

October 18, 2011

LABORATORY REPORT

Client:

Arcadis - Corpus Christi
711 N. Carancahua, Suite 1700
Corpus Christi, TX 78401
Attn: Ken Brandner

Work Order: PUJ0896
Project Name: Air Monitoring 2010
Project Number: Encycle CC001231.0001
Date Received: 10/14/11
Final Report: 10/18/11 10:10

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica.

TestAmerica Laboratories, Inc., Phoenix Laboratory certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(602)437-3340

Analyses included in this report were performed by the laboratory shown at the top of this report unless otherwise indicated.

CASE NARRATIVE:

- SAMPLE RECEIPT:** Samples were received intact, at 20°C and with chain of custody documentation.
- HOLDING TIMES:** All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica Sample Acceptance Policy unless otherwise noted in the report.
- PRESERVATION:** Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA:** All analyses met method criteria, except as noted in the report with data qualifiers.
- COMMENTS:** No significant observations were made.
- SUBCONTRACTED:** Refer to the last page for specific subcontract laboratory information included in this report.

Approved By:



Tina Paulauskas
Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

4625 East Cotton Center Blvd. Ste 189 Phoenix, AZ 85040 * (602) 437-3340 * Fax (602) 454-9303

Arcadis - Corpus Christi
711 N. Carancahua, Suite 1700
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Ken Brandner

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SAMPLE IDENTIFICATION

LAB NUMBER

COLLECTION DATE

CONTAINER TYPE

Upwind 10-13-11	PUJ0896-01	10/13/11	MCE Filter, 0.8 micron, 37-mm, 3-piece
Upwind 10-13-11	PUJ0896-02	10/13/11	Anasorb C300, 200 mg
Downwind 10-13-11	PUJ0896-03	10/13/11	MCE Filter, 0.8 micron, 37-mm, 3-piece
Downwind 10-13-11	PUJ0896-04	10/13/11	Anasorb C300, 200 mg
Trip Blank	PUJ0896-05	10/13/11	MCE Filter, 0.8 micron, 37-mm, 3-piece
Trip Blank	PUJ0896-06	10/13/11	Anasorb C300, 200 mg

Arcadis - Corpus Christi 711 N. Carancahua, Suite 1700 Corpus Christi, TX 78401 Ken Brandner	Work Order: PUV0896 Project: Air Monitoring 2010 Project Number: Encycle CC001231.0001	Received: 10/14/11 Reported: 10/18/11 10:10
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ANALYTICAL REPORT

