### Wickham, Jerry, Env. Health

From:	Schultz, Robert [Robert.Schultz@amec.com] Thursday, April 21, 2011 2:51 PM
Sent:	
То:	Denis Brown (denis.l.brown@shell.com); Schaefer, Peter; Wickham, Jerry, Env. Health
Cc:	Torrens, Jake
Subject:	Former Shell, 2301-2307 Lincoln Ave., Alameda
Attachments:	J34569-1 Std_Tal_L2 Final Report.pdf; 720-34569-1_Geomatrix.csv

Gentlemen:

Please find attached the results of our split sampling from Shell's excavation at the above-referenced property. Samples were collected directly from the backhoe bucket. When the bucket was brought to the surface, approximately the top 6 inches of soil was scraped away using a spade. The EnCore sampler was advanced following the EnCore sampler instruction manual. Three 5-gram EnCore samples were collected per sample location. The Encore T-handle and spade were decontaminated before each use using a three stage wash (water, water and Alconox, and water rinse). Each individual EnCore was placed in the laboratory-provided bag, labeled and sealed with a custody seal, and all three from each location were placed into a labeled zip lock bag, and placed in an ice cooled chest under standard chain of custody protocol. Standing water was present in the excavation at approximately 7 feet bgs. Samples were collected from excavation sidewall soil at approximately 7 feet bgs.

Please contact us at 510-663-4100 should you have questions or require further information.

Sincerely, Robert W. Schultz, CHG AMEC Geomatrix, Inc.

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# ANALYTICAL REPORT

Job Number: 720-34569-1 Job Description: Sebanc-Alameda

For: AMEC Geomatrix Inc. 2101 Webster Street, 12th Floor Oakland, CA 94612 Attention: Mr. Jake Torrens



Approved for release. Surinder Sidhu Customer Service Manager 4/15/2011 4:16 PM

Designee for Afsaneh Salimpour Project Manager I afsaneh.salimpour@testamericainc.com 04/15/2011

CA ELAP Certification # 2496

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A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

TestAmerica Laboratories, Inc. TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566 Tel (925) 484-1919 Fax (925) 600-3002 <u>www.testamericainc.com</u>

#### Comments

No additional comments.

#### Receipt

All samples were received in good condition within temperature requirements.

#### GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following sample 720-34569-1 was outside control limits: EX-S-7.0 (720-34569-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

### **EXECUTIVE SUMMARY - Detections**

Client: AMEC Geomatrix Inc.

Lab Sample ID	Client Sample ID		Reporting		
Analyte		Result / Qualifier	Limit	Units	Method
720-34569-1	EX-S-7.0				
Benzene		13	5.4	ug/Kg	8260B/CA_LUFTMS
Ethylbenzene		35	5.4	ug/Kg	8260B/CA_LUFTMS
Gasoline Range O	rganics (GRO)-C5-C12	5200	270	ug/Kg	8260B/CA_LUFTMS
720-34569-3	EX-W-7.0				
Ethylbenzene		21	4.3	ug/Kg	8260B/CA_LUFTMS
Gasoline Range O	rganics (GRO)-C5-C12	2400	210	ug/Kg	8260B/CA_LUFTMS

### **METHOD SUMMARY**

### Client: AMEC Geomatrix Inc.

#### Job Number: 720-34569-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
8260B / CA LUFT MS	TAL SF	SW846 8260	B/CA_LUFTMS
Closed System Purge and Trap	TAL SF		SW846 5035

#### Lab References:

TAL SF = TestAmerica San Francisco

#### Method References:

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

### Client: AMEC Geomatrix Inc.

			Date/Time		
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received	
720-34569-1	EX-S-7.0	Solid	04/14/2011 1239	04/14/2011 1625	
720-34569-2	EX-SW-7.0	Solid	04/14/2011 1250	04/14/2011 1625	
720-34569-3	EX-W-7.0	Solid	04/14/2011 1305	04/14/2011 1625	

