The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, CA 91304-1148

Certified Mail

May 15, 2009
In reply refer to SHEA-108673

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Ms. L. B. Nye, 401 Certification Program Unit Chief

Reference: CLEANUP AND ABATEMENT ORDER NO. R4-2007-0054

Subject: April 2009 Monthly Monitoring Report Submittal
Northern Drainage Debris Area and LOX Debris Area Removal Project
Santa Susana Field Laboratory, Ventura County, California

Dear Ms. Nye:

The Boeing Company (Boeing) hereby submits the monthly monitoring report (MMR) for the Santa Susana Field Laboratory (SSFL) Northern Drainage Debris Area and LOX Debris Area Removal Project, as required by Section B. xii of Cleanup and Abatement Order No. R4-2007-0054 (CAO). Monthly reports are to provide a summary of wet weather sampling activities and analytical results. Based on CAO requirements, MMRs will be submitted to the California Regional Water Quality Control Board-Los Angeles Region (RWQCB) by the 15th day of each calendar month for the previous month. This report covers sampling activities during April, 2009 and includes validated analytical results for sampling activities during February, 2009.

Project History

As previously reported, two distinct debris areas were identified in the northeast portion of the SSFL along the Northern Drainage: the LOX Debris Area and the Former Shooting Range/Clay Target Debris Area. In addition to these specific areas, but still within the Northern Drainage, clay target debris was observed extending westward from the Former Shooting Range down drainage, and foam insulation debris was observed extending westward from the LOX Debris Area. Based on work scopes, the project was divided into two specific task areas: (i) the LOX Debris Area and (ii) the Northern Drainage Debris Area (including the Former Shooting Range).

Boeing submitted a mitigation work plan to the Department of Toxic Substances Control (DTSC) on September 10, 2007 (*Sage Ranch Debris/Asbestos Removal Work Plan*) for review and approval. In anticipation of commencing this project, Boeing submitted a *Request to Amend a Lake or Streambed Alteration Agreement* to the California Department of Fish and Game (CDFG) on August 15, 2007. Additionally, a site-specific storm water pollution prevention plan (SWPPP) was submitted to the RWQCB on October 10, 2007. Based on discussion and communication with the United States Army Corps of Engineers (ACOE), Clean Water Act Section 404 authorization or permitting was not necessary or required for this project.

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Project Implementation

LOX Debris Area. Soil and debris removal began in the LOX Debris Area on November 14, 2007 and was completed on December 20, 2007. The LOX Debris Area removal was performed in an area covering approximately 0.3 acres, with approximately 2,500 cubic yards of debris and soil removed, shipped off-site and appropriately managed. Additional information regarding the field activities for the LOX Debris Area was provided in previous MMRs.

Northern Drainage Debris Area Debris removal from the Northern Drainage Debris Area began on July 22, 2008 and is currently on hold until the end of the 2008/2009 winter rainy season.

A cultural survey to identify and protect historical anthropogenic sites and a biological survey to identify protected natural resources within the Northern Drainage including the Former Shooting Range Area were initiated on May 12, 2008. Historical sites and protected species identified during the surveys were marked with red flags so they could be preserved during the debris removal.

In preparation for clay target debris removal, clearing and grubbing of vegetation at the Former Shooting Range Area was performed between June 3, 2008 and June 27, 2008. Pursuant to a DTSC requirement, radiological surveys were performed in the cleared areas.

Debris removal in the Northern Drainage Debris Area commenced on July 22, 2008. Soil that was removed from the drainage was either placed in roll-off bins or stockpiled on site for waste profiling. Anthropogenic debris discovered during excavation activities at the Former Shooting Range Area were removed and contained in roll-off bins on site for waste characterization. To date, approximately 9,400 cubic yards of sediment, soil and debris have been removed, characterized, and transported off-site for disposal.

Confirmation soil sampling was performed between September 17, 2008 and September 26, 2008 to identify potential impacts from the material removed from the anthropogenic debris area. To address elevated concentrations of analytical results identified during the initial confirmation soil sampling event, additional soil removal was performed at the Former Shooting Range Area. Confirmation soil sampling was performed intermittently between October 31, 2008 and December 5, 2008 concurrently with the additional soil removal.

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Additional down-drainage confirmation soil sampling between the Former Shooting Range and the LOX Debris Area was conducted on October 24, 2008. Based on the analytical results from confirmation soil sampling, additional soil removal in this stretch of the drainage is necessary and will be performed after the conclusion of the 2008/2009 winter rainy season.

Silt barriers were installed at the Former Shooting Range area and at the bottom of RD-82 Well Road to reduce sediment loads into the drainage. Approximately 1.5 acres of Hydroseed were applied at the Former Shooting Range area on November 10, 2008 and an additional 1 acre was applied on December 19, 2008.

Wet Weather Flow and Sampling

The CAO requires surface water samples to be collected when wet weather flow discharging downstream of the cleanup area occurs. Samples are to be collected during the first hour of discharge or at the first safe opportunity. Samples are to be collected not more than 50 feet upstream or downstream of the area where work is occurring. Samples are to be collected for three rain events or two years, whichever occurs first, after work is complete. To further define a "rain event," the Los Angeles RWQCB agreed to adopt the requirements of the SSFL National Pollution Discharge Elimination System (NPDES) permit, which provides that a discharge (rain) event is greater than 0.1 inch of rainfall in a 24-hour period, that no more than one sample per week need be obtained during extended periods of rainfall and that a storm must be preceded by at least 72 hours of dry weather. To establish whether a rain event results in wet weather flow, field inspections are conducted before, during and after rain events.

During the month of April, Boeing did not observe any rain events. Therefore, surface water samples were not collected.

Wet Weather Flow Sample Results Reporting

As indicated above, surface water flow did not occur in April. However, as reported in the February 2009 MMR, surface water samples were collected and analyzed in accordance with the CAO as a result of flow events in February 2009. Sampling locations are shown on Figure 1. Because the validated analytical results were not finalized until after April 15, 2009, they could not be included in previous MMRs. Surface water samples were collected upstream from the Former Shooting Range

Area on February 6, 2009 and February 16, 2009, and downstream from the Former Shooting Range on February 6, 2009 and February 13, 2009. The Los Angeles RWQCB agreed the downstream samples could be collected at or near the NPDES location of Outfall 009 as conditions further downstream is unsafe during wet weather. Samples were submitted to a state-certified analytical laboratory for chemical analyses in accordance with the CAO. The final validated analytical results from these sampling events are included as Attachment A in this MMR.

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Table 1 provides analytical results as required by the CAO for sample NDSW0012 (upstream from the Former Shooting Range Area). Table 2 provides analytical results as required by the CAO for sample NDSW0013 (downstream from the Former Shooting Range Area), and Tables 3 and 4 note daily and monthly water quality objective exceedances, respectively, at the two sampling locations.

If there are any questions regarding this report, please contact Ms. Lori Blair at (818) 466-8741.

Sincerely,

Thomas D. Gallacher
Director, Santa Susana Field Laboratory
Environment, Health and Safety

LNB:bjc
Attachments:

Figure 1 – Excavation Extents in the Northern Drainage
Table 1. NDSW0012 (Shooting Range Area Upstream)
Table 2. NDSW0013 (Shooting Range Area Downstream)
Table 3. Summary of Daily CAO Limit Exceedances
Table 4. Summary of Monthly CAO Limit Exceedances
Attachment A – Analytical Laboratory Reports and Data Validation Reports

cc: Norman E. Riley, DTSC
✓ Gerard Abrams, DTSC
Cassandra Owens, RWQCB
Allen Elliott, NASA
Dixie Hambrick, MWH

Excavation Extents in the Northern Drainage

Base Map Legend

- Administrative Area Boundary
- RFI Site Boundary
- Existing Building or Structure
- Removed Building or Structure
- Dirt Road
- Fences
- A/C Paving
- Pipe
- Drainage
- NPDES Outfall

