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

Via FedEx

February 12, 2009
In reply refer to SHEA-108283

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

BOEING

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

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

Subject: January 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 January, 2009, and also includes validated results from the sampling event on November 26, 2008 that was initially reported in the December 2008 MMR.

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.

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 at 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.

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 establish whether a rain event results in wet weather flow, field inspections are conducted before, during and after rain events.

Boeing observed rain events on January 2 through January 3, 2009, and on January 22 through 24, 2009. The SSFL rain gauge recorded the following amounts of precipitation for the month of December:

- A total of 0.03 inches of rain between approximately 11:00 pm on January 2 and 1:00 am on January 3, 2009.
- A total of 0.69 inches of rain between approximately 7:00 am on January 22 and 12:00 pm on January 24, 2009.

Field inspections were conducted before, during and after each rain event. Surface water flow did not result from these rain events.[1]

Wet Weather Flow Sample Results Reporting

As required by the CAO, surface water samples are to be collected when wet weather flow discharging downstream of the cleanup area occurs. The samples are to be collected not more than 50 feet upstream or downstream of the area where work is occurring and for three rain events or two years, whichever occurs first, after work is complete. To establish whether a rain event resulted in wet weather flow, field inspections are conducted before, during and after rain events.

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[1] Surface water flow from wet weather events was also not observed at Outfall 009 in January 2009. However, a water pipe leak approximately 500 feet upstream from Outfall 009 resulted in approximately 550,000 gallons of water being discharged into the drainage from December 26, 2008 through January 8, 2009. A sample was collected at Outfall 009. Sampling results will be included in the RWQCB NPDES monitoring report for the first quarter of 2009, due May 15, 2009.

During the month of January, Boeing did not observe any rain events that resulted in surface water flow through the Northern Drainage Debris Area.

Wet Weather Flow Sample Results Reporting

As indicated above, surface water flow did not occur in the Northern Drainage Debris Area in January. However, as reported in the December 2008 MMR, surface water samples were collected and analyzed in accordance with the CAO during a flow event in the Northern Drainage Debris Area in November 2008. These samples were submitted to a state-certified analytical laboratory for chemical analysis in accordance with the requirements of the CAO. Since the validated analytical results from this sampling event were not finalized and obtained until after January 15, 2009, they could not be included in previous MMRs. Specifically, samples were collected during a flow event in the Northern Drainage Debris Area on November 26, 2008. The final validated analytical results from this sampling event are included in this MMR.

Figure 1 is a site location map showing the extent of excavation activities in the Northern Drainage and sample locations.

Table 1 provides analytical results as required by the CAO from NDSW0012 (upstream from the Shooting Range Area)

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

LB:bjc

Attachment: Figure 1. Excavation Extents in the Northern Drainage
Table 1. NDSW0012 (SR-Upstream)
Appendix A -- Analytical Laboratory Reports, Chain-of-Custody, and 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

