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9:12 am, Jun 23, 2011
Alameda County
Environmental Health

ARCADIS U.S., Inc.
100 Montgomery Street, Suite 300
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Injection Well Installation and Results of Recent Sampling and Site Update
Former BP Service Station #11133
2220 98th Avenue
Oakland, California
ACEH Case #RO0000403

ENVIRONMENT

"I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Date:
June 2, 2011

Submitted by:

Contact:
Hollis E. Phillips

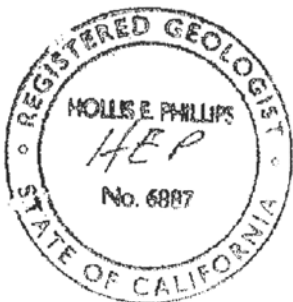
ARCADIS U.S., Inc

Phone:
415.374.2744 ext 13

Email:
Hollis.phillips@arcadis-us.com

Hollis E. Phillips, PG
Project Manager

Our ref:
GP09BPNA.C107



Paresh Khatri
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

ARCADIS
2033 North Main Street
Suite 340
Walnut Creek
California 94596
Tel 925.274.1100
Fax 925.274.1103
www.arcadis-us.com

Subject:

Injection Well Installation and Results of Recent Sampling and Site Update
Former BP Station #11133
2220 98th Avenue, Oakland, California
ACEH Case #RO0000403

ENVIRONMENT

Dear Mr. Khatri:

ARCADIS U.S., Inc (ARCADIS) has prepared this letter to summarize the injection well installation and subsequent groundwater monitoring at the Former BP Station #11133 located at 2220 98th Avenue, in Oakland, California (Site). ARCADIS installed three injection wells in order to conduct an injection pilot study as outlined in the Corrective Action Plan Addendum (ARCADIS May 2010). The injection wells were installed in September 2010 (Figure 1), boring logs and well completion reports are included in Attachment A.

Date:

June 2, 2011

Contact:

Hollis Phillips

Phone:

415.374.2744 x.18

Email:

Hollis.Phillips@arcadis-us.com

Our ref:

GP09BPNA.C107

Following the installation of the three injection wells the newly installed downgradient injection well (IW-3) was sampled to further delineate the plume in the vicinity of the injection pilot test prior to the start of the test. Results indicated concentrations of benzene at 5.8 µg/L, ethylbenzene at 8.3 µg/L, toluene at 2.9 µg/L, xylenes at 8.5 µg/L (collectively BTEX), methyl tert-butyl ether (MTBE) at 2.5 µg/L, and total petroleum hydrocarbons as gasoline (TPH-g) at 1,000 µg/L. Based on the low levels of contaminants of concern (COCs) it was decided to wait until the first quarter 2011 sampling event to evaluate groundwater concentrations in the wells in the vicinity of the pilot test.

Results of the first quarter 2011 sampling event indicated non-detectable to very low concentrations of (COCs) (up to 0.56 micrograms per liter (µg/L) of MTBE in monitoring well AW-1 (the focus of the pilot test). Based on these results the pilot test was postponed and additional groundwater samples were collected from AW-1 and downgradient wells MW-1 and AW-2. Results of the sampling indicated AW-1 contained concentrations of MTBE at 4.4 µg/L, benzene at 0.92 µg/L, and tert amyl-methyl ether (TAME) at 0.80 µg/L; AW-2 contained 0.52 µg/L of MTBE; and MW-1 contained 230 µg/L of TPH-g. Laboratory reports are included in Attachment B.

Mr. Khatri
June 3, 2011

Because of the low levels of COCs in the vicinity of the pilot test wells and the downgradient wells it was decided to postpone the pilot injection test until results of the third quarter 2011 sampling event are reviewed. The postponement of the pilot test was approved by Alameda County Environmental Health (ACEH) in an email correspondence on May 31, 2011. The third quarter 2011 sampling event is scheduled for July 2011. Following receipt of the analytical results ARCADIS will submit recommendations for a path forward at this site.

If you have any questions or comments regarding the contents of this Work Plan, please contact either Hollis Phillips of ARCADIS at 415.374.2745 or by e-mail at Hollis.Phillips@arcadis-us.com.

Sincerely,
ARCADIS



Hollis Phillips P.G.
Project Manager

Enc: Attachment A – Boring Logs and Well Completion Reports
Attachment B- Laboratory Reports
Figure 1- Site Map with Well Locations

References:

ARCADIS US, Inc. 2010. *Corrective Action Plan Addendum, Former BP Station #11133, 2220 98th Avenue, Oakland, California, ACEH Case #RO000403*. May 10

ATTACHMENT A

BORING LOGS AND WELL COMPLETION REPORTS

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

EXPLORATORY BORING LOG

project no: **GP09BPNA.C107.C0000** date: **9-13-10** boring number: **IW-1**
 client: **BP**
 location: **2220 98th Ave., Oakland, CA**
 logged by: **Kyle King**
 driller/helper: **WDC** page 1 of 2

field location of boring: **S-1 0-3.5 dry s-c-u rec 3.15**
black, brown, silty CLAY, and f-c SAND
 drilling method: **HSA**
 hole diameter: **5 1/2"**
 casing diameter: **N/A**
 well completion data:

ground elevation: datum:

boring/well construction	headspace: gastech/PID/F ID ppm	sample number	blows per foot or pressure in psi	depth sample	soil group symbol (USCS)	water level	time	date	
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">#30</div> <div style="margin-bottom: 20px;">2/16</div> </div>		S-1		3.5	CL				
			S-2		2	CL			
					3.5				
			S-3		1.5	SM-SC			
					13.5				
			S-4		2.5	SM-CL			
					18.5				
			S-5		3.5	CL			
					23.5				
					20				

dry, brown, stiff, silty CLAY, lit sand

dry, brown, tan, f-c SAND, some clay, lit silt

SM Top 1" moist, brown, black, f-c SAND, some silt, lit clay
 ML BOT 1.5", dry to moist, brown, tan, silt and CLAY, some f-m sand

CL dry to moist, brown, tan, med. stiff CLAY, little f-m sand, gray clay veins

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

boring/well construction	headspace: gastech/PID/FID ppm	sample number	blows per foot or pressure in psi	depth	sample	soil group symbol (USCS)	project number:	boring number:
								IW-1
				20.5				
				21	4	CL	moist, brown, tan, hard, silty CLAY, some β-m sand	2 1/2
			S-5		22	SM ^{5"} SC	brownish black f-c sand, some SILT and CLAY layer (~24' bgs)	
					23			
					24			
					24.5	CL	Wet, brown, st. ff, silty CLAY, some β-m sand	
					25	4		
			S-6		26	ML	bot 0.5 - wet, brown, soft, CLAY and SILT, and β-m sand	
					27	-CL		
					28			
					28.5			
					29			
					30			
					31	4.5	CL	
			S-7		32			
					33			
					33.5			
					34			
					35			
					36			
				37				
				38				
				38.5				
				39				
				40				
				41				
				42				
				43				
				44				
				45				
				46				

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

ARCADIS U.S., Inc.

Logged By: KWC Dates Drilled: 9/9/10 Drilling Contractor: WDC Gregg Drilling Project Name/Address: BP -111 33 Method/Equipment: HSPA Boring Number: IW-2

See Unified Soil Classification System for sampling method, classifications and laboratory testing methods. Boring Diam. (in.): 4 1/4 Surface Elev. (ft.): Groundwater Depth (ft): First Water ▽ Static Water ▽ Total Depth (ft.): 40 Drive wt. (lbs.): CONT CORG Drop Dist. (in.):

Feet (bgs)	Boring or Well Completion	Depth (ft.)	Sample Recovery	Blows/6"	Classification Letter	Description (classification, color w/code using ASTM standard, grain shape, consistency, moisture, other, odor)	PID/FID (ppm)	Sample Name	Feet (bgs)
1						1" TOPCOAT, 1"-5" BL/BL			1
2					CL	6"-4' dry, stiff, d brown, silty clay and f-m SAND	0	S-1	2
3									3
4		5.5			SM-SC	4-5' dry, brown f-m SAND, little silty clay			4
5									5
6					CL	5-8.5' dry, brown, stiff, silty clay some to lit of gravel, fr & sand	0	S-2	6
7									7
8									8
9		8.5				8.5-13.5' dry, brown, STIFF silty CLAY, and f-m SAND			9
10									10
11					CL			S-3	11
12									12
13									13
14		13.5				13.5-18.5' dry, brown, STIFF, silty CLAY, and f-m SAND			14
15									15
16					CL		59	S-4	16
17									17
18									18
19		18.5			SM-SC	18.5-20.0: moist brown, gray, f-c SAND, and silty CLAY, some of gravel			19
20								78.85-5	20
21					CL	20.0-23.5: dry to moist brown, stiff, silty CLAY, lit sand			21
22									22
23									23
24		23.5							24
25									25

ARCADIS U.S., Inc.

Logged By: ERRC	Dates Drilled: 9/9/10	Drilling Contractor: WDC Gregg-Drilling	Project Name/Address: BP-11133	Method/Equipment: HSD	Boring Number: IW-2
---------------------------	---------------------------------	---	--	---------------------------------	-------------------------------

See Unified Soil Classification System for sampling method, classifications and laboratory testing methods.	Boring Diam.(in.):	Surface Elev.(ft.):	Groundwater Depth (ft): First Water ∇ Static Water ∇	Total Depth (ft.): 40	Drive wt.(lbs.): 600T	Drop Dist.(in.): 600T
---	--------------------	---------------------	--	---------------------------------	---------------------------------	---------------------------------

Feet (bgs)	Boring or Well Completion	Depth, (ft.)	Sample Recovery	Blows/6"	Classification Letter	Description (classification, color w/code using ASTM standard, grain shape, consistency, moisture, other, odor)	PID/FID (ppm)	Sample Name	Feet (bgs)
1		23.5				23.5-28.5: Moist, gray brown, tan, CLAY and SILT, and f-m SAND	0	S-6	1
2				4.5	ML				2
3									3
4									4
5		28.5				28.5-33.5: wet, brown, tan, SAND, little clay			5
6							7.2	S-7	6
7					SC				7
8				2					8
9									9
10		33.5				33.5-38.5: moist, brown, tan, stiff, silty clay, and f-m SAND	0	S-8	10
11	2 1/16 SAND								11
12									12
13				3	CL				13
14									14
15		38.5				38.5-42: moist to wet brown, tan, SILT and CLAY, and f SAND			15
16								S-9	16
17									17
18				3	CL				18
19									19
20		42							20
21									21
22									22
23									23
24									24
25									25

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

EXPLORATORY BORING LOG

project no: **GP09BPNA.C107.C0000** date: **9-10 -10** boring number: **IW-3**
 client: **BP**
 location: **2220 98th Ave., Oakland, CA**
 logged by: **Kyle King**
 driller/helper: **WDL**

page 1 of 2

field location of boring: _____
 drilling method: **HSA CME-SS**
 hole diameter: **4 1/4" - 5 1/2"**
 casing diameter: **~~4 1/2"~~ N/A**
 well completion data: _____

ground elevation: _____ datum: _____

boring/well construction	headspace: gastech/PID/F ID ppm	sample number	blows per foot or pressure in psi	depth sample	soil group symbol (USCS)	water level	time	date		
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">#30</div> <div style="margin-bottom: 20px;">83.8</div> <div style="margin-bottom: 20px;">2 1/2</div> </div>		S-1	CONTINUOUS	1						
	0			2	CH	moist, black, soft, silty CLAY, lit some f-m sand, med. plasticity				
				3						
			4							
					5					
			S-2	CONTINUOUS	6	CL	dry to moist, brown, stiff, silty CLAY, some f-m sand, low plasticity			
			7							
			8							
			0		9					
					10	ML	dry, brown, stiff, clayey SILT, and f-m SAND, tr & gravel, low med plast.			
			S-3	CORDED	11	1.5				
			12							
			13							
					14					
					15	CL	moist, gray, brown, stiff, silty CLAY, a bit of sand, mild pet odor			
			S-4		16					
			17		5					
			18							
					19					
					20					