# **Analytical Data**

#### Client: AMEC Geomatrix Inc.

Client Sample ID:	EX-S-7.0						
Lab Sample ID:	720-34569-1				[	Date Sam	pled: 04/14/2011 123
Client Matrix:	Solid				1	Date Rece	eived: 04/14/2011 162
		8260B/CA_LUFTM	S 8260B / CA	LUFT MS			
Analysis Method:	8260B/CA_LUFTMS	Analysis Batch:	720-89656		Instrument ID:	SA	AT 3900A
Prep Method:	5035	Prep Batch:	720-89701		Lab File ID:	34	569-A-1 4-14-2011
Dilution:	1.0				Initial Weight/Volum	ne: 4.6	66 g
Analysis Date:	04/14/2011 2050				Final Weight/Volum	ne: 10	mL
Prep Date:	04/14/2011 1800						
Analyte	DryWt Corrected: N	Result (u	g/Kg)	Qualifier			RL
MTBE		ND					5.4
Benzene		13					5.4
Ethylbenzene		35					5.4
Toluene		ND					5.4
Xylenes, Total		ND					11
Gasoline Range Or	ganics (GRO)-C5-C12	5200					270
Surrogate		%Rec		Qualifier	Acce	eptance Li	mits
4-Bromofluorobenze	ene	127		Х	65 -	117	
1,2-Dichloroethane-	d4 (Surr)	104			73 -	140	
Toluene-d8 (Surr)		98			80 -	112	

### **Analytical Data**

### Client: AMEC Geomatrix Inc.

Toluene-d8 (Surr)

### Job Number: 720-34569-1

80 - 112

Client Sample ID:	EX-SW-7.0					
Lab Sample ID: Client Matrix:	720-34569-2 Solid				Date Sampled: 04 Date Received: 04	
		8260B/CA_LUFTM	IS 8260B / CA	LUFT MS		
Analysis Method: Prep Method: Dilution: Analysis Date: Prep Date:	8260B/CA_LUFTMS 5035 1.0 04/14/2011 2113 04/14/2011 1800	Analysis Batch: Prep Batch:	720-89656 720-89701	Instrument II Lab File ID: Initial Weight Final Weight	34569-a-2 t/Volume: 4.86 g	A 4-14-2011
Analyte	DryWt Corrected: N	Result (u	g/Kg)	Qualifier	RL	
MTBE	-	ND			5.1	
Benzene		ND			5.1	
Ethylbenzene		ND			5.1	
Toluene		ND			5.1	
Xylenes, Total		ND			10	
Gasoline Range Or	ganics (GRO)-C5-C12	ND			260	
Surrogate		%Rec		Qualifier	Acceptance Limits	
4-Bromofluorobenz	ene	90			65 - 117	
1,2-Dichloroethane	-d4 (Surr)	105			73 - 140	
	· /					

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# **Analytical Data**

#### Client: AMEC Geomatrix Inc.

Client Sample ID:	EX-W-7.0					
Lab Sample ID:	720-34569-3				Date	Sampled: 04/14/2011 130
Client Matrix:	Solid				Date	Received: 04/14/2011 162
		8260B/CA_LUFTM	IS 8260B / CA	LUFT MS		
Analysis Method:	8260B/CA_LUFTMS	Analysis Batch:	720-89656	Instrumer	nt ID:	SAT 3900A
Prep Method:	5035	Prep Batch:	720-89701	Lab File I	D:	34569-A-3 4-14-2011
Dilution:	1.0			Initial We	ight/Volume:	5.86 g
Analysis Date:	04/14/2011 2137			Final Wei	ght/Volume:	10 mL
Prep Date:	04/14/2011 1800					
Analyte	DryWt Corrected: N	Result (u	g/Kg)	Qualifier		RL
MTBE		ND				4.3
Benzene		ND				4.3
Ethylbenzene		21				4.3
Toluene		ND				4.3
Xylenes, Total		ND				8.5
Gasoline Range Or	ganics (GRO)-C5-C12	2400				210
Surrogate		%Rec		Qualifier	Acceptan	ice Limits
4-Bromofluorobenze	ene	112			65 - 117	
1,2-Dichloroethane-	-d4 (Surr)	99			73 - 140	
Toluene-d8 (Surr)		95			80 - 112	

# DATA REPORTING QUALIFIERS

Client: AMEC Geomatrix Inc.

Lab Section	Qualifier	Description
GC/MS VOA		
	х	Surrogate is outside control limits

Client: AMEC Geomatrix Inc.