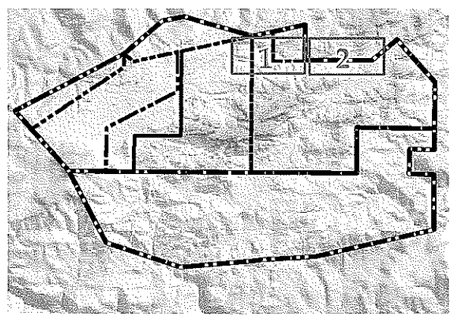
Figure Legend

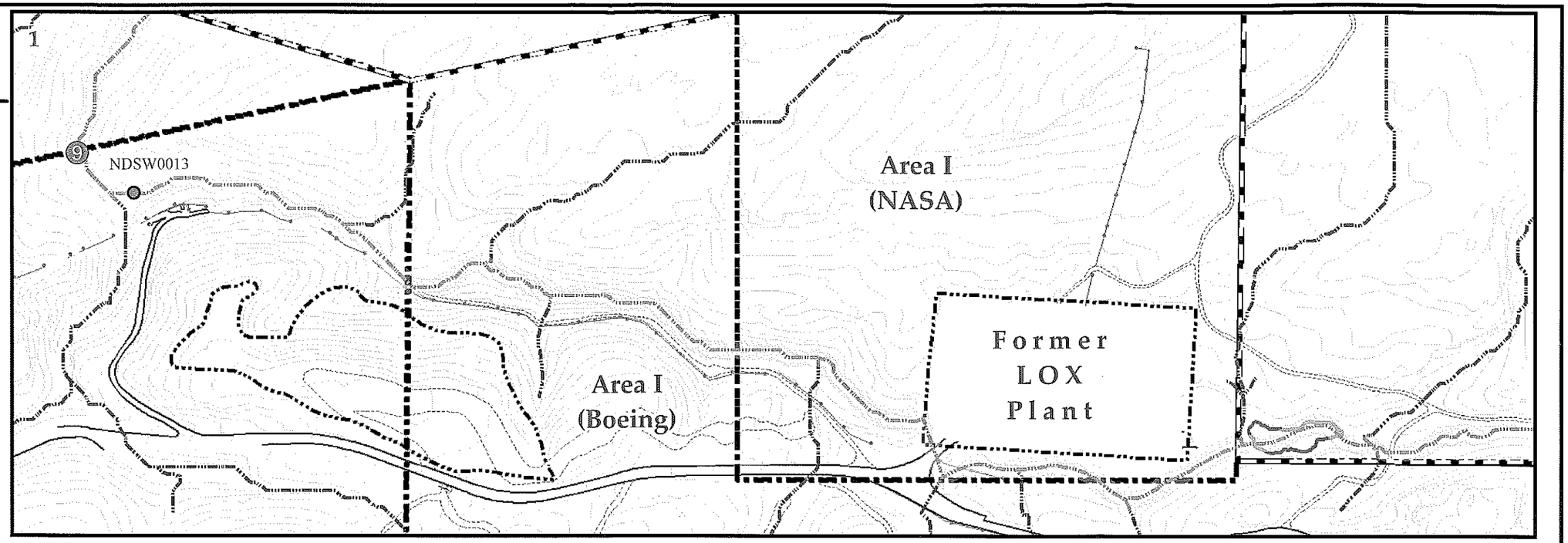
- Clay Target Excavation Extent
- Drainage Excavation and Debris Removal
- Extent of Lox Debris / Asbestos

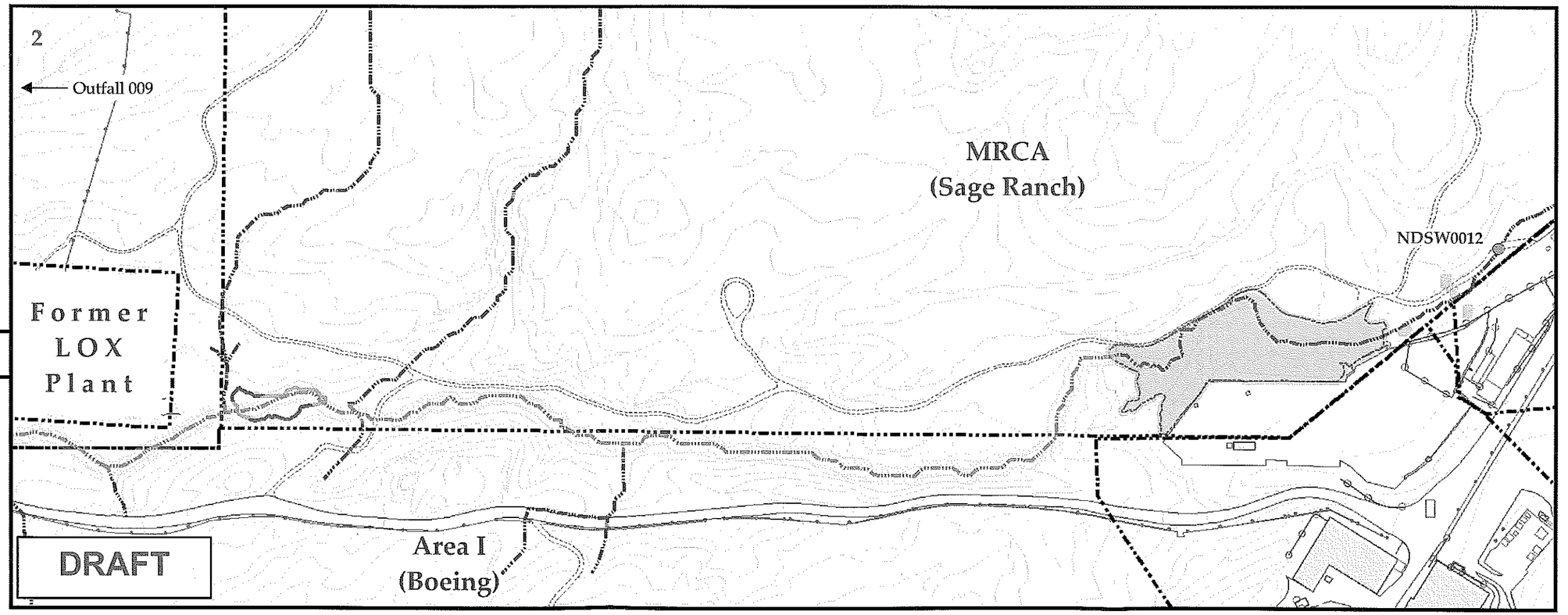
Document: NorthDrainage_ExcavationExtents.MXD

Date: Dec. 12, 2008

0 130 260 520 Feet







SANTA SUSANA FIELD LABORATORY

MWH FIGURE 1

Table 1. NDSW0012 (SHOOTING RANGE AREA UPSTREAM)
NORTHERN DRAINAGE REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
CAO NO. R4-2007-0054

February 1 through February 28, 2009

ANALYTE	UNITS	CAO WQO Daily Max/Monthly Average	2/6/2009		2/16/2009	
			RESULT	DATA VALIDATION QUALIFIER[1]	RESULT	DATA VALIDATION QUALIFIER[1]
Dissolved Oxygen	mg/L	5 Min/7Annual	**6.6**	--	***10***	--
pH (Field)	pH Units	6.5-8.5/-	7.7	*	7.7	*
Temperature	deg. F	86/-	56	*	42	*
Total Suspended Solids	mg/L	45/15	8.0	J* (DNQ)	***200***	--
Turbidity	NTU	75/50	26	*	***120***	--
Benzo(a)pyrene	µg/L	0.049/-	ND < 0.047	*	ND < 0.047	U
Benzo(b)fluoranthene	µg/L	0.049/-	ND < 0.047	*	ND < 0.047	U
Benzo(k)fluoranthene	µg/L	0.049/-	ND < 0.047	*	ND < 0.047	U
Chrysene	µg/L	0.049/-	ND < 0.047	*	ND < 0.047	U
Dibenzo(a,h)anthracene	µg/L	0.019/-	ND < 0.047	*	ND < 0.047	U
Fluoranthene	µg/L	370/-	ND < 0.047	*	ND < 0.047	U
Fluorene	µg/L	14000/-	ND < 0.047	*	ND < 0.047	U
Indeno(1,2,3-cd)pyrene	µg/L	0.049/-	ND < 0.047	*	ND < 0.47	UJ (B,C)
Naphthalene	µg/L	17/-	ND < 0.047	*	ND < 0.047	U
Pyrene	µg/L	11000/-	ND < 0.047	C*	ND < 0.047	U

Notes:

Results shown in bold exceed the maximum daily CAO limit

Results shown in italics exceed the monthly or annual CAO average

[1] Level IV data validation performed by MEC*

-- = Based on validation of the data, a qualifier was not required

<(value) = Analyte not detected at a concentration greater than or equal to the detection limit, method detection limit or reporting limit (see laboratory report in Attachment A for specfic details)