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

boring/well construction

headsapce:
gastech/PID/FID
ppm

sample number

blows per foot or
pressure in psi

depth
sample

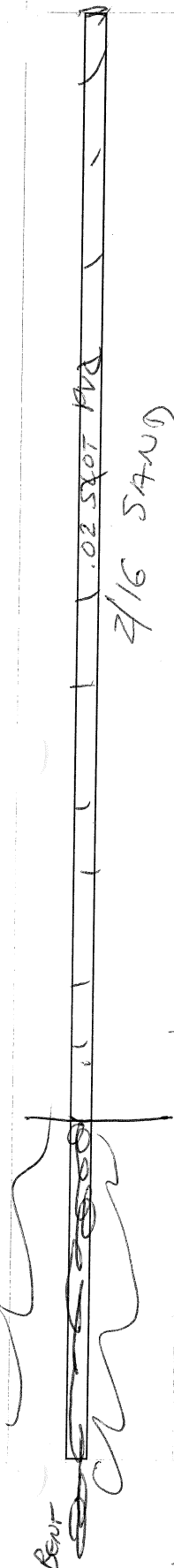
soil group
symbol (USCS)

project number:

boring number:

IW-3

2/2



headsapce: gastech/PID/FID ppm	sample number	blows per foot or pressure in psi	depth sample	soil group symbol (USCS)	project number:	boring number:
			18.5	CL		IW-3
			21		TOP 0.5' SAA	2/2
	S-5		22	Sm	Bot 1.5' mo GRAY, black, f-m SAND, some silt, some f gravel	
			23			
			24		moist, brown, gray, stiff, silty CLAY, some m-f sand,	
	S-6		26	5CL	24 1/2 - 25 1/2: gray, silty sand layer	
			27			
			28			
			29		moist to wet, brown, gray, stiff, clayey SILT, and f-m SAND, tr. gravel. low plasticity, heavy petroleum odor.	
	S-7		31	4.5 ML EL	- WATER TABLE ~ 31' bgs	
			32			
			33			
			34		moist to wet, brown, gray, clayey SILT, some f-m sand,	
			35		2" silty sand layer	
	S-8		36	4 ML		
			37			
			38			
			39		moist to wet, brown, clayey SILT, some m' sand	
			40			
			41	ML		
	S-9		42	3		
			43			
			44		TOP 1' : SAA	
			45		BOT 8.5' : Moist, brown, clayey f-m SAND, and SILT, lit clay	
	S-10		46	Sm		
			47			
			48			

USCS lithology; Munsell color; sorting; grain size; lith. %s; modifiers; consistency; moisture.

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

ARCADIS U.S., Inc.

Logged By: KEC Dates Drilled: 9/9/10 Drilling Contractor: WOC Gregg Drilling Project Name/Address: BP-11133 Method/Equipment: HSA Boring Number: 00-1

See Unified Soil Classification System for sampling method, classifications and laboratory testing methods. Boring Diam. (in.): 4 1/4 Surface Elev. (ft.): Groundwater Depth (ft): First Water ∇ Static Water ∇ Total Depth (ft.): 00 Drive wt. (lbs.): CONT CORE Drop Dist. (in.):

Feet (bgs)	Boring or Well Completion	Depth, (ft.)	Sample Recovery	Blows/6"	Classification Letter	Description (classification, color w/code using ASTM standard, grain shape, consistency, moisture, other, odor)	PID/FID (ppm)	Sample Name	Feet (bgs)
1						1" TOP COAT, 1-5" BC/BC			1
2					CU	3"-3.5": dry, black, soft, silty CLAY, some ϕ sand, tr ϕ gravel	0	S-1	2
3									3
4		3.5				3.5'-4.5': dry, brown, hard, silty CLAY, some ϕ sand			4
5						4.5'-8.5': dry, brown, F-m SAND, some clay, lit silt			5
6			25		SC		0	S-2	6
7									7
8									8
9		8.5				8.5-13.5 Dry, brown, tan, F-m SAND, lit clay, tr silt			9
10							0	S-3	10
11			15		SC				11
12									12
13		13.5				13.5-18.5: dry, brown, F-m SAND, lit silt, tr ϕ gravel			13
14									14
15									15
16					SM		0	S-4	16
17									17
18									18
19		18.5				18.5-23.5: moist, black, brown, clayey SILT and F-m SAND, slight petroleum odor			19
20									20
21			1.5		ML		1118	S-5	21
22									22
23		23.5							23
24									24
25									25

ARCADIS U.S., Inc.

Logged By: KEK	Dates Drilled: 9/9/10	Drilling Contractor: WDC Gregg Drilling	Project Name/Address: BP-11133	Method/Equipment: HSA	Boring Number: OW-1
--------------------------	---------------------------------	---	--	---------------------------------	-------------------------------

See Unified Soil Classification System for sampling method, classifications and laboratory testing methods.	Boring Diam. (in.): 4 1/4	Surface Elev. (ft.):	Groundwater Depth (ft): First Water ∇ Static Water \blacktriangledown	Total Depth (ft.): 40	Drive wt. (lbs.): CONT	Drop Dist. (in.): CORE
---	-------------------------------------	----------------------	--	---------------------------------	----------------------------------	----------------------------------

Feet (bgs)	Boring or Well Completion	Depth, (ft.)	Sample Recovery	Blows/6"	Classification Letter	Description (classification, color w/code using ASTM standard, grain shape, consistency, moisture, other, odor)	PID/FID (ppm)	Sample Name	Feet (bgs)	
1	<div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border: 1px solid black; opacity: 0.5;"> 2050 PUC 216 SAND </div>	23.5				23.5-28.5: moist, black, brown, clayey SILT, and f sand			1	
2									2	
3					1.5	ML			OS-6	3
4										4
5			28.5				28.5-33.5: moist, brown, clayey SILT, and f-m SAND			5
6										6
7										7
8						ML			OS-7	8
9										9
10			33.5				33.5-38.5: moist, brown, clayey SILT, and f-m SAND			10
11										11
12										12
13						ML			OS-8	13
14										14
15			38.5				No Recovery			15
16										16
17						ML			OS-9	17
18										18
19										19
20			42							20
21										21
22										22
23										23
24										24
25										25

ATTACHMENT B

LABORATORY REPORTS

ANALYTICAL REPORT

Job Number: 720-31759-1

Job Description: BP #11133, Oakland

For:

ARCADIS U.S., Inc.
155 Montgomery Street
Suite 1500
San Francisco, CA 94104
Attention: Hollis Phillips



Approved for release.
Dimple Sharma
Project Manager I
11/16/2010 4:57 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
11/16/2010

cc: Mr. Jason Duda
Mr. Ben McKenna

CA ELAP Certification # 2496

The Chain(s) of Custody are included and are an integral part of this report.

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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 www.testamericainc.com

Job Narrative
720-31759-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

Lab Sample ID	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-31759-1	IW-3 (11/12/10)				
Methyl tert-butyl ether		2.5	0.50	ug/L	8260B/CA_LUFTMS
Benzene		5.8	0.50	ug/L	8260B/CA_LUFTMS
Ethylbenzene		8.3	0.50	ug/L	8260B/CA_LUFTMS
Toluene		2.9	0.50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		8.5	1.0	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C6-C12		1000	50	ug/L	8260B/CA_LUFTMS

METHOD SUMMARY

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
8260B / CA LUFT MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

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

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-31759-1	IW-3 (11/12/10)	Water	11/12/2010 1050	11/12/2010 1423

Analytical Data

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

Client Sample ID: IW-3 (11/12/10)

Lab Sample ID: 720-31759-1

Date Sampled: 11/12/2010 1050

Client Matrix: Water

Date Received: 11/12/2010 1423

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method: 8260B/CA_LUFTMS Analysis Batch: 720-81702 Instrument ID: HP4
Preparation: 5030B Lab File ID: 111310010.D
Dilution: 1.0 Initial Weight/Volume: 10 mL
Date Analyzed: 11/13/2010 1447 Final Weight/Volume: 10 mL
Date Prepared: 11/13/2010 1447

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	2.5		0.50
Benzene	5.8		0.50
Ethylbenzene	8.3		0.50
Toluene	2.9		0.50
Xylenes, Total	8.5		1.0
Gasoline Range Organics (GRO)-C6-C12	1000		50

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		67 - 130
Toluene-d8 (Surr)	105		70 - 130

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description
-------------	-----------	-------------

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

QC Association Summary

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Report Basis</u>	<u>Client Matrix</u>	<u>Method</u>	<u>Prep Batch</u>
GC/MS VOA					
Analysis Batch:720-81702					
LCS 720-81702/5	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-81702/7	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-81702/6	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-81702/8	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-81702/4	Method Blank	T	Water	8260B/CA_LUFT	
720-31759-1	IW-3 (11/12/10)	T	Water	8260B/CA_LUFT	
720-31759-1MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-31759-1MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	

Report Basis

T = Total

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

Method Blank - Batch: 720-81702

Lab Sample ID: MB 720-81702/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1047
Date Prepared: 11/13/2010 1047

Analysis Batch: 720-81702
Prep Batch: N/A
Units: ug/L

Method: 8260B/CA_LUFTMS Preparation: 5030B

Instrument ID: HP4
Lab File ID: 111310004.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C6-C12	ND		50

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	107	67 - 130
1,2-Dichloroethane-d4 (Surr)	109	67 - 130
Toluene-d8 (Surr)	111	70 - 130

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-81702**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-81702/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1154
Date Prepared: 11/13/2010 1154

Analysis Batch: 720-81702
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 111310005.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-81702/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1226
Date Prepared: 11/13/2010 1226

Analysis Batch: 720-81702
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 111310006.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Methyl tert-butyl ether	117	120	62 - 130	3	20		
Benzene	109	108	82 - 127	1	20		
Ethylbenzene	114	112	86 - 135	2	20		
Toluene	111	109	83 - 129	2	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	107		106		67 - 130		
1,2-Dichloroethane-d4 (Surr)	101		99		67 - 130		
Toluene-d8 (Surr)	113		109		70 - 130		

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

**Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-81702**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-81702/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1258
Date Prepared: 11/13/2010 1258

Analysis Batch: 720-81702
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 111310007.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-81702/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1330
Date Prepared: 11/13/2010 1330

Analysis Batch: 720-81702
Prep Batch: N/A
Units: ug/L

Instrument ID: HP4
Lab File ID: 111310008.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Gasoline Range Organics (GRO)-C6-C12	83	83	58 - 106	1	20		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	110		108			67 - 130	
1,2-Dichloroethane-d4 (Surr)	106		102			67 - 130	
Toluene-d8 (Surr)	113		114			70 - 130	

Quality Control Results

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-81702**

**Method: 8260B/CA_LUFTMS
Preparation: 5030B**

MS Lab Sample ID: 720-31759-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1519
Date Prepared: 11/13/2010 1519

Analysis Batch: 720-81702
Prep Batch: N/A

Instrument ID: HP4
Lab File ID: 111310011.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-31759-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/13/2010 1551
Date Prepared: 11/13/2010 1551

Analysis Batch: 720-81702
Prep Batch: N/A

Instrument ID: HP4
Lab File ID: 111310012.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Methyl tert-butyl ether	119	113	60 - 138	4	20		
Benzene	101	95	60 - 140	5	20		
Ethylbenzene	103	96	60 - 140	6	20		
Toluene	106	100	60 - 140	5	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
4-Bromofluorobenzene	103		90		67 - 130		
1,2-Dichloroethane-d4 (Surr)	97		86		67 - 130		
Toluene-d8 (Surr)	107		91		70 - 130		

Login Sample Receipt Check List

Client: ARCADIS U.S., Inc.