Analyte	Result	Qual	Date Analyzed	Analyst	Rpt Limit ug, Total	Method	
Mercury by NIOSH 6009 (Modified)							
Sample ID: PUV0896-02 (Upwind 10-13-11)		Tube		Sample Air Volume: 96L		Sampled: 10/13/11	
	ug, Total	mg/m3	ppm			Prepared: 10/17/11 10:26	
Mercury	<0.0225	<0.000234	<0.0000286	10/17/2011	PC	0.0225 NIOSH 6009 (Modified)	
Sample ID: PUV0896-04 (Downwind 10-13-11)		Tube		Sample Air Volume: 96L		Sampled: 10/13/11	
	ug, Total	mg/m3	ppm			Prepared: 10/17/11 10:26	
Mercury	<0.0225	<0.000234	<0.0000286	10/17/2011	PC	0.0225 NIOSH 6009 (Modified)	
Sample ID: PUV0896-06 (Trip Blank)		Tube		Sample Air Volume: L		Sampled: 10/13/11	
	ug, Total	mg/m3	ppm			Prepared: 10/17/11 10:26	
Mercury	<0.0225	--	--	10/17/2011	PC	0.0225 NIOSH 6009 (Modified)	
Metals using ICP-MS by NIOSH 7303							
Sample ID: PUV0896-01 (Upwind 10-13-11)		Filter		Sample Air Volume: 960L		Sampled: 10/13/11	
	ug, Total	mg/m3	ppm			Prepared: 10/14/11 17:23	
Antimony	<0.0750	<0.0000781	<0.0000157	10/17/2011	PC	0.0750 NIOSH 7303	
Arsenic	<0.0250	<0.0000260	<0.00000850	10/17/2011	PC	0.0250 NIOSH 7303	
Barium	0.147	0.000153	0.0000273	10/17/2011	PC	0.0500 NIOSH 7303	
Cadmium	<0.0250	<0.0000260	<0.00000566	10/17/2011	PC	0.0250 NIOSH 7303	
Chromium	<1.25	<0.00130	<0.000612	L	10/17/2011	PC	1.25 NIOSH 7303
Copper	<0.0500	<0.0000521	<0.0000200	10/17/2011	PC	0.0500 NIOSH 7303	
Lead	<0.0250	<0.0000260	<0.00000307	10/17/2011	PC	0.0250 NIOSH 7303	
Nickel	0.169	0.000176	0.0000733	10/17/2011	PC	0.0250 NIOSH 7303	
Selenium	<0.0500	<0.0000521	<0.0000161	IH1	10/17/2011	PC	0.0500 NIOSH 7303
Silver	<0.0250	<0.0000260	<0.00000590	10/17/2011	PC	0.0250 NIOSH 7303	
Zinc	<0.250	<0.000260	<0.0000974	10/17/2011	PC	0.250 NIOSH 7303	
Sample ID: PUV0896-03 (Downwind 10-13-11)		Filter		Sample Air Volume: 960L		Sampled: 10/13/11	
	ug, Total	mg/m3	ppm			Prepared: 10/14/11 17:23	
Antimony	<0.0750	<0.0000781	<0.0000157	10/17/2011	PC	0.0750 NIOSH 7303	
Arsenic	<0.0250	<0.0000260	<0.00000850	10/17/2011	PC	0.0250 NIOSH 7303	
Barium	0.138	0.000144	0.0000256	10/17/2011	PC	0.0500 NIOSH 7303	
Cadmium	<0.0250	<0.0000260	<0.00000566	10/17/2011	PC	0.0250 NIOSH 7303	
Chromium	<1.25	<0.00130	<0.000612	L	10/17/2011	PC	1.25 NIOSH 7303
Copper	0.130	0.000135	0.0000521	10/17/2011	PC	0.0500 NIOSH 7303	
Lead	0.0318	0.0000331	0.00000391	10/17/2011	PC	0.0250 NIOSH 7303	
Nickel	0.175	0.000182	0.0000759	10/17/2011	PC	0.0250 NIOSH 7303	
Selenium	<0.0500	<0.0000521	<0.0000161	IH1	10/17/2011	PC	0.0500 NIOSH 7303
Silver	<0.0250	<0.0000260	<0.00000590	10/17/2011	PC	0.0250 NIOSH 7303	
Zinc	<0.250	<0.000260	<0.0000974	10/17/2011	PC	0.250 NIOSH 7303	
Sample ID: PUV0896-05 (Trip Blank)		Filter		Sample Air Volume: L		Sampled: 10/13/11	
	ug, Total	mg/m3	ppm			Prepared: 10/14/11 17:23	
Antimony	<0.0750	--	--	10/17/2011	PC	0.0750 NIOSH 7303	
Arsenic	<0.0250	--	--	10/17/2011	PC	0.0250 NIOSH 7303	

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Analyte	Result	Qual	Date Analyzed	Analyst	Rpt Limit ug, Total	Method
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Metals using ICP-MS by NIOSH 7303 - cont.

Sample ID: PUJ0896-05 (Trip Blank) - cont.	Filter	Sample Air Volume: L	Sampled: 10/13/11
ug, Total	mg/m3	ppm	Prepared: 10/14/11 17:23
Barium	0.0555	--	10/17/2011 PC 0.0500 NIOSH 7303
Cadmium	<0.0250	--	10/17/2011 PC 0.0250 NIOSH 7303
Chromium	<1.25	--	L 10/17/2011 PC 1.25 NIOSH 7303
Copper	0.0588	--	10/17/2011 PC 0.0500 NIOSH 7303
Lead	<0.0250	--	10/17/2011 PC 0.0250 NIOSH 7303
Nickel	0.191	--	10/17/2011 PC 0.0250 NIOSH 7303
Selenium	<0.0500	--	IH1 10/17/2011 PC 0.0500 NIOSH 7303
Silver	<0.0250	--	10/17/2011 PC 0.0250 NIOSH 7303
Zinc	<0.250	--	10/17/2011 PC 0.250 NIOSH 7303

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PROJECT QUALITY CONTROL DATA

Blank

Analyte	Blank Value	Qual	Units	Q.C. Batch	Target Range	Lab Number	Analyzed Date
Mercury by NIOSH 6009 (Modified)							
11J0623-BLK1							
Mercury	<0.0225		ug, Total	11J0623		11J0623-BLK1	10-17-2011
Metals using ICP-MS by NIOSH 7303							
11J0607-BLK1							
Antimony	<0.0750		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Arsenic	<0.0250		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Barium	<0.0500		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Cadmium	<0.0250		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Chromium	<1.25		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Copper	<0.0500		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Lead	<0.0250		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Nickel	<0.0250		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Selenium	0.0595	IHI	ug, Total	11J0607		11J0607-BLK1	10-17-2011
Silver	<0.0250		ug, Total	11J0607		11J0607-BLK1	10-17-2011
Zinc	<0.250		ug, Total	11J0607		11J0607-BLK1	10-17-2011

