

7 of 18 -PCDS

2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention Sally Bilodeau Project Boeing/Rocketdyne

870071

Sampled: 06/27/00 Received: 06/27/00

Reported: 07/07/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



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IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314 Burbank, CA 91502

Attention: Sally Bilodeau

Client Project ID: Boeing/Rocketdyne

870071 Report Number: IJF0901

Sampled: 06/27/00 Received: 06/27/00

DATA QUALIFIERS AND DEFINITIONS

The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine

Pat Abe Project Manager

C Del Mar Analytical

2852 Alton Ave., irvine, CA 92606 (949) 261-1022 FAX (949) 261-1028 1014 E. Cooley Dr., Suite A Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 6525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0043 FAX (602) 783-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

000502

Their to Barr David Chung (Boeirg) Special Instructions Live De normal Sample Integrity: (Check) Turnaround Time: (Check) same day 24 hours 48 hours intact 1530 Analysis Required 6-47-00 0-22-00 Date /Time: Date /Time Received in Lab k Fax Number: (818) 846 - 9280 Preservatives Project Manager:), MM1/1an-/5. Externa Phone Number: (818)841-1100 Received by: Received by: 6/27/9:42 work 1630 1013 Sampling Date/Time 020 2001 545 1(30 3 5002 1135 1035 <u>은</u> Client Name/Address: Breing c/o ITCnty Project/PO Number.
601 S. Glenoals Blod. Ste #314
Burbank, CA 91502 # of Cont. 6.22.00 Date /Time: Date /Time; $\zeta/27/0_{\rm C}$ Sample | Container Date /Time: Matrix Sampler: BKE SWB .BC-45B CAC-38B 180-46 K 18C - 44B いろしょりな Sample Description CAC-36B はつったの以 のその一と一区 2AC-39B JAC-43B CAC - 35B 240-348 Mc-33B Relipeuished By: Relinquished By; Relinquished By:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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CHAIN OF CUSTODY FORM

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Page 7 of 7				2		Special Instructions									21.04	5 days	ormal	on ice
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			s	28085 428 428	\$ <u>\$</u>	More X									Received By:	Received by:	Received in Lab by:	とくとして
iect/PO Number:	14041) A	Project Manager: J. McM/ an / S. Kilatakhone Number: (418) GHI-1160	Fax Number: (&K) & U_918	# of Sampling Pro	0									1415 Rece			3
The Care Pres	る、井のユー	Embank, CA 9,1502	n/5. Bilotraneho	Fax	Sample Container #	 . 								į	Charles:		Date /Time:	
Address: Raine	· 6 Enoak De	wk, CA all	er J. McMilla	Sampler: Ref/wz	Sample Description										retor	1 Sometime		
Client Name/A	601 5	Burbe	Project Manag	Sampler: B	, Q	CBC - 417B								Delinanie De	The price of the p	Refinquished By	Relinquished By:	

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COC-GB



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LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Project Boeing/Rocketdyne

Attention Sally Bilodeau

870071

Sampled: 06/28/00

Received:

06/28/00

Reported: 07/10/00

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> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



CASE NARRATIVE

Client:

IT Corporation / Emcon

Project: Boeing / Rocketdyne 870071

Lab#:

IJF0961

Date Sampled:

6/28/00

Date Received:

6/28/00

Sample Description	Del Mar Lab#	Sample Matrix	Analyses Performed
PC-1 @ 9.5'	IJF0961-01	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-2 @ 35.5'	IJF0961-02	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-3 @ 68'	IJF0961-03	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-4 @ 85.5'	IJF0961-04	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-5 @ 103.5'	IJF0961-05	Soil	EPA 300.0 Mod.
PC-6 @ 125'	IJF0961-06	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-7 @ 154'	IJF0961-07	Soil	EPA 300,0 Mod.
PC-8 @ 174'	IJF0961-08	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-9 @ 200'	IJF0961-09	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-10 @ 214'	IJF0961-10	Soíl	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-11 @ 249'	IJF0961-11	Soil	EPA 300.0 Mod.
PC-12 @ 275'	IJF0961-12	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-13B @ 300'	IJF0961-13	Soil	EPA 300.0 Mod.
PC-14B @ 325'	IJF0961-14	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod,
PC-13T @ 300'	IJF0961-15	Soil	EPA 300.0 Mod.
PC-14T @ 325'	IJF0961-16	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.