Job Number: 720-31759-1

Login Number: 31759
Creator: Apostol, Anita
List Number: 1

List Source: TestAmerica San Francisco

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

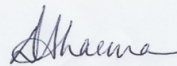
ANALYTICAL REPORT

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

TestAmerica Job ID: 720-33514-1
Client Project/Site: BP #11133, Oakland

For:
ARCADIS U.S., Inc.
155 Montgomery Street
Suite 1500
San Francisco, California 94104

Attn: Project Manager Hollis Phillips



Authorized for release by:
03/08/2011 05:10:31 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

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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.

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Qualifier Definition/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

Glossary

Glossary	Glossary Description
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.

- 1
- 2
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Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Job ID: 720-33514-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-33514-1

Comments

No additional comments.

Receipt

The time on containers for RW-1 (02/22/11) say 10:35. COC says 10:50.

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

GC/MS VOA

Method 8260B: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 86615 exceeded control limits for the following analytes: TAME. The samples associated with this batch non-detects for the affected analyte; therefore, the data have been reported.

No other analytical or quality issues were noted.

Metals

Method 200.7 Rev 4.4: The serial dilution performed for the following sample was outside control limits: 720-33419-B-4-A for Mn

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

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Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-4 (02/22/11)

Lab Sample ID: 720-33514-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.9		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	150		50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	82		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.68		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	5.4		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	84		10		mg/L	10		300.0	Total/NA
Alkalinity	310		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	310		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	4.3		0.10		mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: MW-3 (02/22/11)

Lab Sample ID: 720-33514-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.50		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	26		0.17		mg/L	1.0		RSK SOP-175	total
Manganese	0.30		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	54		10		mg/L	10		300.0	Total/NA
Nitrate as NO3	1.5		1.0		mg/L	1		300.0	Total/NA
Alkalinity	130		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	130		5.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: AW-6 (02/22/11)

Lab Sample ID: 720-33514-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	4.6		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	38		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.0038		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	0.20		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	31		10		mg/L	10		300.0	Total/NA
Alkalinity	150		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0		mg/L	1		SM 2320B	Total/NA

Client Sample ID: AW-5 (02/22/11)

Lab Sample ID: 720-33514-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	1.9		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
TBA	28		4.0		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	52		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.081		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	2.3		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	15		1.0		mg/L	1		300.0	Total/NA
Alkalinity	200		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	200		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	1.2		0.10		mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: AW-1 (02/22/11)

Lab Sample ID: 720-33514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.56		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	130		0.17		mg/L	1.0		RSK SOP-175	total
Methane	1.5		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	0.53		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	2.6		1.0		mg/L	1		300.0	Total/NA

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-1 (02/22/11) (Continued)

Lab Sample ID: 720-33514-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Alkalinity	150		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	150		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	3.8		0.10		mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: RW-1 (02/22/11)

Lab Sample ID: 720-33514-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.54		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	170		50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	28		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.050		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	1.6		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	15		1.0		mg/L	1		300.0	Total/NA
Alkalinity	110		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	110		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	0.64		0.10		mg/L	1		SM 3500 FE D	Total/NA

Client Sample ID: MW-1 (02/22/11)

Lab Sample ID: 720-33514-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.92		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Gasoline Range Organics (GRO) -C6-C12	1400		50		ug/L	1		8260B/CA_LUFTM	Total/NA
Carbon dioxide	54		0.17		mg/L	1.0		RSK SOP-175	total
Methane	0.29		0.0010		mg/L	1.0		RSK SOP-175	total
Manganese	4.7		0.020		mg/L	1		200.7 Rev 4.4	Total/NA
Sulfate	94		10		mg/L	10		300.0	Total/NA
Alkalinity	220		5.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0		mg/L	1		SM 2320B	Total/NA
Ferrous Iron	2.1		0.10		mg/L	1		SM 3500 FE D	Total/NA

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-4 (02/22/11)

Lab Sample ID: 720-33514-1

Date Collected: 02/22/11 15:10

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	2.9		0.50		ug/L			02/23/11 03:55	1
Benzene	ND		0.50		ug/L			02/23/11 03:55	1
EDB	ND		0.50		ug/L			02/23/11 03:55	1
1,2-DCA	ND		0.50		ug/L			02/23/11 03:55	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 03:55	1
Toluene	ND		0.50		ug/L			02/23/11 03:55	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 03:55	1
Gasoline Range Organics (GRO)	150		50		ug/L			02/23/11 03:55	1
-C6-C12									
TBA	ND		4.0		ug/L			02/23/11 03:55	1
Ethanol	ND		250		ug/L			02/23/11 03:55	1
DIPE	ND		0.50		ug/L			02/23/11 03:55	1
TAME	ND *		0.50		ug/L			02/23/11 03:55	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 03:55	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		67 - 130					02/23/11 03:55	1
1,2-Dichloroethane-d4 (Surr)	113		67 - 130					02/23/11 03:55	1
Toluene-d8 (Surr)	100		70 - 130					02/23/11 03:55	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	82		0.17		mg/L		02/25/11 06:00	02/25/11 07:14	1.0
Methane	0.68		0.0010		mg/L		02/25/11 06:00	02/25/11 10:21	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	5.4		0.020		mg/L		02/23/11 08:31	02/23/11 15:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	84		10		mg/L			02/22/11 17:53	10
Nitrate as NO3	ND		1.0		mg/L			02/22/11 17:36	1
Alkalinity	310		5.0		mg/L			02/23/11 10:23	1
Bicarbonate Alkalinity as CaCO3	310		5.0		mg/L			02/23/11 10:23	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:23	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:23	1
Ferrous Iron	4.3		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 15:10	02/24/11 17:09	1.0

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: MW-3 (02/22/11)

Lab Sample ID: 720-33514-2

Date Collected: 02/22/11 14:25

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.50		0.50		ug/L			02/23/11 01:13	1
Benzene	ND		0.50		ug/L			02/23/11 01:13	1
EDB	ND		0.50		ug/L			02/23/11 01:13	1
1,2-DCA	ND		0.50		ug/L			02/23/11 01:13	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 01:13	1
Toluene	ND		0.50		ug/L			02/23/11 01:13	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 01:13	1
Gasoline Range Organics (GRO)	ND		50		ug/L			02/23/11 01:13	1
-C6-C12									
TBA	ND		4.0		ug/L			02/23/11 01:13	1
Ethanol	ND		250		ug/L			02/23/11 01:13	1
DIPE	ND		0.50		ug/L			02/23/11 01:13	1
TAME	ND *		0.50		ug/L			02/23/11 01:13	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 01:13	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130		02/23/11 01:13	1
1,2-Dichloroethane-d4 (Surr)	107		67 - 130		02/23/11 01:13	1
Toluene-d8 (Surr)	99		70 - 130		02/23/11 01:13	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	26		0.17		mg/L		02/25/11 06:00	02/25/11 07:26	1.0
Methane	ND		0.0010		mg/L		02/25/11 06:00	02/25/11 08:51	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.30		0.020		mg/L		02/23/11 08:31	02/23/11 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	54		10		mg/L			02/22/11 18:28	10
Nitrate as NO3	1.5		1.0		mg/L			02/22/11 18:10	1
Alkalinity	130		5.0		mg/L			02/23/11 10:29	1
Bicarbonate Alkalinity as CaCO3	130		5.0		mg/L			02/23/11 10:29	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:29	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:29	1
Ferrous Iron	ND		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 14:25	02/24/11 17:09	1.0

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-6 (02/22/11)

Lab Sample ID: 720-33514-3

Date Collected: 02/22/11 13:00

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	4.6		0.50		ug/L			02/23/11 01:46	1
Benzene	ND		0.50		ug/L			02/23/11 01:46	1
EDB	ND		0.50		ug/L			02/23/11 01:46	1
1,2-DCA	ND		0.50		ug/L			02/23/11 01:46	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 01:46	1
Toluene	ND		0.50		ug/L			02/23/11 01:46	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 01:46	1
Gasoline Range Organics (GRO)	ND		50		ug/L			02/23/11 01:46	1
-C6-C12									
TBA	ND		4.0		ug/L			02/23/11 01:46	1
Ethanol	ND		250		ug/L			02/23/11 01:46	1
DIPE	ND		0.50		ug/L			02/23/11 01:46	1
TAME	ND *		0.50		ug/L			02/23/11 01:46	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 01:46	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130		02/23/11 01:46	1
1,2-Dichloroethane-d4 (Surr)	112		67 - 130		02/23/11 01:46	1
Toluene-d8 (Surr)	100		70 - 130		02/23/11 01:46	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	38		0.17		mg/L		02/25/11 06:00	02/25/11 07:41	1.0
Methane	0.0038		0.0010		mg/L		02/25/11 06:00	02/25/11 09:04	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.20		0.020		mg/L		02/23/11 08:31	02/23/11 16:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	31		10		mg/L			02/22/11 19:36	10
Nitrate as NO3	ND		1.0		mg/L			02/22/11 19:19	1
Alkalinity	150		5.0		mg/L			02/23/11 10:34	1
Bicarbonate Alkalinity as CaCO3	150		5.0		mg/L			02/23/11 10:34	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:34	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:34	1
Ferrous Iron	ND		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 13:00	02/24/11 17:09	1.0

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-5 (02/22/11)

Lab Sample ID: 720-33514-4

Date Collected: 02/22/11 12:20

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	1.9		0.50		ug/L			02/23/11 02:18	1
Benzene	ND		0.50		ug/L			02/23/11 02:18	1
EDB	ND		0.50		ug/L			02/23/11 02:18	1
1,2-DCA	ND		0.50		ug/L			02/23/11 02:18	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 02:18	1
Toluene	ND		0.50		ug/L			02/23/11 02:18	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 02:18	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/23/11 02:18	1
TBA	28		4.0		ug/L			02/23/11 02:18	1
Ethanol	ND		250		ug/L			02/23/11 02:18	1
DIPE	ND		0.50		ug/L			02/23/11 02:18	1
TAME	ND *		0.50		ug/L			02/23/11 02:18	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 02:18	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		67 - 130					02/23/11 02:18	1
1,2-Dichloroethane-d4 (Surr)	115		67 - 130					02/23/11 02:18	1
Toluene-d8 (Surr)	100		70 - 130					02/23/11 02:18	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	52		0.17		mg/L		02/25/11 06:00	02/25/11 07:53	1.0
Methane	0.081		0.0010		mg/L		02/25/11 06:00	02/25/11 09:17	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	2.3		0.020		mg/L		02/23/11 08:31	02/23/11 16:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	15		1.0		mg/L			02/22/11 20:45	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 20:45	1
Alkalinity	200		5.0		mg/L			02/23/11 10:40	1
Bicarbonate Alkalinity as CaCO3	200		5.0		mg/L			02/23/11 10:40	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:40	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:40	1
Ferrous Iron	1.2		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 12:20	02/24/11 17:09	1.0

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-1 (02/22/11)