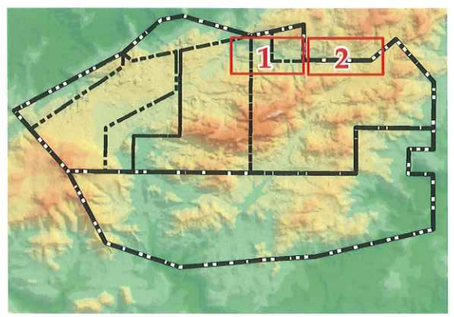
Figure Legend

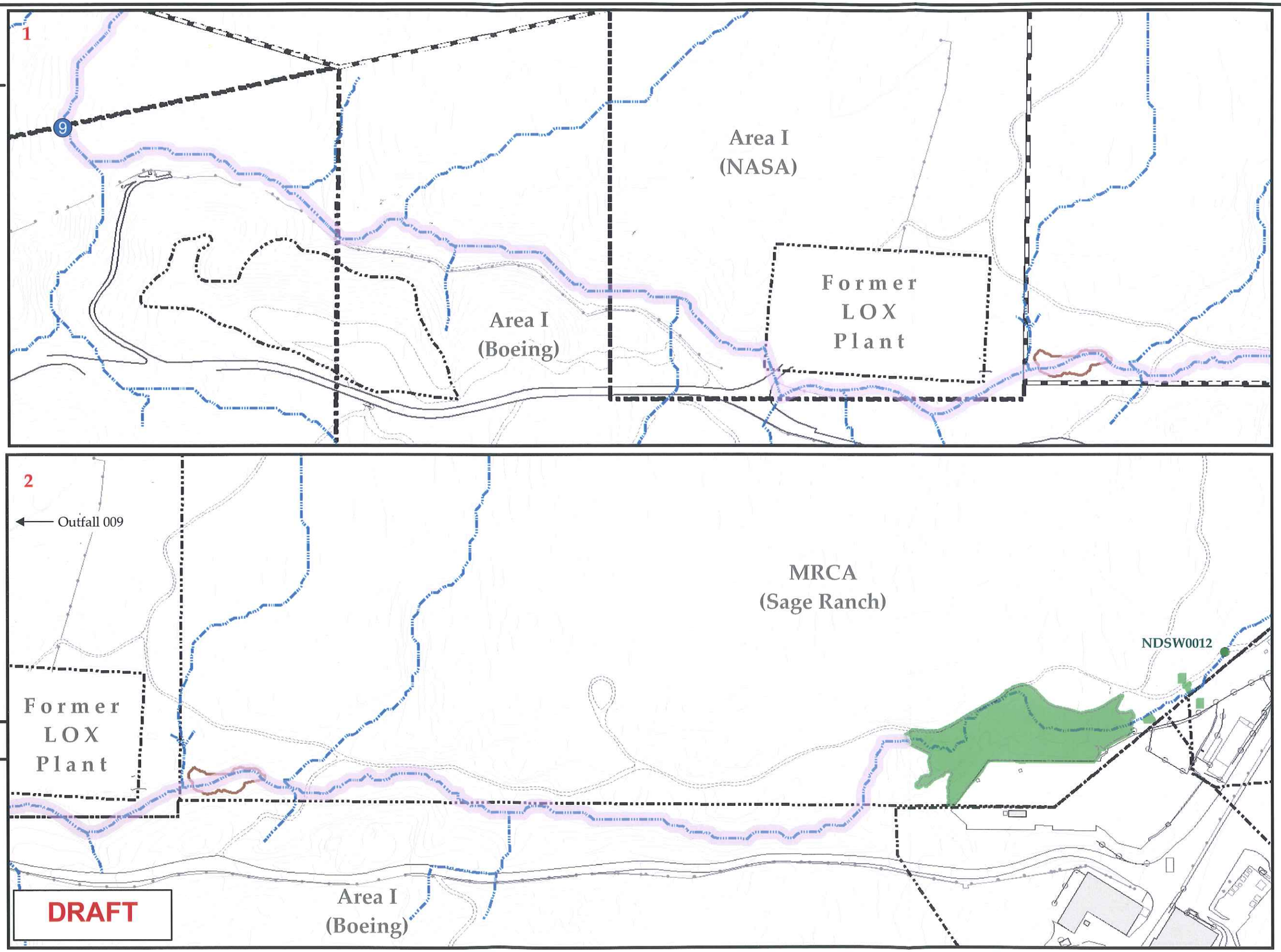
- Clay Target Excavation Extent
- Drainage Excavation and Debris Removal
- Extent of Lox Debris / Asbestos

Document: NorthDrainage_ExcavationExtents.MXD

Date: Dec. 12, 2008

0 130 260 520 Feet





SANTA SUSANA FIELD LABORATORY

MWH FIGURE 1

Table 1. NDSW0012 (SR- Upstream)

NORTH DRAINAGE REPORTING SUMMARY
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY

ANALYTE	UNITS	Permit Limit Daily Max/Monthly Avg	11/26/2008	
			RESULT	VALIDATION QUALIFIER
Dissolved Oxygen	mg/L	5(Min)/7(Annual)	8.6	J (H)
pH (Field)	pH Units	6.5-8.5/-	6.8	*
Temperature	deg. F	86/-	57	*
Total Suspended Solids	mg/L	45/15	11	*
Turbidity	NTU	75/50	28	*
Benzo(a)pyrene	ug/L	0.049/-	ND < 0.048	*
Benzo(b)fluoranthene	ug/L	0.049/-	ND < 0.048	*
Benzo(k)fluoranthene	ug/L	0.049/-	ND < 0.048	*
Chrysene	ug/L	0.049/-	ND < 0.048	*
Dibenzo(a,h)anthracene	ug/L	0.019/-	ND < 0.048	*
Fluoranthene	ug/L	370/-	ND < 0.048	*
Fluorene	ug/L	14000/-	ND < 0.048	*
Indeno(1,2,3-cd)pyrene	ug/L	0.049/-	ND < 0.048	*
Naphthalene	ug/L	17/-	ND < 0.048	*
Pyrene	ug/L	11000/-	ND < 0.048	*

Notes:

* result not validated

<(value) analyte not detected at a concentration greater than or equal to the DL, MDL, or RL (see laboratory report for specific detail)

J estimated value

H holding time was exceeded

mg/L milligrams per liter

ND analyte value less than the LOD or MDL

NTU nephelometric turbidity unit

ug/L micrograms per liter

APPENDIX A

Analytical Laboratory Reports
Chain-of-Custody
Validation 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: 11/26/08
Received: 11/26/08
Issued: 12/05/08 14:29

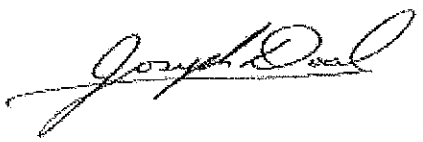
NELAP #01108CA California ELAP#2706 CSDLAC #10256 AZ #AZ0671 NV #CA01531

CASE NARRATIVE

SAMPLE RECEIPT:	Samples were received intact, at 4°C, on ice and with chain of custody documentation.
HOLDING TIMES:	Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA:	All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS:	Results that fall between the MDL and RL are 'J' flagged.
SUBCONTRACTED:	No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
IRK2849-01	NDSW0012	Water

Reviewed By:



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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: IRK2849

Sampled: 11/26/08
Received: 11/26/08

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: IRK2849-01 (NDSW0012 - Water)									
Reporting Units: ug/l									
Benzo(a)pyrene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Benzo(b)fluoranthene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Benzo(k)fluoranthene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Chrysene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Dibenz(a,h)anthracene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Fluoranthene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Fluorene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Indeno(1,2,3-cd)pyrene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Naphthalene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Pyrene	EPA 8270C-SIM	8L02082	0.048	0.48	ND	0.962	12/02/08	12/03/08	
Surrogate: 2-Fluorobiphenyl (50-120%)					*65 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*69 %*				
Surrogate: Terphenyl-d14 (50-125%)					*93 %*				

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Project ID: Northern Drainage-Shooting Range Surface Water Sampling
Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRK2849-01 (NDSW0012 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen	EPA 360.1	8K27020	1.0	1.0	**8.6**	1	11/27/08	11/27/08	HFT
Total Suspended Solids	SM 2540D	8L03150	1.0	10	**11**	1	12/03/08	12/03/08	
Sample ID: IRK2849-01 (NDSW0012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	8K27010	0.040	1.0	**28**	1	11/27/08	11/27/08	

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Project ID: Northern Drainage-Shooting Range Surface Water Sampling
Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: NDSW0012 (IRK2849-01) - Water					
EPA 180.1	2	11/26/2008 11:55	11/26/2008 20:45	11/27/2008 10:44	11/27/2008 12:45
EPA 360.1	1	11/26/2008 11:55	11/26/2008 20:45	11/27/2008 18:10	11/27/2008 18:15