CASE NARRATIVE

Client:

IT Corporation / Emcon

Lab #:

Project: Boeing / Rocketdyne 870071

IJF0961

Date Sampled:

6/28/00

Date Received:

6/28/00

Sample Description	Del Mar Lab #	Sample Matrix	Analyses Performed
PC-15T @ 345'	IJF0961-17	Soíl	EPA 300.0 Mod.
PC-15B @ 345'	IJF0961-18	Soil	EPA 300.0 Mod.
PC-16T @ 368'	IJF0961-19	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-16B @ 368'	IJF0961-20	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-16BD @ 368'	IJF0961-21	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-17B @ 395'	IJF0961-22	Soil	EPA 300.0 Mod.
PC-17T @ 395'	IJF0961-23	Soil	EPA 300.0 Mod.
PC-18 @ 425'	IJF0961-24	Soil	EPA 8082, EPA 7471A EPA 300.0 Mod.
PC-19 @ 449'	IJF0961-25	Soil	EPA 300.0 Mod.
SAMPLE RECEIPT:	Samples were received in 000505. The cooler temporatory.	ntact and with chain of c erature was measured a	ustody numbers 000504 and at 4 °C upon receipt at the
HOLDING TIMES:	All samples were analyze	ed within holding times.	
PROBLEMS ENCOUNTERED:	No problems were encour	ntered during sample an	alysis.
QA/QC CRITERIA:	Calibration Verification remethod control limit for EF not detected in the sample	PA 8082 samples IJF09i	1254 and 1260 were above the 61-08 and 20. Analytes were as not impacted.
	Aroclor 1016, Aroclor 126	0 and the surrogate wer C batch I0F3032. The M	e below acceptance limits in IS/MSD RPD for Aroclor 1016

No significant observations were made.

DEL MAR ANALYTICAL

OBSERVATIONS:

Pat Abe Project Manager

2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

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CORRECTIVE ACTION REPORT

Department:

GC

Date:

6/30/00

Method:

EPA 8082

Matrix:

Soil

QC Batch:

I0F3032

Identification and Definition of Problem:

Aroclor 1016, Aroclor 1260, and the surrogate were below the acceptance limits in the matrix spike duplicate. The RPD was above the acceptance limits for Aroclor 1016 and 1260.

Determination of the Cause

The gas pressure during the reduction process of the matrix spike duplicate affected the Aroclor and surrogate recoveries.

Corrective Action:

The laboratory control sample was within acceptance limits for all target analytes. All samples reported were ND. The matrix spike duplicate was flagged with an 'M2' indicating the low recoveries. The matrix spike duplicate was also flagged with an 'R2' indicating the RPD was above the acceptance limits. The surrogate was flagged with a 'Z1' qualifier indicating the low surrogate recovery.

Quality Assurance Approval: Date: 7/7/00

WORK ORDER

Del Mar Analytical, Irvine **IJF0961**

Due: 07/07/00 12:00

Client: IT Corporation/Emcon - Burbank

Printed: 6/29/00 7:58:24AM Project Number: 870071

Report To:

IT Corporation/Emcon - Burbank

Project: Boeing/Rocketdyne

Sally Bilodeau

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Phone: (818) 841-1160 Fax: (818) 846-9280

Invoice To:

Boeing North American, Inc. Rocketdyne Division

Accounts Payable

P.O. Box 7922, 6633 Canoga Avenue M/S: NB16

Canoga Park, CA 91309-7922

Phone :411

Fax: 411

7/10 (7day) 07/07/00 17:00 (6 day TAT)

Project Manager: Pat Abe

Date Due:

Received By:

David Dunkley

Date Received:

06/28/00 18:10

Logged In By:

David Dunkley

Date Logged In:

06/28/00 18:26

Samples Received at: All containers intact:

4°C Yes

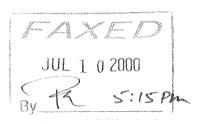
Sample labels/COC agree: Samples Preserved Properly: Yes

Yes

Custody Seals Present:

No

Analysis		Due	TAT	Expires	Comments
IJF0961-01 PC-1		Soil	Sampl	ed: 06/28/00 10:03	Homogenize before weighing
8082 - PCBs		07/07/00 12:00	6	07/12/00 10:03	
Mercury-7470/7471		07/07/00 12:00	6	07/26/00 10:03	
Perchlorate-300.0mod		07/07/00 12:00	6	07/26/00 10:03	
IJF0961-02 PC-2	J	Soil	Sampl	ed: 06/28/00 10:25	Homogenize before weighing
8082 - PCBs		07/07/00 12:00	6	07/12/00 10:25	
Mercury-7470/7471		07/07/00 12:00	6	07/26/00 10:25	
Perchlorate-300.0mod		07/07/00 12:00	6	07/26/00 10:25	
IJF0961-03 PC-3	/	Soil	Sample	ed: 06/28/00 10:40	Homogenize before weighing
8082 - PCBs		07/07/00 12:00	6	07/12/00 10:40	
Mercury-7470/7471		07/07/00 12:00	6	07/26/00 10:40	
Perchlorate-300.0mod		07/07/00 12:00	6	07/26/00 10:40	
IJF0961-04 PC-4		Soil	Sample	ed: 06/28/00 10:50	Homogenize before weighing
8082 - PCBs		07/07/00 12:00	6	07/12/00 10:50	
Mercury-7470/7471		07/07/00 12:00	6	07/26/00 10:50	
Perchlorate-300.0mod	/	07/07/00 12:00	6	07/26/00 10:50	
IJF0961-05 PC-5	V	Soil	Sample	ed: 06/28/00 11:08	Homogenize before weighing
Perchlorate-300.0mod		07/07/00 12:00	6	07/26/00 11:08	



WORK ORDER

Del Mar Analytical, Irvine IJF0961

Client: IT Corporation/Emcon - Burbank

Project: Boeing/Rocketdyne

Printed: 6/29/00 7:58:24AM
Project Number: 870071

Analysis	Due	TAT	Expires	Comments
IJF0961-06 PC-6	Soil	Sample	d: 06/28/00 11:15	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 11:15	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 11:15	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 11:15	
IJF0961-07 PC-7	Soil	Sample	1: 06/28/00 11:20	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 11:20	
IJF0961-08 PC-8	Soil	Sample	d: 06/28/00 12:30	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 12:30	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 12:30	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 12:30	
IJF0961-09 PC-9	Soil	Sample	1: 06/28/00 12:40	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 12:40	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 12:40	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 12:40	
IJF0961-10 PC-10	Soil	Sampleo	l: 06/28/00 12:45	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 12:45	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 12:45	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 12:45	
IJF0961-11 PC-11	Soil	Sampled	1: 06/28/00 12:55	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 12:55	
IJF0961-12 PC-12	Soil	Sampled	1: 06/28/00 13:00	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 13:00	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 13:00	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 13:00	
IJF0961-13 PC-13B	Soil	Sampled	1: 06/28/00 13:10	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 13:10	
IJF0961-14 PC-14B	Soil	Sampled	1: 06/28/00 13:15	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 13:15	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 13:15	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 13:15	
IJF0961-15 PC-13T	Soil	Sampled	1: 06/28/00 13:37	Homogenize before weighing

Due: 07/07/00 12:00

Del Mar Analytical

201-1228 370-1046 779-1843 CHAIN OF CUSTODY FORM

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@103,5 Perenty Special Instructions 200 10855 Q220 @325 @249 8214 8 0275 6 300 @35.5 \$ 154 5710 A 9.5' 72 hours 800 5 days normal (Check) Sample Integrity: (Check) Turnaround Time: same day 24 hours 48 hours intact 5 Analysis Required 6-28-00 Date /Time: Date /Time: Date /Time × R X X 2 SZ × X لا ソ X × X \succ X × X ン × Received In Lab by Project Manager: 5. Bilodlowl), McMillan Phone Number: (818)841-116 Fax Number: (818) 846 - 925 Preservatives Received by non Received by 87007 6/28 1003 1010 87,73 5201 1230 1120 1:00 12:53 620 20% 12.15g 0 : 1 Sampling Date/Time Project/PO Number: Date /Time: @/636 Cont. 14 jo # 6-28-00 Client Name/Address: Being Soft Corp. 6015. Glandas BRId. Swite 344 Burbowk, CA 91502 862,ar Sample | Container Date /Time: Date /Time: Type Matrix 3 Sampler: BEC + SWB Description Sample PC- 12 B PC-17 duished By elinquished By PC-2 おしの pc-0 10-10 オーし 27-20 4 6-7

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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CHAIN OF CUSTODY FORM

000505 Page 2 of 34

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PC-15B		1405			×			2450	ļ
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COC-GB



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CORRECTIVE ACTION REPORT

Department:

GC

Method: QC Batch: EPA 8082 IOF3032

Date:

6/30/00

Matrix:

Soil

Identification and Definition of Problem:

Aroclor 1016, Aroclor 1260, and the surrogate were below the acceptance limits in the matrix spike duplicate. The RPD was above the acceptance limits for Aroclor 1016 and 1260.