/- = No permit limit established for monthly average

CAO = Cleanup and Abatement Order

deg. F = degrees Fahrenheit

mg/L = milligrams per liter

NTU = nephelometric turoididty units

µg/L = micrograms per liter

WQO = Water Quality Objective

Data Validation Qualifiers

* = Result not validated

B = Presumed contamination as indicated by the method blank results

C = Calibration %RSD or %D was noncompliant

DNQ = The reported result is above the method detection limit but is less than the reporting limit

U = Not detected above the reported sample quantitation limit

UJ = Result not detected at the estimated reporting limit

Table 2. NDSW0013 (SHOOTING RANGE AREA DOWNSTREAM)
NORTHERN DRAINAGE REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
CAO NO. R4-2007-0054

February 1 through February 28, 2009

			2/6/2009		2/13/2009	
ANALYTE	**UNITS**	**CAO WQO Daily Maximum/Monthly Average**	**RESULT**	**DATA VALIDATION QUALIFIER[1]**	**RESULT**	**DATA VALIDATION QUALIFIER[1]**
Dissolved Oxygen	mg/L	5 Min/7Annual	8.5	J (H)	9.6	--
pH (Field)	pH Units	6.5-8.5/-	8.0	*	7.0	*
Temperature	deg. F	86/-	51	*	46	*
Total Suspended Solids	mg/L	45/15	27	--	*50*	--
Turbidity	NTU	75/50	55	J (H)	*58*	--
Benzo(a)pyrene	µg/L	0.049/-	ND < 2.8	*	ND < 0.050	U
Benzo(b)fluoranthene	µg/L	0.049/-	ND < 1.9	*	ND < 0.050	U
Benzo(k)fluoranthene	µg/L	0.049/-	ND < 2.4	*	ND < 0.050	U
Chrysene	µg/L	0.049/-	ND < 2.4	*	ND < 0.050	U
Dibenzo(a,h)anthracene	µg/L	0.019/-	ND < 2.8	*	ND < 0.050	U
Fluoranthene	µg/L	370/-	ND < 2.8	*	ND < 0.050	U
Fluorene	µg/L	14000/-	ND < 2.8	*	ND < 0.050	U
Indeno(1,2,3-cd)pyrene	µg/L	0.049/-	ND < 3.3	*	ND < 0.50	UJ (B,C)
Naphthalene	µg/L	17/-	ND < 2.8	*	ND < 0.050	U
Pyrene	µg/L	11000/-	ND < 3.8	*	ND < 0.050	U

Notes:

Results shown in bold exceed the maximum daily CAO limit

Results shown in italics exceed the monthly or annual CAO average

[1] Level IV data validation performed by MEC[x]

-- = Based on validation of the data, a qualifier was not required

<(value) = Analyte not detected at a concentration greater than or equal to the detection limit, method detection limit or reporting limit (see laboratory report in Attachment A for specfic details)

/- = No permit limit established for monthly average

CAO = Cleanup and Abatement Order

deg. F = degrees Fahrenheit

mg/L = milligrams per liter

NTU = nephelometric turbididty units

µg/L = micrograms per liter

WQO = Water Quality Objective

Data Validation Qualifiers

* = Result not validated

B = Presumed contamination as indicated by the method blank results

C = Calibration %RSD or %D was noncompliant

J = estimated value

H = holding time was exceeded

U = Not detected above the reported sample quantitation limit

UJ = Result not detected at the estimated reporting limit

Table 3. SUMMARY OF DAILY CAO LIMIT EXCEEDANCES
NORTHERN DRAINAGE
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
CAO NUMBER R4-2007-0054

DAILY CAO WATER QUALITY OBJECTIVE EXCEEDANCES							
SAMPLE ID	LOCATION	SAMPLE DATE	ANALYTE	CAO LIMIT DAILY MAX	DAILY MAX RESULT	UNITS	VALIDATION QUALIFIER
NDSW0012	SHOOTING RANGE AREA UPSTREAM	02/16/09	Total Suspended Solids	45	200	mg/L	--
NDSW0012	SHOOTING RANGE AREA UPSTREAM	02/16/09	Turbidity	75	120	NTU	--
NDSW0013	SHOOTING RANGE AREA DOWNSTREAM	02/13/09	Total Suspended Solids	45	50	mg/L	--

Notes:

-- = Based on validation of the data, a qualifier was not required

CAO = Cleanup and Abatement Order

mg/L = milligrams per liter

NTU = nephelometric turbididty units

Table 4. SUMMARY OF MONTHLY CAO LIMIT EXCEEDANCES
NORTHERN DRAINAGE
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
CAO NUMBER R4-2007-0054

MONTHLY CAO WATER QUALITY OBJECTIVE EXCEEDANCES							
OUTFALL	LOCATION	SAMPLE DATE	ANALYTE	CAO MONTHLY AVERAGE	MONTHLY AVERAGE RESULT	UNITS	VALIDATION QUALIFIER
NDSW0012	SHOOTING RANGE AREA UPSTREAM	Feb-09	Total Suspended Solids	15	200	mg/L	*
NDSW0012	SHOOTING RANGE AREA UPSTREAM	Feb-09	Turbidity	50	120	NTU	*
NDSW0013	SHOOTING RANGE AREA DOWNSTREAM	Feb-09	Total Suspended Solids	15	52	mg/L	*
NDSW0013	SHOOTING RANGE AREA DOWNSTREAM	Feb-09	Turbidity	50	84	mg/L	*

Notes:

* = Result not validated

CAO = Cleanup and Abatement Order

mg/L = milligrams per liter

NTU = nephelometric turbididty units

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS
AND
DATA VALIDATION REPORTS

ANALYTICAL LABORATORY REPORTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project: Northern Drainage-Shooting Range
Surface Water Sampling
Sampled: 02/06/09
Received: 02/06/09
Issued: 02/17/09 13:58

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(s) of Custody, 2 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
ISB0769-01	NDSW0012	Water

Reviewed By:

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0769-01 (NDSW0012 - Water)									
Reporting Units: ug/l									
Benzo(a)pyrene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Benzo(b)fluoranthene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Benzo(k)fluoranthene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Chrysene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Dibenz(a,h)anthracene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Fluoranthene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Fluorene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Indeno(1,2,3-cd)pyrene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Naphthalene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	
Pyrene	EPA 8270C-SIM	9B12110	0.047	0.47	ND	0.943	02/12/09	02/13/09	C
Surrogate: 2-Fluorobiphenyl (50-120%)					*68 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*66 %*				
Surrogate: Terphenyl-d14 (50-125%)					*82 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0769-01 (NDSW0012 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	9B07055	1.0	1.0	**6.6**	1	02/07/09	02/07/09	HFT
Total Suspended Solids	SM 2540D	9B13100	1.0	10	**8.0**	1	02/13/09	02/13/09	J
Sample ID: ISB0769-01 (NDSW0012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B07043	0.040	1.0	**26**	1	02/07/09	02/07/09	

TestAmerica Irvine

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Project Manager

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MWH-Pasadena/Boeing
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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: NDSW0012 (ISB0769-01) - Water					
EPA 180.1	2	02/06/2009 14:15	02/06/2009 17:35	02/07/2009 10:30	02/07/2009 10:30
EPA 360.1	1	02/06/2009 14:15	02/06/2009 17:35	02/07/2009 12:45	02/07/2009 12:45