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Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

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: 8L02082 Extracted: 12/02/08											
Blank Analyzed: 12/03/2008 (8L02082-BLK1)											
Benzo(a)pyrene	ND	0.50	0.050	ug/l							
Benzo(b)fluoranthene	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							
Pyrene	ND	0.50	0.050	ug/l							
Surrogate: 2-Fluorobiphenyl	*0.804*			*ug/l*	*1.00*		*80*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.806*			*ug/l*	*1.00*		*81*	*45-120*			
Surrogate: Terphenyl-d14	*1.01*			*ug/l*	*1.00*		*101*	*50-125*			
LCS Analyzed: 12/03/2008 (8L02082-BS1)											**MNR1**
Benzo(a)pyrene	0.919	0.50	0.050	ug/l	1.00		92	55-130			
Benzo(b)fluoranthene	0.865	0.50	0.050	ug/l	1.00		86	55-125			
Benzo(k)fluoranthene	0.892	0.50	0.050	ug/l	1.00		89	50-125			
Chrysene	0.918	0.50	0.050	ug/l	1.00		92	65-120			
Dibenz(a,h)anthracene	0.926	0.50	0.050	ug/l	1.00		93	50-135			
Fluoranthene	1.02	0.50	0.050	ug/l	1.00		102	60-120			
Fluorene	0.862	0.50	0.050	ug/l	1.00		86	65-120			
Indeno(1,2,3-cd)pyrene	0.940	0.50	0.050	ug/l	1.00		94	45-135			
Naphthalene	0.787	0.50	0.050	ug/l	1.00		79	55-120			
Pyrene	0.925	0.50	0.050	ug/l	1.00		92	55-125			
Surrogate: 2-Fluorobiphenyl	*0.773*			*ug/l*	*1.00*		*77*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.811*			*ug/l*	*1.00*		*81*	*45-120*			
Surrogate: Terphenyl-d14	*0.921*			*ug/l*	*1.00*		*92*	*50-125*			

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range
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Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

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: 8L02082 Extracted: 12/02/08											
LCS Dup Analyzed: 12/03/2008 (8L02082-BSD1)											
Benzo(a)pyrene	0.977	0.50	0.050	ug/l	1.00		98	55-130	6	25	
Benzo(b)fluoranthene	0.906	0.50	0.050	ug/l	1.00		91	55-125	5	25	
Benzo(k)fluoranthene	0.930	0.50	0.050	ug/l	1.00		93	50-125	4	20	
Chrysene	0.942	0.50	0.050	ug/l	1.00		94	65-120	3	20	
Dibenz(a,h)anthracene	0.967	0.50	0.050	ug/l	1.00		97	50-135	4	25	
Fluoranthene	1.01	0.50	0.050	ug/l	1.00		101	60-120	0	20	
Fluorene	0.867	0.50	0.050	ug/l	1.00		87	65-120	1	20	
Indeno(1,2,3-cd)pyrene	0.966	0.50	0.050	ug/l	1.00		97	45-135	3	25	
Naphthalene	0.774	0.50	0.050	ug/l	1.00		77	55-120	2	20	
Pyrene	0.936	0.50	0.050	ug/l	1.00		94	55-125	1	25	
Surrogate: 2-Fluorobiphenyl	*0.728*			*ug/l*	*1.00*		*73*	*50-120*			
Surrogate: Nitrobenzene-d5	*0.772*			*ug/l*	*1.00*		*77*	*45-120*			
Surrogate: Terphenyl-d14	*0.936*			*ug/l*	*1.00*		*94*	*50-125*			

