-Terphenyl	123		38 - 148					

**Lab Sample ID: LCSD 720-147566/3-A**  
**Matrix: Solid**  
**Analysis Batch: 147625**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Silica Gel Cleanup**  
**Prep Batch: 147566**

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec. Limits		RPD	Limit
		Result	Qualifier				Limits	RPD		
Diesel Range Organics [C10-C28]	82.4	75.8		mg/Kg		92	36 - 112	6	35	
Surrogate	LCSD LCSD		Limits							
%Recovery	Qualifier	Result		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
p-Terphenyl	121		38 - 148							

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 720-147197/1-A**  
**Matrix: Solid**  
**Analysis Batch: 147271**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 147197**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lead	ND		0.50		mg/Kg		10/28/13 16:03	10/29/13 12:07	1

**Lab Sample ID: LCS 720-147197/2-A**  
**Matrix: Solid**  
**Analysis Batch: 147271**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 147197**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits	
		Result	Qualifier				Limits	RPD
Lead	50.0	49.0		mg/Kg		98	80 - 120	

**Lab Sample ID: LCSD 720-147197/3-A**  
**Matrix: Solid**  
**Analysis Batch: 147271**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 147197**

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec. Limits		RPD	Limit
		Result	Qualifier				Limits	RPD		
Lead	50.0	51.8		mg/Kg		104	80 - 120	6	20	

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# QC Association Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## GC/MS VOA

### Analysis Batch: 147272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-4	B1-16'	Total/NA	Solid	8260B/CA_LUFT MS	147303
720-53309-18	B3-4'	Total/NA	Solid	8260B/CA_LUFT MS	147303
LCS 720-147272/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-147272/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-147272/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-147272/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-147272/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

### Prep Batch: 147303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-4	B1-16'	Total/NA	Solid	5030B	
720-53309-18	B3-4'	Total/NA	Solid	5030B	

### Analysis Batch: 147339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-23	B4-4'	Total/NA	Solid	8260B/CA_LUFT MS	147363
720-53309-28	B5-4'	Total/NA	Solid	8260B/CA_LUFT MS	147363
720-53309-33	B6-4'	Total/NA	Solid	8260B/CA_LUFT MS	147363
LCS 720-147339/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-147339/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-147339/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-147339/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-147339/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

### Prep Batch: 147363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-23	B4-4'	Total/NA	Solid	5030B	
720-53309-28	B5-4'	Total/NA	Solid	5030B	
720-53309-33	B6-4'	Total/NA	Solid	5030B	

### Analysis Batch: 147393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-1	B1-4'	Total/NA	Solid	8260B/CA_LUFT MS	147425
720-53309-12	B2-4'	Total/NA	Solid	8260B/CA_LUFT MS	147425
LCS 720-147393/5	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	
LCS 720-147393/7	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	

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# QC Association Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## GC/MS VOA (Continued)

### Analysis Batch: 147393 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-147393/6	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
LCSD 720-147393/8	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	
MB 720-147393/4	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	

### Prep Batch: 147425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-1	B1-4'	Total/NA	Solid	5030B	
720-53309-12	B2-4'	Total/NA	Solid	5030B	

## GC Semi VOA

### Analysis Batch: 147340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-147350/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	147350

### Analysis Batch: 147341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-1	B1-4'	Silica Gel Cleanup	Solid	8015B	147350
720-53309-4	B1-16'	Silica Gel Cleanup	Solid	8015B	147350
720-53309-12	B2-4'	Silica Gel Cleanup	Solid	8015B	147350
720-53309-18	B3-4'	Silica Gel Cleanup	Solid	8015B	147350
720-53309-23	B4-4'	Silica Gel Cleanup	Solid	8015B	147350

### Analysis Batch: 147348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-147350/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	147350
LCSD 720-147350/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	147350
MB 720-147350/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	147350

### Prep Batch: 147350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-1	B1-4'	Silica Gel Cleanup	Solid	3546	
720-53309-4	B1-16'	Silica Gel Cleanup	Solid	3546	
720-53309-12	B2-4'	Silica Gel Cleanup	Solid	3546	
720-53309-18	B3-4'	Silica Gel Cleanup	Solid	3546	
720-53309-23	B4-4'	Silica Gel Cleanup	Solid	3546	
LCS 720-147350/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-147350/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-147350/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

### Analysis Batch: 147436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-33	B6-4'	Silica Gel Cleanup	Solid	8015B	147447
LCS 720-147447/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	147447
LCSD 720-147447/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	147447
MB 720-147447/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	147447

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# QC Association Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## GC Semi VOA (Continued)

### Prep Batch: 147447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-33	B6-4'	Silica Gel Cleanup	Solid	3546	
LCS 720-147447/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-147447/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-147447/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

### Prep Batch: 147566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-28	B5-4'	Silica Gel Cleanup	Solid	3546	
LCS 720-147566/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-147566/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-147566/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

### Analysis Batch: 147624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-147566/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	147566
MB 720-147566/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	147566

### Analysis Batch: 147625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-147566/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	147566

### Analysis Batch: 147628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-28	B5-4'	Silica Gel Cleanup	Solid	8015B	147566

## Metals

### Prep Batch: 147197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-1	B1-4'	Total/NA	Solid	3050B	
720-53309-4	B1-16'	Total/NA	Solid	3050B	
720-53309-12	B2-4'	Total/NA	Solid	3050B	
720-53309-18	B3-4'	Total/NA	Solid	3050B	
720-53309-23	B4-4'	Total/NA	Solid	3050B	
720-53309-28	B5-4'	Total/NA	Solid	3050B	
720-53309-33	B6-4'	Total/NA	Solid	3050B	
LCS 720-147197/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-147197/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
MB 720-147197/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 147271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-147197/2-A	Lab Control Sample	Total/NA	Solid	6010B	147197
LCSD 720-147197/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	147197
MB 720-147197/1-A	Method Blank	Total/NA	Solid	6010B	147197

### Analysis Batch: 147329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-1	B1-4'	Total/NA	Solid	6010B	147197
720-53309-4	B1-16'	Total/NA	Solid	6010B	147197

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# QC Association Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Metals (Continued)

### Analysis Batch: 147329 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53309-12	B2-4'	Total/NA	Solid	6010B	147197
720-53309-18	B3-4'	Total/NA	Solid	6010B	147197
720-53309-23	B4-4'	Total/NA	Solid	6010B	147197
720-53309-28	B5-4'	Total/NA	Solid	6010B	147197
720-53309-33	B6-4'	Total/NA	Solid	6010B	147197

- 1
- 2
- 3
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- 10
- 11
- 12
- 13
- 14

# Lab Chronicle

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Client Sample ID: B1-4'

Date Collected: 10/24/13 08:53

Date Received: 10/24/13 15:53

## Lab Sample ID: 720-53309-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147425	10/30/13 22:04	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147393	10/30/13 23:03	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147350	10/30/13 15:21	MRP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147341	10/31/13 02:30	DCH	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 20:33	SLK	TAL PLS

## Client Sample ID: B1-16'

Date Collected: 10/24/13 09:12

Date Received: 10/24/13 15:53

## Lab Sample ID: 720-53309-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147303	10/29/13 16:35	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147272	10/30/13 00:25	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147350	10/30/13 15:21	MRP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147341	10/31/13 00:53	DCH	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 20:37	SLK	TAL PLS

## Client Sample ID: B2-4'

Date Collected: 10/24/13 11:01

Date Received: 10/24/13 15:53

## Lab Sample ID: 720-53309-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147425	10/30/13 22:04	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147393	10/30/13 23:30	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147350	10/30/13 15:21	MRP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147341	10/31/13 01:17	DCH	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 20:42	SLK	TAL PLS

## Client Sample ID: B3-4'

Date Collected: 10/24/13 11:42

Date Received: 10/24/13 15:53

## Lab Sample ID: 720-53309-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147303	10/29/13 16:35	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147272	10/30/13 01:22	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147350	10/30/13 15:21	MRP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147341	10/31/13 01:42	DCH	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 20:55	SLK	TAL PLS

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# Lab Chronicle

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

**Client Sample ID: B4-4'**

**Lab Sample ID: 720-53309-23**

**Date Collected: 10/24/13 12:14**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147363	10/30/13 10:00	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147339	10/30/13 16:49	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147350	10/30/13 15:21	MRP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147341	10/31/13 02:06	DCH	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 21:00	SLK	TAL PLS

**Client Sample ID: B5-4'**

**Lab Sample ID: 720-53309-28**

**Date Collected: 10/24/13 13:03**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147363	10/30/13 10:00	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147339	10/30/13 17:18	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147566	11/02/13 14:22	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147628	11/04/13 13:51	DCH	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 21:04	SLK	TAL PLS

**Client Sample ID: B6-4'**

**Lab Sample ID: 720-53309-33**

**Date Collected: 10/24/13 13:43**

**Matrix: Solid**

**Date Received: 10/24/13 15:53**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			147363	10/30/13 10:00	YYB	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	147339	10/30/13 14:54	ASC	TAL PLS
Silica Gel Cleanup	Prep	3546			147447	10/31/13 09:10	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	147436	10/31/13 18:34	JL	TAL PLS
Total/NA	Prep	3050B			147197	10/28/13 17:52	JCR	TAL PLS
Total/NA	Analysis	6010B		4	147329	10/29/13 21:09	SLK	TAL PLS

**Laboratory References:**

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Certification Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

## Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

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# Method Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM S	8260B / CA LUFT MS	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS
6010B	Metals (ICP)	SW846	TAL PLS

**Protocol References:**

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

**Laboratory References:**

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



# Sample Summary

Client: ACC Environmental Consultants  
Project/Site: Chestnut

TestAmerica Job ID: 720-53309-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-53309-1	B1-4'	Solid	10/24/13 08:53	10/24/13 15:53
720-53309-4	B1-16'	Solid	10/24/13 09:12	10/24/13 15:53
720-53309-12	B2-4'	Solid	10/24/13 11:01	10/24/13 15:53
720-53309-18	B3-4'	Solid	10/24/13 11:42	10/24/13 15:53
720-53309-23	B4-4'	Solid	10/24/13 12:14	10/24/13 15:53
720-53309-28	B5-4'	Solid	10/24/13 13:03	10/24/13 15:53
720-53309-33	B6-4'	Solid	10/24/13 13:43	10/24/13 15:53

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San Francisco  
1220 Quarry Lane

Pleasanton, CA 94566  
phone 925.484.1919 fax 925.600.3002

720-53309 Chain of Custody Record

TestAmerica Laboratories, Inc.  
THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica  
149598

Client Contract		Project Manager: Ian Sutherland		Date: 10.24.13	
ACC Environmental Consultants		Tel/Fax: 510.713.0752		Carrier: Ian Sutherland	
7977 Capwell Drive, Suite 100		Analysis Turnaround Time		Job No. 6733-699-09	
Oakland, CA 94621		Calendar (C) or Work Days (W) <u>W</u>		COG No. 1 of 4 COGs	
510-638-8400 Phone		TAT if different from below		SDG No.	
510-638-8404 FAX		2 weeks			
Project Name: 1 Chestnut		1 week			
Site: Livermore, CA		2 days			
PO # 6988-0V3.00		1 day			
Sample Identification		Sample Date		Sample Time	
B1-41		10/24/13		8:55 A	
B1-8				9:06	
B1-12				9:07	
B1-16				9:12	
B1-26				9:09	
B1-24				9:16	
B1-30				9:21	
B1-32				9:26	
B1-36				9:33	
B1-40				9:38	
B1-44				10:03	
Sample Matrix		Sample Type		Matrix # of Cont	
				5:1 2	
Filtered Sample		Lead		XXXX	
		TPH-d + -me w/ 5% cleanup		XXXX	
		VOCs + TPH-g		XXXX	
Sample Specific Notes:		HOLD			
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client	
Possible Hazard Identification		Non-hazard		Harmless	
Special Instructions/QC Requirements & Comments:		Toxic/Irritant		Poison B	
		Unknown			
Retained by: <u>D. Miranda</u>		Company: <u>ACC</u>		Date/Time: <u>10/24/13 3:53P</u>	
Retained by:		Company:		Date/Time:	
Retained by:		Company:		Date/Time:	
Retained by:		Company:		Date/Time:	





San Francisco  
1220 Quarry Lane

Pleasanton, CA 94566  
phone 925.484.1919 fax 925.600.3002

720-533089 Chain of Custody Record

199598  
TestAmerica  
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, CA 94621 510-638-8400 x110 Phone 510-638-8404 FAX		Project Manager: Ian Sutherland Tel/Fax: 510.773.0752		Site Contact: Ian Sutherland Lab Contact: Dimple Sharma		Date: 10.24.13		Carrier: Ian Sutherland		COC No: 2 of 4 COCs Job No. 0709-000079	
Analysis Turnaround Time Calendar (C) or Work Days (W) W		TAT if different from Below		Filtered Sample		Lea TPH-D + -mo w/5.6 camp VOCs + TPH-g		HOLD		Sample Specific Notes:	
Project Name: Chestnut Site: Livermore, CA		<input type="checkbox"/> 2 weeks <input checked="" type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Date		Sample Time		Sample Type		Matrix # of Coals	
PO # G989-003.00		Sample Identification		Sample Date		Sample Time		Sample Type		Matrix # of Coals	
		B2- 41		10/24/13		11:01A				Silt 1	
		B2- 81				11:03					
		B2- 121				11:14					
		B2- 161				11:16					
		B2- 201				11:16					
		B2- 241				11:26					
		B3- 41				11:42					
		B3- 81				11:45					
		B3- 121				11:49					
		B3- 161				11:55					
		B3- 201				11:58					
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		<input type="checkbox"/> Return To Client		<input type="checkbox"/> Disposal By Lab		<input type="checkbox"/> Archive For		Months	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Special Instructions/QC Requirements & Comments:									
Relinquished by: [Signature] D. Miranda		Company: ACC		Date/Time: 10/24/13 3:58pm		Received by: [Signature] Ian Sutherland		Company: [Signature]		Date/Time: 10-24-13 1553	
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:	

Form No. CA-C-WI-002, dated 04/07/2011



**San Francisco**  
1220 Quarry Lane

Pleasanton, CA 94566  
phone 925.484.1919 fax 925.600.3002

Chain of Custody Record  
720-53304

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

149598

TestAmerica Laboratories, Inc.

ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, CA 94621 510-638-8400 x110 Phone 510-638-8404 FAX		Client Contact		Project Manager: Ian Sutherland Tel/Fax: 510.773.0752		Site Contact: Ian Sutherland Lab Contact: Dimple Sharma		Date: 10-24-13		COC No: 3 of 4 COCs Job No: 6283-099-00	
Project Name: 1 Site: Livermore, CA P.O.#: G988-003.00		Analysis Turnaround Time Calendar (C) or Work Days (W) W TAT if different from Below <input type="checkbox"/> 2 weeks <input checked="" type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Sample Identification		Sample Date		Sample Time		Sample Type	
Sample Date		Sample Time		Sample Type		Matrix # of Cont.		Filtered Sample		Sample Specific Notes	
B4-45		12/13		Soil		1		Lead TPH-d + -m w/s.c. VOCs + TPH-g cleanup		HOLD	
B4-81		12:15		Soil		1					
B4-121		12:22		Soil		1					
B4-116		12:23		Soil		1					
B4-201		12:28		Soil		1					
B5-41		1:05P		Soil		1					
B5-81		1:05P		Soil		1					
B5-121		1:15P		Soil		1					
B5-161		1:14P		Soil		1					
B5-201		1:20P		Soil		1					
Preservation Used: 1=Ice; 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Volatile <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>											
Special Instructions/QC Requirements & Comments:											
Retrieved by: [Signature]		Company: ACC		Date/Time: 10-24-13 3:55P		Received by: [Signature]		Company: [Signature]		Date/Time: 10-24-13 1553	
Retrieved by: [Signature]		Company: [Signature]		Date/Time: [Signature]		Received by: [Signature]		Company: [Signature]		Date/Time: [Signature]	



**San Francisco**  
1220 Quarry Lane  
Pleasanton, CA 94566  
phone 925.484.1919 fax 925.600.3002

**720-53309**  
Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.  
49578

Client Contact: ACC Environmental Consultants  
7977 Capwell Drive, Suite 100  
Oakland, CA 94621  
510-638-8400 x110 Phone  
510-638-8404 FAX  
Project Name: 1  
Site: Livermore, CA  
P.O.#: 988-003.60

Project Manager: Ian Sutherland  
Tel/Fax: 510.773.0752

Analysis Turnaround Time  
Calendar (C) or Work Days (W)  W  
TNT if different from below  
 2 weeks  
 1 week  
 2 days  
 1 day

Site Contact: Ian Sutherland  
Lab Contact: Dimple Sharma  
Date: 10.24.13  
Carrier: Ian Sutherland

COG No: 4 of 4 COCs  
Job No: 5202-009-09  
SDG No.

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix # of Cont.	Filtered Sample	Sample Specific Notes
B6-41	10/24/13	1:43		Soil	X	
B6-81		1:45			X	
B6-121		1:50			X	
B6-161		1:52			X	
B6-201		1:57			X	
						HOLD

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other

Possible Hazard Identification  
 Non-Hazard  Flammable  Corrosive/Irritant  Poison B  Unknown

Special Instructions/QC Requirements & Comments:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Dispose By Lab  Archive For \_\_\_\_\_ Months

Requested by: [Signature] D. Miranda  
 Requisitioned by: [Signature]  
 Company: ACC  
 Date/Time: 10/24/13 3:53  
 Received by: [Signature]  
 Company: [Signature]  
 Date/Time: 10/24/13 1553

Requisitioned by: [Signature]  
 Company: [Signature]  
 Date/Time: [Signature]

Form No. CA-C-WI-002, dated 04/07/2011

## Login Sample Receipt Checklist

Client: ACC Environmental Consultants

Job Number: 720-53309-1

**Login Number: 53309**

**List Source: TestAmerica Pleasanton**

**List Number: 1**

**Creator: Mullen, Joan**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are 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	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received 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	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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## **APPENDIX D**

**Protocol for Determining Background Concentrations of Metals in Soil  
at Lawrence Berkeley National Laboratory (LBNL)**

*A Joint Effort of  
Environment, Health and Safety Division and  
Earth Sciences Division  
Lawrence Berkeley National Laboratory  
University of California  
Berkeley, CA 94720*

August 1995

This work was done at the Lawrence Berkeley National Laboratory, which is operated by the University of California for the U. S. Department of Energy under contract DE-AC03-76SF00098.

Protocol for Determining Background Concentrations of Metals in Soil  
at Lawrence Berkeley National Laboratory (LBNL)

Background concentrations for metals in soil at LBNL were determined in accordance with procedures described in "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities" Interim Final Guidance, United States Environmental Protection Agency (EPA), February 1989 (PB89-151047). The background concentration was defined as the 95% upper confidence limit (UCL). A tolerance coefficient of 95%, as recommended in the EPA guidance document, was used to determine the 95% UCL, which was used to define the background levels. This means that one has a confidence level of 95% that the 95% UCL will contain at least 95% of the distribution of observations from the background data.

The upper confidence limit for background data that follows a normal distribution can be calculated by the formula:

$$UCL = X_{av} + K\sigma$$

where:

- UCL = the upper confidence (tolerance) limit
- $X_{av}$  = the arithmetic mean
- $\sigma$  = the standard deviation
- K = the one sided normal tolerance factor

Background concentrations were determined from the 95% upper confidence limit for the following California Code of Regulations (CCR) Title 22, California Assessment Manual (CAM) 17 metals:

1. antimony (Sb)
2. arsenic (As)
3. barium (Ba)
4. beryllium (Be)
5. cadmium (Cd)
6. chromium (Cr)
7. cobalt (Co)
8. copper (Cu)
9. lead (Pb)
10. mercury (Hg)
11. molybdenum (Mo)
12. nickel (Ni)
13. selenium (Se)
14. silver (Ag)
15. thallium (Tl)
16. vanadium (Vn)
17. zinc (Zn)

Site background concentrations were determined from the data set of 498 soil samples from the borings for construction of 71 monitoring wells. Samples from two monitoring wells, MW7-94-3 and MW77-92-10, which were installed in areas of potential metals contamination were excluded from the data set. In addition, the data set was reviewed for extreme outliers and those values were also excluded from the data set. The data used for the calculation of background concentrations are included in Table 1. The arithmetic mean ( $X_{av}$ ) and standard deviation ( $\sigma$ ) were calculated by assigning a value of the detection limit for all analytes with non-detectable concentrations. The one-sided normal tolerance factor (K) for the 95% UCL was obtained from Table 5, Appendix B of the EPA guidance document. This tolerance factor (K) is dependent on the number of the samples in the data set. Values of  $X_{av}$ ,  $\sigma$ , and K used to calculate background concentrations are listed in Table 2.

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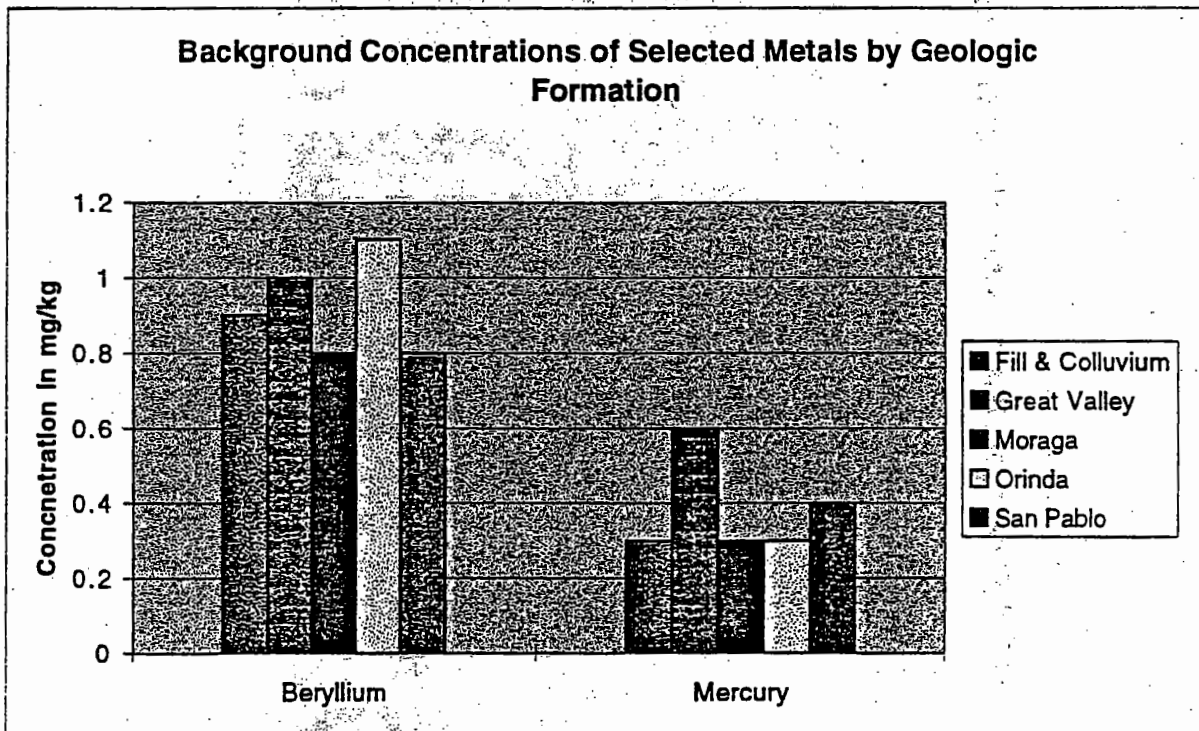
The same data set was also used to calculate background concentrations (95% UCL) of metals for individual geologic units at LBNL, in order to assess if there is a geological dependent variation in background metals concentrations. Background concentrations were determined for the following geologic units:

- Colluvium/Fill
- Moraga Formation
- Orinda Formation
- San Pablo Group
- Great Valley Group

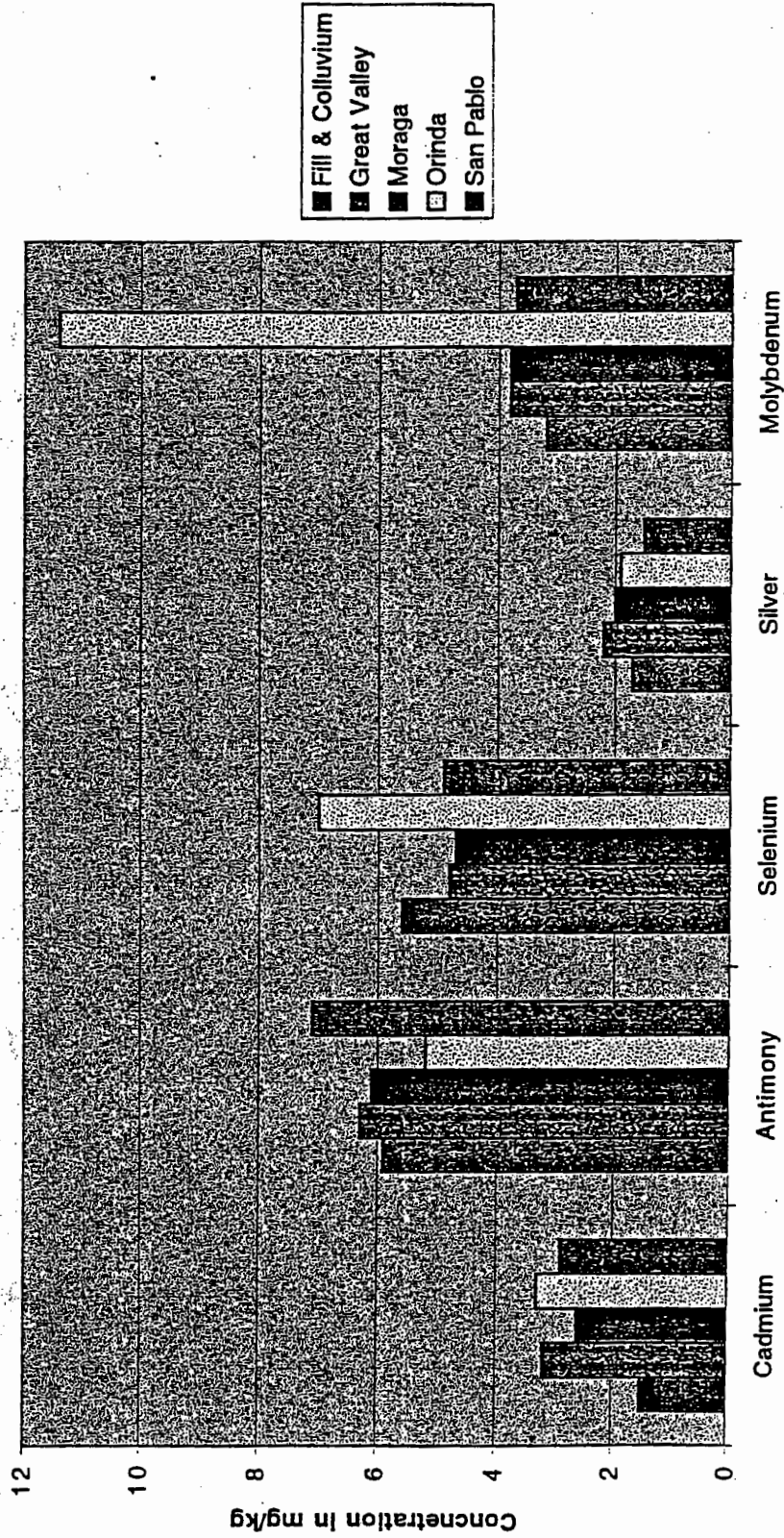
The calculated site background metals concentrations and the background concentrations for individual geologic units are listed in Table 3. The background concentrations for the geologic units are also presented graphically on chart 1 (arsenic, cobalt, copper, lead, thallium, and vanadium), chart 2 (beryllium and mercury), chart 3 (cadmium, antimony, selenium, silver, and molybdenum), and chart 4 (nickel, chromium, zinc, and barium). Since the background concentrations are generally similar for the different geologic units and since the specific formation corresponding to the sample location is not always known, overall site background levels will generally be utilized for requesting No Further Investigation (NFI) status for LBNL's Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). Background metals concentrations for specific geologic units with background concentrations significantly greater than site background may also be used in some cases to request NFI status, including:

- Arsenic in Great Valley Group rocks
- Thallium in fill/colluvium and Moraga Formation rocks
- Molybdenum and selenium in Orinda Formation rocks
- Copper in Great Valley Group rocks