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B12110 Extracted: 02/12/09											
Blank Analyzed: 02/13/2009 (9B12110-BLK1)											
Acenaphthene	ND	0.50	0.050	ug/l							
Acenaphthylene	ND	0.50	0.050	ug/l							
Anthracene	ND	0.50	0.050	ug/l							
Benzo(a)anthracene	ND	0.50	0.050	ug/l							
Benzo(a)pyrene	ND	0.50	0.050	ug/l							
Benzo(b)fluoranthene	ND	0.50	0.050	ug/l							
Benzo(g,h,i)perylene	ND	0.50	0.050	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.050	ug/l							
Chrysene	ND	0.50	0.050	ug/l							
Dibenz(a,h)anthracene	ND	0.50	0.050	ug/l							
Fluoranthene	ND	0.50	0.050	ug/l							
Fluorene	ND	0.50	0.050	ug/l							
Indeno(1,2,3-cd)pyrene	ND	0.50	0.050	ug/l							
Naphthalene	ND	0.50	0.050	ug/l							
Phenanthrene	ND	0.50	0.050	ug/l							
Pyrene	ND	0.50	0.050	ug/l							
Surrogate: 2-Fluorobiphenyl	*0.857*			*ug/l*	*1.00*		*86*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.831*			*ug/l*	*1.00*		*83*	*45-120*			
Surrogate: Terphenyl-d14	*1.10*			*ug/l*	*1.00*		*110*	*50-125*			
LCS Analyzed: 02/13/2009 (9B12110-BS1)											**MNR1**
Acenaphthene	0.837	0.50	0.050	ug/l	1.00		84	60-120			
Acenaphthylene	0.833	0.50	0.050	ug/l	1.00		83	60-120			
Anthracene	0.925	0.50	0.050	ug/l	1.00		93	65-120			
Benzo(a)anthracene	0.991	0.50	0.050	ug/l	1.00		99	65-120			
Benzo(a)pyrene	0.937	0.50	0.050	ug/l	1.00		94	55-130			
Benzo(b)fluoranthene	0.877	0.50	0.050	ug/l	1.00		88	55-125			
Benzo(g,h,i)perylene	0.953	0.50	0.050	ug/l	1.00		95	45-135			
Benzo(k)fluoranthene	0.938	0.50	0.050	ug/l	1.00		94	50-125			
Chrysene	0.966	0.50	0.050	ug/l	1.00		97	65-120			
Dibenz(a,h)anthracene	0.920	0.50	0.050	ug/l	1.00		92	50-135			
Fluoranthene	0.872	0.50	0.050	ug/l	1.00		87	60-120			
Fluorene	0.933	0.50	0.050	ug/l	1.00		93	65-120			
Indeno(1,2,3-cd)pyrene	0.972	0.50	0.050	ug/l	1.00		97	45-135			
Naphthalene	0.792	0.50	0.050	ug/l	1.00		79	55-120			
Phenanthrene	0.903	0.50	0.050	ug/l	1.00		90	65-120			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B12110 Extracted: 02/12/09											
LCS Analyzed: 02/13/2009 (9B12110-BS1)											**MNR1**
Pyrene	1.10	0.50	0.050	ug/l	1.00		110	55-125			
Surrogate: 2-Fluorobiphenyl	*0.801*			*ug/l*	*1.00*		*80*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.787*			*ug/l*	*1.00*		*79*	*45-120*			
Surrogate: Terphenyl-d14	*0.966*			*ug/l*	*1.00*		*97*	*50-125*			
LCS Dup Analyzed: 02/13/2009 (9B12110-BSD1)											
Acenaphthene	0.785	0.50	0.050	ug/l	1.00		78	60-120	6	20	
Acenaphthylene	0.817	0.50	0.050	ug/l	1.00		82	60-120	2	20	
Anthracene	0.889	0.50	0.050	ug/l	1.00		89	65-120	4	20	
Benzo(a)anthracene	0.959	0.50	0.050	ug/l	1.00		96	65-120	3	20	
Benzo(a)pyrene	0.896	0.50	0.050	ug/l	1.00		90	55-130	4	25	
Benzo(b)fluoranthene	0.868	0.50	0.050	ug/l	1.00		87	55-125	1	25	
Benzo(g,h,i)perylene	0.871	0.50	0.050	ug/l	1.00		87	45-135	9	25	
Benzo(k)fluoranthene	0.853	0.50	0.050	ug/l	1.00		85	50-125	10	20	
Chrysene	0.929	0.50	0.050	ug/l	1.00		93	65-120	4	20	
Dibenz(a,h)anthracene	0.830	0.50	0.050	ug/l	1.00		83	50-135	10	25	
Fluoranthene	0.829	0.50	0.050	ug/l	1.00		83	60-120	5	20	
Fluorene	0.846	0.50	0.050	ug/l	1.00		85	65-120	10	20	
Indeno(1,2,3-cd)pyrene	0.849	0.50	0.050	ug/l	1.00		85	45-135	14	25	
Naphthalene	0.754	0.50	0.050	ug/l	1.00		75	55-120	5	20	
Phenanthrene	0.857	0.50	0.050	ug/l	1.00		86	65-120	5	20	
Pyrene	1.14	0.50	0.050	ug/l	1.00		114	55-125	3	25	
Surrogate: 2-Fluorobiphenyl	*0.746*			*ug/l*	*1.00*		*75*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.736*			*ug/l*	*1.00*		*74*	*45-120*			
Surrogate: Terphenyl-d14	*0.937*			*ug/l*	*1.00*		*94*	*50-125*			

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618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B07043 Extracted: 02/07/09											
Blank Analyzed: 02/07/2009 (9B07043-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 02/07/2009 (9B07043-DUP1)						Source: ISB0764-02					
Turbidity	0.830	1.0	0.040	NTU		0.780			6	20	*J*
Duplicate Analyzed: 02/07/2009 (9B07043-DUP2)						Source: ISB0769-01					
Turbidity	26.7	1.0	0.040	NTU		26.0			3	20	
Batch: 9B07055 Extracted: 02/07/09											
Duplicate Analyzed: 02/07/2009 (9B07055-DUP1)						Source: ISB0769-01					
Dissolved Oxygen	6.55	1.0	1.0	mg/l		6.57			0	20	*HFT*
Batch: 9B13100 Extracted: 02/13/09											
Blank Analyzed: 02/13/2009 (9B13100-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/13/2009 (9B13100-BS1)											
Total Suspended Solids	978	10	1.0	mg/l	1000		98	85-115			
Duplicate Analyzed: 02/13/2009 (9B13100-DUP1)						Source: ISB0824-01					
Total Suspended Solids	10.0	10	1.0	mg/l		10.0			0	10	

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MWH-Pasadena/Boeing
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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

DATA QUALIFIERS AND DEFINITIONS

C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
HFT	The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after receipt.
J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 180.1	Water	X	X
EPA 360.1	Water	X	X
EPA 8270C-SIM	Water		
SM 2540D	Water	X	X

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

Joseph Doak
Project Manager

Test America CAO No. R4-2007-0054 **CHAIN OF CUSTODY FORM**

Client Name/Address:
MWH-Arcadia
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007

Test America Contact: Joseph Doak

Project:
Boeing-SSFL Northern Drainage
Surface Water Sampling
Shooting Range Area – Upstream
NDSW0012

Project Manager: Bronwyn Kelly

Sampler: R Banaga.

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Dissolved Oxygen (EPA 360.1)	Turbidity, TSS	SVOCs (EPA 8270)	Field readings: Temp = 56 pH = 7.7 Sample Collection Time= 14:15 **Comments**
NDSW0012	W	40 mL VOA Amber	2	2/5/09 1615	None	1A, 1B	X			
NDSW0012	W	500 mL Poly	2		None	2A, 2B		X		
NDSW0012	W	1 L Amber	2		None	3A, 3B			X	
~~Trip Blanks~~	~~W~~	~~VOAs~~	~~3~~	2/5/09 1615	None	4A, 4B, 4C			X	

Relinquished By: [signature] Date/Time: 2/6/09 1145

Received By: [signature] Date/Time: 2/6/09 1520

Relinquished By: Date/Time:

Received By: Date/Time:

Relinquished By: Date/Time:

Received By: Date/Time:

Turn around Time: (check)
24 Hours ____ 5 Days ____
48 Hours ____ 10 Days ____
72 Hours ____ Normal X

Sample Integrity: (check)
Intact ____ On Ice ____

ISB0[illegible]769

Test America CAO No. R4-2007-0054 CHAIN OF CUSTODY FORM

Client Name/Address:
MWH-Arcadia
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007

Test America Contact: Joseph Doak

Project Manager: Bronwyn Kelly

Sampler:

Project:
Boeing-SSFL Northern Drainage
Surface Water Sampling
Shooting Range Area – Upstream
NDSW0012

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	ANALYSIS REQUIRED: Dissolved Oxygen (EPA 360.1)	Turbidity, TSS	SVOCs (EPA 8270)
NDSW0012	W	40 mL VOA Amber	2	2/6/9 1415	None	1A, 1B	X		
NDSW0012	W	500 mL Poly	2		None	2A, 2B		X	
NDSW0012	W	1 L Amber	2		None	3A, 3B			X
Trip Blanks	W	VOAs	3	2/6/9 1415	None	4A, 4B, 4C			X