Lab Sample ID: 720-33514-5

Date Collected: 02/22/11 11:17

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.56		0.50		ug/L			02/24/11 18:17	1
Benzene	ND		0.50		ug/L			02/24/11 18:17	1
EDB	ND		0.50		ug/L			02/24/11 18:17	1
1,2-DCA	ND		0.50		ug/L			02/24/11 18:17	1
Ethylbenzene	ND		0.50		ug/L			02/24/11 18:17	1
Toluene	ND		0.50		ug/L			02/24/11 18:17	1
Xylenes, Total	ND		1.0		ug/L			02/24/11 18:17	1
Gasoline Range Organics (GRO)	ND		50		ug/L			02/24/11 18:17	1
-C6-C12									
TBA	ND		4.0		ug/L			02/24/11 18:17	1
Ethanol	ND		250		ug/L			02/24/11 18:17	1
DIPE	ND		0.50		ug/L			02/24/11 18:17	1
TAME	ND		0.50		ug/L			02/24/11 18:17	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/24/11 18:17	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		67 - 130		02/24/11 18:17	1
1,2-Dichloroethane-d4 (Surr)	109		67 - 130		02/24/11 18:17	1
Toluene-d8 (Surr)	99		70 - 130		02/24/11 18:17	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	130		0.17		mg/L		02/25/11 06:00	02/25/11 08:09	1.0
Methane	1.5		0.0010		mg/L		02/25/11 06:00	02/25/11 09:31	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.53		0.020		mg/L		02/23/11 08:31	02/23/11 16:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.6		1.0		mg/L			02/22/11 22:28	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 22:28	1
Alkalinity	150		5.0		mg/L			02/23/11 10:45	1
Bicarbonate Alkalinity as CaCO3	150		5.0		mg/L			02/23/11 10:45	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:45	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:45	1
Ferrous Iron	3.8		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 11:17	02/24/11 17:09	1.0

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: RW-1 (02/22/11)

Lab Sample ID: 720-33514-6

Date Collected: 02/22/11 10:50

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.54		0.50		ug/L			02/23/11 02:49	1
Benzene	ND		0.50		ug/L			02/23/11 02:49	1
EDB	ND		0.50		ug/L			02/23/11 02:49	1
1,2-DCA	ND		0.50		ug/L			02/23/11 02:49	1
Ethylbenzene	ND		0.50		ug/L			02/23/11 02:49	1
Toluene	ND		0.50		ug/L			02/23/11 02:49	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 02:49	1
Gasoline Range Organics (GRO)	170		50		ug/L			02/23/11 02:49	1
-C6-C12									
TBA	ND		4.0		ug/L			02/23/11 02:49	1
Ethanol	ND		250		ug/L			02/23/11 02:49	1
DIPE	ND		0.50		ug/L			02/23/11 02:49	1
TAME	ND *		0.50		ug/L			02/23/11 02:49	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 02:49	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		67 - 130					02/23/11 02:49	1
1,2-Dichloroethane-d4 (Surr)	115		67 - 130					02/23/11 02:49	1
Toluene-d8 (Surr)	101		70 - 130					02/23/11 02:49	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	28		0.17		mg/L		02/25/11 06:00	02/25/11 08:22	1.0
Methane	0.050		0.0010		mg/L		02/25/11 06:00	02/25/11 09:46	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.6		0.020		mg/L		02/23/11 08:31	02/23/11 16:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	15		1.0		mg/L			02/22/11 23:02	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 23:02	1
Alkalinity	110		5.0		mg/L			02/23/11 10:51	1
Bicarbonate Alkalinity as CaCO3	110		5.0		mg/L			02/23/11 10:51	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:51	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:51	1
Ferrous Iron	0.64		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 10:50	02/24/11 17:09	1.0

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: MW-1 (02/22/11)

Lab Sample ID: 720-33514-7

Date Collected: 02/22/11 13:48

Matrix: Water

Date Received: 02/22/11 16:13

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			02/23/11 03:22	1
Benzene	ND		0.50		ug/L			02/23/11 03:22	1
EDB	ND		0.50		ug/L			02/23/11 03:22	1
1,2-DCA	ND		0.50		ug/L			02/23/11 03:22	1
Ethylbenzene	0.92		0.50		ug/L			02/23/11 03:22	1
Toluene	ND		0.50		ug/L			02/23/11 03:22	1
Xylenes, Total	ND		1.0		ug/L			02/23/11 03:22	1
Gasoline Range Organics (GRO)	1400		50		ug/L			02/23/11 03:22	1
-C6-C12									
TBA	ND		4.0		ug/L			02/23/11 03:22	1
Ethanol	ND		250		ug/L			02/23/11 03:22	1
DIPE	ND		0.50		ug/L			02/23/11 03:22	1
TAME	ND *		0.50		ug/L			02/23/11 03:22	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/23/11 03:22	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	106		67 - 130		02/23/11 03:22	1
1,2-Dichloroethane-d4 (Surr)	120		67 - 130		02/23/11 03:22	1
Toluene-d8 (Surr)	99		70 - 130		02/23/11 03:22	1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	54		0.17		mg/L		02/25/11 06:00	02/25/11 08:39	1.0
Methane	0.29		0.0010		mg/L		02/25/11 06:00	02/25/11 10:08	1.0

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	4.7		0.020		mg/L		02/23/11 08:31	02/23/11 16:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	94		10		mg/L			02/22/11 23:54	10
Nitrate as NO3	ND		1.0		mg/L			02/22/11 23:37	1
Alkalinity	220		5.0		mg/L			02/23/11 10:57	1
Bicarbonate Alkalinity as CaCO3	220		5.0		mg/L			02/23/11 10:57	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:57	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:57	1
Ferrous Iron	2.1		0.10		mg/L			02/22/11 18:35	1

Method: SM4500-S D - INORGANICS - dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/22/11 13:48	02/24/11 17:09	1.0

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-86615/5
Matrix: Water
Analysis Batch: 86615

Client Sample ID: MB 720-86615/5
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
MTBE	ND		0.50		ug/L			02/22/11 20:23	1
Benzene	ND		0.50		ug/L			02/22/11 20:23	1
EDB	ND		0.50		ug/L			02/22/11 20:23	1
1,2-DCA	ND		0.50		ug/L			02/22/11 20:23	1
Ethylbenzene	ND		0.50		ug/L			02/22/11 20:23	1
Toluene	ND		0.50		ug/L			02/22/11 20:23	1
Xylenes, Total	ND		1.0		ug/L			02/22/11 20:23	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/22/11 20:23	1
TBA	ND		4.0		ug/L			02/22/11 20:23	1
Ethanol	ND		250		ug/L			02/22/11 20:23	1
DIPE	ND		0.50		ug/L			02/22/11 20:23	1
TAME	ND		0.50		ug/L			02/22/11 20:23	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/22/11 20:23	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier				
4-Bromofluorobenzene	103		67 - 130		02/22/11 20:23	1
1,2-Dichloroethane-d4 (Surr)	116		67 - 130		02/22/11 20:23	1
Toluene-d8 (Surr)	99		70 - 130		02/22/11 20:23	1

Lab Sample ID: LCS 720-86615/6
Matrix: Water
Analysis Batch: 86615

Client Sample ID: LCS 720-86615/6
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Benzene	25.0	25.9		ug/L		104	82 - 127
EDB	25.0	30.9		ug/L		124	70 - 130
1,2-DCA	25.0	28.6		ug/L		115	70 - 126
Ethylbenzene	25.0	24.3		ug/L		97	86 - 135
Toluene	25.0	25.2		ug/L		101	83 - 129
TBA	500	492		ug/L		98	82 - 116
Ethanol	500	424		ug/L		85	31 - 216
DIPE	25.0	30.1		ug/L		120	74 - 155
TAME	25.0	34.7 *		ug/L		139	79 - 129
Ethyl t-butyl ether	25.0	32.2		ug/L		129	70 - 130

Surrogate	LCS LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	113		67 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCS 720-86615/8
Matrix: Water
Analysis Batch: 86615

Client Sample ID: LCS 720-86615/8
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-86615/8
Matrix: Water
Analysis Batch: 86615

Client Sample ID: LCS 720-86615/8
Prep Type: Total/NA

Surrogate	LCS		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	103		67 - 130
1,2-Dichloroethane-d4 (Surr)	115		67 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 720-86615/7
Matrix: Water
Analysis Batch: 86615

Client Sample ID: LCSD 720-86615/7
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
MTBE	25.0	29.3		ug/L		117	62 - 130	3	20	
Benzene	25.0	25.9		ug/L		104	82 - 127	0	20	
EDB	25.0	30.1		ug/L		120	70 - 130	3	20	
1,2-DCA	25.0	27.8		ug/L		111	70 - 126	3	20	
Ethylbenzene	25.0	24.4		ug/L		98	86 - 135	0	20	
Toluene	25.0	25.5		ug/L		102	83 - 129	1	20	
TBA	500	496		ug/L		99	82 - 116	1	20	
Ethanol	500	459		ug/L		92	31 - 216	8	30	
DIPE	25.0	29.4		ug/L		118	74 - 155	2	20	
TAME	25.0	33.8 *		ug/L		135	79 - 129	3	20	
Ethyl t-butyl ether	25.0	31.5		ug/L		126	70 - 130	2	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	99		67 - 130
1,2-Dichloroethane-d4 (Surr)	110		67 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 720-86615/9
Matrix: Water
Analysis Batch: 86615

Client Sample ID: LCSD 720-86615/9
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Gasoline Range Organics (GRO) -C6-C12	500	451		ug/L		90	58 - 106	1	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	115		67 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: 720-33514-2 MS
Matrix: Water
Analysis Batch: 86615

Client Sample ID: MW-3 (02/22/11)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	% Rec	% Rec.	
				Result	Qualifier				Limits	RPD
MTBE	0.50		25.0	30.0		ug/L		118	60 - 138	
Benzene	ND		25.0	25.4		ug/L		102	60 - 140	
EDB	ND		25.0	30.5		ug/L		122	60 - 140	
1,2-DCA	ND		25.0	27.7		ug/L		111	60 - 140	
Ethylbenzene	ND		25.0	24.4		ug/L		97	60 - 140	

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-33514-2 MS

Matrix: Water

Analysis Batch: 86615

Client Sample ID: MW-3 (02/22/11)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Toluene	ND		25.0	25.1		ug/L		100	60 - 140
TBA	ND		500	482		ug/L		96	60 - 140
Ethanol	ND		500	427		ug/L		85	60 - 140
DIPE	ND		25.0	28.5		ug/L		114	60 - 140
TAME	ND	*	25.0	32.3		ug/L		129	60 - 140
Ethyl t-butyl ether	ND		25.0	30.5		ug/L		122	60 - 140

Surrogate	MS % Recovery	MS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	108		67 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: 720-33514-2 MSD

Matrix: Water

Analysis Batch: 86615

Client Sample ID: MW-3 (02/22/11)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
MTBE	0.50		25.0	27.9		ug/L		109	60 - 138	7	20
Benzene	ND		25.0	25.6		ug/L		102	60 - 140	0	20
EDB	ND		25.0	29.0		ug/L		116	60 - 140	5	20
1,2-DCA	ND		25.0	26.5		ug/L		106	60 - 140	4	20
Ethylbenzene	ND		25.0	24.2		ug/L		97	60 - 140	0	20
Toluene	ND		25.0	25.3		ug/L		101	60 - 140	1	20
TBA	ND		500	490		ug/L		98	60 - 140	2	20
Ethanol	ND		500	483		ug/L		97	60 - 140	12	20
DIPE	ND		25.0	28.0		ug/L		112	60 - 140	2	20
TAME	ND	*	25.0	31.0		ug/L		124	60 - 140	4	20
Ethyl t-butyl ether	ND		25.0	29.3		ug/L		117	60 - 140	4	20