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range Surface Water Sampling
Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 8K27010 Extracted: 11/27/08											
Blank Analyzed: 11/27/2008 (8K27010-BLK1)											
Turbidity	0.0900	1.0	0.040	NTU							*J*
Duplicate Analyzed: 11/27/2008 (8K27010-DUP1)						**Source: IRK2764-01**					
Turbidity	49.4	2.0	0.080	NTU		51.2			4	20	
Batch: 8K27020 Extracted: 11/27/08											
Duplicate Analyzed: 11/27/2008 (8K27020-DUP1)						**Source: IRK2849-01**					
Dissolved Oxygen	8.70	1.0	1.0	mg/l		8.62			1	20	*HFT*
Batch: 8L03150 Extracted: 12/03/08											
Blank Analyzed: 12/03/2008 (8L03150-BLK1)											
Total Suspended Solids	ND	10	1.0	mg/l							
LCS Analyzed: 12/03/2008 (8L03150-BS1)											
Total Suspended Solids	1010	10	1.0	mg/l	1000		101	85-115			
Duplicate Analyzed: 12/03/2008 (8L03150-DUP1)						**Source: IRL0206-03**					
Total Suspended Solids	7.00	10	1.0	mg/l		7.00			0	10	*J*

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Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range Surface Water Sampling
Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

DATA QUALIFIERS AND DEFINITIONS

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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Arcadia, CA 91007
Attention: Bronwyn Kelly

Project ID: Northern Drainage-Shooting Range Surface Water Sampling
Report Number: IRK2849

Sampled: 11/26/08
Received: 11/26/08

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

003

IRK028649

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

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 – Upstream NDSW0012
Project Manager: Bronwyn Kelly Sampler: R. BANAGA	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)	Field readings: / Comments
NDSW0012	W	40 mL VOA Amber	2	11-26-08 11:55	None	1A, 1B	X			Field readings: Temp = 57° pH = 6.8 Sample Collection Time= 11:55
NDSW0012	W	500 mL Poly	2	〃	None	2A, 2B		X		
NDSW0012	W	1 L Amber	2	11-26-08 11:55	None	3A, 3B			X	
Trip Blanks	W	VOAs	3		None	4A, 4B, 4C			X	

TA 11/26/08 2285

Relinquished By	Date/Time:	Received By	Date/Time:
Rin Bang	11-26-08 1400	TAI	11/26/08 1400
TAI	11/26/08 2045		11-26-08 2045

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

Sample Integrity: (check)
Intact ~~X~~ On Ice: X
3.6°C

DATA VALIDATION REPORT

Boeing SSFL NPDES

SAMPLE DELIVERY GROUP: IRK2849

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.001
Sample Delivery Group:	IRK2849
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	IRK2849-01	N/A	Water	11/26/08 1155	360.1

II. Sample Management

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were delivered by courier, 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: January 6, 2009

The sample listed in Table 1 for this analysis were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), EPA Method 360.1*, and the *National Functional Guidelines for Inorganic Data Review* (07/02).

- Holding Times: The analytical holding time, 24 hours from collection, was exceeded; therefore, the dissolved oxygen result was qualified as estimated, "J."

- Calibration: No calibration information for the dissolved oxygen probe was provided.

- Blanks: The zero water check did not detect dissolved oxygen above the MDL.

- Blank Spikes and Laboratory Control Samples: No LCS was analyzed. Tap water was analyzed and found to have a reasonable dissolved oxygen concentration.

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

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

- Sample Result Verification: Calculations were verified and the sample result reported on the sample result summary was verified against the raw data. No transcription errors or calculation errors were noted.

- 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.

TestAmerica
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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
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INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IRK2849-01 (NDSW0012 - Water) - cont.									
Reporting Units: mg/l									
Dissolved Oxygen J/H	EPA 360.1	8K27020	1.0	1.0	**8.6**	1	11/27/08	11/27/08	HPT
Total Suspended Solids *	SM 2540D	8L03150	1.0	10	**11**	1	12/03/08	12/03/08	
Sample ID: IRK2849-01 (NDSW0012 - Water)									
Reporting Units: NTU									
Turbidity *	EPA 180.1	8K27010	0.040	1.0	**28**	1	11/27/08	11/27/08	

LEVEL IV

*Analysis not validated

TestAmerica Irvine

Joseph Doak
Project Manager