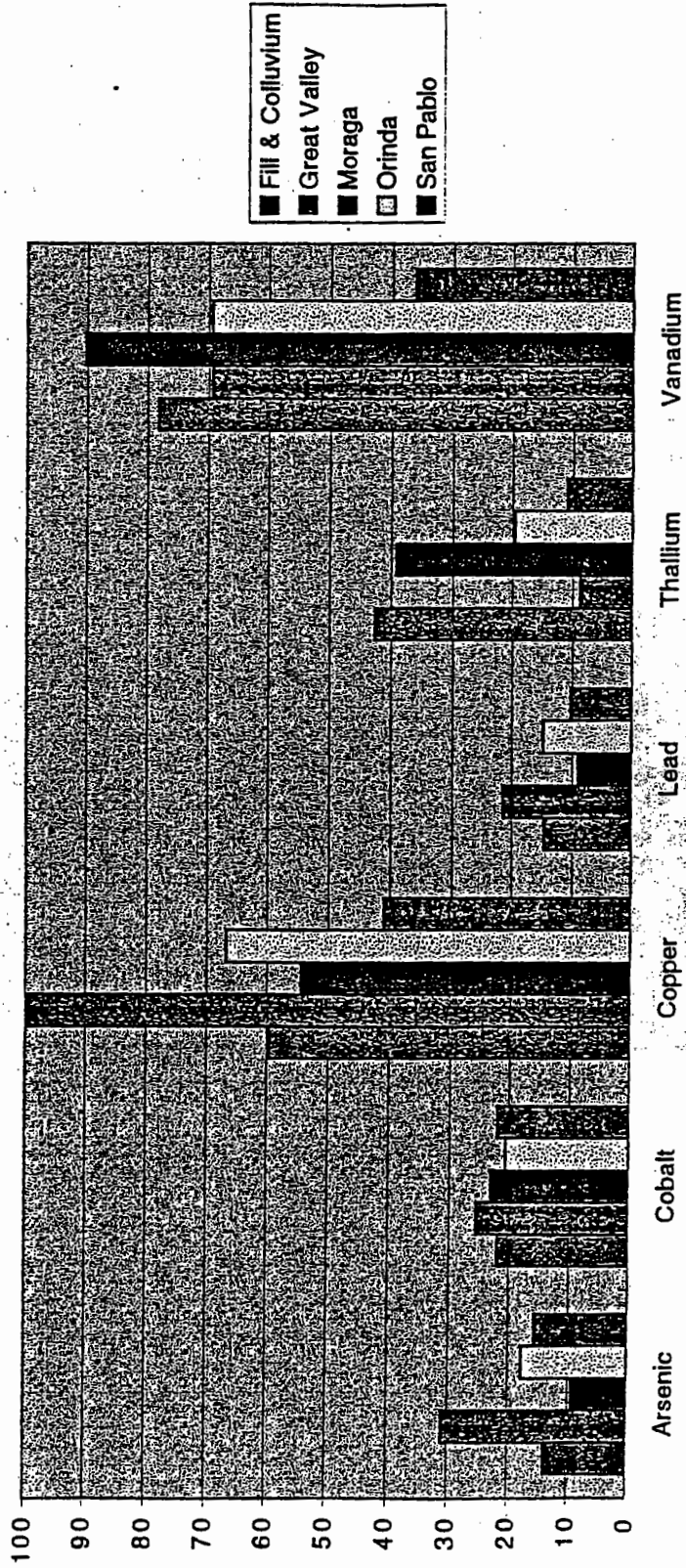
BG Met/geology Chart 2

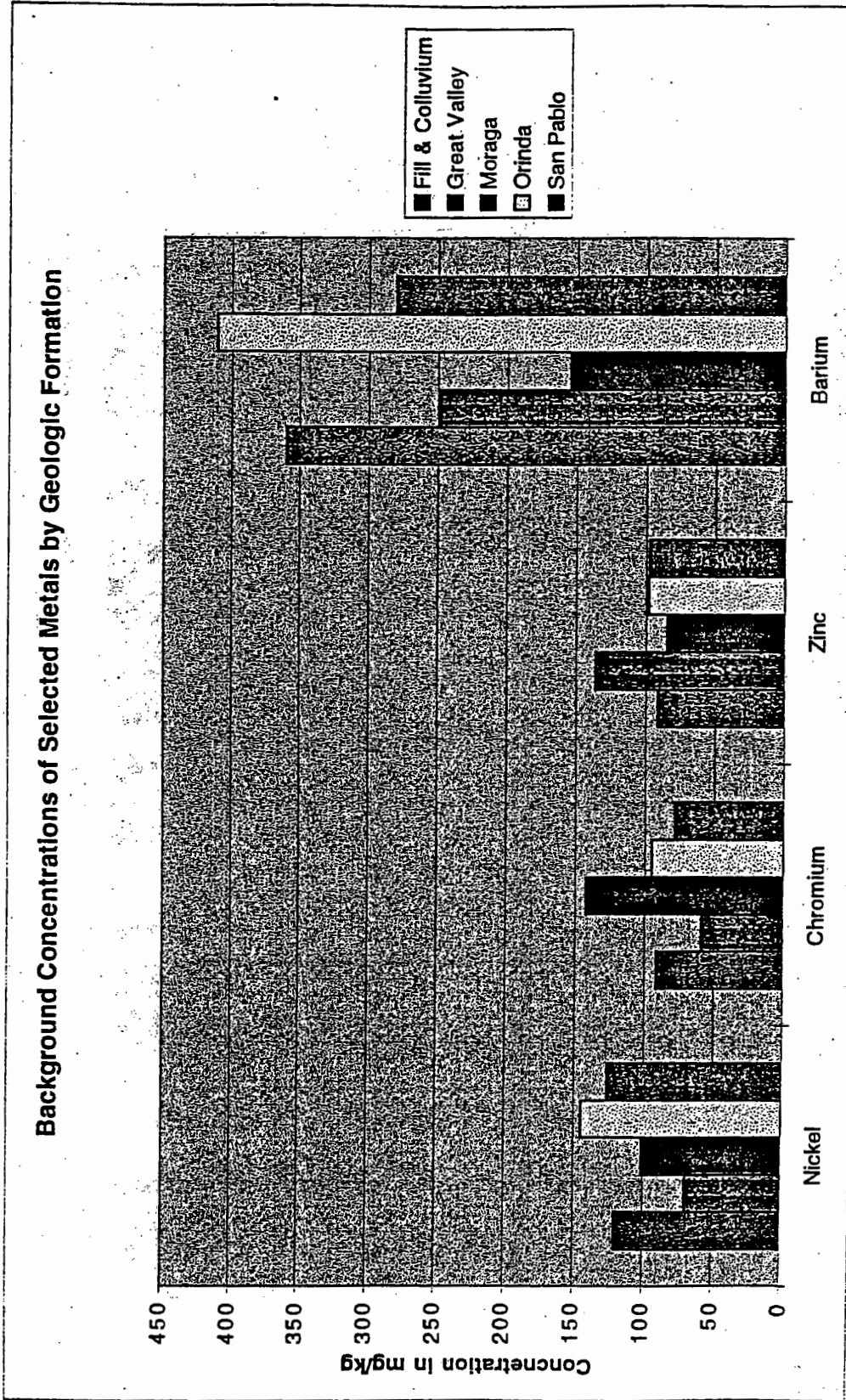


### Background Concentrations of Selected Metals by Geologic Formation



### Background Concentrations of Selected Metals by Geologic Formation





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**TABLE 1**  
**Metals Concentrations In soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Metals Concentrations (mg/kg)																
			Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn
MW51-92-2	BS51-92-2-5	l/c	2	9	93	0.6	0.4	71	18	20	10	0.2	0.6	49	2	0.2	3	61	54
	BS51-92-2-15	gv	2	9	330	0.8	0.2	89	14	33	12	0.2	0.6	110	2	0.2	3	44	67
MW88-92-4	BS88-92-4-5.5	l/c	2	13	130	0.6	0.2	23	8.8	13	11	0.2	1.1	18	2	0.2	3	42	45
	BS88-92-4-15.5	gv	2	13	210	0.7	0.7	25	15	15	10	0.2	0.7	46	2	0.2	4	59	57
	BS88-92-4-25.5	gv	2	13	38	0.2	0.2	6	2.4	4	5	0.2	0.6	9	2	0.2	3	15	15
	BS88-92-4-34.5	gv	2	17	56	0.7	0.5	41	9.5	47	13	0.2	0.9	33	3	0.2	3	42	82
	BS88-92-4-58	gv	2	14	24	0.3	0.3	7	4.2	43	8	0.2	0.7	6	2	0.3	3	22	52
MW37-92-5	BS37-92-5-6	o	2	12	88	0.5	0.2	68	25	34	23	0.2	0.6	62	2	0.2	3	65	96
	BS37-92-5-16	o	2	22	230	1.1	0.2	110	14	26	15	0.2	0.6	93	2	0.2	9	72	84
	BS37-92-5-36	o	2	18	1300	1.2	0.3	30	11	31	15	0.2	0.6	32	2	0.3	3	59	69
	BS37-92-5-65	o	2	17	93	1.1	0.3	38	15	21	13	0.2	0.6	36	2	0.2	3	62	88
	BS37-92-5-74	o	2	12	110	1.6	0.3	51	18	35	25	0.2	2.5	56	4	0.3	3	69	110
	BS37-92-5-81	gv	2	12	72	0.9	0.6	35	14	50	15	0.2	1.5	36	2	0.2	4	48	98
	BS37-92-5-88	gv	2	6	110	0.7	0.4	36	15	48	14	0.2	1	41	2	0.2	6	45	92
	BS37-92-5-97	gv	2	9	290	1	0.4	47	16	51	20	0.2	0.7	47	3	0.2	4	69	96
	MW37-92-6	BS37-92-6-5.5	o	2	3	120	0.8	0.3	38	12	37	14	0.2	0.6	40	2	0.2	6	43
BS37-92-6-16		o	2	6	280	0.8	0.2	40	14	36	16	0.2	1	59	3	0.2	10	39	82
BS37-92-6-26		o	2	4	260	0.8	0.3	32	16	35	18	0.2	0.6	44	2	0.2	4	43	95
BS37-92-6-35		gv	2	3	280	0.8	0.2	34	35	250	31	0.2	0.8	64	2	0.2	3	59	130
MW70-92-7	BS70-92-7-5.5	gv	2	17	180	0.9	0.5	56	18	53	17	0.2	0.6	57	2	0.2	3	56	110
	BS70-92-7-10.5	gv	2	16	59	1	0.5	45	12	39	16	0.2	0.6	37	2	0.2	3	53	96
	BS70-92-7-15.5	gv	2	19	51	0.8	0.3	47	13	34	15	0.2	0.6	45	2	0.2	3	57	81
MW58-92-8	BS58-92-8-5.5	m	2	2	97	0.3	0.3	52	15	21	4	0.2	0.6	21	2	0.2	3	22	45
	BS58-92-8-11	o	2	28	840	1.1	0.8	18	4.8	14	5	0.2	1.1	38	3	1	3	28	27
	BS58-92-8-16	o	2	8	330	0.8	1	51	23	35	13	0.2	0.6	79	6	0.5	3	36	75
	BS58-92-8-21	o	2	13	190	0.8	0.5	97	15	25	14	0.2	0.7	110	3	0.2	6	52	87
	BS58-92-8-30.8	o	2	5	270	0.8	0.3	33	15	24	12	0.2	0.6	51	3	0.2	3	35	75
MW46-92-9	BS46-92-9-5.5	l/c	2	7	100	0.9	0.2	73	23	28	11	0.2	0.6	72	2	0.4	3	85	49
	BS46-92-9-11	o	2	7	110	0.6	0.3	92	13	24	7	0.2	0.6	98	2	0.2	7	60	43
	BS46-92-9-15.5	o	2	5	110	0.7	0.3	43	10	26	9	0.2	0.6	59	2	0.2	4	45	50
	BS46-92-9-20.5	o	2	8	120	0.7	0.2	53	10	33	12	0.2	0.6	58	2	0.5	6	43	57
	BS46-92-9-30	o	2	11	200	2.7	0.2	61	12	29	11	0.2	0.6	65	2	0.6	5	50	58
	BS46-92-9-40.5	o	2	3	280	0.9	0.2	83	16	34	12	0.2	0.6	80	2	0.2	7	78	64
	BS46-92-9-50	o	2	11	230	0.9	0.2	99	16	21	14	0.2	0.6	100	2	0.6	8	67	80
	BS46-92-9-80	o	2	8	270	0.8	0.3	97	16	27	12	0.3	1.3	110	2	0.5	4	59	61
MW26-92-11	BS26-92-11-4	m	2	11	91	0.8	0.3	67	17	15	9	0.2	0.6	54	2	5.2	3	64	56
	BS26-92-11-9	o	2	7	170	0.8	0.2	59	19	20	6	0.2	0.6	40	2	0.2	3	60	36
	BS26-92-11-20.5	o	2	10	100	0.5	0.2	100	20	32	7	0.2	0.6	190	2	0.2	4	50	53
	BS26-92-11-30.2	o	2	11	94	0.6	0.2	77	16	35	8	0.2	0.6	130	2	0.2	8	50	57
MW61-92-12	BS61-92-12-10.5	l/c	2	4	370	0.8	0.3	34	12	43	13	0.2	0.6	41	2	0.2	5	33	74
	BS61-92-12-20.3	o	2	4	120	0.7	0.4	28	5.6	13	9	0.2	0.6	21	2	0.2	3	26	36
	BS61-92-12-30.3	o	2	6	240	0.5	0.2	19	7.1	21	11	0.2	0.9	36	2	0.2	11	18	48
	BS61-92-12-40.5	o	2	4	210	0.5	0.2	31	5.1	3	7	0.2	0.6	29	2	0.3	5	22	34
	BS61-92-12-60	o	2	3	170	0.4	0.2	43	4.6	4	6	0.2	0.6	26	2	0.2	3	25	40
	BS61-92-12-71	o	2	5	34	0.4	1.7	28	5.6	7	6	0.2	0.6	26	2	0.9	3	22	29
	BS61-92-12-85	o	2	7	230	0.6	0.2	30	6.6	200	9	0.2	0.7	28	2	0.3	3	25	130
MW74-92-13	BS74-92-13-6	l/c	1.5	0.25	45	0.1	1.2	12	3.2	7.5	4.5	0.12	0.28	45	0.5	0.25	2	7.8	26
	BS74-92-13-16	l/c	1	0.25	39	0.23	1.4	11	3.5	11	3.5	0.1	0.25	16	0.5	0.25	2	5.4	24
	BS74-92-13-25.5	sp	1	0.25	38	0.08	3.3	11	3.7	21	4.3	0.39	0.25	25	0.5	0.25	2	9	29
	BS74-92-13-33	sp	1	0.25	49	0.26	1.4	12	3.6	17	3.9	0.4	0.26	21	0.63	0.25	2	5.5	24
MW83-92-14	BS74-92-13-40	sp	1	0.25	17	0.06	0.69	4.1	1.7	6.6	2.3	0.07	0.38	6.2	0.5	0.5	2	3.3	17
	BS83-92-14-6	l/c	2	3	69	0.4	0.5	21	10	18	7	0.2	0.6	56	2	0.2	4	28	55
	BS83-92-14-11	l/c	2	1	87	0.4	0.2	16	9	13	8	0.2	0.6	51	2	0.2	3	8	42
	BS83-92-14-16	sp	2	3	250	0.4	0.5	27	9.7	20	8	0.2	0.6	56	3	0.2	8	13	75
	BS83-92-14-20	sp	2	4	59	0.3	0.5	22	7.1	7	4	0.2	0.6	51	3	0.2	5	11	32
	BS83-92-14-30.5	sp	2	7	210	0.6	0.3	34	23	30	9	0.2	0.6	120	3	0.2	5	8	84
	BS83-92-14-40.5	sp	2	14	100	0.3	0.2	9	4.6	3	6	0.2	0.6	21	3	0.2	10	7	19
	BS83-92-14-50	sp	2	4	120	0.4	0.3	14	5.4	16	7	0.2	1.2	33	2	0.2	3	8	47
	BS83-92-14-57	sp	2	3	92	0.3	0.3	10	4.5	6	6	0.2	0.6	34	3	0.2	3	6	41
MW46A-92-15	BS46A-92-15-6	l/c	1.5	9.9	62	0.1	0.05	41	12	16	5.5	0.09	0.25	34	2.7	0.25	2	37	39
	BS46A-92-15-16	l/c	1.3	7.6	87	0.12	0.05	49	12	21	3.9	0.05	1.3	40	1.2	0.25	2	46	44
	BS46A-92-15-26	l/c	1	6.6	41	0.08	0.05	20	9.5	21	2	0.05	0.25	12	1.2	0.25	2	42	63
	BS46A-92-15-36	o	1.1	12	56	0.08	0.05	51	13	65	5.7	0.11	0.25	63	0.5	0.25	2	42	78
MW7-92-16	BS7-92-16-5.5	l/c	1	9.7	130	0.23	0.13	41	14	107	6.8	0.07	0.25	46	9.1	0.25	2	42	47
	BS7-92-16-21	l/c	1.3	21	130	0.28	0.08	56	17	16	6.1	0.05	0.25	41	8.2	0.25	2	62	38
	BS7-92-16-30.8	m	1	2.7	51	0.12	0.05	57	13	33	2.2	0.05	0.25	21	0.5	0.25	2	39	66
	BS7-92-16-40.5	m	1	0.25	26	0.06	0.05	17	6.5	29	0.91	0.05	0.25	8.1	0.5	0.25	2	17	34
	BS7-92-16-50.2	m	1	1.1	28	0.29	0.05	34	10	33	1.8	0.05	0.25	13	0.5	0.25	2	46	65
MW6-92-17	BS6-92-17-6	m	1	6.3	69	0.22	0.21	75	16	31	5.5	0.05	0.25	120					