Surrogate	MSD % Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	104		67 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: MB 720-86751/5

Matrix: Water

Analysis Batch: 86751

Client Sample ID: MB 720-86751/5

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			02/24/11 10:52	1
Benzene	ND		0.50		ug/L			02/24/11 10:52	1
EDB	ND		0.50		ug/L			02/24/11 10:52	1
1,2-DCA	ND		0.50		ug/L			02/24/11 10:52	1
Ethylbenzene	ND		0.50		ug/L			02/24/11 10:52	1
Toluene	ND		0.50		ug/L			02/24/11 10:52	1
Xylenes, Total	ND		1.0		ug/L			02/24/11 10:52	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			02/24/11 10:52	1
TBA	ND		4.0		ug/L			02/24/11 10:52	1
Ethanol	ND		250		ug/L			02/24/11 10:52	1

TestAmerica San Francisco

Quality Control Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-86751/5

Matrix: Water

Analysis Batch: 86751

Client Sample ID: MB 720-86751/5

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIPE	ND		0.50		ug/L			02/24/11 10:52	1
TAME	ND		0.50		ug/L			02/24/11 10:52	1
Ethyl t-butyl ether	ND		0.50		ug/L			02/24/11 10:52	1

Surrogate	MB % Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	108		67 - 130		02/24/11 10:52	1
1,2-Dichloroethane-d4 (Surr)	122		67 - 130		02/24/11 10:52	1
Toluene-d8 (Surr)	104		70 - 130		02/24/11 10:52	1

Lab Sample ID: LCS 720-86751/11

Matrix: Water

Analysis Batch: 86751

Client Sample ID: LCS 720-86751/11

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
MTBE	25.0	26.8		ug/L		107	62 - 130
Benzene	25.0	23.7		ug/L		95	82 - 127
EDB	25.0	26.3		ug/L		105	70 - 130
1,2-DCA	25.0	26.3		ug/L		105	70 - 126
Ethylbenzene	25.0	24.6		ug/L		98	86 - 135
Toluene	25.0	24.0		ug/L		96	83 - 129
TBA	500	467		ug/L		93	82 - 116
Ethanol	500	562		ug/L		112	31 - 216
DIPE	25.0	24.0		ug/L		96	74 - 155
TAME	25.0	28.6		ug/L		115	79 - 129
Ethyl t-butyl ether	25.0	26.5		ug/L		106	70 - 130

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	111		67 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCS 720-86751/8

Matrix: Water

Analysis Batch: 86751

Client Sample ID: LCS 720-86751/8

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	441		ug/L		88	58 - 106

Surrogate	LCS % Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	119		67 - 130
Toluene-d8 (Surr)	101		70 - 130

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-86751/12

Matrix: Water

Analysis Batch: 86751

Client Sample ID: LCSD 720-86751/12

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.		RPD	RPD Limit
		Result	Qualifier				Limits	RPD		
MTBE	25.0	26.5		ug/L		106	62 - 130	1	20	
Benzene	25.0	23.9		ug/L		96	82 - 127	1	20	
EDB	25.0	26.2		ug/L		105	70 - 130	0	20	
1,2-DCA	25.0	26.5		ug/L		106	70 - 126	1	20	
Ethylbenzene	25.0	25.0		ug/L		100	86 - 135	2	20	
Toluene	25.0	24.5		ug/L		98	83 - 129	2	20	
TBA	500	471		ug/L		94	82 - 116	1	20	
Ethanol	500	573		ug/L		115	31 - 216	2	30	
DIPE	25.0	24.1		ug/L		97	74 - 155	1	20	
TAME	25.0	28.1		ug/L		112	79 - 129	2	20	
Ethyl t-butyl ether	25.0	26.0		ug/L		104	70 - 130	2	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	109		67 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 720-86751/9

Matrix: Water

Analysis Batch: 86751

Client Sample ID: LCSD 720-86751/9

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.		RPD	RPD Limit
		Result	Qualifier				Limits	RPD		
Gasoline Range Organics (GRO) -C6-C12	500	434		ug/L		87	58 - 106	2	20	

Surrogate	LCSD		Limits
	% Recovery	Qualifier	
4-Bromofluorobenzene	106		67 - 130
1,2-Dichloroethane-d4 (Surr)	117		67 - 130
Toluene-d8 (Surr)	102		70 - 130

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water

Lab Sample ID: 11B0174-BLK1

Matrix: Water

Analysis Batch: 11B0174

Client Sample ID: 11B0174-BLK1

Prep Type: total

Prep Batch: 11B0174_P

Analyte	Blank		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbon dioxide	ND		0.17		mg/L		02/25/11 05:30	02/25/11 06:32	1.00

Lab Sample ID: 11B0174-BS1

Matrix: Water

Analysis Batch: 11B0174

Client Sample ID: 11B0174-BS1

Prep Type: total

Prep Batch: 11B0174_P

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	RPD
Carbon dioxide	16.88	16.4		mg/L		97	70 - 130	

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: RSK SOP-175 - RSK SOP-175 - Dissolved Gases in Water (Continued)

Lab Sample ID: 11B0174-BSD1
Matrix: Water
Analysis Batch: 11B0174

Client Sample ID: 11B0174-BSD1
Prep Type: total
Prep Batch: 11B0174_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Carbon dioxide	16.88	16.7		mg/L		99	70 - 130	2	20	

Lab Sample ID: 11B0175-BLK1
Matrix: Water
Analysis Batch: 11B0175

Client Sample ID: 11B0175-BLK1
Prep Type: total
Prep Batch: 11B0175_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 11B0175-BS1
Matrix: Water
Analysis Batch: 11B0175

Client Sample ID: 11B0175-BS1
Prep Type: total
Prep Batch: 11B0175_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	RPD
Methane	0.04767	0.0491		mg/L		103	70 - 125	

Lab Sample ID: 11B0175-BSD1
Matrix: Water
Analysis Batch: 11B0175

Client Sample ID: 11B0175-BSD1
Prep Type: total
Prep Batch: 11B0175_P

Analyte	Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Methane	0.04767	0.0492		mg/L		103	70 - 125	0.3	20	

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 720-86648/1-A
Matrix: Water
Analysis Batch: 86709

Client Sample ID: MB 720-86648/1-A
Prep Type: Total/NA
Prep Batch: 86648

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: LCS 720-86648/2-A
Matrix: Water
Analysis Batch: 86709

Client Sample ID: LCS 720-86648/2-A
Prep Type: Total/NA
Prep Batch: 86648

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec.	
							Limits	RPD
Manganese	1.00	0.993		mg/L		99	85 - 115	

Lab Sample ID: LCSD 720-86648/3-A
Matrix: Water
Analysis Batch: 86709

Client Sample ID: LCSD 720-86648/3-A
Prep Type: Total/NA
Prep Batch: 86648

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec.		RPD	Limit
							Limits	RPD		
Manganese	1.00	0.962		mg/L		96	85 - 115	3	20	

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 720-86556/4

Matrix: Water

Analysis Batch: 86556

Client Sample ID: MB 720-86556/4

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		1.0		mg/L			02/22/11 08:27	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 08:27	1

Lab Sample ID: LCS 720-86556/5

Matrix: Water

Analysis Batch: 86556

Client Sample ID: LCS 720-86556/5

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
							RPD	Limit
Sulfate	10.0	10.7		mg/L		107	90 - 110	
Nitrate as NO3	10.0	9.64		mg/L		96	90 - 110	

Lab Sample ID: LCSD 720-86556/6

Matrix: Water

Analysis Batch: 86556

Client Sample ID: LCSD 720-86556/6

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	
							RPD	Limit		
Sulfate	10.0	9.52		mg/L		95	90 - 110	12	20	
Nitrate as NO3	10.0	9.53		mg/L		95	90 - 110	1	20	

Lab Sample ID: MB 720-86657/39

Matrix: Water

Analysis Batch: 86657

Client Sample ID: MB 720-86657/39

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		1.0		mg/L			02/22/11 19:53	1
Nitrate as NO3	ND		1.0		mg/L			02/22/11 19:53	1

Lab Sample ID: LCS 720-86657/40

Matrix: Water

Analysis Batch: 86657

Client Sample ID: LCS 720-86657/40

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
							RPD	Limit
Sulfate	10.0	10.2		mg/L		102	90 - 110	
Nitrate as NO3	10.0	10.2		mg/L		102	90 - 110	

Lab Sample ID: LCSD 720-86657/41

Matrix: Water

Analysis Batch: 86657

Client Sample ID: LCSD 720-86657/41

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	
							RPD	Limit		
Sulfate	10.0	10.6		mg/L		106	90 - 110	4	20	
Nitrate as NO3	10.0	9.25		mg/L		93	90 - 110	9	20	

Lab Sample ID: 720-33514-A-4 MS

Matrix: Water

Analysis Batch: 86657

Client Sample ID: 720-33514-A-4 MS

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits	
									RPD	Limit
Sulfate	15		100	113		mg/L		99	80 - 120	
Nitrate as NO3	ND		100	97.9		mg/L		98	80 - 120	

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 720-33514-A-4 MSD
Matrix: Water
Analysis Batch: 86657

Client Sample ID: 720-33514-A-4 MSD
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits			
Sulfate	15		100	110		mg/L		96	80 - 120	3		20
Nitrate as NO3	ND		100	85.6		mg/L		86	80 - 120	13		20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 720-86676/2
Matrix: Water
Analysis Batch: 86676

Client Sample ID: MB 720-86676/2
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Alkalinity	ND		5.0		mg/L			02/23/11 10:03	1
Bicarbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:03	1
Carbonate Alkalinity as CaCO3	ND		5.0		mg/L			02/23/11 10:03	1
Hydroxide Alkalinity	ND		5.0		mg/L			02/23/11 10:03	1

Lab Sample ID: LCS 720-86676/3
Matrix: Water
Analysis Batch: 86676

Client Sample ID: LCS 720-86676/3
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.
		Result	Qualifier				Limits
Alkalinity	250	254		mg/L		102	80 - 120

Lab Sample ID: LCSD 720-86676/4
Matrix: Water
Analysis Batch: 86676

Client Sample ID: LCSD 720-86676/4
Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.	RPD	Limit
		Result	Qualifier				Limits		
Alkalinity	250	256		mg/L		103	80 - 120	1	20

Method: SM 3500 FE D - Iron, Ferrous and Ferric

Lab Sample ID: MB 720-86625/9
Matrix: Water
Analysis Batch: 86625

Client Sample ID: MB 720-86625/9
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ferrous Iron	ND		0.10		mg/L			02/22/11 18:35	1

Lab Sample ID: LCS 720-86625/10
Matrix: Water
Analysis Batch: 86625

Client Sample ID: LCS 720-86625/10
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.
		Result	Qualifier				Limits
Ferrous Iron	1.00	0.982		mg/L		98	80 - 120

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method: SM 3500 FE D - Iron, Ferrous and Ferric (Continued)

Lab Sample ID: LCSD 720-86625/11
Matrix: Water
Analysis Batch: 86625

Client Sample ID: LCSD 720-86625/11
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Ferrous Iron	1.00	0.973		mg/L		97	80 - 120	1	20

Lab Sample ID: 720-33514-2 MS
Matrix: Water
Analysis Batch: 86625

Client Sample ID: MW-3 (02/22/11)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Ferrous Iron	ND		1.00	1.02		mg/L		97	75 - 125