Field readings:
Temp = 56°
pH = 7.7
Sample Collection Time= 14:15

Comments

TN 2/6/09 2120

Relinquished By	Date/Time:	Received By	Date/Time:
[signature]	2/6/9 1445	[signature]	2/6/09 1500
[signature]	2/6/09 1735	[signature]	2/6/09 1735
Relinquished By	Date/Time:	Received By	Date/Time:

Turn around Time: (check)
24 Hours _____ 5 Days _____
48 Hours _____ 10 Days _____
72 Hours _____ Normal X

Sample Integrity: (check)
Intact X On Ice: X

3.5°C

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LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project: Northern Drainage-Shooting Range
Surface Water
Sampled: 02/13/09
Received: 02/13/09
Issued: 02/26/09 16:52

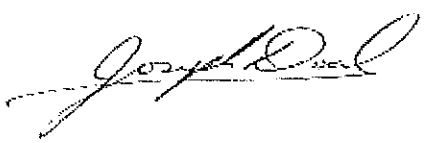
NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
ISB1696-01	NDSW0013	Water

Reviewed By:



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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1696-01 (NDSW0013 - Water)									
Reporting Units: ug/l									
Benzo(a)pyrene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Benzo(b)fluoranthene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Benzo(k)fluoranthene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Chrysene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Dibenz(a,h)anthracene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Fluoranthene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Fluorene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Indeno(1,2,3-cd)pyrene	EPA 8270C-SIM	9B20060	0.050	0.50	**0.12**	0.99	02/20/09	02/25/09	B, J
Naphthalene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Pyrene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Surrogate: 2-Fluorobiphenyl (50-120%)					*71 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*81 %*				
Surrogate: Terphenyl-d14 (50-125%)					*92 %*				

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1696-01 (NDSW0013 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	9B14044	1.0	1.0	**9.6**	1	02/14/09	02/14/09	HFT
Total Suspended Solids	SM 2540D	9B20048	1.0	10	**50**	1	02/20/09	02/20/09	
Sample ID: ISB1696-01 (NDSW0013 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B14042	0.040	1.0	**58**	1	02/14/09	02/14/09	

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Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: NDSW0013 (ISB1696-01) - Water					
EPA 180.1	2	02/13/2009 14:30	02/13/2009 20:10	02/14/2009 15:00	02/14/2009 15:00
EPA 360.1	1	02/13/2009 14:30	02/13/2009 20:10	02/14/2009 08:50	02/14/2009 08:50

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Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B20060 Extracted: 02/20/09											
Blank Analyzed: 02/25/2009 (9B20060-BLK1)											
Acenaphthene	ND	0.50	0.050	ug/l							
Acenaphthylene	ND	0.50	0.050	ug/l							
Anthracene	ND	0.50	0.050	ug/l							
Benzo(a)anthracene	ND	0.50	0.050	ug/l							
Benzo(a)pyrene	ND	0.50	0.050	ug/l							
Benzo(b)fluoranthene	ND	0.50	0.050	ug/l							
Benzo(g,h,i)perylene	ND	0.50	0.050	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.050	ug/l							
Chrysene	ND	0.50	0.050	ug/l							
Dibenz(a,h)anthracene	ND	0.50	0.050	ug/l							
Fluoranthene	ND	0.50	0.050	ug/l							
Fluorene	ND	0.50	0.050	ug/l							
Indeno(1,2,3-cd)pyrene	0.114	0.50	0.050	ug/l							*J*
Naphthalene	ND	0.50	0.050	ug/l							
Phenanthrene	ND	0.50	0.050	ug/l							
Pyrene	ND	0.50	0.050	ug/l							
Surrogate: 2-Fluorobiphenyl	*0.846*			*ug/l*	*1.00*		*85*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.843*			*ug/l*	*1.00*		*84*	*45-120*			
Surrogate: Terphenyl-d14	*0.908*			*ug/l*	*1.00*		*91*	*50-125*			
LCS Analyzed: 02/25/2009 (9B20060-BS1)											**MNR1**
Acenaphthene	0.806	0.50	0.050	ug/l	1.00		81	60-120			
Acenaphthylene	0.849	0.50	0.050	ug/l	1.00		85	60-120			
Anthracene	0.926	0.50	0.050	ug/l	1.00		93	65-120			
Benzo(a)anthracene	1.05	0.50	0.050	ug/l	1.00		105	65-120			
Benzo(a)pyrene	0.969	0.50	0.050	ug/l	1.00		97	55-130			
Benzo(b)fluoranthene	0.797	0.50	0.050	ug/l	1.00		80	55-125			
Benzo(g,h,i)perylene	0.869	0.50	0.050	ug/l	1.00		87	45-135			
Benzo(k)fluoranthene	0.840	0.50	0.050	ug/l	1.00		84	50-125			
Chrysene	0.861	0.50	0.050	ug/l	1.00		86	65-120			
Dibenz(a,h)anthracene	0.932	0.50	0.050	ug/l	1.00		93	50-135			
Fluoranthene	0.969	0.50	0.050	ug/l	1.00		97	60-120			
Fluorene	0.843	0.50	0.050	ug/l	1.00		84	65-120			
Indeno(1,2,3-cd)pyrene	0.905	0.50	0.050	ug/l	1.00		90	45-135			
Naphthalene	0.798	0.50	0.050	ug/l	1.00		80	55-120			
Phenanthrene	0.902	0.50	0.050	ug/l	1.00		90	65-120			

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B20060 Extracted: 02/20/09											
LCS Analyzed: 02/25/2009 (9B20060-BS1)											**MNR1**
Pyrene	0.866	0.50	0.050	ug/l	1.00		87	55-125			
Surrogate: 2-Fluorobiphenyl	*0.785*			*ug/l*	*1.00*		*78*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.762*			*ug/l*	*1.00*		*76*	*45-120*			
Surrogate: Terphenyl-d14	*0.865*			*ug/l*	*1.00*		*86*	*50-125*			
LCS Dup Analyzed: 02/25/2009 (9B20060-BSD1)											
Acenaphthene	0.827	0.50	0.050	ug/l	1.00		83	60-120	3	20	
Acenaphthylene	0.873	0.50	0.050	ug/l	1.00		87	60-120	3	20	
Anthracene	0.938	0.50	0.050	ug/l	1.00		94	65-120	1	20	
Benzo(a)anthracene	0.999	0.50	0.050	ug/l	1.00		100	65-120	5	20	
Benzo(a)pyrene	0.937	0.50	0.050	ug/l	1.00		94	55-130	3	25	
Benzo(b)fluoranthene	0.818	0.50	0.050	ug/l	1.00		82	55-125	3	25	
Benzo(g,h,i)perylene	0.847	0.50	0.050	ug/l	1.00		85	45-135	3	25	
Benzo(k)fluoranthene	0.839	0.50	0.050	ug/l	1.00		84	50-125	0	20	
Chrysene	0.832	0.50	0.050	ug/l	1.00		83	65-120	3	20	
Dibenz(a,h)anthracene	0.893	0.50	0.050	ug/l	1.00		89	50-135	4	25	
Fluoranthene	0.982	0.50	0.050	ug/l	1.00		98	60-120	1	20	
Fluorene	0.915	0.50	0.050	ug/l	1.00		92	65-120	8	20	
Indeno(1,2,3-cd)pyrene	0.878	0.50	0.050	ug/l	1.00		88	45-135	3	25	
Naphthalene	0.796	0.50	0.050	ug/l	1.00		80	55-120	0	20	
Phenanthrene	0.888	0.50	0.050	ug/l	1.00		89	65-120	2	20	
Pyrene	0.752	0.50	0.050	ug/l	1.00		75	55-125	14	25	
Surrogate: 2-Fluorobiphenyl	*0.790*			*ug/l*	*1.00*		*79*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.796*			*ug/l*	*1.00*		*80*	*45-120*			
Surrogate: Terphenyl-d14	*0.749*			*ug/l*	*1.00*		*75*	*50-125*			