**TABLE 1**  
**Metals Concentrations In soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Sa	Ag	Tl	Vn	Zn
MW6-92-17	BS6-92-17-25.5	m	1	2.8	31	0.27	0.3	23	7.1	20	2.8	0.05	0.25	71	1.6	0.25	2	32	32
	BS6-92-17-30	o	1	7.8	40	0.26	0.29	109	17	32	4.1	0.29	0.25	180	0.5	0.25	2	40	46
	BS6-92-17-40.5	o	1	4	56	0.19	0.21	54	11	31	3.4	0.09	0.25	73	0.5	0.25	2	29	48
MW37-92-18	BS37-92-18-6	o	1.3	13	150	0.24	0.05	27	11	23	8.5	0.1	0.25	37	0.5	0.25	2	34	75
	BS37-92-18-16	o	1	3.7	80	0.05	0.05	22	4.3	5.1	4.5	0.08	0.25	23	0.5	0.25	2	17	37
	BS37-92-18-26	o	1	6.8	43	0.38	0.05	14	3.7	18	4	0.06	0.25	14	0.5	0.25	2	22	47
	BS37-92-18-31	o	1	4.2	25	0.05	0.16	29	7	15	5	0.05	0.25	30	0.5	0.25	2	20	71
MW37-92-18A	BS37-92-18A-11	o	1	5.5	150	0.07	0.05	18	3.7	6.9	3.4	0.08	0.8	15	2.1	0.5	2	14	22
	BS37-92-18A-20.5	o	1.1	6.2	44	0.14	0.05	11	3	4.3	4.7	0.06	0.25	16	0.5	0.25	2	7.8	21
	BS37-92-18A-31.5	o	1.9	9.6	48	0.42	0.05	14	6.1	11	4.1	0.05	0.25	17	5.2	0.25	2	21	43
	BS37-92-18A-41.3	qv	2.4	6.5	62	0.32	0.05	17	7.8	16	5.3	0.05	0.25	24	0.5	0.25	2	24	54
	BS37-92-18A-51	qv	2.1	29	96	0.59	0.05	27	13	42	8.6	0.12	0.49	41	16	0.25	2	38	88
	BS37-92-18A-60.7	qv	1.8	30	77	0.43	0.05	25	18	42	16	0.12	1.3	39	3.4	0.25	2	33	90
	BS37-92-18A-70.4	qv	1.5	9.4	120	0.45	0.05	24	37	32	4.7	0.11	0.25	72	2.1	0.25	2	27	108
MW7-92-19	BS7-92-19-6	l/c	1.3	8.4	70	0.17	0.05	34	14	20	5.8	0.05	0.25	34	2.3	0.25	2	46	36
	BS7-92-19-15.5	m	1.8	15	57	0.11	0.05	51	15	13	3.3	0.05	0.25	32	3.3	0.25	2	39	43
	BS7-92-19-26	m	1	6	36	0.09	0.05	38	11	12	1.8	0.05	0.25	18	0.5	0.25	2	27	35
	BS7-92-19-36	m	1.5	4.6	53	0.13	0.05	26	14	24	5.1	0.05	0.25	76	7.9	0.25	2	30	53
	BS7-92-19-45.5	m	1.2	3.2	49	0.12	0.05	47	14	23	2.8	0.05	0.25	110	2.7	0.25	2	47	44
	BS7-92-19-55.5	o	1	3.8	79	0.16	0.05	140	25	20	4.1	0.05	0.25	309	1.7	0.25	2	44	57
MW27-92-20	BS27-92-20-10.2	m	4.6	15	39	0.35	0.05	52	19	12	6.1	0.05	0.25	21	6	0.25	2	28	54
	BS27-92-20-20	m	1.5	3.9	26	0.05	0.05	51	15	17	3.4	0.05	0.25	22	1.1	0.25	2	34	54
	BS27-92-20-30.4	m	0.7	9.4	27	0.05	0.05	36	15	10	4.9	0.05	0.25	16	0.5	0.25	2	30	40
	BS27-92-20-45	m	1	9.6	43	0.05	0.05	57	15	15	1.2	0.05	0.25	18	12	0.25	2	32	43
	BS27-92-20-55	m	1.6	5.1	39	0.05	0.05	48	12	20	1.8	0.05	0.25	17	2.1	0.25	2	33	67
	BS27-92-20-60C	m	1	6.9	39	0.05	0.05	58	12	13	3.3	0.05	0.25	18	0.5	0.25	2	29	44
MW53-92-21	BS53-92-21-9.9	m	1	4.3	54	0.14	0.05	34	12	23	4	0.11	0.25	16	4.6	0.25	2	16	41
	BS53-92-21-20.3	m	1	4.7	46	0.05	0.05	36	13	11	2.3	0.06	0.25	19	4.9	0.25	2	22	38
	BS53-92-21-30.8	m	1	4.3	28	0.05	0.05	29	10	8.4	2.2	0.05	0.25	10	3.6	0.25	2	16	31
	BS53-92-21-39.1	m	1	3.2	20	0.05	0.05	24	9.6	8.9	1.9	0.05	0.25	9.4	2.8	0.25	2	24	30
	BS53-92-21-48.8	m	1	4.3	28	0.06	0.05	32	13	11	2.2	0.05	0.4	26	4.5	0.25	2	25	34
	BS53-92-21-58	m	1	3.1	31	0.05	0.05	28	11	25	2	0.05	0.25	14	2.5	0.25	2	15	40
	BS53-92-21-68.9	m	1	2.8	16	0.05	0.05	26	11	5.9	0.83	0.08	0.25	11	2.8	0.25	2	11	36
	BS53-92-21-78.8	m	1	4.3	38	0.05	0.05	25	12	11	1.1	0.05	0.25	18	2.1	0.25	2	15	38
	BS53-92-21-83.5	m	1	4.5	90	0.25	0.05	35	10	13	4.7	0.13	0.25	86	6.5	0.25	2	17	29
	BS53-92-21-95	o	1	5.2	71	0.08	0.05	27	6.8	28	3.5	0.12	0.25	37	3.8	0.61	2	26	35
	BS53-92-21-108	o	1.2	11	560	0.28	0.05	41	9	18	3.2	0.1	0.25	61	4.8	0.25	5.3	25	45
	BS53-92-21-115.7	o	1.2	18	190	0.05	0.05	41	9.4	20	3.6	0.05	0.25	73	2.1	0.88	9.3	30	54
	BS53-92-21-126.3	o	2.3	13	250	0.05	0.05	36	8.6	12	4.9	0.05	0.25	70	28	1.3	71	16	55
	BS53-92-21-135.3	o	1	8	310	0.49	0.05	52	8.9	29	8.3	0.1	0.43	80	3.1	0.25	2	23	91
	BS53-92-21-150.5	o	1	21	220	0.74	0.05	69	14	43	14	0.27	3.6	110	4.8	0.25	2	37	91
	BS53-92-21-165.5	o	1	51	130	0.49	0.05	23	8.5	22	10	0.23	32	71	3.8	0.25	2	20	47
	BS53-92-21-180.5	o	1	8.9	280	0.44	0.54	66	14	38	7.6	0.05	0.47	130	0.5	0.25	2	39	87
MW69A-92-22	BS69A-92-22-5.8	m	1	17	71	0.54	4.8	73	18	44	0.5	0.09	0.25	60	0.5	0.25	2	59	52
	BS69A-92-22-10	m	1	12	120	1.2	3.7	76	14	33	7.4	0.1	0.63	86	0.5	0.25	2	45	64
	BS69A-92-22-15	o	1	8.7	170	0.65	4.3	71	15	36	7.2	0.21	0.25	91	0.5	0.25	2	39	75
	BS69A-92-22-20.6	o	3.9	2.7	130	1.2	3.2	52	11	27	6.9	0.05	0.25	77	0.5	0.25	2	37	58
	BS69A-92-22-25.2	o	1	0.73	150	1.2	3.7	53	13	27	0.5	0.1	0.25	88	0.5	0.25	2	34	68
	BS69A-92-22-30	o	1	1.4	97	0.32	3.2	43	12	24	2.2	0.05	0.25	49	0.5	0.25	2	44	47
MW75-92-23	BS75-92-23-5.5	l/c	1.3	12	140	0.14	0.05	78	13	35	4	0.05	0.25	98	1.3	0.25	2	51	63
	BS75-92-23-15	l/c	1	14	87	0.5	0.05	32	8.1	0.3	5.2	0.1	0.25	68	0.5	0.25	2	0.78	45
	BS75-92-23-25	l/c	1.5	20	60	0.1	0.05	54	19	87	1.7	0.05	0.25	37	17	0.25	110	59	112
	BS75-92-23-35.5	l/c	1	5.1	31	0.08	0.05	46	15	78	1.8	0.05	0.25	31	1.9	0.25	2	42	51
	BS75-92-23-45.5	l/c	1	9	99	0.15	0.05	43	11	34	4.6	0.05	0.25	87	0.5	0.25	2	29	51
MW75B-92-24	BS75B-92-24-5	l/c	1	14	89	0.18	0.05	43	12	39	5.3	0.07	0.25	65	0.5	0.25	2	40	53
	BS75B-92-24-15	l/c	1.1	8.6	106	0.13	0.05	102	15	31	5	0.06	0.25	140	0.5	0.25	2	51	48
	BS75B-92-24-25	o	1.2	8.4	160	0.34	0.05	36	10	27	4.3	0.05	0.25	70	2.6	0.28	2	28	46
	BS75B-92-24-35	o	1	8	73	0.09	0.05	32	8.4	31	4.1	0.05	0.25	55	0.5	0.25	2	28	63
	BS75B-92-24-45	o	1	9	99	0.15	0.05	43	11	34	4.6	0.09	0.25	87	0.5	0.25	2	30	51
	BS75B-92-24-54	o	1	6.8	83	0.12	0.05	42	12	38	2.4	0.1	0.25	100	0.5	0.25	2	31	54
MW76-92-25	BS76-92-25-5.5	l/c	1	12	81	0.17	0.05	47	14	34	2	0.05	1	24	3	0.25	2	33	51
	BS76-92-25-18	o	1.6	8.9	71	0.37	0.05	26	9.4	26	2	0.05	0.25	67	2	0.25	2	21	110
	BS76-92-25-26	o	1	7.5	190	0.14	0.05	48	10	39	2.3	0.05	0.25	82	0.6	0.25	2	26	55
	BS76-92-25-36	o	1	7.1	110	0.16	2.5	42	10	27	2.5	0.06	0.35	66	0.5	0.25	2	27	67
MW62-92-26	BS62-92-26-6	l/c	1	13	120	0.38	0.05	25	2.5	9.8	2.8	0.05	0.25	18	3.7	0.25	90	14	39
	BS62-92-26-11	qv	1	11	170	0.39	0.05	21	5.2	27	8.4	0.05	0.25	23	2.5	0.25	2	17	140
	BS62-92-26-21	qv	1	11	84	0.17	0.05	23	4.6	30	2.6	0.05	0.25	26	0.9	0.25	2	16	60
	BS62-92-26-30.5	qv	1.3	21	53	0.11	0.05	26	13	46	1.1	0.11	0.25	28	0.5	0.25	2	43	98
	BS62-92-26-40.3	qv	1	26	39	0.16	0.05	29	14	53	9.9	0.08	0.25	31	0.5	0.25	2	51	95
BS62-92-26-50.5	qv	1.3	28	37	0.07	0.05	27	17	41	12	0.09	0.25	38	0.5	0.25	2	38	90	