Lab Sample ID: 720-33514-2 MSD
Matrix: Water
Analysis Batch: 86625

Client Sample ID: MW-3 (02/22/11)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Ferrous Iron	ND		1.00	1.04		mg/L		99	75 - 125	2	20

Method: SM4500-S D - INORGANICS

Lab Sample ID: 11B3118-BLK1
Matrix: Water
Analysis Batch: 11B3118

Client Sample ID: 11B3118-BLK1
Prep Type: dissolved
Prep Batch: 11B3118_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Sulfide	ND		0.10		mg/l		02/24/11 15:32	02/24/11 17:09	1.00

Lab Sample ID: 11B3118-BS1
Matrix: Water
Analysis Batch: 11B3118

Client Sample ID: 11B3118-BS1
Prep Type: dissolved
Prep Batch: 11B3118_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Dissolved Sulfide	0.700	0.713		mg/l		102	80 - 120

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

GC/MS VOA

Analysis Batch: 86615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-2 MS	MW-3 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-2 MSD	MW-3 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-86615/5	MB 720-86615/5	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-86615/6	LCS 720-86615/6	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86615/7	LCSD 720-86615/7	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-86615/8	LCS 720-86615/8	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86615/9	LCSD 720-86615/9	Total/NA	Water	8260B/CA_LUF TMS	

Analysis Batch: 86751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-86751/11	LCS 720-86751/11	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86751/12	LCSD 720-86751/12	Total/NA	Water	8260B/CA_LUF TMS	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-86751/5	MB 720-86751/5	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-86751/8	LCS 720-86751/8	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-86751/9	LCSD 720-86751/9	Total/NA	Water	8260B/CA_LUF TMS	

GC Volatiles

Analysis Batch: 11B0174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0174-BS1	11B0174-BS1	total	Water	RSK SOP-175	11B0174_P
11B0174-BSD1	11B0174-BSD1	total	Water	RSK SOP-175	11B0174_P
11B0174-BLK1	11B0174-BLK1	total	Water	RSK SOP-175	11B0174_P
720-33514-1	AW-4 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-2	MW-3 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-3	AW-6 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-4	AW-5 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-5	AW-1 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-6	RW-1 (02/22/11)	total	Water	RSK SOP-175	11B0174_P
720-33514-7	MW-1 (02/22/11)	total	Water	RSK SOP-175	11B0174_P

Prep Batch: 11B0174_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0174-BS1	11B0174-BS1	total	Water	METHOD-GC-R SK	

QC Association Summary

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

GC Volatiles (Continued)

Prep Batch: 11B0174_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0174-BSD1	11B0174-BSD1	total	Water	METHOD-GC-R SK	
11B0174-BLK1	11B0174-BLK1	total	Water	METHOD-GC-R SK	
720-33514-1	AW-4 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-2	MW-3 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-3	AW-6 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-4	AW-5 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-5	AW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-6	RW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-7	MW-1 (02/22/11)	total	Water	METHOD-GC-R SK	

Analysis Batch: 11B0175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0175-BS1	11B0175-BS1	total	Water	RSK SOP-175	11B0175_P
11B0175-BSD1	11B0175-BSD1	total	Water	RSK SOP-175	11B0175_P
11B0175-BLK1	11B0175-BLK1	total	Water	RSK SOP-175	11B0175_P
720-33514-2	MW-3 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-3	AW-6 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-4	AW-5 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-5	AW-1 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-6	RW-1 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-7	MW-1 (02/22/11)	total	Water	RSK SOP-175	11B0175_P
720-33514-1	AW-4 (02/22/11)	total	Water	RSK SOP-175	11B0175_P

Prep Batch: 11B0175_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B0175-BS1	11B0175-BS1	total	Water	METHOD-GC-R SK	
11B0175-BSD1	11B0175-BSD1	total	Water	METHOD-GC-R SK	
11B0175-BLK1	11B0175-BLK1	total	Water	METHOD-GC-R SK	
720-33514-2	MW-3 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-3	AW-6 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-4	AW-5 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-5	AW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-6	RW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-7	MW-1 (02/22/11)	total	Water	METHOD-GC-R SK	
720-33514-1	AW-4 (02/22/11)	total	Water	METHOD-GC-R SK	

Metals

Prep Batch: 86648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-86648/1-A	MB 720-86648/1-A	Total/NA	Water	200.7	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	200.7	



QC Association Summary

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Metals (Continued)

Prep Batch: 86648 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	200.7	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	200.7	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	200.7	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	200.7	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	200.7	
LCS 720-86648/2-A	LCS 720-86648/2-A	Total/NA	Water	200.7	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	200.7	
LCSD 720-86648/3-A	LCSD 720-86648/3-A	Total/NA	Water	200.7	

Analysis Batch: 86709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-86648/1-A	MB 720-86648/1-A	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
LCS 720-86648/2-A	LCS 720-86648/2-A	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	200.7 Rev 4.4	86648
LCSD 720-86648/3-A	LCSD 720-86648/3-A	Total/NA	Water	200.7 Rev 4.4	86648

General Chemistry

Analysis Batch: 86556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	300.0	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	300.0	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	300.0	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	300.0	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	300.0	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	300.0	
MB 720-86556/4	MB 720-86556/4	Total/NA	Water	300.0	
LCS 720-86556/5	LCS 720-86556/5	Total/NA	Water	300.0	
LCSD 720-86556/6	LCSD 720-86556/6	Total/NA	Water	300.0	

Analysis Batch: 86625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-86625/10	LCS 720-86625/10	Total/NA	Water	SM 3500 FE D	
LCSD 720-86625/11	LCSD 720-86625/11	Total/NA	Water	SM 3500 FE D	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-2 MS	MW-3 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-2 MSD	MW-3 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	SM 3500 FE D	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	SM 3500 FE D	
MB 720-86625/9	MB 720-86625/9	Total/NA	Water	SM 3500 FE D	

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

General Chemistry (Continued)

Analysis Batch: 86657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-86657/39	MB 720-86657/39	Total/NA	Water	300.0	
LCS 720-86657/40	LCS 720-86657/40	Total/NA	Water	300.0	
LCSD 720-86657/41	LCSD 720-86657/41	Total/NA	Water	300.0	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	300.0	
720-33514-A-4 MS	720-33514-A-4 MS	Total/NA	Water	300.0	
720-33514-A-4 MSD	720-33514-A-4 MSD	Total/NA	Water	300.0	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	300.0	
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	300.0	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	300.0	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	300.0	

Analysis Batch: 86676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-33514-6	RW-1 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-7	MW-1 (02/22/11)	Total/NA	Water	SM 2320B	
MB 720-86676/2	MB 720-86676/2	Total/NA	Water	SM 2320B	
LCS 720-86676/3	LCS 720-86676/3	Total/NA	Water	SM 2320B	
LCSD 720-86676/4	LCSD 720-86676/4	Total/NA	Water	SM 2320B	
720-33514-1	AW-4 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-2	MW-3 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-3	AW-6 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-4	AW-5 (02/22/11)	Total/NA	Water	SM 2320B	
720-33514-5	AW-1 (02/22/11)	Total/NA	Water	SM 2320B	

Wet Chemistry

Analysis Batch: 11B3118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B3118-BLK1	11B3118-BLK1	Dissolved	Water	SM4500-S D	11B3118_P
11B3118-BS1	11B3118-BS1	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-1	AW-4 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-2	MW-3 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-3	AW-6 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-4	AW-5 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-5	AW-1 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-6	RW-1 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P
720-33514-7	MW-1 (02/22/11)	Dissolved	Water	SM4500-S D	11B3118_P

Prep Batch: 11B3118_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11B3118-BLK1	11B3118-BLK1	Dissolved	Water	General Prep	
11B3118-BS1	11B3118-BS1	Dissolved	Water	General Prep	
720-33514-1	AW-4 (02/22/11)	Dissolved	Water	General Prep	
720-33514-2	MW-3 (02/22/11)	Dissolved	Water	General Prep	
720-33514-3	AW-6 (02/22/11)	Dissolved	Water	General Prep	
720-33514-4	AW-5 (02/22/11)	Dissolved	Water	General Prep	
720-33514-5	AW-1 (02/22/11)	Dissolved	Water	General Prep	
720-33514-6	RW-1 (02/22/11)	Dissolved	Water	General Prep	
720-33514-7	MW-1 (02/22/11)	Dissolved	Water	General Prep	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-4 (02/22/11)

Date Collected: 02/22/11 15:10

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 03:55	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:14	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 10:21	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 15:57	BA	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86556	02/22/11 17:36	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86556	02/22/11 17:53	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:23	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 15:10	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

Client Sample ID: MW-3 (02/22/11)

Date Collected: 02/22/11 14:25

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 01:13	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:26	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 08:51	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:01	BA	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86556	02/22/11 18:10	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86556	02/22/11 18:28	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:29	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 14:25	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

Client Sample ID: AW-6 (02/22/11)

Date Collected: 02/22/11 13:00

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 01:46	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-6 (02/22/11)

Date Collected: 02/22/11 13:00

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:41	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:04	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:06	BA	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86556	02/22/11 19:19	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86556	02/22/11 19:36	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:34	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 13:00	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

Client Sample ID: AW-5 (02/22/11)

Date Collected: 02/22/11 12:20

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 02:18	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 07:53	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:17	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:10	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86657	02/22/11 20:45	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:40	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 12:20	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

Client Sample ID: AW-1 (02/22/11)

Date Collected: 02/22/11 11:17

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86751	02/24/11 18:17	LL	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 08:09	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:31	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: AW-1 (02/22/11)

Date Collected: 02/22/11 11:17

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:14	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86657	02/22/11 22:28	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:45	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 11:17	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

Client Sample ID: RW-1 (02/22/11)

Date Collected: 02/22/11 10:50

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 02:49	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 08:22	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 09:46	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:18	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86657	02/22/11 23:02	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:51	daf	TestAmerica San Francisco
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 10:50	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

Client Sample ID: MW-1 (02/22/11)

Date Collected: 02/22/11 13:48

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	86615	02/23/11 03:22	YB	TestAmerica San Francisco
total	Prep	METHOD-GC-R SK		1.0	11B0174_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0174	02/25/11 08:39	EI	TestAmerica Los Angeles
total	Prep	METHOD-GC-R SK		1.0	11B0175_P	02/25/11 06:00	yz	TestAmerica Los Angeles
total	Analysis	RSK SOP-175		1.0	11B0175	02/25/11 10:08	EI	TestAmerica Los Angeles
Total/NA	Prep	200.7			86648	02/23/11 08:31	ET	TestAmerica San Francisco
Total/NA	Analysis	200.7 Rev 4.4		1	86709	02/23/11 16:22	BA	TestAmerica San Francisco
Total/NA	Analysis	SM 3500 FE D		1	86625	02/22/11 18:35	EYT	TestAmerica San Francisco
Total/NA	Analysis	300.0		1	86657	02/22/11 23:37	MJK	TestAmerica San Francisco
Total/NA	Analysis	300.0		10	86657	02/22/11 23:54	MJK	TestAmerica San Francisco
Total/NA	Analysis	SM 2320B		1	86676	02/23/11 10:57	daf	TestAmerica San Francisco

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Client Sample ID: MW-1 (02/22/11)

Date Collected: 02/22/11 13:48

Date Received: 02/22/11 16:13

Lab Sample ID: 720-33514-7

Matrix: Water

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared Or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Dissolved	Prep	General Prep		1.0	11B3118_P	02/22/11 13:48	RW	TestAmerica Irvine
Dissolved	Analysis	SM4500-S D		1.0	11B3118	02/24/11 17:09	RW	TestAmerica Irvine

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Certification Summary

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Laboratory	Authority	Program	EPA Region	Certification ID	* Expiration Date
TestAmerica San Francisco	California	State Program	9	2496	01/31/12
TestAmerica Irvine		USDA		P330-09-00080	04/29/12
TestAmerica Irvine	Arizona	State Program	9	AZ0671	10/13/11
TestAmerica Irvine	California	LA Cty Sanitation Districts	9	10256	01/31/12
TestAmerica Irvine	California	NELAC	9	1108CA	01/31/12
TestAmerica Irvine	California	State Program	9	2706	06/30/12
TestAmerica Irvine	Guam	State Program	9	Cert. No. 10.001r	01/23/11
TestAmerica Irvine	Hawaii	State Program	9	N/A	01/31/11
TestAmerica Irvine	Nevada	State Program	9	CA015312007A	07/31/11
TestAmerica Irvine	New Mexico	State Program	6	N/A	01/31/11
TestAmerica Irvine	Northern Mariana Islands	State Program	9	MP0002	01/31/11
TestAmerica Los Angeles	California	NELAC	9	CA200013	07/19/11
TestAmerica Los Angeles	Florida	NELAC	4	E87652	06/30/11
TestAmerica Los Angeles	New York	NELAC	2	11851	04/01/11

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

* Any expired certifications in this list are currently pending renewal and are considered valid.



Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFT MS	8260B / CA LUFT MS	SW846	TAL SF
RSK SOP-175	RSK SOP-175 - Dissolved Gases in Water		TAL LA
200.7 Rev 4.4	Metals (ICP)	EPA	TAL SF
300.0	Anions, Ion Chromatography	MCAWW	TAL SF
SM 2320B	Alkalinity	SM	TAL SF
SM 3500 FE D	Iron, Ferrous and Ferric	SM	TAL SF
SM4500-S D	INORGANICS		TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Avenue, Suite 100, Irvine, CA 92614, TEL (949) 261-1022

TAL LA = TestAmerica Los Angeles, 3585 Cadillac Avenue, Suite A, Costa Mesa, CA 92626, TEL 714-258-8610

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

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-33514-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-33514-1	AW-4 (02/22/11)	Water	02/22/11 15:10	02/22/11 16:13
720-33514-2	MW-3 (02/22/11)	Water	02/22/11 14:25	02/22/11 16:13
720-33514-3	AW-6 (02/22/11)	Water	02/22/11 13:00	02/22/11 16:13
720-33514-4	AW-5 (02/22/11)	Water	02/22/11 12:20	02/22/11 16:13
720-33514-5	AW-1 (02/22/11)	Water	02/22/11 11:17	02/22/11 16:13
720-33514-6	RW-1 (02/22/11)	Water	02/22/11 10:50	02/22/11 16:13
720-33514-7	MW-1 (02/22/11)	Water	02/22/11 13:48	02/22/11 16:13

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San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

phone 925.484.1919 fax 925.600.3002

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Chain of Custody Record
720-33514

Client Contact		Project Manager: Jason Duda		Site Contact:		Date:		COC No: <u>129828</u>		
Broadbent and Associates, Inc.		Tel/Fax: 530-566-1400/530-566-1401		Lab Contact: Dimple Sharma		Carrier:		\ of \ COCs		
Address: 1324 Mangrove Ave. Suite 212		Analysis Turnaround Time		Filtered Sample GRO by 8260B BTEX and 5 Oxy by 8260B EDB, 1,2-DCA, and Ethanol by 8260B Nitrate and Sulfate by EPA 300 Ferrous Iron and Manganese by EPA 200.7 Dissolved Sulfide by EPA 376.2 Carbon Dioxide and Methane by RSK 175 Alkalinity by EPA 310.1				Job No.		
City/State/Zip: Chico, CA 95926		Calendar (C) or Work Days (W)						SDG No.		
(530) 566-1400 Phone		TAT if different from Below <u>5 d</u>						Sample Specific Notes:		
(530) 566-1401 FAX		<input type="checkbox"/> 2 weeks								
Project Name: BP 11133		<input type="checkbox"/> 1 week								
Site: 2220 98th Avenue, Oakland, CA		<input type="checkbox"/> 2 days								
P O # GP09BPNA.C107		<input type="checkbox"/> 1 day								
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.				
AW-46 (02/22/11)		02/22/11	1510	6a b	Ad	14	X	X	X	X
MW-3 (02/22/11)		02/22/11	1425							
AW-6 (02/22/11)		02/22/11	1300							
AW-5 (02/22/11)		02/22/11	1220							
AW-1 (02/22/11)		02/22/11	1117							
RW-1 (02/22/11)		02/22/11	1050							
MW-1 (02/22/11)		02/22/11	1348							
TB-1133-11022		02/22/11								On Hold
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"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						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				
Special Instructions/QC Requirements & Comments:										
Relinquished by:		Company: <u>B&E</u>		Date/Time: <u>02/22/11 1613</u>		Received by:		Company: <u>TASF</u>		Date/Time: <u>2/22/11 1013</u>
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:

Login Sample Receipt Check List

Client: ARCADIS U.S., Inc.

Job Number: 720-33514-1

Login Number: 33514
Creator: Apostol, Anita
List Number: 1

List Source: TestAmerica San Francisco

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

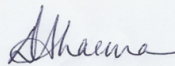
ANALYTICAL REPORT

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

TestAmerica Job ID: 720-35051-1
Client Project/Site: BP #11133, Oakland

For:
ARCADIS U.S., Inc.
155 Montgomery Street
Suite 1500
San Francisco, California 94104

Attn: Project Manager Hollis Phillips



Authorized for release by:
05/16/2011 01:50:10 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

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Have a Question?



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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.

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Qualifier Definition/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

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.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

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Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Job ID: 720-35051-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-35051-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

No analytical or quality issues were noted.

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Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Client Sample ID: AW-1 (5/6/11)

Lab Sample ID: 720-35051-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	4.4		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Benzene	0.92		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
TAME	0.80		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

Client Sample ID: AW-2 (5/6/11)

Lab Sample ID: 720-35051-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.52		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA

Client Sample ID: MW-1 (5/6/11)

Lab Sample ID: 720-35051-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C12	230		50		ug/L	1		8260B/CA_LUFTM	Total/NA

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Client Sample ID: AW-1 (5/6/11)

Lab Sample ID: 720-35051-1

Date Collected: 05/06/11 12:25

Matrix: Water

Date Received: 05/09/11 10:40

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	4.4		0.50		ug/L			05/09/11 16:26	1
Benzene	0.92		0.50		ug/L			05/09/11 16:26	1
EDB	ND		0.50		ug/L			05/09/11 16:26	1
1,2-DCA	ND		0.50		ug/L			05/09/11 16:26	1
Ethylbenzene	ND		0.50		ug/L			05/09/11 16:26	1
Toluene	ND		0.50		ug/L			05/09/11 16:26	1
Xylenes, Total	ND		1.0		ug/L			05/09/11 16:26	1
Gasoline Range Organics (GRO)-C6-C12	ND		50		ug/L			05/09/11 16:26	1
TBA	ND		4.0		ug/L			05/09/11 16:26	1
Ethanol	ND		250		ug/L			05/09/11 16:26	1
DIPE	ND		0.50		ug/L			05/09/11 16:26	1
TAME	0.80		0.50		ug/L			05/09/11 16:26	1
Ethyl t-butyl ether	ND		0.50		ug/L			05/09/11 16:26	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130					05/09/11 16:26	1
1,2-Dichloroethane-d4 (Surr)	86		67 - 130					05/09/11 16:26	1
Toluene-d8 (Surr)	102		70 - 130					05/09/11 16:26	1

Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Client Sample ID: AW-2 (5/6/11)

Lab Sample ID: 720-35051-2

Date Collected: 05/06/11 13:45

Matrix: Water

Date Received: 05/09/11 10:40

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.52		0.50		ug/L			05/09/11 17:58	1
Benzene	ND		0.50		ug/L			05/09/11 17:58	1
EDB	ND		0.50		ug/L			05/09/11 17:58	1
1,2-DCA	ND		0.50		ug/L			05/09/11 17:58	1
Ethylbenzene	ND		0.50		ug/L			05/09/11 17:58	1
Toluene	ND		0.50		ug/L			05/09/11 17:58	1
Xylenes, Total	ND		1.0		ug/L			05/09/11 17:58	1
Gasoline Range Organics (GRO)-C6-C12	ND		50		ug/L			05/09/11 17:58	1
TBA	ND		4.0		ug/L			05/09/11 17:58	1
Ethanol	ND		250		ug/L			05/09/11 17:58	1
DIPE	ND		0.50		ug/L			05/09/11 17:58	1
TAME	ND		0.50		ug/L			05/09/11 17:58	1
Ethyl t-butyl ether	ND		0.50		ug/L			05/09/11 17:58	1
Surrogate	% Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		67 - 130					05/09/11 17:58	1
1,2-Dichloroethane-d4 (Surr)	88		67 - 130					05/09/11 17:58	1
Toluene-d8 (Surr)	101		70 - 130					05/09/11 17:58	1

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Analytical Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Client Sample ID: MW-1 (5/6/11)

Lab Sample ID: 720-35051-3

Date Collected: 05/06/11 13:00

Matrix: Water

Date Received: 05/09/11 10:40

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			05/09/11 18:28	1
Benzene	ND		0.50		ug/L			05/09/11 18:28	1
EDB	ND		0.50		ug/L			05/09/11 18:28	1
1,2-DCA	ND		0.50		ug/L			05/09/11 18:28	1
Ethylbenzene	ND		0.50		ug/L			05/09/11 18:28	1
Toluene	ND		0.50		ug/L			05/09/11 18:28	1
Xylenes, Total	ND		1.0		ug/L			05/09/11 18:28	1
Gasoline Range Organics (GRO)	230		50		ug/L			05/09/11 18:28	1
-C6-C12									
TBA	ND		4.0		ug/L			05/09/11 18:28	1
Ethanol	ND		250		ug/L			05/09/11 18:28	1
DIPE	ND		0.50		ug/L			05/09/11 18:28	1
TAME	ND		0.50		ug/L			05/09/11 18:28	1
Ethyl t-butyl ether	ND		0.50		ug/L			05/09/11 18:28	1

Surrogate	% Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		67 - 130		05/09/11 18:28	1
1,2-Dichloroethane-d4 (Surr)	90		67 - 130		05/09/11 18:28	1
Toluene-d8 (Surr)	102		70 - 130		05/09/11 18:28	1

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Quality Control Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-91162/4

Matrix: Water

Analysis Batch: 91162

Client Sample ID: MB 720-91162/4

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
MTBE	ND		0.50		ug/L			05/09/11 10:28	1
Benzene	ND		0.50		ug/L			05/09/11 10:28	1
EDB	ND		0.50		ug/L			05/09/11 10:28	1
1,2-DCA	ND		0.50		ug/L			05/09/11 10:28	1
Ethylbenzene	ND		0.50		ug/L			05/09/11 10:28	1
Toluene	ND		0.50		ug/L			05/09/11 10:28	1
m-Xylene & p-Xylene	ND		1.0		ug/L			05/09/11 10:28	1
o-Xylene	ND		0.50		ug/L			05/09/11 10:28	1
Xylenes, Total	ND		1.0		ug/L			05/09/11 10:28	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			05/09/11 10:28	1
TBA	ND		4.0		ug/L			05/09/11 10:28	1
Ethanol	ND		250		ug/L			05/09/11 10:28	1
DIPE	ND		0.50		ug/L			05/09/11 10:28	1
TAME	ND		0.50		ug/L			05/09/11 10:28	1
Ethyl t-butyl ether	ND		0.50		ug/L			05/09/11 10:28	1
Surrogate	MB MB		Limits		Unit	D	Prepared	Analyzed	Dil Fac
	% Recovery	Qualifier							
4-Bromofluorobenzene	97		67 - 130					05/09/11 10:28	1
1,2-Dichloroethane-d4 (Surr)	86		67 - 130					05/09/11 10:28	1
Toluene-d8 (Surr)	99		70 - 130					05/09/11 10:28	1

