# **APPENDIX G**

# **Section 5**

Outfall 004, BMP Effectiveness, February 5, 2009 Test America Analytical Laboratory Report



# LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: BMP Effectiveness

618 Michillinda Avenue, Suite 200 Monitoring Program

Arcadia, CA 91007

Attention: Bronwyn Kelly Sampled: 02/05/09-02/06/09

Received: 02/09/09 Issued: 02/18/09 12:43

#### NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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. The Chain of Custody, 1 page, is included and is an integral part of this report.

 ${\it This\ entire\ report\ was\ reviewed\ and\ approved\ for\ release}.$ 

### SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
ISB0941-01	004 EFF-1	Water
ISB0941-02	004 EFF-2	Water
ISB0941-03	004 EFF-3	Water
ISB0941-04	004 EFF-4	Water
ISB0941-05	004 EFF-5	Water
ISB0941-06	004 EFF-6	Water
ISB0941-07	004 EFF-7	Water
ISB0941-08	004 EFF-8	Water
ISB0941-09	004 EFF-9	Water
ISB0941-10	004 EFF-10	Water
ISB0941-11	004 EFF-11	Water
ISB0941-12	004 EFF-12	Water
ISB0941-13	004 EFF-13	Water
ISB0941-14	004 EFF-14	Water
ISB0941-15	004 EFF-15	Water
ISB0941-16	004 EFF-16	Water
ISB0941-17	004 EFF-17	Water
ISB0941-18	004 EFF-18	Water
ISB0941-19	004 EFF-19	Water
ISB0941-20	004 EFF-20	Water
ISB0941-21	004 EFF-21	Water
ISB0941-22	004 EFF-22	Water
ISB0941-23	004 EFF-23	Water



17461 Derian Avenue. Suite 100, Irvine, CA 92614 (949) 261-1022 Fax:(949) 260-3297

Project ID: BMP Effectiveness

Monitoring Program Sampled: 02/05/09-02/06/09

Report Number: ISB0941 Received: 02/09/09

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200

MWH-Pasadena/Boeing

Arcadia, CA 91007

LABORATORY ID
ISB0941-24

CLIENT ID

004 EFF-24

MATRIX Water

Reviewed By:

**TestAmerica Irvine** 

Joseph Dock



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200

Monitoring Program Sampled: 02/05/09-02/06/09

Arcadia, CA 91007

Report Number: ISB0941

Received: 02/09/09

# **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0941-01 (004 EFF-1 - Wa	ater)				Sample	ed: 02/05/0	09		
Reporting Units: g/cc Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-02 (004 EFF-2 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/05/0	09		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-03 (004 EFF-3 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/05/0	09		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-04 (004 EFF-4 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/05/0	)9		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-05 (004 EFF-5 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/05/0	)9		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-06 (004 EFF-6 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/05/0	09		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-07 (004 EFF-7 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/05/0	09		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-08 (004 EFF-8 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/06/0	)9		
Density	Displacement	9B17121	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-09 (004 EFF-9 - Wa Reporting Units: g/cc	ater)				Sample	ed: 02/06/0	)9		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-10 (004 EFF-10 - W	Vater)				Sample	ed: 02/06/0	)9		
Reporting Units: g/cc Density	Displacement	9B17122	N/A	NA	0.99	1	02/17/09	02/17/09	

#### **TestAmerica Irvine**



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

618 Michillinda Avenue, Suite 200 Arcadia, CA 91007

Project ID: BMP Effectiveness

Monitoring Program Sampled: 02/05/09-02/06/09

Report Number: ISB0941 Received: 02/09/09

# **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0941-11 (004 EFF-11 - W Reporting Units: g/cc	Vater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-12 (004 EFF-12 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-13 (004 EFF-13 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density Charles get	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-14 (004 EFF-14 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
<b>Density</b>	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-15 (004 EFF-15 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-16 (004 EFF-16 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	0.99	1	02/17/09	02/17/09	
Sample ID: ISB0941-17 (004 EFF-17 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	0.99	1	02/17/09	02/17/09	
Sample ID: ISB0941-18 (004 EFF-18 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-19 (004 EFF-19 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-20 (004 EFF-20 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	

#### **TestAmerica Irvine**



MWH-Pasadena/Boeing Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200 Monitoring Program Sampled: 02/05/09-02/06/09