**TABLE 1**  
**Metals Concentrations in soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Metals Concentrations (mg/kg)																		
			Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn		
MW62-92-27	BS62-92-27-5.5	l/c	1.2	16	103	0.17	0.05	19	6.3	11	6.1	0.05	0.68	14	2	0.25	2	38	49		
	BS62-92-27-15.5	qv	1.9	17	51	0.11	0.05	32	11	60	12	0.08	0.25	33	0.5	0.25	2	40	130		
	BS62-92-27-25.5	qv	1.8	18	320	0.57	0.05	31	10	77	9.2	0.05	0.25	28	0.5	0.25	2	47	130		
	BS62-92-27-35.5	qv	1	25	36	0.09	0.05	26	16	45	12	0.07	0.25	38	0.5	0.25	2	34	93		
	BS62-92-27-45.5	qv	1.2	18	41	0.15	0.05	29	11	44	9.6	0.08	0.25	37	0.5	0.25	2	37	107		
	BS62-92-27-55.5	qv	1	24	53	0.23	0.05	34	12	50	11	0.08	0.25	37	0.5	0.25	2	43	105		
MWCD-92-28	BS62-92-27-65	qv	1.9	18	55	0.13	0.05	32	9.3	53	8.9	0.06	0.25	28	0.5	0.25	2	45	107		
	BSCD-92-28-9.5	l/c	3	10	160	0.49		2	26	6.4	20	8.4	0.09	0.58	22	0.5	0.25	2	35	60	
	BSCD-92-28-19.5	l/c	1	12	1200	0.8	2.6	29	12	41	6.7	0.18	0.73	29	0.5	0.25	2	32	71		
	BSCD-92-28-28.5	qv	3	42	52	0.4	2.4	17	15	22	15	0.42	1.9	42	0.96	0.25	2	21	74		
MW71-93-1	BSCD-92-28-38.5	qv	1.5	17	59	0.25	3.2	35	9.2	49	11	0.15	0.97	32	0.5	0.25	2	40	80		
	BSCD-92-28-48.5	qv	1.5	25	56	0.28	3.1	31	17	42	17	0.27	1.2	42	0.5	0.25	2	37	78		
MW71-93-1	BS71-93-1-4.5	m	1.1	0.25	37	0.14	1.6	41	16	11	0.5	0.05	2.6	13	0.5	0.25	2	37	47		
	BS71-93-1-14.5	m	1.6	0.99	71	0.22	1.4	42	15	12	0.5	0.05	2.8	22	0.5	0.25	2	50	42		
	BS71-93-1-24.7	m	1	0.25	65	0.39	1.2	43	14	12	0.5	0.05	1.8	29	0.5	0.25	2	46	37		
	BS71-93-1-35	m	1	0.25	50	0.18	1.1	56	14	7.7	0.5	0.05	2.5	12	0.5	0.25	2	44	45		
	BS71-93-1-44.9	m	1.3	0.25	86	0.13	0.88	72	11	29	0.5	0.35	1.9	84	0.5	0.25	2	56	3.8		
	BS71-93-1-54.8	o	1	3.9	68	0.34	0.19	11	3.9	6.4	0.66	0.05	0.69	18	0.5	0.25	2	24	17		
MW71-93-2	BS71-93-1-64	o	1	1.1	68	0.34	0.5	27	8.9	21	0.5	0.05	1.7	38	0.5	0.25	2	36	31		
	BS71-93-2-10	m	2.5	0.25	26	0.48	1.1	29	12	17	0.5	0.05	2.4	15	0.5	0.25	2	22	44		
	BS71-93-2-20	m	2.8	7.7	46	0.53	1.7	43	15	34	0.5	0.05	3.4	18	0.5	0.25	2	44	62		
	BS71-93-2-30	m	3.1	0.3	49	0.45	1.7	56	20	35	0.5	0.05	3.3	22	0.5	0.25	2	44	69		
	BS71-93-2-35.7	m	1	0.33	72	0.49	1.1	46	15	74	0.5	0.05	2.2	44	0.5	0.25	2	48	71		
	BS71-93-2-41	m	2.4	3.5	41	0.32	1.2	52	14	36	0.5	0.05	1.8	18	0.5	0.25	2	34	59		
	BS71-93-2-50	m	1	6.3	25	0.1	0.64	17	17	32	0.5	0.05	2.3	15	0.5	0.25	2	44	46		
	BS71-93-2-60.6	m	1.2	3.5	46	0.16	0.52	36	19	37	0.5	0.05	1.9	24	0.5	0.25	2	34	60		
	BS71-93-2-70	m	1.1	3.2	44	0.08	0.52	16	11	8.6	0.5	0.05	0.62	13	0.5	0.25	2	25	27		
	BS71-93-2-80	o	1	0.25	73	0.38	0.77	41	14	26	0.5	0.05	2.3	72	0.5	0.25	2	37	50		
	MW6-93-4	BS6-93-4-6	l/c	1.3	0.25	99	0.26		44	13	75	9.8	0.06	1.3	53	0.5	0.25	2	37	110	
		BS6-93-4-16	l/c	1	0.25	118	0.46	1.8	42	12	24	7.2	0.05	0.49	82	0.5	0.25	2	24	42	
BS6-93-4-26		l/c	1	0.25	105	0.5	1.5	44	15	19	4.4	0.05	0.25	58	0.5	0.39	2	46	31		
BS6-93-4-35.5		m	2.2	3.2	130	0.29	3.5	65	20	23	0.5	0.05	4.7	41	0.5	0.96	2	91	64		
MW37-93-5	BS6-93-4-45	m	1	3.7	58	0.1	2.5	40	15	10	0.5	0.05	2.8	23	0.5	2.1	2	28	49		
	BS37-93-5-11	o	1	0.25	140	0.45	2.9	26	11	22	0.5	0.06	2.3	22	0.5	2.3	2	49	53		
	BS37-93-5-21	o	1	16	230	0.42	4.3	25	17	48	1.4	0.08	3.8	31	0.5	3.2	2	71	69		
	BS37-93-5-30.5	qv	5	19	63	0.54	7.5	31	8.1	65	0.5	0.08	6.6	37	0.5	6.5	2	24	110		
	BS37-93-5-40.5	qv	9	42	53	0.46	5.6	24	13	77	17	0.08	4.1	49	0.5	4.1	2	28	110		
MW76-93-6	37-93-5-50-50.3	qv	1	63	80	0.41	3.9	36	16	60	0.5	0.09	4.7	45	0.5	3.8	2	45	140		
	76-93-6-5.8-6.3	o	3	2.2	81	0.39	3.7	33	13	19	0.5	0.31	2.8	140	0.5	3	2	0.5	46		
	76-93-6-15.4-15.9	o	5	7.9	110	0.31	3.3	67	15	38	0.5	0.2	5.7	120	0.5	3.4	2	47	50		
	76-93-6-26-26.5	o	1	0.56	180	0.31	3.8	73	17	45	0.5	0.2	5.8	210	0.5	3.6	2	11	59		
	76-93-6-35.2-35.7	o	7	0.25	64	0.34	3.8	52	15	38	0.5	0.11	6.3	120	0.5	4.1	2	0.5	40		
	76-93-6-45.1-45.6	o	1	11	220	0.35	1.8	42	32	41	0.5	0.33	2.1	160	0.5	2	2	17	69		
MW76-93-7	BS76-93-7-5.5	m	3	0.25	30	0.1	2.1	49	15	34	0.5	0.06	3.2	130	0.5	1	2	21	26		
	BS76-93-7-15.5	o	1	0.25	54	0.28	3	38	8.8	42	0.5	0.06	3.7	130	0.5	1.1	2	42	58		
	BS76-93-7-26	o	1	3	120	0.29	4	43	16	58	5.4	0.12	3.3	91	0.5	2	2	49	66		
	BS76-93-7-35.5	o	3.1	13	180	0.36	2.9	34	13	25	0.5	0.05	5.7	68	0.5	1.8	2	20	43		
MW77-93-8	77-93-8-5.7-6.2	l/c	1	0.25	48	0.21	1.5	47	13	26	6.1	0.2	1.7	110	0.5	3.1	2	8.6	45		
	77-93-8-16-16.5	l/c	1	7	98	0.3	3.5	82	21	35	9.6	0.2	4.6	140	0.5	4	2	43	47		
	77-93-8-25.6-26.1	o	3	0.25	86	0.23	2.3	31	10	38	3.5	0.2	1.6	62	0.5	4.4	2	22	50		
MW53-93-9	BS53-93-9-10	m	1	0.25	82	0.15	2.5	36	20	20	7.1	0.05	2.8	15	0.5	1.8	2	47	48		
	BS53-93-9-25	m	1	0.25	77	0.17	2.3	31		25	0.5	0.05	4.2	16	0.5	2.3	2	36	50		
	BS53-93-9-40.5	m	1	0.25	90	0.53	4.6	61	24	22	0.5	0.05	2.5	19	0.5	1.9	2	59	65		
	BS53-93-9-50	m	1	3.9	45	0.17	2.7	51	18	11	0.5	0.05	1.6	16	0.5	2	2	42	46		
	BS53-93-9-60	m	1	0.25	67	0.16	4.2	51	17	18	0.5	0.05	3.1	17	0.5	2	2	34	49		
	BS53-93-9-80	m	1	0.25	35	0.12	0.77	25	12	9.5	0.5	0.05	1.5	21	0.5	0.25	2	16	35		
MW5-93-10	BS5-93-10-6	l/c	1	0.94	85	0.22	0.65	26	10	11	1.2	0.05	1.2	35	0.5	0.25	2	38	30		
	BS5-93-10-15.3	l/c	1	0.25	67	0.19	0.23	18	9.4	19	0.5	0.05	1.6	60	0.5	0.25	2	42	31		
	BS5-93-10-25.8	m	1	3	57	0.38	0.21	12	7.9	15	0.5	0.05	1.2	36	0.5	0.25	2	14	24		
	BS5-93-10-35.2	o	1	1.3	84	0.14	0.05	17	7.5	21	3.3	0.05	1.1	44	0.5	0.25	2	14	33		
MW88-93-11	BS88-93-11-5.5	qv	1	1.8	180	0.51	3.6	40	6.7	23	10	0.05	2.8	62	0.5	0.25	2	51	82		
	BS88-93-11-15.3	qv	2.5	9.6	140	0.81	3.4	49	18	58	10	0.05	5.3	47	0.5	0.77	2	63	110		
	BS88-93-11-25.7	qv	1.9	8.8	36	0.56	3.7	33	12	36	9.6	0.05	2.2	49	0.5	0.61	2	45	81		
	BS88-93-11-36	qv	1.5	0.25	42	0.59	4.6	31	20	66	17	0.05	2.6	50	0.5	1.6	2	40	79		
	BS88-93-11-45.2	qv	2.2	6.7	22	0.33	3.3	46	11	31	3.4	0.05	2.1	43	0.5	0.86	2	62	67		
	BS88-93-11-55	qv	1	8.6	16	0.15	2.6	41	9.4	17	3.3	0.05	1.5	37	0.5	1.5	2	50	53		
MW88-93-11A	BS88-93-11A-10.2	qv	5	8.7	196	0.82															