LCS

Analyte	Known Val.	Analyzed Val	Qual	Units	% Rec.	Target Range	Batch	Analyzed Date
Mercury by NIOSH 6009 (Modified)								
11J0623-BS1								
Mercury	0.500	0.495		ug, Total	99%	81-129	11J0623	10-17-2011
Metals using ICP-MS by NIOSH 7303								
11J0607-BS1								
Antimony	2.50	2.44		ug, Total	98%	80-120	11J0607	10-17-2011
Arsenic	2.50	2.54		ug, Total	101%	80-120	11J0607	10-17-2011
Barium	2.50	2.54		ug, Total	101%	80-120	11J0607	10-17-2011
Cadmium	2.50	2.41		ug, Total	97%	80-120	11J0607	10-17-2011
Chromium	2.50	3.04	L	ug, Total	121%	80-120	11J0607	10-17-2011
Copper	2.50	2.76		ug, Total	110%	80-120	11J0607	10-17-2011
Lead	2.50	2.57		ug, Total	103%	80-120	11J0607	10-17-2011
Nickel	2.50	2.62		ug, Total	105%	80-120	11J0607	10-17-2011
Selenium	2.50	2.65	IHI	ug, Total	106%	80-120	11J0607	10-17-2011
Silver	2.50	2.52		ug, Total	101%	80-120	11J0607	10-17-2011
Zinc	2.50	2.40		ug, Total	96%	80-120	11J0607	10-17-2011

LCS Dup

Analyte	Orig. Val.	Duplicate	Qual	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date
Mercury by NIOSH 6009 (Modified)												

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LCS Dup

Analyte	Orig. Val.	Duplicate	Qual	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date
Mercury by NIOSH 6009 (Modified)												
11J0623-BSD1												
Mercury		0.492		ug, Total	0.500	98%	81-129	0.628	30	11J0623		10-17-2011
Metals using ICP-MS by NIOSH 7303												
11J0607-BSD1												
Antimony		2.39		ug, Total	2.50	96%	80-120	2.22	25	11J0607		10-17-2011
Arsenic		2.50		ug, Total	2.50	100%	80-120	1.64	25	11J0607		10-17-2011
Barium		2.53		ug, Total	2.50	101%	80-120	0.322	25	11J0607		10-17-2011
Cadmium		2.33		ug, Total	2.50	93%	80-120	3.56	25	11J0607		10-17-2011
Chromium		3.06	L	ug, Total	2.50	122%	80-120	0.748	25	11J0607		10-17-2011
Copper		2.72		ug, Total	2.50	109%	80-120	1.31	25	11J0607		10-17-2011
Lead		2.59		ug, Total	2.50	104%	80-120	0.662	25	11J0607		10-17-2011
Nickel		2.66		ug, Total	2.50	107%	80-120	1.49	25	11J0607		10-17-2011
Selenium		2.57	IH1	ug, Total	2.50	103%	80-120	3.26	25	11J0607		10-17-2011
Silver		2.46		ug, Total	2.50	98%	80-120	2.55	25	11J0607		10-17-2011
Zinc		2.39		ug, Total	2.50	95%	80-120	0.492	25	11J0607		10-17-2011

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CERTIFICATION SUMMARY

Analyses included in this report were performed by TestAmerica Phoenix, 4625 E. Cotton Center Boulevard, Building 3, Suite 189, Phoenix, AZ 85040.