### Job Number: 720-34569-1

### **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-896	56				
LCS 720-89701/2-A	Lab Control Sample	Т	Solid	8260B/CA_LUFT	720-89701
LCS 720-89701/4-A	Lab Control Sample	Т	Solid	8260B/CA_LUFT	720-89701
LCSD 720-89701/3-A	Lab Control Sample Duplicate	Т	Solid	8260B/CA_LUFT	720-89701
LCSD 720-89701/5-A	Lab Control Sample Duplicate	Т	Solid	8260B/CA_LUFT	720-89701
MB 720-89701/1-A	Method Blank	Т	Solid	8260B/CA_LUFT	720-89701
720-34569-1	EX-S-7.0	Т	Solid	8260B/CA_LUFT	720-89701
720-34569-2	EX-SW-7.0	Т	Solid	8260B/CA_LUFT	720-89701
720-34569-3	EX-W-7.0	Т	Solid	8260B/CA_LUFT	720-89701
Prep Batch: 720-89701					
LCS 720-89701/2-A	Lab Control Sample	Т	Solid	5035	
LCS 720-89701/4-A	Lab Control Sample	Т	Solid	5035	
LCSD 720-89701/3-A	Lab Control Sample Duplicate	Т	Solid	5035	
LCSD 720-89701/5-A	Lab Control Sample Duplicate	Т	Solid	5035	
MB 720-89701/1-A	Method Blank	Т	Solid	5035	
720-34569-1	EX-S-7.0	Т	Solid	5035	
720-34569-2	EX-SW-7.0	Т	Solid	5035	
720-34569-3	EX-W-7.0	Т	Solid	5035	

#### Report Basis

T = Total

**TestAmerica San Francisco** 

# **Quality Control Results**

Job Number: 720-34569-1

### Method: 8260B/CA\_LUFTMS Preparation: 5035

Lab Sample ID: Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	MB 720-89701/1-A Solid 1.0 04/14/2011 1816 04/14/2011 1600 N/A	Analysis Batch: Prep Batch: Leach Batch: Units:	720-89656 720-89701 N/A ug/Kg	Instrument ID Lab File ID: Initial Weight/ Final Weight/	Volume:	SAT 3900A MB 4-14-2011 6;16;10 5 g 10 mL
Analyte		Res	sult	Qual		RL
MTBE		ND				5.0
Benzene		ND				5.0
Ethylbenzene		ND				5.0
Toluene		ND				5.0
Xylenes, Total		ND				10
Gasoline Range O	rganics (GRO)-C5-C12	ND				250
Surrogate		%	Rec	Acce	ptance Limi	its
4-Bromofluoroben	zene	(	99		65 - 117	
1,2-Dichloroethane	e-d4 (Surr)	9	97		73 - 140	
Toluene-d8 (Surr)			100		80 - 112	

Client: AMEC Geomatrix Inc.

### Method Blank - Batch: 720-89701

# **Quality Control Results**

Client: AMEC Geomatrix Inc.

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 720-89701

Job Number: 720-34569-1

### Method: 8260B/CA\_LUFTMS Preparation: 5035

LCS Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	E LCS 720-89701/2-A Solid 1.0 04/14/2011 1903 04/14/2011 1600 N/A	Prep E	sis Batch: 3atch: Batch:	720-89656 720-89701 N/A ug/Kg			SAT 3900A LCS 4-14-2 5 g 10 mL	x 2011 7;03;25
LCSD Lab Sample I	D: LCSD 720-89701/3-A	Analys	sis Batch:	720-89656	Instrume	nt ID:	SAT 3900A	١
Client Matrix:	Solid	Prep E	Batch:	720-89701	Lab File	ID:	LCSD 4-14	-2011
Dilution:	1.0	Leach	Batch:	N/A	Initial We	ight/Volume:	5 g	
Analysis Date:	04/14/2011 1927	Units:		ug/Kg	Final We	ight/Volume:	10 mL	
Prep Date:	04/14/2011 1600							
Leach Date:	N/A							
		(	<u>% Rec.</u>					
Analyte		LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
МТВЕ		105	105	71 - 144	0	20		
Benzene		104	102	82 - 124	2	20		
Ethylbenzene		104	110	80 - 137	5	20		
Toluene		105	109	83 - 128	3	20		
Surrogate		L	CS % Rec	LCSD %	Rec	Accep	tance Limits	
4-Bromofluorobenze	ene	1	09	101		6	5 - 117	
1,2-Dichloroethane-	-d4 (Surr)	1	00	92		7	3 - 140	
Toluene-d8 (Surr)		9	8	98		8	0 - 112	

# **Quality Control Results**

Client: AMEC Geomatrix Inc.