TestAmerica Irvine

Joseph Doak
Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B14042 Extracted: 02/14/09											
Blank Analyzed: 02/14/2009 (9B14042-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 02/14/2009 (9B14042-DUP1)						**Source: ISB1569-01**					
Turbidity	0.640	1.0	0.040	NTU		0.620			3	20	*J*
Duplicate Analyzed: 02/14/2009 (9B14042-DUP2)						**Source: ISB1732-01**					
Turbidity	3.83	1.0	0.040	NTU		3.76			2	20	
Batch: 9B14044 Extracted: 02/14/09											
Duplicate Analyzed: 02/14/2009 (9B14044-DUP1)						**Source: ISB1671-01**					
Dissolved Oxygen	9.55	1.0	1.0	mg/l		9.57			0	20	*HFT*
Batch: 9B20048 Extracted: 02/20/09											
Blank Analyzed: 02/20/2009 (9B20048-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/20/2009 (9B20048-BS1)											
Total Suspended Solids	989	10	1.0	mg/l	1000		99	85-115			
Duplicate Analyzed: 02/20/2009 (9B20048-DUP1)						**Source: ISB1659-01**					
Total Suspended Solids	69.0	10	1.0	mg/l		70.0			1	10	

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Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
HFT	The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after receipt.
J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 180.1	Water	X	X
EPA 360.1	Water	X	X
EPA 8270C-SIM	Water		
SM 2540D	Water	X	X

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

Joseph Doak
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Test America CAO No. R4-2007-0054 CHAIN OF CUSTODY FORM

ISB1696

Page 1 of 1

Client Name/Address:	Project:
MWH-Arcadia 618 Michillinda Avenue, Suite 200 Arcadia, CA 91007 Test America Contact: Joseph Doak	Boeing-SSFL Northern Drainage **Surface Water Sampling** Shooting Range Area – Downstream NDSW0013
Project Manager: Bronwyn Kelly Sampler: Barraza	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Dissolved Oxygen (EPA 360.1)	Turbidity, TSS	SVOCs (EPA 8270)
NDSW0013	W	40 mL VOA Amber	2	2-13-09 14:30	None	1A, 1B	X		
NDSW0013	W	500 mL Poly	2	↓	None	2A, 2B		X	
NDSW0013	W	1 L Amber	2		None	3A, 3B			X

ANALYSIS REQUIRED

Field readings:
Temp = 45.8
pH = 7.01
Sample Collection Time= 14:30

Comments

TF 2/13/09 215

Relinquished By: [signature] 2-13-09	Date/Time: 1600	Received By: [signature] TAT	Date/Time: 2/13/09 1600
Relinquished By: [signature] TAT	Date/Time: 2/13/09 2010	Received By: [signature]	Date/Time: 2/13/09 2010
Relinquished By:	Date/Time:	Received By:	Date/Time:

Turn around Time: (check)
24 Hours _____ 5 Days _____
48 Hours _____ 10 Days _____
72 Hours _____ Normal X

Sample Integrity: (check)
Intact ✓ On Ice: ✓ 3.5°C

Data Requirements: (check)
No Level IV ___ All Level IV ___
NPDES Level IV X

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LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project: Northern Drainage-Shooting Range
Surface Water
Sampled: 02/16/09
Received: 02/16/09
Issued: 02/26/09 16:45

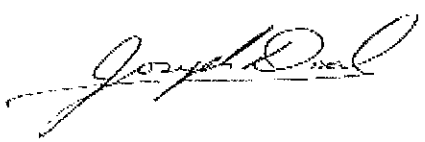
NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

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.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
ISB1824-01	NDSW0012	Water

Reviewed By:



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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1824-01 (NDSW0012 - Water)									
Reporting Units: ug/l									
Benzo(a)pyrene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Benzo(b)fluoranthene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Benzo(k)fluoranthene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Chrysene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Dibenz(a,h)anthracene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Fluoranthene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Fluorene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Indeno(1,2,3-cd)pyrene	EPA 8270C-SIM	9B20060	0.047	0.47	**0.11**	0.943	02/20/09	02/25/09	B, J
Naphthalene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Pyrene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Surrogate: 2-Fluorobiphenyl (50-120%)					*67 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*71 %*				
Surrogate: Terphenyl-d14 (50-125%)					*86 %*				

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1824-01 (NDSW0012 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	9B17106	1.0	1.0	**10**	1	02/17/09	02/17/09	HFT
Total Suspended Solids	SM 2540D	9B21068	1.0	10	**200**	1	02/21/09	02/21/09	
Sample ID: ISB1824-01 (NDSW0012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B17067	0.40	10	**120**	10	02/17/09	02/17/09	

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Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: NDSW0012 (ISB1824-01) - Water					
EPA 180.1	2	02/16/2009 12:30	02/16/2009 18:20	02/17/2009 09:30	02/17/2009 12:55
EPA 360.1	1	02/16/2009 12:30	02/16/2009 18:20	02/17/2009 14:00	02/17/2009 14:00

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Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B20060 Extracted: 02/20/09											
Blank Analyzed: 02/25/2009 (9B20060-BLK1)											
Acenaphthene	ND	0.50	0.050	ug/l							
Acenaphthylene	ND	0.50	0.050	ug/l							
Anthracene	ND	0.50	0.050	ug/l							
Benzo(a)anthracene	ND	0.50	0.050	ug/l							
Benzo(a)pyrene	ND	0.50	0.050	ug/l							
Benzo(b)fluoranthene	ND	0.50	0.050	ug/l							
Benzo(g,h,i)perylene	ND	0.50	0.050	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.050	ug/l							
Chrysene	ND	0.50	0.050	ug/l							
Dibenz(a,h)anthracene	ND	0.50	0.050	ug/l							
Fluoranthene	ND	0.50	0.050	ug/l							
Fluorene	ND	0.50	0.050	ug/l							
Indeno(1,2,3-cd)pyrene	0.114	0.50	0.050	ug/l							*J*
Naphthalene	ND	0.50	0.050	ug/l							
Phenanthrene	ND	0.50	0.050	ug/l							
Pyrene	ND	0.50	0.050	ug/l							
Surrogate: 2-Fluorobiphenyl	*0.846*			*ug/l*	*1.00*		*85*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.843*			*ug/l*	*1.00*		*84*	*45-120*			
Surrogate: Terphenyl-d14	*0.908*			*ug/l*	*1.00*		*91*	*50-125*			
LCS Analyzed: 02/25/2009 (9B20060-BS1)											**MNR1**
Acenaphthene	0.806	0.50	0.050	ug/l	1.00		81	60-120			
Acenaphthylene	0.849	0.50	0.050	ug/l	1.00		85	60-120			
Anthracene	0.926	0.50	0.050	ug/l	1.00		93	65-120			
Benzo(a)anthracene	1.05	0.50	0.050	ug/l	1.00		105	65-120			
Benzo(a)pyrene	0.969	0.50	0.050	ug/l	1.00		97	55-130			
Benzo(b)fluoranthene	0.797	0.50	0.050	ug/l	1.00		80	55-125			
Benzo(g,h,i)perylene	0.869	0.50	0.050	ug/l	1.00		87	45-135			
Benzo(k)fluoranthene	0.840	0.50	0.050	ug/l	1.00		84	50-125			
Chrysene	0.861	0.50	0.050	ug/l	1.00		86	65-120			
Dibenz(a,h)anthracene	0.932	0.50	0.050	ug/l	1.00		93	50-135			
Fluoranthene	0.969	0.50	0.050	ug/l	1.00		97	60-120			
Fluorene	0.843	0.50	0.050	ug/l	1.00		84	65-120			
Indeno(1,2,3-cd)pyrene	0.905	0.50	0.050	ug/l	1.00		90	45-135			
Naphthalene	0.798	0.50	0.050	ug/l	1.00		80	55-120			
Phenanthrene	0.902	0.50	0.050	ug/l	1.00		90	65-120			