**TABLE 1**  
**Metals Concentrations in soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Metals Concentrations (mg/kg)																
			Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn
MW88-93-11A	BS88-93-11A-65	gv	5	4.1	27	0.5	0.5	41	8.8	27	3.2	0.2	2.5	38	0.5	1	5	48	62
MW88-93-13	BS88-93-13-3.5	l/c	5	8.1	155	0.63	0.5	26	8.4	22	7	0.2	2.5	22	0.5	1	5	46	62
	BS88-93-13-19.6	gv	5	8.9	144	0.85	0.5	60	17	63	14	0.2	2.5	70	0.5	1	5	61	124
	BS88-93-13-29.3	gv	5	7.2	129	0.72	0.5	58	11	63	13	0.2	2.5	50	0.5	1	5	59	117
MW88-93-13	BS88-93-13-39.5	gv	5	34	54	0.57	1.3	46	39	83	16	0.27	7.4	102	2.2	1	6.5	74	174
	BS88-93-13-49.4	gv	5	8.9	80	0.59	0.5	52	18	64	9.2	0.2	2.5	41	0.5	1	5	66	107
	BS88-93-13-59.6	gv	5	9.8	120	0.61	0.5	50	18	60	9.8	0.2	2.5	38	0.5	1	5	66	102
	BS88-93-13-69	gv	5	16	116	0.53	0.5	51	22	59	15	2.2	2.5	41	0.5	1	5	65	115
	BS88-93-13-79	gv	5	6.6	104	0.58	0.61	59	14	48	7.7	0.2	2.5	36	0.5	1.1	5	68	102
	BS88-93-13-89	gv	5	6.3	63	0.5	0.5	41	10	143	17	0.2	2.5	22	0.5	1	5	58	69
	BS88-93-13-9	l/c	5	8.7	126	0.7	0.5	49	17	63	11	0.2	2.5	50	0.5	1	5	62	104
	BS88-93-13-9	m	5	0.58	112	0.5	0.5	76	16	15	2.5	0.2	2.5	37	0.5	1	5	74	45
MW52-93-14	BS52-93-14-4.5	m	5	0.5	48	0.5	0.5	69	16	14	2.5	0.2	2.5	25	0.5	1	5	41	52
	BS52-93-14-25.3	m	5	0.5	34	0.5	0.5	49	16	21	2.5	0.2	2.5	23	0.5	1	5	35	73
	BS52-93-14-35	m	5	0.64	51	0.5	0.5	38	11	16	2.5	0.2	2.5	18	0.5	1	5	24	42
	BS52-93-14-46.2	o	5	9.1	162	0.5	0.5	54	12	36	6.4	0.2	2.5	67	0.5	1	5	51	63
	BS52-93-14-46.2	o	5	9.1	162	0.5	0.5	54	12	36	6.4	0.2	2.5	67	0.5	1	5	51	63
MW25-93-15	BS25-93-15-8.8	m	5	0.73	149	0.55	0.53	66	23	41	2.5	0.2	2.5	39	0.5	1	5	97	66
	BS25-93-15-13.8	m	5	0.5	0.5	0.5	0.5	35	17	48	2.5	0.2	2.5	23	0.5	1	5	37	84
	BS25-93-15-23.5	m	5	1.5	87	0.61	0.5	51	13	21	4.5	0.2	2.5	32	0.5	1	5	70	54
	BS25-93-15-33	m	5	0.5	69	0.66	0.5	57	17	95	2.5	0.2	2.5	43	0.5	1	5	104	92
	BS25-93-15-43.2	m	5	0.5	88	0.5	0.5	46	20	20	2.5	0.2	2.5	22	0.5	1	5	38	62
	BS25-93-15-57	m	5	0.5	81	0.5	0.5	72	22	37	2.5	0.2	2.5	33	0.5	1	5	61	84
	BS25-93-15-67.5	o	5	2	111	0.5	0.84	49	14	48	5.7	0.2	2.5	71	0.5	1	5	38	65
	BS25-93-15-67.5	o	5	2	111	0.5	0.84	49	14	48	5.7	0.2	2.5	71	0.5	1	5	38	65
MW518-93-18A	BS518-93-18A-4.4	l/c	5	1.6	96	0.5	0.5	63	16	22	7.7	0.76	2.5	32	0.5	1	5	51	60
	BS518-93-18A-9	l/c	5	6.9	118	0.52	0.5	64	14	36	6.8	0.2	2.5	92	0.5	1	5	50	79
	BS518-93-18A-14	o	5	7.3	226	0.59	0.5	76	16	60	7.3	0.2	2.5	99	0.5	1	5	60	96
	BS518-93-18A-19	o	5	7.6	270	0.67	0.5	82	17	36	7.8	0.2	2.5	105	0.54	1	5	67	97
	BS518-93-18A-24	o	5	7.1	230	0.6	0.5	76	15	47	7.2	0.2	2.5	95	0.62	1	5	62	88
	BS518-93-18A-29.3	o	5	5.7	231	0.58	0.5	80	15	69	6.9	0.2	2.5	97	0.5	1	5	61	75
	BS518-93-18A-34	o	5	3	248	0.51	0.5	56	8.9	32	7.5	0.2	2.5	64	0.5	1	5	34	60
	BS518-93-18A-39	o	5	4.3	232	0.58	0.5	72	12	35	6.8	0.2	2.5	77	0.5	1	5	53	71
	BS518-93-18A-41	o	5	5.4	211	0.51	0.5	65	12	105	5.9	0.2	2.5	74	0.5	1	5	48	103
MW71-94-1	BS71-94-1-4	l/c	5	1.7	172	0.5	0.5	68	17	31	5.3	0.2	2.5	56	0.5	1	0.5	64	54
	BS71-94-1-8.5	l/c	5	1.8	133	0.5	0.5	69	18	27	6.3	0.2	2.5	60	0.5	1	0.5	68	52
	BS71-94-1-14.2	l/c	5	3.4	141	0.5	0.5	65	17	36	5.3	0.2	2.5	52	0.5	1	0.5	68	58
	BS71-94-1-23.7	m	5	0.5	103	0.5	0.5	24	24	25	2.5	0.2	2.5	27	0.5	1	0.5	83	57
	BS71-94-1-33.7	m	5	0.75	74	0.5	0.5	43	20	28	2.8	0.2	2.5	32	0.5	1	0.5	105	59
	BS71-94-1-48.5	m	5	1.2	98	0.5	0.5	55	15	13	2.5	0.2	2.5	25	0.5	1	0.5	78	54
MW77-94-5	BS77-94-5-4.3	l/c	5	0.5	74	0.5	0.5	45	17	16	2.5	0.2	2.5	26	0.5	1	5	32	43
	BS77-94-5-9.3	l/c	5	1.3	87	0.5	0.5	66	14	24	2.6	0.2	2.5	53	0.5	1	5	58	45
	BS77-94-5-14.1	l/c	5	4.1	125	0.5	0.5	39	9.8	21	4.5	0.2	2.5	62	0.5	1	5	29	46
	BS77-94-5-19	l/c	5	1.4	96	0.5	0.5	46	14	31	2.5	0.2	2.5	54	0.5	1	5	40	37
	BS77-94-5-29.5	l/c	5	6	131	0.54	0.5	60	16	36	5.2	0.31	2.5	104	0.5	1	5	39	73
	BS77-94-5-38.9	o	5	6.7	337	0.67	0.5	78	15	34	7	0.2	2.5	110	0.5	1	5	45	87
	BS77-94-5-48.5	o	5	3.4	384	0.61	0.5	72	19	41	9	0.27	2.5	126	0.5	1	5	41	71
	BS77-94-5-58.5	o	5	6.7	268	0.62	0.5	65	15	28	5	0.2	2.5	84	0.5	1	5	57	77
	BS77-94-6-3.7	l/c	5	1.1	87	0.5	0.5	62	20	27	3	0.2	2.5	34	0.5	1	5	59	57
MW77-94-6	BS77-94-6-9.3	l/c	5	0.71	63	0.5	0.5	61	18	18	2.5	0.2	2.5	28	0.5	1	5	52	58
	BS77-94-6-14.2	l/c	5	5.2	106	0.5	0.61	70	14	46	5.8	0.2	2.5	92	0.5	1	5	49	68
	BS77-94-6-24.2	l/c	5	4.6	211	0.5	0.5	66	13	36	6.9	0.2	2.5	89	0.5	1	5	43	64
	BS77-94-6-34	l/c	5	1.9	92	0.5	0.5	62	18	27	5.2	0.2	2.5	84	0.5	1	5	71	68
	BS77-94-6-44	l/c	5	2.1	139	0.5	0.5	52	17	46	3.8	0.2	2.5	61	0.5	1	5	62	51
	BS77-94-6-54.5	o	5	9.2	179	0.5	0.5	86	15	38	4.8	0.2	2.5	83	0.5	1	5	50	61
	BS77-94-6-63.5	o	5	5.1	141	0.5	0.5	67	13	48	5.6	0.2	2.5	81	0.5	1	5	48	70
	BS77-94-6-63.5	o	5	5.1	141	0.5	0.5	67	13	48	5.6	0.2	2.5	81	0.5	1	5	48	70
	BS77-94-6-63.5	o	5	5.1	141	0.5	0.5	67	13	48	5.6	0.2	2.5	81	0.5	1	5	48	70
MW74-94-7	BS74-94-7-5.1	l/c	5	3.7	94	0.5	0.52	38	9.2	16	4.3	0.2	2.5	41	0.5	1	5	42	47
	BS74-94-7-15.5	l/c	5	6.5	170	0.53	0.5	66	17	30	6.5	0.2	2.5	97	0.5	1	5	49	61
	BS74-94-7-25.5	sp	5	0.99	97	0.5	0.5	48	9.7	18	4.5	0.2	2.5	73	0.5	1	5	25	48
	BS74-94-7-35.7	sp	5	0.89	105	0.5	0.5	58	9.6	32	4.6	0.2	2.5	62	0.5	1	5	29	58
	BS74-94-7-44.7	sp	5	5.6	116	0.5	0.5	66	9.8	24	5.3	0.2	2.5	65	0.5	1	5	28	49
MW74-94-8	BS74-94-8-4.2	l/c	5	3.4	125	0.5	0.5	22	4.9	17	5.2	0.2	2.5	34	0.5	1	5	20	59
	BS74-94-8-10	l/c	5	3.9	136	0.5	0.59	18	4.6	25	5.5	0.2	2.5	37	0.5	1	5	15	82
	BS74-94-8-13.6	l/c	5	1.5	151	0.5	0.68	45	11	20	4.5	0.2	2.5	57	0.5	1	5	23	55
	BS74-94-8-19.5	l/c	5	1	90	0.5	0.5	25	8.2	18	2.5	0.2	2.5	45	0.5	1	5	37	46
	BS74-94-8-29	sp	5	11	92	0.5	0.5	19	4.3	12	5.6	0.2	2.5	34	0.5	1	6	12	43
MW37-94-9	BS37-94-9-4.2	l/c	5	6	138	0.5	0.5	33	9.1	27	6.7	0.2	2.5	30	0.5	1	5	36	63
	BS37-94-9-9.5	l/c	5	4.7	100	0.58	0.5	49	14	27	8.9	0.2	2.5	69	0.5	1	5	29	60
	BS37-94-9-14.2	l/c	5	2	114	0.5	0.5	29	4.3	13	3.4	0.2	2.5	23	0.5	1	5	16	33
	BS37-94-9-18.5	o	5	0.5	190	0.66	0.5	22	6.4	19	8.5	0.2	2.5	32	0.5	1	5	21	50
	BS37-94-9-24.3	o	5	3.8	51	0.5	0.5	23	5.2	6.6	3.8	0.2	2.5	22	0.5	1	5	14	29
	BS37-94-9-28.6	o	5	2.6	66	0.5	0.5	16	4.1	15	4.9	0.2	2.5	20	0.5	1	5	14	43
BS37-94-9-34	o	5	5.2	210	0.54	0.5	28	12	30	7.7	0.2	2.5	39	0.5	1	5	45	93	

**TABLE 1**  
**Metals Concentrations in soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Metals Concentrations (mg/kg)																	
			Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn	
MW37-94-9	BS37-94-9-38.7	gv	5	5.4	193	0.6	0.5	29	13	47	9.1	0.2	2.5	35	0.5	1	5	44	93	
	BS37-94-9-44.5	gv	5	10	50	0.61	0.5	39	15	52	12	0.2	2.5	47	0.75	1	5	49	107	
MW52-94-10	BS-MW52-94-10-4	m	5	1.1	109	0.5	0.5	63	21	40	2.6	0.2	2.5	37	0.5	1	5	65	69	
	BS-MW52-94-10-9	m	5	0.94	100	0.5	0.5	62	20	29	2.5	0.2	2.5	37	0.5	1	5	71	65	
	BS-MW52-94-10-13.9	m	5	3.2	82	0.5	0.5	65	17	47	2.5	0.2	2.5	54	0.5	1	5	86	103	
MW52-94-10	BS-MW52-94-10-18	m	5	0.6	47	0.5	0.5	41	17	13	2.5	0.2	2.5	13	0.5	1	5	15	55	
	BS-MW52-94-10-23.5	m	5	0.94	81	0.5	0.5	44	16	22	2.5	0.2	2.5	14	0.5	1	5	66	56	
	BS-MW52-94-10-28.5	m	5	0.5	63	0.5	0.5	33	22	36	2.5	0.2	2.5	17	0.5	1	5	45	77	
	BS-MW52-94-10-33.5	m	5	0.97	44	0.5	0.5	22	11	7	2.5	0.2	2.5	17	0.5	1	5	32	29	
	BS-MW52-94-10-39.1	m	5	0.83	127	0.5	0.5	59	16	53	3.3	0.2	2.5	38	0.5	1	5	79	57	
	BS-MW52-94-10-43.5	m	5	0.63	165	0.71	0.5	50	19	47	3.7	0.2	2.5	42	0.5	1	5	74	105	
	BS-MW52-94-10-48.6	m	5	1.5	172	0.69	0.5	45	18	37	3.7	0.2	2.5	43	0.5	1	5	58	59	
	BS-MW52-94-10-53.6	m	5	0.5	84	0.5	0.5	45	17	57	2.5	0.2	2.5	20	0.5	1	5	41	65	
	BS-MW52-94-10-58.5	o	5	2.5	110	0.5	0.5	93	19	47	3.4	0.2	2.5	173	0.5	1	5	57	72	
	BS-MW52-94-10-63.6	o	5	2	55	0.5	0.5	81	10	37	2.5	0.2	2.5	95	0.5	1	5	40	50	
	BS-MW52-94-10-68.5	o	5	5.6	141	0.61	0.5	54	11	40	4.9	0.2	2.5	58	0.5	1	5	38	73	
	MW51-94-11	BS-MW51-94-11-2.6	m	5	3.4	153	0.52	0.5	62	14	41	4	0.2	2.5	95	0.5	1	5	47	87
BS-MW51-94-11-5		m	5	2.9	190	0.5	0.5	92	17	38	2.5	0.2	2.5	132	0.5	1	5	52	63	
BS-MW51-94-11-14		m	5	8.9	185	0.5	0.5	75	14	29	3.6	0.2	2.5	85	0.5	1	5	64	65	
BS-MW51-94-11-19		o	5	10	232	0.5	0.5	43	9.3	21	3.8	0.2	2.5	63	0.5	1	5	39	51	
BS-MW51-94-11-24.3		o	5	6.5	242	0.5	0.5	48	11	28	4.4	0.2	2.5	61	0.5	1	5	34	56	
BS-MW51-94-11-29.3		o	5	2.9	188	0.5	0.55	30	8.2	47	3.7	0.2	2.5	45	0.5	1	5	25	57	
BS-MW51-94-11-9.3		m	5	0.95	175	0.5	0.5	86	14	33	2.5	0.2	2.5	84	0.5	1	5	66	58	
BS-MW25-94-12-4.2		f/c	5	2.4	115	0.5	0.5	41	17	39	5.3	0.2	2.5	91	0.5	1	5	78	55	
MW25-94-12	BS-MW25-94-12-10	f/c	5	3.9	109	0.5	0.5	51	18	29	5.1	0.2	2.5	90	0.5	1	5	77	60	
	BS-MW25-94-12-14.2	m	5	2.3	101	0.5	0.5	47	22	43	2.5	0.2	2.5	65	0.5	1	5	83	61	
	BS-MW25-94-12-19	m	5	0.5	132	0.51	0.5	40	17	24	2.5	0.2	2.5	16	0.5	1	5	77	73	
	BS-MW25-94-12-24	m	5	0.5	126	0.5	0.5	31	18	15	2.5	0.2	2.5	25	0.5	1	5	60	70	
	BS-MW25-94-12-34	m	5	0.5	183	0.5	0.5	16	20	14	2.5	0.2	2.5	20	0.5	1	5	41	45	
	BS-MW25-94-12-39.1	o	5	2.7	83	0.5	0.5	64	15	35	4.3	0.2	2.5	97	0.5	1	5	41	67	
	BS-MW25-94-12-49	o	5	4.6	152	0.55	0.5	53	13	35	4.9	0.2	2.5	78	0.5	1	5	34	67	
	BS-MW25-94-12-54.3	o	5	3.9	120	0.5	0.5	48	10	28	3.1	0.2	2.5	55	0.5	1	5	29	48	
	BS-MW25-94-12-59.1	o	5	10	282	0.61	0.5	59	11	42	5.3	0.2	2.5	83	0.5	1	5	34	64	
	BS-MW25-94-12-64.1	o	5	0.5	182	0.5	0.5	65	12	37	2.9	0.2	2.5	71	0.5	1	5	35	66	
	BS-MW25-94-12-69	o	5	0.59	158	0.5	0.5	16	55	12	33	2.8	0.2	2.5	70	0.5	1	5	33	60
	BS-MW25-94-12-74	o	5	7.5	252	0.62	0.5	86	15	98	3.3	0.2	2.5	109	0.5	1	5	62	90	
	MW16-94-13	BS-MW16-94-13-6.5	f/c	5	2.2	85	0.5	0.5	94	16	31	5.1	0.2	2.5	132	0.5	1	5	56	50
		BS-MW16-94-13-11	m	5	2.3	133	0.5	0.52	478	18	48	3.7	0.29	2.5	166	0.5	1	5	80	63
BS-MW16-94-13-15.7		o	5	1.9	91	0.5	0.5	43	15	38	7.1	0.2	2.5	86	0.5	1	5	28	57	
BS-MW16-94-13-20.2		o	5	1.3	129	0.5	0.5	46	14	47	6.3	0.23	2.5	67	0.5	1	5	34	67	
BS-MW16-94-13-25.4		o	5	1	152	0.5	0.5	46	12	44	4.6	0.2	2.5	71	0.5	1	5	37	64	
BS-MW16-94-13-30.6		o	5	0.5	236	0.55	0.6	27	8.1	33	7.7	0.2	2.5	46	0.5	1	5	83	45	
BS-MW16-94-13-35.1		o	5	3.4	169	0.56	0.5	60	16	48	7.7	0.2	2.5	82	0.5	1	5	55	73	
BS-MW16-94-13-40.3		o	5	5.1	236	0.51	0.5	61	15	66	6.4	0.2	2.5	101	0.5	1	5	51	75	
BS-MW16-94-13-45		o	5	26	206	0.5	0.58	43	12	27	5.5	0.2	2.5	74	0.5	1	5	39	53	
BS-MW58A-94-14		f/c	5	0.94	69	0.5	0.5	61	19	23	2.5	0.2	2.5	31	0.5	1	5	78	52	
MW58A-94-14	BS-MW58A-94-14-11	f/c	5	0.98	99	0.5	0.5	92	18	31	7.5	0.2	2.5	71	0.5	1	5	81	65	
	BS-MW58A-94-14-15	m	5	3.7	113	0.5	1.5	68	15	72	2.9	0.2	2.5	41	0.5	1	5	65		
	BS-MW58A-94-14-21	m	5	0.5	107	0.5	0.5	76	17	19	2.5	0.2	2.5	31	0.5	1	5	60	54	
	BS-MW58A-94-14-23	m	5	0.5	48	0.5	0.5	70	14	19	2.5	0.2	2.5	26	0.5	1	5	42	57	
	BS-MW58A-94-14-26	o	5	0.5	132	0.5	0.5	84	17	24	2.5	0.2	2.5	79	0.5	1	5	57	55	
	BS-MW58A-94-14-31	o	5	0.5	117	0.5	0.5	80	17	29	2.5	0.2	2.5	33	0.5	1	5	70	46	
	BS-MW58A-94-14-36	o	5	0.96	126	0.5	0.5	69	17	27	2.5	0.2	2.5	39	0.5	1	5	55	51	
	MW91-1	91-1-S1	f/c	2	3	48	0.3	0.2	45	17	13	3	0.2	0.6	27	2	0.2	3	33	40
91-1-S2		o	2	4	110	0.5	0.2	42	8.4	14	7	0.2	0.6	51	2	0.2	3	25	42	
91-1-S3		o	2	2	73	0.6	0.2	58	13	31	6	0.2	0.6	82	2	0.2	3	54	56	
91-1-S4		o	2	2	290	0.7	0.2	63	17	20	9	0.2	0.6	96	2	0.2	3	46	68	
91-1-S5		o	2	2	120	0.5	0.2	57	13	25	6	0.2	0.6	88	2	0.2	3	39	52	
91-1-S6		o	2	4	170	0.7	0.2	87	16	63	2	0.2	0.6	110	2	0.2	3	51	140	
91-1-S7		o	2	5	140	0.7	0.2	66	15	31	7	0.2	0.6	98	2	0.2	3	36	58	
91-1-S8		o	2	6	57	0.5	0.2	72	13	25	4	0.2	0.6	90	2	0.2	3	38	48	
91-1-SC		o	2	6	210	0.8	0.2	81	16	32	8	0.2	0.6	110	2	0.2	3	47	69	
MW91-2		91-2-S1	f/c	2	3	76	0.6	0.2	56	20	30	4	0.2	0.6	29	2	0.2	3	45	51
	91-2-S2	f/c	2	3	72	0.6	0.2	64	19	19	7	0.2	0.6	36	2	0.2	3	59	104	
	91-2-S3	o	2	3	130	0.5	0.2	65	14	29	7	0.2	0.6	80	2	0.2	3	47	93	
	91-2-S4	o	2	2	130	0.6	0.2	58	15	26	8	0.2	0.6	68	2	0.2	3	53	28	
	91-2-S5	o	2	1	140	0.6	0.2	59	15	26	7	0.2	0.6	77	2	0.2	5	47	35	
	91-2-S6	o	2	1	100	0.5	0.2	53	13	28	8	0.2	0.6	77	2	0.2	4	39	34	
	91-2-S7	o	2	4	88	0.6	0.2	64	22	41	5	0.2	0.6	62	2	0.2	4	66	20	