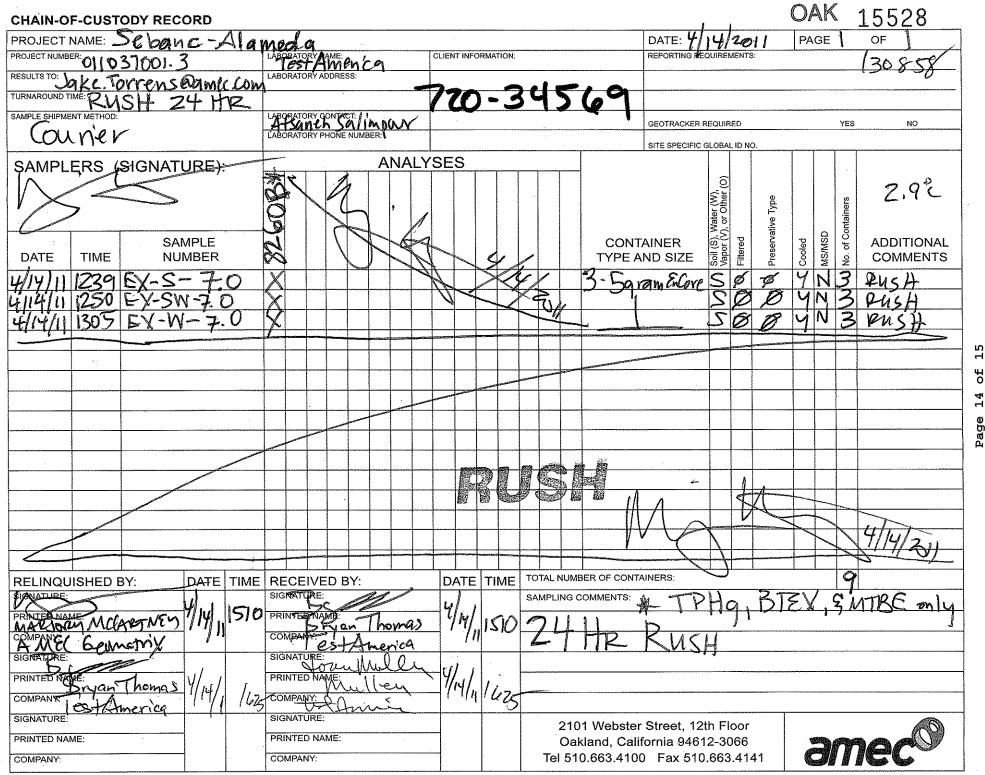
### Lab Control Sample/

## Lab Control Sample Duplicate Recovery Report - Batch: 720-89701

Job Number: 720-34569-1

### Method: 8260B/CA\_LUFTMS Preparation: 5035

LCS Lab Sample ID Client Matrix: Dilution: Analysis Date: Prep Date: Leach Date:	: LCS 720-89701/4-A Solid 1.0 04/14/2011 1950 04/14/2011 1600 N/A	Prep E	sis Batch: 3atch: Batch:	720-89656 720-89701 N/A ug/Kg			SAT 3900A LCS GAS 4 5 g 10 mL		
LCSD Lab Sample I	D: LCSD 720-89701/5-A	Analys	sis Batch:	720-89656	Instrume	nt ID:	SAT 3900A		
Client Matrix:	Solid	Prep E	Batch:	720-89701	Lab File	ID:	LCSD GAS	4-14-2011	
Dilution:	1.0	Leach	Batch:	N/A	Initial We	eight/Volume:	5 g		
Analysis Date:	04/14/2011 2014	Units:		ug/Kg	Final We	ight/Volume:	10 mL	10 mL	
Prep Date:	04/14/2011 1600								
Leach Date:	N/A								
		(	<u>% Rec.</u>						
Analyte		LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual	
Gasoline Range Org	ganics (GRO)-C5-C12	94	96	68 - 115	2	20			
Surrogate		L	.CS % Rec	LCSD %	Rec	Accep	tance Limits		
4-Bromofluorobenze	ene	1	02	102		6	5 - 117		
1,2-Dichloroethane-	d4 (Surr)	1	03	103		7	3 - 140		
Toluene-d8 (Surr)		9	7	107		8	0 - 112		



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### Client: AMEC Geomatrix Inc.

### Login Number: 34569 List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Job Number: 720-34569-1

#### List Source: TestAmerica San Francisco