Arcadia, CA 91007 Report Number: ISB0941 Received: 02/09/09

Attention: Bronwyn Kelly

# **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0941-21 (004 EFF-21 - W	ater)				Sample	ed: 02/06/	09		
Reporting Units: g/cc Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-22 (004 EFF-22 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-23 (004 EFF-23 - W Reporting Units: g/cc	/ater)				Sample	ed: 02/06/0	)9		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-24 (004 EFF-24 - W Reporting Units: g/cc	ater)				Sample	ed: 02/06/0	09		
Density	Displacement	9B17122	N/A	NA	1.0	1	02/17/09	02/17/09	
Sample ID: ISB0941-01 (004 EFF-1 - Wa Reporting Units: mg/l	nter)				Sample	ed: 02/05/0	)9		
Sediment	ASTM D3977	9B18060	10	10	61	1	02/18/09	02/18/09	
Sample ID: ISB0941-02 (004 EFF-2 - Wa	nter)				Sample	ed: 02/05/	)9		
Reporting Units: mg/l Sediment	ASTM D3977	9B18060	10	10	62	1	02/18/09	02/18/09	
Sample ID: ISB0941-03 (004 EFF-3 - Wa Reporting Units: mg/l	nter)				Sample	ed: 02/05/0	09		
Sediment	ASTM D3977	9B18060	10	10	50	1	02/18/09	02/18/09	
Sample ID: ISB0941-04 (004 EFF-4 - Wa Reporting Units: mg/l	nter)				Sample	ed: 02/05/0	)9		
Sediment	ASTM D3977	9B18060	10	10	49	1	02/18/09	02/18/09	
Sample ID: ISB0941-05 (004 EFF-5 - Wa Reporting Units: mg/l	nter)				Sample	ed: 02/05/0	09		
Sediment Sediment	ASTM D3977	9B18060	10	10	47	1	02/18/09	02/18/09	
Sample ID: ISB0941-06 (004 EFF-6 - Wa	nter)				Sample	ed: 02/05/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18060	10	10	52	1	02/18/09	02/18/09	

#### **TestAmerica Irvine**



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: BMP Effectiveness

618 Michillinda Avenue, Suite 200

Monitoring Program

Arcadia, CA 91007

Report Number: ISB0941

Sampled: 02/05/09-02/06/09

Received: 02/09/09

# **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0941-07 (004 EFF-7 - Wa	nter)				Sample	ed: 02/05/	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18060	10	10	59	1	02/18/09	02/18/09	
Sample ID: ISB0941-08 (004 EFF-8 - Wa	nter)				Sample	ed: 02/06/	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18060	10	10	44	1	02/18/09	02/18/09	
Sample ID: ISB0941-09 (004 EFF-9 - Wa	iter)				Sample	ed: 02/06/	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	84	1	02/18/09	02/18/09	
Sample ID: ISB0941-10 (004 EFF-10 - W	ater)				Sample	ed: 02/06/	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	ND	1	02/18/09	02/18/09	
Sample ID: ISB0941-11 (004 EFF-11 - W	ater)				Sample	ed: 02/06/			
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	ND	1	02/18/09	02/18/09	
Sample ID: ISB0941-12 (004 EFF-12 - W		,				ed: 02/06/		V = 1 = 0. V 2	
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	ND	1	02/18/09	02/18/09	
Sample ID: ISB0941-13 (004 EFF-13 - W		) <b>D</b> 10001	10	10		ed: 02/06/		02/10/07	
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	13	1	02/18/09	02/18/09	
Sample ID: ISB0941-14 (004 EFF-14 - W		9618001	10	10		ed: 02/06/		02/16/09	
Reporting Units: mg/l		0D10071	10	10	•			02/10/00	
Sediment Sample ID: ISB0941-15 (004 EFF-15 - W	ASTM D3977	9B18061	10	10	30	1	02/18/09	02/18/09	
Reporting Units: mg/l	,				•	ed: 02/06/			
Sediment	ASTM D3977	9B18061	10	10	55	1	02/18/09	02/18/09	
Sample ID: ISB0941-16 (004 EFF-16 - W Reporting Units: mg/l	aterj				Sample	ed: 02/06/	U9		
Sediment	ASTM D3977	9B18061	10	10	57	1	02/18/09	02/18/09	

#### **TestAmerica Irvine**



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MWH-Pasadena/Boeing

# **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0941-17 (004 EFF-17 - '	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	68	1	02/18/09	02/18/09	
Sample ID: ISB0941-18 (004 EFF-18 -	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	75	1	02/18/09	02/18/09	
Sample ID: ISB0941-19 (004 EFF-19 - '	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	40	1	02/18/09	02/18/09	
Sample ID: ISB0941-20 (004 EFF-20 - V	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	58	1	02/18/09	02/18/09	
Sample ID: ISB0941-21 (004 EFF-21 - V	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	61	1	02/18/09	02/18/09	
Sample ID: ISB0941-22 (004 EFF-22 - V	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	60	1	02/18/09	02/18/09	
Sample ID: ISB0941-23 (004 EFF-23 - '	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	50	1	02/18/09	02/18/09	
Sample ID: ISB0941-24 (004 EFF-24 - V	Water)				Sample	ed: 02/06/0	09		
Reporting Units: mg/l Sediment	ASTM D3977	9B18061	10	10	43	1	02/18/09	02/18/09	