**TABLE 1**  
**Metals Concentrations In soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Sb	As	Ba	Be	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn	
MW91-2	91-2-SC	o	2	3	490	0.6	0.2	83	16	28	9	0.2	0.6	91	2	0.2	3	58	65
MW91-3	91-3-S1	f/c	2	2	75	0.6	0.2	59	13	23	7	0.2	0.6	75	2	0.2	5	39	52
	91-3-S2	o	2	4	100	0.6	0.2	54	12	21	7	0.2	0.6	84	2	0.2	3	33	48
	91-3-S3	o	2	3	190	0.7	0.2	69	12	30	8	0.2	0.6	87	2	0.2	6	39	53
	91-3-S4	o	2	2	240	0.5	0.2	46	11	24	5	0.2	0.6	61	2	0.2	3	32	45
	91-3-S5	o	2	5	100	0.7	0.3	74	14	29	10	0.2	0.6	96	2	0.3	3	34	65
MW91-3	91-3-S6	o	2	4	180	0.5	0.2	56	16	31	7	0.2	0.6	82	2	0.2	3	46	59
	91-3-S7	o	2	3	180	0.6	0.2	64	15	27	7	0.2	0.6	99	2	0.2	3	41	65
MW91-4	91-4-S1	f/c	2	1	150	0.6	0.2	74	15	35	14	0.2	0.6	100	2	0.2	10	57	67
	91-4-S2	o	2	2	140	0.7	0.2	88	16	48	16	0.2	0.6	97	2	0.2	14	62	84
	91-4-S3	o	2	1	220	0.8	0.2	85	19	26	14	0.2	0.6	76	2	0.2	11	71	49
	91-4-S4	o	2	1	140	0.8	0.2	77	17	29	16	0.2	0.6	96	2	0.2	16	62	77
	91-4-S5	o	2	1	220	0.7	0.3	62	15	29	15	0.2	0.6	100	2	0.2	4	48	68
	91-4-S6	o	2	1	170	0.6	0.3	60	15	36	13	0.2	0.6	88	2	0.2	10	42	70
	91-4-S7	o	2	1	240	0.6	0.2	65	14	30	13	0.2	0.6	84	2	0.2	4	53	66
MW91-5	91-5-S1	f/c	2	4	130	0.6	0.2	59	13	27	6	0.2	0.6	84	2	0.2	3	39	53
	91-5-S2	f/c	2	4	84	0.7	0.2	65	17	23	8	0.2	0.6	94	2	0.2	3	53	62
	91-5-S3	o	2	3	51	0.5	0.2	67	18	39	3	0.2	0.6	50	2	0.2	3	59	27
	91-5-S4	o	2	4	40	0.5	0.2	58	17	37	3	0.2	0.6	44	2	0.2	3	60	30
	91-5-S5	o	2	16	400	0.9	0.2	69	13	35	10	0.2	0.6	89	16	0.2	3	44	69
	91-5-S6	o	2	3	490	0.6	0.8	52	12	21	9	0.2	0.6	80	2	0.3	3	41	61
	91-5-S7	o	2	3	190	0.6	0.2	48	11	20	6	0.2	0.6	68	2	0.2	3	43	47
	91-5-SC	o	2	3	270	0.8	0.2	82	16	31	8	0.2	0.6	93	2	0.2	3	62	68
MW91-6	91-6-S1	f/c	2	9	99	0.7	0.2	76	15	32	12	0.2	0.6	99	2	0.2	9	52	61
	91-6-S2	o	2	10	100	0.7	0.2	79	18	36	14	0.2	0.6	98	2	0.2	18	70	62
	91-6-S3	o	2	15	100	0.8	0.2	71	16	32	12	0.2	0.6	83	2	0.2	9	63	54
	91-6-S4	o	2	8	88	0.5	0.2	60	13	27	7	0.2	0.6	56	2	0.2	4	59	41
	91-6-S5	o	2	10	79	0.5	0.2	49	19	40	7	0.2	0.6	54	2	0.2	3	62	52
	91-6-S6	o	2	9	100	0.6	0.2	66	14	87	10	0.2	0.6	72	2	0.2	3	49	94
MW91-7	91-7-S1	f/c	2	3	130	0.9	0.2	70	19	18	12	0.2	0.6	32	2	0.2	72	72	43
	91-7-S2	f/c	2	4	170	1	0.2	73	23	19	8	0.2	0.6	31	2	0.2	77	77	41
	91-7-S3	m	2	2	110	0.9	0.2	41	18	10	4	0.2	0.6	28	2	0.2	130	130	27
	91-7-S4	m	2	2	150	0.8	0.2	67	23	24	7	0.2	0.6	31	2	0.3	59	59	51
	91-7-S5	m	2	1	93	0.6	0.2	66	23	24	5	0.2	0.6	32	2	0.2	40	40	52
	91-7-S6	m	2	2	100	0.5	0.2	49	16	20	4	0.2	0.6	23	2	0.2	52	52	48
	91-7-S7	m	2	2	46	0.4	0.2	46	16	11	4	0.2	0.6	21	2	0.2	42	42	40
	91-7-S8	m	2	1	29	0.3	0.2	35	12	6	2	0.2	0.6	18	2	0.2	22	22	37
	91-7-S9	m	2	1	50	0.4	0.2	70	18	26	4	0.2	0.6	35	2	0.2	54	54	62
	91-7-S10	m	2	1	33	0.3	0.2	73	23	13	3	0.2	0.6	34	2	0.2	27	27	70
	91-7-S11	m	2	1	27	0.2	0.2	34	13	14	2	0.2	0.6	16	2	0.2	18	18	45
	91-7-S12	m	2	1	36	0.3	0.2	36	13	14	2	0.2	0.6	19	2	0.2	27	27	45
MW91-8	91-8-S1	m	2	3	44	0.5	0.2	50	21	19	4	0.2	0.6	26	2	0.2	3	31	65
	91-8-S2	m	2	3	54	0.4	0.2	58	20	13	5	0.2	0.6	31	2	0.2	3	44	50
	91-8-S3	m	2	3	73	0.4	0.3	58	19	9	5	0.2	0.6	24	2	0.2	3	53	44
	91-8-S4	m	2	2	42	0.3	0.2	55	14	7	3	0.2	0.6	22	2	0.2	3	37	38
MW91-9	91-9-S1	f/c	2	11	120	0.6	0.3	86	19	17	12	0.2	0.6	86	2	0.2	66	66	34
	91-9-S2	o	2	8	120	0.7	0.2	57	16	21	10	0.2	0.6	54	2	0.2	64	64	58
	91-9-S3	o	2	8	130	0.6	0.4	47	13	27	10	0.2	0.6	73	2	0.2	39	39	58
	91-9-S4	o	2	5	82	0.9	0.4	81	12	20	8	0.2	0.6	77	2	0.2	41	41	39
MWP-1	MWP1-S1	f/c	2	2	110	0.7	0.2	56	14	22	9	0.2	0.6	40	2	0.2	3	52	48
	MWP1-S2	f/c	2	3	170	0.8	0.2	41	12	32	14	0.2	0.6	41	2	0.2	5	48	66
	MWP1-S3	f/c	2	9	130	0.7	0.2	33	13	41	11	0.2	0.6	33	2	0.2	4	44	77
	MWP1-S4	f/c	2	5	150	0.7	0.2	99	16	40	7	0.2	0.6	120	2	0.2	5	53	52
	MWP1-S5	f/c	2	4	110	0.6	0.2	67	14	33	7	0.2	0.6	91	2	0.3	5	43	50
	MWP1-S6	f/c	2	5	120	0.6	0.2	50	12	33	6	0.2	0.6	85	2	0.2	5	34	46
	MWP1-S7	f/c	2	8	130	0.7	0.2	56	11	24	8	0.2	0.6	52	2	0.2	3	44	56
	MWP1-S8	f/c	2	6	140	0.6	0.2	50	20	21	6	0.2	0.6	38	2	0.2	3	47	51
MWP1-S9	gv	2	4	82	0.7	0.2	63	18	16	6	0.2	0.6	36	2	0.2	3	62	43	
MWP-2	MWP2-S1	f/c	2	13	180	0.9	0.4	39	15	41	31	0.2	0.6	39	2	0.2	4	55	87
	MWP2-S2	gv	2	9	180	0.7	0.4	34	11	14	14	0.2	0.6	19	2	0.3	3	62	64
	MWP2-S3	gv	2	11	64	0.8	0.2	38	20	53	17	0.2	0.6	48	2	0.2	12	54	110
	MWP2-S4	gv	2	9	120	0.7	0.2	36	15	45	15	0.2	0.6	40	2	0.3	4	46	110
	MWP2-S5	gv	2	8	55	0.7	0.2	36	13	40	16	0.2	0.6	41	2	0.2	8	46	99
	MWP2-S6	gv	2	8	71	0.8	0.2	37	15	41	18	0.2	0.6	40	2	0.2	14	54	84
	MWP2-S7	gv	2	8	98	0.6	0.2	29	13	23	12	0.2	0.6	27	2	0.6	3	39	63
MWP-4	MWP4-S1	f/c	2	12	120	0.7	0.2	36	12	30	12	0.2	0.6	31	2	0.2	7	53	72
	MWP4-S2	gv	2	14	210	0.8	0.3	35	17	45	14	0.2	0.6	44	2	0.2	10	49	100
	MWP4-S3	gv	2	8	190	0.8	0.6	37	17	48	16	0.2	0.6	69	2	0.3	3	52	97
	MWP4-S4	gv	2	15	130	0.7	0.2	35	17	49	15	0.2	0.6	40	2	0.2	7	50	92
	MWP4-S5	gv	2	11	190	0.7	0.2	31	22	43	14	0.2	0.6	34	2	0.2	3	54	90
	MWP4-S6	gv	2	9	140	0.7	0.2	36	17	53	14	0.2	0.6	42	2	0.3	5	50	93