Lab Sample ID: LCS 720-91162/5

Matrix: Water

Analysis Batch: 91162

Client Sample ID: LCS 720-91162/5

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
								MTBE
Benzene	25.0	25.5		ug/L		102	82 - 127	
EDB	25.0	26.3		ug/L		105	70 - 130	
1,2-DCA	25.0	21.4		ug/L		85	70 - 126	
Ethylbenzene	25.0	25.7		ug/L		103	86 - 135	
Toluene	25.0	26.3		ug/L		105	83 - 129	
m-Xylene & p-Xylene	50.0	52.5		ug/L		105	70 - 142	
o-Xylene	25.0	26.5		ug/L		106	89 - 136	
TBA	500	478		ug/L		96	82 - 116	
Ethanol	500	530		ug/L		106	31 - 216	
DIPE	25.0	23.8		ug/L		95	74 - 155	
TAME	25.0	27.0		ug/L		108	79 - 129	
Ethyl t-butyl ether	25.0	24.4		ug/L		98	70 - 130	
Surrogate	LCS LCS		Limits		Unit	D	% Rec	% Rec. Limits
	% Recovery	Qualifier						
4-Bromofluorobenzene	100		67 - 130					
1,2-Dichloroethane-d4 (Surr)	88		67 - 130					
Toluene-d8 (Surr)	101		70 - 130					

Quality Control Data

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-91162/7

Matrix: Water

Analysis Batch: 91162

Client Sample ID: LCS 720-91162/7

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits	
Gasoline Range Organics (GRO) -C6-C12	500	346		ug/L		69	58 - 106	
Surrogate		LCS % Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene		100		67 - 130				
1,2-Dichloroethane-d4 (Surr)		87		67 - 130				
Toluene-d8 (Surr)		102		70 - 130				

Lab Sample ID: LCSD 720-91162/6

Matrix: Water

Analysis Batch: 91162

Client Sample ID: LCSD 720-91162/6

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	
									RPD	Limit
MTBE	25.0	25.2		ug/L		101	62 - 130	2	20	
Benzene	25.0	25.5		ug/L		102	82 - 127	0	20	
EDB	25.0	26.6		ug/L		106	70 - 130	1	20	
1,2-DCA	25.0	21.0		ug/L		84	70 - 126	2	20	
Ethylbenzene	25.0	25.5		ug/L		102	86 - 135	1	20	
Toluene	25.0	26.2		ug/L		105	83 - 129	0	20	
m-Xylene & p-Xylene	50.0	51.8		ug/L		104	70 - 142	1	20	
o-Xylene	25.0	26.1		ug/L		105	89 - 136	1	20	
TBA	500	451		ug/L		90	82 - 116	6	20	
Ethanol	500	509		ug/L		102	31 - 216	4	30	
DIPE	25.0	23.8		ug/L		95	74 - 155	0	20	
TAME	25.0	27.3		ug/L		109	79 - 129	1	20	
Ethyl t-butyl ether	25.0	24.6		ug/L		99	70 - 130	1	20	
Surrogate		LCSD % Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene		100		67 - 130						
1,2-Dichloroethane-d4 (Surr)		87		67 - 130						
Toluene-d8 (Surr)		102		70 - 130						

Lab Sample ID: LCSD 720-91162/8

Matrix: Water

Analysis Batch: 91162

Client Sample ID: LCSD 720-91162/8

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits		RPD	
									RPD	Limit
Gasoline Range Organics (GRO) -C6-C12	500	355		ug/L		71	58 - 106	2	20	
Surrogate		LCSD % Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene		99		67 - 130						
1,2-Dichloroethane-d4 (Surr)		84		67 - 130						
Toluene-d8 (Surr)		101		70 - 130						

Quality Control Data

Client: ARCADIS U.S., Inc.
 Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-35051-1 MS

Matrix: Water

Analysis Batch: 91162

Client Sample ID: AW-1 (5/6/11)

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	% Rec	% Rec.
	Result	Qualifier	Added	Result	Qualifier				
MTBE	4.4		25.0	31.0		ug/L		106	60 - 138
Benzene	0.92		25.0	27.2		ug/L		105	60 - 140
EDB	ND		25.0	27.6		ug/L		110	60 - 140
1,2-DCA	ND		25.0	21.8		ug/L		87	60 - 140
Ethylbenzene	ND		25.0	25.9		ug/L		102	60 - 140
Toluene	ND		25.0	26.2		ug/L		105	60 - 140
m-Xylene & p-Xylene	ND		50.0	51.9		ug/L		103	60 - 140
o-Xylene	ND		25.0	26.5		ug/L		106	60 - 140
TBA	ND		500	453		ug/L		90	60 - 140
Ethanol	ND		500	514		ug/L		103	60 - 140
DIPE	ND		25.0	24.9		ug/L		100	60 - 140
TAME	0.80		25.0	29.6		ug/L		115	60 - 140
Ethyl t-butyl ether	ND		25.0	26.0		ug/L		104	60 - 140
MS MS									
Surrogate	% Recovery	Qualifier	Limits						
4-Bromofluorobenzene	101		67 - 130						
1,2-Dichloroethane-d4 (Surr)	89		67 - 130						
Toluene-d8 (Surr)	101		70 - 130						

Lab Sample ID: 720-35051-1 MSD

Matrix: Water

Analysis Batch: 91162

Client Sample ID: AW-1 (5/6/11)

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	% Rec	% Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
MTBE	4.4		25.0	30.7		ug/L		105	60 - 138	1	20
Benzene	0.92		25.0	26.4		ug/L		102	60 - 140	3	20
EDB	ND		25.0	27.0		ug/L		108	60 - 140	2	20
1,2-DCA	ND		25.0	21.1		ug/L		84	60 - 140	4	20
Ethylbenzene	ND		25.0	24.8		ug/L		98	60 - 140	4	20
Toluene	ND		25.0	25.2		ug/L		101	60 - 140	4	20
m-Xylene & p-Xylene	ND		50.0	49.7		ug/L		98	60 - 140	4	20
o-Xylene	ND		25.0	25.4		ug/L		102	60 - 140	4	20
TBA	ND		500	441		ug/L		88	60 - 140	3	20
Ethanol	ND		500	501		ug/L		100	60 - 140	3	20
DIPE	ND		25.0	24.5		ug/L		98	60 - 140	2	20
TAME	0.80		25.0	29.4		ug/L		114	60 - 140	1	20
Ethyl t-butyl ether	ND		25.0	25.7		ug/L		103	60 - 140	1	20
MSD MSD											
Surrogate	% Recovery	Qualifier	Limits								
4-Bromofluorobenzene	101		67 - 130								
1,2-Dichloroethane-d4 (Surr)	89		67 - 130								
Toluene-d8 (Surr)	102		70 - 130								

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

GC/MS VOA

Analysis Batch: 91162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-35051-1	AW-1 (5/6/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-35051-1 MS	AW-1 (5/6/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-35051-1 MSD	AW-1 (5/6/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-35051-2	AW-2 (5/6/11)	Total/NA	Water	8260B/CA_LUF TMS	
720-35051-3	MW-1 (5/6/11)	Total/NA	Water	8260B/CA_LUF TMS	
MB 720-91162/4	MB 720-91162/4	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-91162/5	LCS 720-91162/5	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-91162/6	LCSD 720-91162/6	Total/NA	Water	8260B/CA_LUF TMS	
LCS 720-91162/7	LCS 720-91162/7	Total/NA	Water	8260B/CA_LUF TMS	
LCSD 720-91162/8	LCSD 720-91162/8	Total/NA	Water	8260B/CA_LUF TMS	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Client Sample ID: AW-1 (5/6/11)

Date Collected: 05/06/11 12:25

Date Received: 05/09/11 10:40

Lab Sample ID: 720-35051-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	91162	05/09/11 16:26	LL	TestAmerica San Francisco

Client Sample ID: AW-2 (5/6/11)

Date Collected: 05/06/11 13:45

Date Received: 05/09/11 10:40

Lab Sample ID: 720-35051-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	91162	05/09/11 17:58	LL	TestAmerica San Francisco

Client Sample ID: MW-1 (5/6/11)

Date Collected: 05/06/11 13:00

Date Received: 05/09/11 10:40

Lab Sample ID: 720-35051-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUF TMS		1	91162	05/09/11 18:28	LL	TestAmerica San Francisco



Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

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Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFT MS	8260B / CA LUFT MS	SW846	TAL SF

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11133, Oakland

TestAmerica Job ID: 720-35051-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-35051-1	AW-1 (5/6/11)	Water	05/06/11 12:25	05/09/11 10:40
720-35051-2	AW-2 (5/6/11)	Water	05/06/11 13:45	05/09/11 10:40
720-35051-3	MW-1 (5/6/11)	Water	05/06/11 13:00	05/09/11 10:40

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San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

phone 925.484.1919 fax 925.600.3002

720 - 35051

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

131307

TestAmerica Laboratories, Inc.

05/16/2011

Client Contact		Project Manager: Jason Duda			Site Contact:			Date: 5/9/11			COC No:							
Broadbent and Associates, Inc.		Tel/Fax: 530-566-1400/530-566-1401			Lab Contact: Dimple Sharma			Carrier:			1 of 1 COCs							
Address: 1324 Mangrove Ave. Suite 212		Analysis Turnaround Time			Filtered Sample GRO by 8260B BTEX and 5 Oxy's by 8260B EDB, 1,2-DCA, and Ethanol by 8260B						Job No.							
City/State/Zip: Chico, CA 95926		Calendar (C) or Work Days (W)																
(530) 566-1400 Phone		TAT if different from Below																
(530) 566-1401 FAX		<input checked="" type="checkbox"/> 2 weeks																
Project Name: BP 11133		<input type="checkbox"/> 1 week																
Site: 2220 98th Avenue, Oakland, CA		<input type="checkbox"/> 2 days			SDG No.													
P O # GP09BPNA.C107		<input type="checkbox"/> 1 day																
Sample Identification		Sample Date	Sample Time	Sample Type							Matrix	# of Cont.	Sample Specific Notes:					
AW-1 (5/6/11)		5/6/11	1225	Grab							GW	3	X	X	X	on hold		
AW-2 (5/6/11)		↓	1345	↓							↓	3	X	X	X			
MW-1 (5/6/11)		↓	1300	↓	↓	3	X	X	X									
Trip Blank		5/6/11	1355															
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other																		
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)												
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months												
Special Instructions/QC Requirements & Comments:																		
Relinquished by:		Company: BAE		Date/Time: 5/9/11 0936		Received by:		Company: Test America		Date/Time: 5-9-11 0936								
Relinquished by:		Company: Test America		Date/Time: 5/9/11 1040		Received by:		Company: Test America		Date/Time: 5-9-11 1040								
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:								

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Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-35051-1

Login Number: 35051

List Source: TestAmerica San Francisco

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	