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B20060 Extracted: 02/20/09											
LCS Analyzed: 02/25/2009 (9B20060-BS1)											**MNR1**
Pyrene	0.866	0.50	0.050	ug/l	1.00		87	55-125			
Surrogate: 2-Fluorobiphenyl	*0.785*			*ug/l*	*1.00*		*78*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.762*			*ug/l*	*1.00*		*76*	*45-120*			
Surrogate: Terphenyl-d14	*0.865*			*ug/l*	*1.00*		*86*	*50-125*			
LCS Dup Analyzed: 02/25/2009 (9B20060-BSD1)											
Acenaphthene	0.827	0.50	0.050	ug/l	1.00		83	60-120	3	20	
Acenaphthylene	0.873	0.50	0.050	ug/l	1.00		87	60-120	3	20	
Anthracene	0.938	0.50	0.050	ug/l	1.00		94	65-120	1	20	
Benzo(a)anthracene	0.999	0.50	0.050	ug/l	1.00		100	65-120	5	20	
Benzo(a)pyrene	0.937	0.50	0.050	ug/l	1.00		94	55-130	3	25	
Benzo(b)fluoranthene	0.818	0.50	0.050	ug/l	1.00		82	55-125	3	25	
Benzo(g,h,i)perylene	0.847	0.50	0.050	ug/l	1.00		85	45-135	3	25	
Benzo(k)fluoranthene	0.839	0.50	0.050	ug/l	1.00		84	50-125	0	20	
Chrysene	0.832	0.50	0.050	ug/l	1.00		83	65-120	3	20	
Dibenz(a,h)anthracene	0.893	0.50	0.050	ug/l	1.00		89	50-135	4	25	
Fluoranthene	0.982	0.50	0.050	ug/l	1.00		98	60-120	1	20	
Fluorene	0.915	0.50	0.050	ug/l	1.00		92	65-120	8	20	
Indeno(1,2,3-cd)pyrene	0.878	0.50	0.050	ug/l	1.00		88	45-135	3	25	
Naphthalene	0.796	0.50	0.050	ug/l	1.00		80	55-120	0	20	
Phenanthrene	0.888	0.50	0.050	ug/l	1.00		89	65-120	2	20	
Pyrene	0.752	0.50	0.050	ug/l	1.00		75	55-125	14	25	
Surrogate: 2-Fluorobiphenyl	*0.790*			*ug/l*	*1.00*		*79*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.796*			*ug/l*	*1.00*		*80*	*45-120*			
Surrogate: Terphenyl-d14	*0.749*			*ug/l*	*1.00*		*75*	*50-125*			

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 9B17067 Extracted: 02/17/09											
Blank Analyzed: 02/17/2009 (9B17067-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 02/17/2009 (9B17067-DUP1)						**Source: ISB1815-01**					
Turbidity	20.2	1.0	0.040	NTU		20.9			3	20	
Duplicate Analyzed: 02/17/2009 (9B17067-DUP2)						**Source: ISB1831-01**					
Turbidity	430	20	0.80	NTU		440			2	20	
Batch: 9B17106 Extracted: 02/17/09											
Duplicate Analyzed: 02/17/2009 (9B17106-DUP1)						**Source: ISB1815-01**					
Dissolved Oxygen	10.6	1.0	1.0	mg/l		10.4			2	20	
Batch: 9B21068 Extracted: 02/21/09											
Blank Analyzed: 02/21/2009 (9B21068-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 02/21/2009 (9B21068-BS1)											
Total Suspended Solids	990	10	1.0	mg/l	1000		99	85-115			
Duplicate Analyzed: 02/21/2009 (9B21068-DUP1)						**Source: ISB1750-01**					
Total Suspended Solids	105	10	1.0	mg/l		106			1	10	

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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

DATA QUALIFIERS AND DEFINITIONS

B	Analyte was detected in the associated Method Blank.
HFT	The holding time for this test is immediate. It was analyzed in the laboratory as soon as possible after receipt.
J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
MNR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

Certification Summary

TestAmerica Irvine

Method	Matrix	Nelac	California
EPA 180.1	Water	X	X
EPA 360.1	Water	X	X
EPA 8270C-SIM	Water		
SM 2540D	Water	X	X

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

Joseph Doak
Project Manager

Test America CAO No. R4-2007-0054 **CHAIN OF CUSTODY FORM** ISB1824

Client Name/Address:
MWH-Arcadia
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007

Test America Contact: Joseph Doak

Project Manager: Bronwyn Kelly

Sampler: [illegible signatures]

Project:
Boeing-SSFL Northern Drainage
Surface Water Sampling
Shooting Range Area – Upstream
NDSW0012

Phone Number:
(626) 568-6691
Fax Number:
(626) 568-6515

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Dissolved Oxygen (EPA 360.1)	Turbidity, TSS	SVOCs (EPA 8270)	Comments
NDSW0012	W	40 mL VOA Amber	2	2-16-09 12:30	None	1A, 1B	X			
NDSW0012	W	500 mL Poly	2	|	None	2A, 2B		X		
NDSW0012	W	1 L Amber	2	2-16-09 12:30	None	3A, 3B			X	

Field readings:
Temp = 42.1°
pH = 7.73
Sample Collection Time= 12:30

Relinquished By	Date/Time:	Received By	Date/Time:
[signature] 2-16-09	1545	[signature]	2/16/09 1545
[signature]	21609 1826	[signature]	
		[signature]	2/16/09 1820

Turn around Time: (check)
24 Hours ___ 5 Days ___
48 Hours ___ 10 Days ___
72 Hours ___ Normal X

Sample Integrity: (check)
Intact X On Ice: 4.2/3.6

Data Requirements: (check)
No Level IV ___ All Level IV ___
NPDES Level IV X

DATA VALIDATION REPORTS

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISB0769

Prepared by

MEC^X, LP
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ISB0769
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
NDSW0012	ISB0769-01	N/A	Water	02/06/09 1415	SM4500-O-G

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at TestAmerica-Irvine within the temperature limit of 4 ±2°C. According to the case narrative for this SDG, the samples were received intact. The COC was appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

Qualification Code Reference Table Cont.

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 23, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), Standard Method SM4500-O-G*, and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: Although dissolved oxygen (DO) is a field analysis, qualifications are not generally applied if the laboratory performs the analysis within 24 hours of sample receipt.

- Calibration: Calibration criteria were met. The DO check standard recoveries were considered acceptable.

- Blanks: The DO was not detected in the zero water sample.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits.

- Laboratory Duplicates: A laboratory duplicate analysis was performed on the sample in this SDG for DO. The RPD was within the laboratory-established control limit.

- Matrix Spike/Matrix Spike Duplicate: Not applicable to this method.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range Surface Water Sampling
Report Number: ISB0769

Sampled: 02/06/09
Received: 02/06/09

INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB0769-01 (NDSW0012 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	9B07055	1.0	1.0	**6.6**	1	02/07/09	02/07/09	HFT
Total Suspended Solids	SM 2540D	9B13100	1.0	10	**8.0**	1	02/13/09	02/13/09	J
Sample ID: ISB0769-01 (NDSW0012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B07043	0.040	1.0	**26**	1	02/07/09	02/07/09	

LEVEL IV

*Analysis not validated

TestAmerica Irvine

Joseph Doak
Project Manager

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISB1696

Prepared by

MEC^X, LP
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ISB1696
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
NDSW0013	ISB1696-01	N/A	Water	02136/09 1430	180.1, 360.1, 625, SM2540D

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at TestAmerica-Irvine within the temperature limit of 4 ±2°C. According to the case narrative for this SDG, the samples were received intact. The COC was appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered to TestAmerica-Irvine, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

Qualification Code Reference Table Cont.

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. EPA METHOD 625—Polynuclear Aromatic Hydrocarbons (PAHs)

Reviewed By: S. Dellamia
Date Reviewed: March 25, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review* (2/99).

- Holding Times: Extraction and analytical holding times were met. The unpreserved water sample was extracted within seven days of collection and analyzed within 40 days of extraction.

- GC/MS Tuning: A DFTPP tune was not required for this analytical sequence because all analyses were run in SIM mode.

- Calibration: Initial and continuing calibration average RRFs were ≥0.05. The initial calibration %RSDs were ≤15% or r^2 values ≥0.995, with the exception of indeno(1,2,3-cd)pyrene. The r^2 value for ideno(1,2,3-cd)pyrene was <0.995; therefore, the nondetected result for ideno(1,2,3-cd)pyrene in sample NDSW0013 was qualified as estimated, "UJ." A second-source midpoint calibration standard (PLCS1000) was analyzed following the initial calibration, with %Ds for all target compounds within the QC limits of ≤20%. Sample NDSW0013 was analyzed in the same analytical sequence as the initial calibration and midpoint calibration standard; therefore a continuing calibration was not necessary.

- Blanks: Ideno(1,2,3-cd)pyrene was detected in the method blank at 0.114(J) µg/L; therefore, ideno(1,2,3-cd)pyrene detected in sample NDSW0013 was qualified as nondetected, "U," at the RL. There were no other target compound detects above the MDL in the method blank.

- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.

- Surrogate Recovery: Surrogate recoveries in the base/neutral fraction were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a sample from this SDG. Evaluation of method accuracy and precision was based on LCS/LCSD results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

- Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times.

- Compound Identification: Compound identification was verified. The laboratory analyzed for ten PAH compounds by Method 8270C-SIM. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

- System Performance: Review of the raw data indicated no problems with system performance.

B. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 24, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Methods 180.1, 360.1, Standard Method SM2540-D,* and the *National Functional Guidelines for Inorganic Data Review* (07/02).

- Holding Times: Analytical holding times, 48 hours from collection for turbidity and seven days for TSS, were met. Although dissolved oxygen (DO) is a field analysis, qualifications are not generally applied if the laboratory performs the analysis within 24 hours of sample receipt.

- Calibration: Calibration criteria were met. The turbidity initial calibration r^2 value was ≥0.995 and the continuing calibration recoveries were within 90-110%. Balance calibration logs were reviewed and found acceptable.

- Blanks: Method blanks had no applicable detects.

- Blank Spikes and Laboratory Control Samples: Recoveries and the BOD RPD were within laboratory-established QC limits.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: Not applicable to these analyses.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

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618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1696-01 (NDSW0013 - Water)									
Reporting Units: ug/l									
Benzo(a)pyrene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Benzo(b)fluoranthene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Benzo(k)fluoranthene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Chrysene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Dibenz(a,h)anthracene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Fluoranthene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Fluorene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Indeno(1,2,3-cd)pyrene	EPA 8270C-SIM	9B20060	0.050	0.50	**0.12**	0.99	02/20/09	02/25/09	B, J
Naphthalene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Pyrene	EPA 8270C-SIM	9B20060	0.050	0.50	ND	0.99	02/20/09	02/25/09	
Surrogate: 2-Fluorobiphenyl (50-120%)					*71 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*81 %*				
Surrogate: Terphenyl-d14 (50-125%)					*92 %*				

TestAmerica Irvine

Joseph Doak
Project Manager

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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
Surface Water Sampling-Downstream
Report Number: ISB1696

Sampled: 02/13/09
Received: 02/13/09

INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1696-01 (NDSW0013 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	9B14044	1.0	1.0	9.6	1	02/14/09	02/14/09	HFT
Total Suspended Solids	SM 2540D	9B20048	1.0	10	50	1	02/20/09	02/20/09	
Sample ID: ISB1696-01 (NDSW0013 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B14042	0.040	1.0	58	1	02/14/09	02/14/09	

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: ISB1824

Prepared by

MEC^X, LP
12269 East Vassar Drive
Aurora, CO 80014

I. INTRODUCTION

Task Order Title:	Boeing SSFL NPDES
Contract Task Order:	1261.100D.00
Sample Delivery Group:	ISB1824
Project Manager:	B. Kelly
Matrix:	Water
QC Level:	IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Laboratory:	TestAmerica-Irvine

Table 1. Sample Identification

Client ID	Laboratory ID	Sub-Laboratory ID	Matrix	Collected	Method
NDSW0012	ISB1824-01	N/A	Water	02/16/09 12:30PM	180.1, 360.1, 8270C SIM, SM2540D

II. Sample Management

No anomalies were observed regarding sample management. The samples were received at TestAmerica-Irvine within the temperature limit of 4 ±2°C. According to the case narrative for this SDG, the samples were received intact. As the sample was couriered to TestAmerica-Irvine, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

Qualification Code Reference Table

Qualifier	Organics	Inorganics
H	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
C	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
B	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

Qualification Code Reference Table Cont.

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*II, *III	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

III. Method Analyses

A. EPA METHOD 625—Polynuclear Aromatic Hydrocarbons (PAHs)

Reviewed By: S. Dellamia
Date Reviewed: March 27, 2009

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 8270C*, and the *National Functional Guidelines for Organic Data Review* (2/99).

- Holding Times: Extraction and analytical holding times were met. The unpreserved water sample was extracted within seven days of collection and analyzed within 40 days of extraction.

- GC/MS Tuning: A DFTPP tune was not required for this analytical sequence because all analyses were run in SIM mode.

- Calibration: Initial and continuing calibration average RRFs were ≥0.05. The initial calibration %RSDs were ≤15% or r^2 values ≥0.995, with the exception of indeno(1,2,3-cd)pyrene. The r^2 value for ideno(1,2,3-cd)pyrene was <0.995; therefore, the nondetected result for ideno(1,2,3-cd)pyrene in sample NDSW0012 was qualified as estimated, "UJ." A second-source midpoint calibration standard (PLCS1000) was analyzed following the initial calibration, with %Ds for all target compounds within the QC limits of ≤20%. Sample NDSW0012 was analyzed in the same analytical sequence as the initial calibration and midpoint calibration standard; therefore a continuing calibration was not necessary.

- Blanks: Ideno(1,2,3-cd)pyrene was detected in the method blank at 0.114(J) µg/L; therefore, ideno(1,2,3-cd)pyrene detected in sample NDSW0012 was qualified as nondetected, "U," at the RL. There were no other target compound detects above the MDL in the method blank.

- Blank Spikes and Laboratory Control Samples: Recoveries and RPDs were within laboratory-established QC limits.

- Surrogate Recovery: Surrogate recoveries in the base/neutral fraction were within laboratory-established QC limits.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the sample from this SDG. Evaluation of method accuracy and precision was based on LCS/LCSD results.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

- Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

- Field Duplicates: There were no field duplicate samples identified for this SDG.

- Internal Standards Performance: The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times.

- Compound Identification: Compound identification was verified. The laboratory analyzed for ten PAH compounds by Method 8270C-SIM. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." Reported nondetects are valid to the reporting limit.

- Tentatively Identified Compounds: TICs were not reported by the laboratory for this SDG.

- System Performance: Review of the raw data indicated no problems with system performance.

B. VARIOUS EPA METHODS—General Minerals

Reviewed By: P. Meeks
Date Reviewed: March 27, 2009

The sample listed in Table 1 for these analyses was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 180.1, 360.1 and Standard Method SM2540D,* and the *National Functional Guidelines for Inorganic Data Review* (10/04).

- Holding Times: Analytical holding times, 48 hours from collection for turbidity, as soon as possible for dissolved oxygen, and 7 days for TSS, were met.

- Calibration: Calibration criteria were met. Initial calibration r^2 values were ≥0.995 and all initial and continuing calibration recoveries were within 90-110%. Balance calibration logs were reviewed and found to be acceptable.

- Blanks: Method blanks and CCBs had no applicable detects.

- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratory-established QC limits where applicable.

- Laboratory Duplicates: No laboratory duplicate analyses were performed on the sample in this SDG.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- Sample Result Verification: Calculations were verified and the sample results reported on the sample result summary were verified against the raw data. No transcription errors or calculation errors were noted. Turbidity was analyzed at a 10× dilution in order to report the analyte within the linear range of the calibration. Any detects reported below the reporting limit were qualified as estimated, "J," and coded with "DNQ," in order to comply with the NPDES permit. Reported nondetects are valid to the MDL.

- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: There were no field duplicate samples identified for this SDG.

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MWH-Pasadena/Boeing
618 Michillinda Avenue, Suite 200
Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range Surface Water Sampling-UpStream
Report Number: ISB1824

Sampled: 02/16/09
Received: 02/16/09

POLYNUCLEAR AROMATIC HYDROCARBONS BY GC/MS (EPA 8270C)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1824-01 (NDSW0012 - Water)									
Reporting Units: ng/l									
Benzo(a)pyrene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Benzo(b)fluoranthene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Benzo(k)fluoranthene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Chrysene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Dibenz(a,h)anthracene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Fluoranthene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Fluorene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Indeno(1,2,3-cd)pyrene	EPA 8270C-SIM	9B20060	0.047	0.47	**0.11**	0.943	02/20/09	02/25/09	B, J
Naphthalene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Pyrene	EPA 8270C-SIM	9B20060	0.047	0.47	ND	0.943	02/20/09	02/25/09	
Surrogate: 2-Fluorobiphenyl (50-120%)					*67 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*71 %*				
Surrogate: Terphenyl-d14 (50-125%)					*86 %*				

LEVEL IV

TestAmerica Irvine

Joseph Doak
Project Manager

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INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ISB1824-01 (NDSW0012 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	9B17106	1.0	1.0	**10**	1	02/17/09	02/17/09	HFT
Total Suspended Solids	SM 2540D	9B21068	1.0	10	**200**	1	02/21/09	02/21/09	
Sample ID: ISB1824-01 (NDSW0012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	9B17067	0.40	10	**120**	10	02/17/09	02/17/09	

LEVEL IV

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