**TABLE 1**  
**Metals Concentrations In soils used to calculate background (In mg/kg)**

Location	Sample ID	Geol. Unit	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn
MWP-4	MWP4-S7	gv	2	14	67	0.6	0.2	33	14	43	13	0.2	0.6	39	2	0.2	7	49	85
	MWP4-S8	gv	2	12	110	0.7	0.2	38	15	50	14	0.2	0.6	40	2	0.3	6	57	90
	MWP4-S9	gv	2	9	76	0.7	0.2	31	15	43	13	0.2	0.6	36	2	0.3	5	42	89
MWP-5	MWP5-S1	l/c	2	8	210	0.7	0.2	37	14	37	14	0.2	0.6	41	2	0.4	3	38	90
	MWP5-S2	gv	2	7	270	0.9	0.2	38	15	41	16	0.2	0.6	39	2	0.2	3	54	78
	MWP5-S3	gv	2	14	200	0.8	0.2	35	14	47	16	0.2	0.6	38	2	0.2	7	44	93
	MWP5-S4	gv	2	8	130	0.5	0.2	27	20	38	13	0.2	0.6	30	2	0.2	4	40	78
MWP-5	MWP5-S5	gv	2	13	160	0.6	0.4	28	27	41	23	0.2	0.6	52	2	0.4	3	35	100
	MWP5-S6	gv	2	5	170	0.8	0.2	33	19	53	19	0.2	0.6	43	2	0.2	7	43	110
	MWP5-S7	gv	2	4	160	0.6	0.2	33	10	41	12	0.2	0.6	35	2	0.2	6	31	90
	MWP5-S8	gv	2	10	63	0.7	0.2	35	15	45	13	0.2	0.6	46	2	0.2	8	42	86
	MWP5-S9	gv	2	10	79	0.6	0.2	32	15	51	14	0.2	0.6	42	2	0.2	6	41	90
	MWP5-S10	gv	2	7	69	0.7	0.2	35	15	47	13	0.2	0.6	41	2	0.4	8	41	95
	MWP5-S11	gv	2	10	73	0.5	0.2	32	15	45	12	0.2	0.6	47	2	0.3	7	39	84
	MWP5-S12	gv	2	12	55	0.5	0.2	31	14	37	10	0.2	0.6	38	2	0.3	6	40	75
	MWP5-S13	gv	2	5	54	0.7	0.2	38	14	51	13	0.2	0.6	42	2	0.3	9	42	94
	MWP5-S14	gv	2	12	240	0.6	0.2	31	13	43	14	0.2	0.6	39	2	0.4	5	37	80
	MWP5-S15	gv	2	24	47	0.6	0.2	31	13	37	10	0.2	0.6	41	2	0.3	6	38	82
	MWP5-S16	gv	2	8	59	0.5	0.2	28	12	29	10	0.2	0.6	35	2	0.2	7	36	68
	MWP5-S17	gv	2	14	55	0.6	0.2	36	16	39	13	0.2	0.6	51	2	0.2	7	43	85
	MWP5-S18	gv	2	8	52	0.7	0.2	33	13	40	10	0.2	0.6	39	2	0.3	5	38	80
	MWP-6	MWP6-S1	l/c	2	7	220	0.9	0.2	41	17	46	16	0.2	0.6	44	2	0.2	3	60
MWP6-S2		gv	2	9	180	1	0.2	39	14	53	15	0.2	0.6	42	2	0.2	5	47	110
MWP6-S3		gv	2	10	160	0.8	0.2	39	20	57	23	0.2	0.6	53	2	0.2	3	53	100
MWP6-S4		gv	2	6	180	0.8	0.2	37	14	52	15	0.2	0.6	44	2	0.2	3	47	100
MWP6-S5		gv	2	4	58	0.8	0.2	39	13	55	15	0.2	0.6	40	2	0.2	7	51	110
MWP6-S6		gv	2	13	69	0.5	0.2	26	16	51	12	0.2	0.6	44	2	0.8	3	34	79
MWP-7	MWP7-S1	l/c	2	8	160	0.6	0.2	41	12	30	10	0.2	0.6	46	2	0.2	3	38	72
	MWP7-S2	o	2	8	210	0.7	0.2	61	14	40	12	0.2	0.6	70	2	0.2	3	50	120
	MWP7-S3	o	2	9	280	0.9	0.2	73	14	28	12	0.2	0.6	110	2	0.2	4	34	88
	MWP7-S4	gv	2	4	170	0.6	0.2	41	9	20	20	0.2	0.6	47	2	0.2	3	33	49
	MWP7-S5	gv	2	2	65	0.5	0.2	17	3.5	6	9	0.2	0.6	7	2	0.2	3	28	32
	MWP7-S6	gv	2	2	310	0.7	0.2	32	13	37	12	0.2	0.6	36	2	0.2	3	48	80
	MWP7-S7	gv	2	2	120	0.6	0.3	33	14	62	12	0.2	0.6	36	2	0.2	3	45	95
MWP-8	MWP8-S1	l/c	2	5	140	0.6	0.2	74	20	26	10	0.2	0.6	27	2	0.2	3	47	68
	MWP8-S2	l/c	2	3	84	0.6	0.2	58	12	32	8	0.2	0.6	74	2	0.2	3	37	53
	MWP8-S3	l/c	2	6	290	0.7	0.2	100	14	34	10	0.2	0.6	120	2	0.2	3	64	81
	MWP8-S4	o	2	2	110	0.5	0.2	22	7.6	18	8	0.2	0.6	24	2	0.2	3	26	45
	MWP8-S5	o	2	2	170	0.7	0.2	32	12	42	10	0.2	0.6	42	2	0.2	3	35	70
	MWP8-S6	o	2	1	110	0.3	0.2	21	6.1	8	7	0.2	0.6	24	2	0.2	3	14	33
	MWP8-S7	o	2	2	97	0.6	0.2	31	9.2	28	9	0.2	0.6	32	2	0.2	3	30	50
	MWP8-S8	o	2	4	88	0.5	0.2	37	8.5	17	8	0.2	0.6	29	2	0.2	3	27	47
	MWP8-S9	o	2	4	83	0.6	0.2	26	5.8	25	10	0.2	0.6	25	2	0.2	3	22	47
	MWP-9	MWP9-S1	l/c	2	3	160	0.5	0.2	46	10	30	6	0.2	0.6	79	2	0.2	3	16
MWP9-S11		o	2	7	82	0.3	0.2	36	5.5	7	4	0.2	0.6	47	2	0.2	3	24	30
MWP9-S2		o	2	3	180	0.7	0.2	83	13	22	8	0.2	0.6	120	2	0.2	3	36	76
MWP9-S3		o	2	3	140	0.6	0.6	59	8.8	25	7	0.2	0.6	73	2	0.2	3	39	55
MWP9-S4		o	2	11	40	0.5	0.2	54	8.9	23	7	0.2	0.6	82	2	0.2	3	26	52
MWP9-S5		o	2	3	87	0.5	0.2	59	8.8	21	6	0.2	0.6	71	2	0.2	3	27	45
MWP9-S6		o	2	27	100	0.7	0.2	69	9	25	8	0.2	0.6	82	2	0.2	3	32	63
MWP9-S7		o	2	3	60	0.5	0.2	46	10	27	8	0.2	0.6	79	2	0.2	3	24	54
MWP9-S8		o	2	2	130	0.6	0.2	45	7.5	23	7	0.2	0.6	69	2	0.3	3	23	59
MWP9-S9		o	2	4	140	0.6	0.2	45	8.2	25	7	0.2	0.9	65	2	0.2	3	26	51
MWP-10	MWP9-S10D	o	2	12	140	0.7	0.3	57	11	32	8	0.2	0.9	78	2	0.2	5	26	64
	MWP10-S1	l/c	2	3	110	0.5	0.2	67	14	39	7	0.2	0.6	81	2	0.2	3	44	64
	MWP10-S2	l/c	2	2	140	0.6	0.2	52	15	24	7	0.2	0.6	110	2	0.2	3	37	76
	MWP10-S3	l/c	2	4	110	0.6	0.3	68	17	16	9	0.2	0.6	140	2	0.2	3	34	79
	MWP10-S4	l/c	2	2	150	0.7	0.2	76	14	36	7	0.2	0.6	95	2	0.2	3	47	79
	MWP10-S5	o	2	3	130	0.4	0.2	59	13	34	6	0.2	0.6	84	2	0.2	3	33	66
	MWP10-S6	o	2	3	160	0.6	0.3	69	15	40	9	0.2	0.6	110	2	0.2	3	35	86
	MWP10-S7	o	2	3	220	0.5	0.2	67	9.9	42	8	0.2	0.6	94	2	0.2	3	32	72
	MWP10-S8	o	2	2	170	0.5	0.2	47	8	22	7	0.2	0.6	68	2	0.2	3	22	54
	MWP10-S9	o	2	4	130	0.4	0.2	41	7.1	25	6	0.2	0.6	54	2	0.2	3	23	50
	MWP10-S10	o	2	30	190	0.6	0.2	64	14	41	9	0.2	0.6	93	2	0.2	4	34	88
	MWP10-S11	o	2	9	180	0.6	0.2	63	12	28	8	0.2	0.6	95	2	0.2	3	35	66
	MWP10-S12	o	2	6	210	0.6	0.2	56	11	44	12	0.2	0.6	100	2	0.2	4	24	76
MWP10-S13	o	2	7	190	0.7	0.2	64	10	37	9	0.2	0.6	89	2	0.2	3	33	64	

Geologic Formations: m - Moraga  
l/c - Fill/Colluvium o - Orinda  
gv - Great Valley sp - San Pablo

**TABLE 2**  
**Parameters Used to Determine Upper 95% Confidence Limit for Background Soil Metals Data**  
 (Concentrations in mg/kg)

	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn
<b>Site Background</b>	5.5	19.1	323.6	1	2.7	99.6	22.2	69.4	16.1	0.4	7.4	119.8	5.6	1.8	27.1	74.3	106.1
<b>Colluvium &amp; Fill</b>																	
Mean (Xav)	2.77	5.39	126.33	0.50	0.46	51.34	13.67	29.05	6.86	0.17	1.26	59.23	1.60	0.55	7.72	44.49	57.37
Standard Deviation ( $\sigma$ )	1.62	4.47	120.84	0.21	0.55	20.81	4.33	15.90	4.05	0.09	0.99	31.67	2.09	0.57	18.07	17.50	17.74
Tolerance Factor (K)	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924
<b>Great Valley</b>																	
Mean (Xav)	2.63	12.53	107.43	0.58	0.73	36.06	14.40	46.95	12.21	0.19	1.24	41.46	1.62	0.56	4.24	45.49	90.00
Standard Deviation ( $\sigma$ )	1.90	9.59	73.30	0.22	1.31	11.93	5.78	27.43	4.84	0.22	1.32	14.68	1.68	0.86	2.33	12.37	23.87
Tolerance Factor (K)	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924
<b>Moraga Formation</b>																	
Mean (Xav)	2.74	2.82	71.80	0.36	0.71	52.80	15.76	24.26	2.84	0.13	1.61	36.50	1.35	0.68	7.41	45.68	52.44
Standard Deviation ( $\sigma$ )	1.77	3.35	42.78	0.22	0.98	46.38	3.82	15.52	3.13	0.08	1.14	33.22	1.76	0.68	16.38	23.08	16.76
Tolerance Factor (K)	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924	1.924
<b>Orinda Formation</b>																	
Mean (Xav)	2.55	6.31	169.83	0.56	0.65	54.48	12.54	31.91	7.17	0.18	1.77	75.39	1.85	0.58	5.16	39.87	60.89
Standard Deviation ( $\sigma$ )	1.46	6.27	131.30	0.28	1.45	22.16	4.41	19.05	4.17	0.06	5.25	37.49	2.83	0.70	7.96	16.02	20.33
Tolerance Factor (K)	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838	1.838
<b>San Pablo Group</b>																	
Mean (Xav)	2.69	4.14	102.28	0.36	0.73	25.55	7.44	16.35	5.42	0.22	1.16	46.25	1.59	0.48	4.62	12.68	43.54
Standard Deviation ( $\sigma$ )	1.65	4.34	66.55	0.17	0.83	19.88	5.44	9.20	1.81	0.09	0.96	29.83	1.23	0.37	2.36	8.80	20.28
Tolerance Factor (K)	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67

**TABLE 3**  
**BACKGROUND CONCENTRATIONS OF METALS**  
 (Concentrations in mg/kg)

	Number of Samples	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	Vn	Zn
Site Background	498	5.5	19.1	323.6	1.0	2.7	99.6	22.2	69.4	16.1	0.4	7.4	119.8	5.6	1.8	27.1	74.3	106.1
Colluvium & Fill	97	5.9	14.0	358.8	0.9	1.5	91.4	22.0	59.6	14.7	0.3	3.2	120.2	5.6	1.7	42.5	78.2	91.5
Great Valley Group	97	6.3	31.0	248.5	1.0	3.2	59.0	25.5	99.7	21.5	0.6	3.8	69.7	4.8	2.2	8.7	69.3	135.9
Moraga Formation	101	6.1	9.3	154.1	0.8	2.6	142.2	23.1	54.1	8.9	0.3	3.8	100.4	4.7	2.0	38.9	90.1	84.7
Orinda Formation	184	5.2	17.8	411.2	1.1	3.3	95.2	20.6	66.9	14.8	0.3	11.4	144.3	7.0	1.9	19.8	69.3	98.3
San Pablo Group	13	7.1	15.7	280.0	0.8	2.9	78.6	22.0	40.9	10.3	0.4	3.7	125.9	4.9	1.5	10.9	36.2	97.7

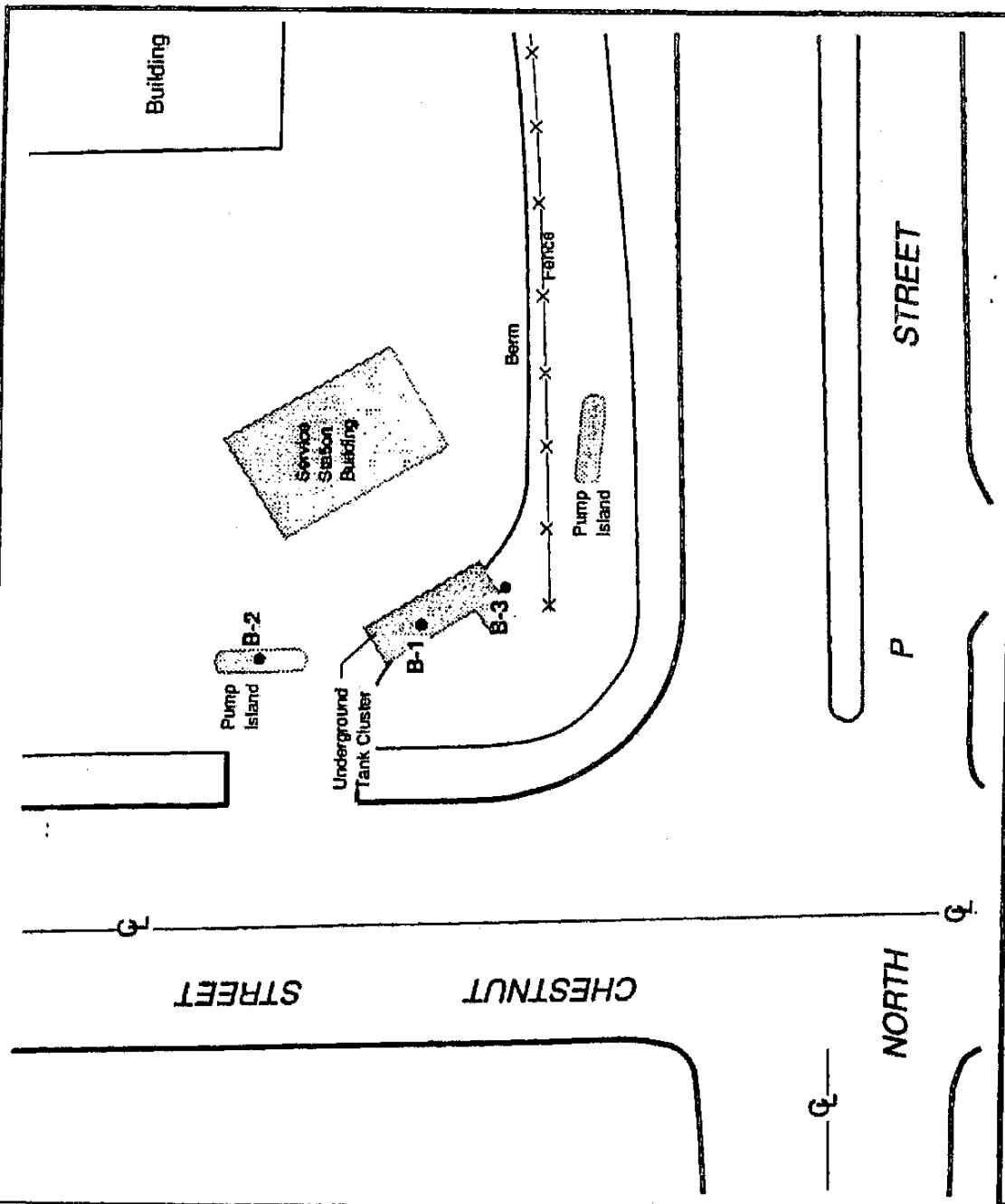
Note: Background concentrations determined for Upper 95% Confidence Limit (UCL) from data from 71 monitoring well borings.

# **APPENDIX E**



**LEGEND**

- B-1 SOIL BORING
- ▭ PREVIOUS GAS STATION FEATURES



	<b>BORING LOCATIONS</b>		PLATE <b>2</b>
	CHESTNUT MALL 1625-1635 CHESTNUT STREET LIVERMORE, CALIFORNIA		
DRAFTED BY: L. Sub	DATE: 8-21-89	PROJECT NO. 10-2007-01	
CHECKED BY: L. Larsen/M. Klaver	DATE: 8-21-89		