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Attention: Bronwyn Kelly

Project ID: BMP Effectiveness

Monitoring Program

Report Number: ISB0941

Sampled: 02/05/09-02/06/09

Received: 02/09/09

# METHOD BLANK/QC DATA

# **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 9B17121 Extracted: 02/17/09	_										
					_						
<b>Duplicate Analyzed: 02/17/2009 (9B1712)</b>	I-DUP1)				Sou	rce: ISB(	941-01				
Density	0.999	NA	N/A	g/cc		0.999			0	20	
<b>Batch: 9B17122 Extracted: 02/17/09</b>	-										
Duplicate Analyzed: 02/17/2009 (9B1712)	2-DUP1)				Sou	rce: ISB(	942-01				
Density	1.00	NA	N/A	g/cc		1.00			0	20	



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# DATA QUALIFIERS AND DEFINITIONS

**ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.

**RPD** Relative Percent Difference



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# **Certification Summary**

#### **TestAmerica Irvine**

Method	Matrix	Nelac	California
ASTM D3977	Water		
Displacement	Water		

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for TestAmerica may be obtained by contacting the laboratory or visiting our website at www.testamericainc.com

#### **TestAmerica Irvine**

CHAIN OF CUSTODY FORM

Test America Version 12/20/07	∍rica ∖	/ersion 12/20/07	2	CHAIN OF CUSTODY FORM	OF CUS	TOD	Y FO	R			Page 1 of 1
Client Name/Address:	Address:			Project: Boei	ng BMP				A	ANALYSIS REQUIRED	
MWH-Arcadia 618 Michillinda Avenue, Suite 200	d <b>ia</b> Avenue,	Suite 200		Effectiveness Monitoring Program	s Monitorinç	<b>D</b>	-1/				Field readings:
Arcadia, CA 91007 Test America Contact: Joseph Doak	1007 Sontact: .le	oseph Doak									Temp = NA
, and a second		Supply Code									N = NA
Project Manager: Bronwyn Keily Sampler: R Banaga	ger: Bro anaga	nwyn Kelly		Fnone Number (626) 568-6691 Fax Number: (626) 568-6515	er: 91 15		ded Sedin tration (S9 1997)				Time of readings = NA
				•			uəo				Comments
Sample Description	Sample Matrix	Container Type	Cont.	Sampling Date/Time	Preservative	Bottle #	noo	··- <u>-</u>	•		
004 EFF-1	8	500 mL Poly	-	2/5/09-1745	None	-	×				
004 EFF-2	Α.	500 mL Poly	-	2/5/09-1845	None	2	×				
004 EFF-3	≥	500 mL Poly	-	2/5/09-1945	None	3	×				
004 EFF-4	≥	500 mL Poly	-	2/5/09-2045	None	4	×				
004 EFF-5	<b>&gt;</b>	500 mL Poly	-	2/5/09-2145	None	2	×				
004 EFF-6	8	500 mL Poly	-	2/5/09-2245	None	9	×				
004 EFF-7	× :	500 mL Poly	- -	2/5/09-2345	None	_	×				
004 EFF-8	≥	500 mL Poly	-	2/6/09-0045	None	8	×				
004 EFF-9	≥	500 mL Poly	-	2/6/09-0145	None	6	×				
004 EFF-10	≥	500 mL Poly	-	2/6/09-0245	None	9	×				
004 EFF-11	>	500 mL Poly	-	2/6/09-0345	None	=	×				
004 EFF-12	≥	500 mL Poly	-	2/6/09-0445	None	12	×				
004 EFF-13	χ.	500 mL Poly	-	2/6/09-0545	None	13	×	-			
004 EFF-14	8	500 mL Poly	-	2/6/09-0645	None	14	×				1.0\ ()
004 EFF-15	> .	500 mL Poly		2/6/09-0745	None	15	×				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
004 EFF-16	8	500 mL Poly	-	2/6/09-0845	None	16	×				So 1/0,
004 EFF-17	> :	500 mL Poly	- -	2/6/09-0945	None	17	×				1, 1, 10
004 EFF-18	<b>≽</b>	500 mL Poly	- -	2/6/09-1045	None	18	×				၁
004 EFF-19	3 3	500 mL Poly	- -	2/6/09-1145	None	19	××				
004 EFE-21	3	500 ml Poly	-	2/6/09-1245	None	2	\ \ \				
004 EFF-22	: ≥	500 mL Poly	-	2/6/09-1445	None	22	×				
004 EFF-23	≥	500 mL Poly	-	2/6/09-1545	None	23	×				
004 EFF-24	>	1	1	2/6/09-1645	None	24	×				
Relinquished By	1	60	Date/Time		Received By	`	141	Date/			Tim ordinal Time, (shoot)
S. C.	٧			1/5/	J. J	Dara Co	1112	ક્ <sup>^</sup>	5/60	15/	24 Hours 5 Days
Relinquished By	,	1	pate/Time	l	Received By			Date/Time:			48 Hours 10 Days
S S S S S S S S S S S S S S S S S S S	3	6	8	0830				~			
Relinquished By			Date/Time	ne:	Received By			Date/Time	Date/Time:		Sample Integrity: (check) Intact On Ice:
								ر )		2	7.5/8.7