TestAmerica Phoenix (Lab ID 154268) is accredited by the American Industrial Hygiene Association (AIHA) in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1007, NIOSH 1010, NIOSH 1015, NIOSH 1022, NIOSH 1300, NIOSH 1400, NIOSH 1401, NIOSH 1403, NIOSH 1405, NIOSH 1450, NIOSH 1457, NIOSH 1500, NIOSH 1501, NIOSH 1550, NIOSH 1602, NIOSH 1604, NIOSH 1606, NIOSH 1609, NIOSH 1610, NIOSH 1611, NIOSH, 1613, NIOSH 1615, NIOSH 2000, NIOSH 2016, NIOSH 2532, NIOSH 2546, NIOSH 2551, NIOSH 5000, NIOSH 5503, NIOSH 5506, NIOSH 5600, NIOSH 6006, NIOSH 6009, NIOSH 6010, NIOSH 7300, NIOSH 7303, NIOSH 7600, NIOSH 7903, NIOSH 9100, NIOSH 9102, EPA IP-6A, EPA IP-6C, OSHA PV2120, OSHA 7, OSHA 42, OSHA 47, OSHA 48, OSHA 64, OSHA 69, OSHA 111, OSHA ID-140, OSHA ID-121, OSHA ID-125G, OSHA IS-215, OSHA 1001, OSHA 1002, OSHA 1003, OSHA 1004, OSHA 1005 and OSHA Chemical and Sampling Information for Silane. Volatile organic compounds on 3M Organic Vapor Monitors, Assay Technology Passive Monitors and SKC Passive Monitors. Formaldehyde and other aldehydes and ketones on Assay Technology Passive Monitor. Aldehydes and ketones by EPA TO-11A.

The TestAmerica Phoenix is also licensed through the State of Arizona (AZ0728) for EPA method TO-15.

TestAmerica Phoenix also holds NELAC accreditation through the State of Oregon (AZ100001) for the analytical techniques noted on the scope of accreditation and the State of New York (11898) for NIOSH 6009.

Samples were analyzed using methods outlined in references such as:

- OSHA - Occupational Safety and Health Administration, U. S. Department of Labor, OSHA Analytical Methods Manual.
- NIOSH - National Institute for Occupational Safety and Health, U. S. Department of Health and Human Services, NIOSH Manual of Analytical Methods, Fourth Edition, 1994, and Updates. NIOSH Method 7300 analyses are performed using a modified digestion procedure to eliminate the use of perchloric acid.
- EPA - U. S. Environmental Protection Agency, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, 1999.
- EPA - U. S. Environmental Protection Agency, Analytical Methods, Emission Measurement Center (EMC).

Analytical Comments:

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report.

Unless otherwise noted, sample results have been corrected for method blank values.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

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DATA QUALIFIERS AND DEFINITIONS

- IH1 Target analyte was detected in the method blank at or above the reporting limit. The background was subtracted from the QC samples and the client's sample(s).
- L Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.

ADDITIONAL COMMENTS

TestAmerica

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[X] Main Lab - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 602.437.3340 - FAX 602.454.9303

www.testamericainc.com or call toll free 866.772.5227

Page 1 of 1

Customer Number: Enbridge Sampler: Richard Searle

Name: ARCADIS Project Name: Enbridge

Address: 711 N. Camelback Road Suite 1080 Project Number: 0000310001

City, State, Zip: Phoenix AZ 85015 P.O. Number: 0000310001

Contact: ARCADIS Fax Results: Y N

Phone: 361 883-1353 Fax: 361 883-7565 E-Mail Results: Y N

E-Mail Address: testamericainc@arcadis.com

Sample Receipt

Temperature: 20.0 °F 68 °F

Custody Seals: Yes X No X

Custody Seals Intact: Yes No

Total # of Containers:

Turn Around Request: 24 Hours 48 Hours 72 Hours 96 Hours

Standard 5 Working Days

Subject to scheduling and availability (surcharges apply)

Sample Information											
Lab # (Internal Use Only)	Media Type (Filter, Passive Badge, Tube or Wipe)	Pump Name or ID Number	Flow Rate (Liters/minute)	Sample Identification	Collection Date	Start Time	Stop Time	Total Minutes	Total Volume In Liters	Area Wiped in cm ²	Number of Media per Sample
	ASSETTE TUBE	BILAL 2.0	2.0	UPW-10-13-11	10-13-11	8:56	4:56	480	960	—	1
		BILAL 0.2	0.2	UPW-10-13-11	10-13-11	8:56	4:56	480	96	—	1
	ASSETTE TUBE	BILAL 2.0	2.0	DOWNS-10-13-11	10-13-11	8:15	4:15	480	960	—	1
		BILAL 0.2	0.2	DOWNS-10-13-11	10-13-11	8:15	4:15	480	96	—	1
	ASSETTE TUBE	—	—	TRP BLANK	10-13-11	—	—	—	—	—	1
		—	—	TRP BLANK	10-13-11	—	—	—	—	—	1

Analysis Method(s)/Analyte(s): NUSH/238 Types

(Sb, Pb, Ba, Cd, Cr, Cu, Ni, Se, Hg, Pb, Zn)

NUSH/238 Types

(Mn, V)

Lab Number: PUS0896

Instructions / Special Requirements:

Date: 10/11/11 Time: 5:11

Samples Relinquished By: Richard Searle

Received By:

Date: 10/14/11 Time: 1030