Determination of the Cause

The gas pressure during the reduction process of the matrix spike duplicate affected the Aroclor and surrogate recoveries.

Corrective Action:

The laboratory control sample was within acceptance limits for all target analytes. All samples reported were ND. The matrix spike duplicate was flagged with an 'M2' indicating the low recoveries. The matrix spike duplicate was also flagged with an 'R2' indicating the RPD was above the acceptance limits. The surrogate was flagged with a 'Z1' qualifier indicating the low surrogate recovery.

Quality Assurance Approval:	legsword	Date: 7/7	00
	The state of the s	**************************************	Annual Control of the

WORK ORDER

Del Mar Analytical, Irvine IJF0961

Client: IT Corporation/Emcon - Burbank Printed: 6/29/00 7:58:24AM

Project: Boeing/Rocketdyne Project Number: 870071

Analysis	Due	TAT	Expires	Comments
IJF0961-16 PC-14T	Soil	Sampl	ed: 06/28/00 13:40	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 13:40	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 13:40	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 13:40	
IJF0961-17 PC-15T \	Soil	Sampl	ed: 06/28/00 14:00	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:00	
IJF0961-18 PC-15B	Soil	Sampl	ed: 06/28/00 14:05	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:05	
IJF0961-19 PC-16T	Soil	Sample	ed: 06/28/00 14:15	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 14:15	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 14:15	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:15	
IJF0961-20 PC-16B √	Soil	Sample	ed: 06/28/00 14:10	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 14:10	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 14:10	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:10	
IJF0961-21 PC-16BD √	Soil	Sample	ed: 06/28/00 14:20	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 14:20	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 14:20	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:20	
IJF0961-22 PC-17B	Soil	Sample	ed: 06/28/00 14:45	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:45	
IJF0961-23 PC-17T \	Soil	Sample	ed: 06/28/00 14:40	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 14:40	
1JF0961-24 PC-18 V	Soil	Sample	ed: 06/28/00 16:36	Homogenize before weighing
8082 - PCBs	07/07/00 12:00	6	07/12/00 16:36	
Mercury-7470/7471	07/07/00 12:00	6	07/26/00 16:36	
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 16:36	
IJF0961-25 PC-19 V	Soil	Sample	ed: 06/28/00 16:36	Homogenize before weighing
Perchlorate-300.0mod	07/07/00 12:00	6	07/26/00 16:36	

Reviewed By

Date (29 er

Due: 07/07/00 12:00



QA/QC PACKAGE: LEVEL IV
PREPARED FOR IT CORPORATION / EMCON
LABORATORY NUMBER: IJF0961
PROJECT: POEING / ROCKETDYNE 870071

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1014 E. Cooley Dr., Suite A Colton, CA 92244 (809) 370-4867 FAX (809) 370-1048 16525 Sherman Way, Suite C-11, Van Nuys, CA 91046 (919) 779-1644 FAX (818) 779-1648 9830 South 518 St., Suite B-1-20, Phoenix, AZ 65044 (602) 785-6043 FAX (602) 785-6049 9494 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9598

1014 E. Cooley Dr., Suite A Colton, CA 92224 (909) 370-4667 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844

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Note. By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this project. Payment for services is lut G in 30 days from the date of invoice. Sample(s) will be disposed of after 30 days. COC-GB



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071 Report Number: IJF0961

Sampled: 06/28/00 Received: 06/28/00

DATA QUALIFIERS AND DEFINITIONS

C Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

M2 Matrix Spike recovery was outside the method control limits. See Corrective Action Report.

R2 The RPD exceeded the method control limit. See Corrective Action Report.

Z1 Surrogate recovery was outside acceptance limits. See Corrective Action Report.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, IrvinePat Abe
Project Manager

CASE NARRATIVE

QUANTERRA INCORPORATED PROJECT NUMBER G0F300201

SOLID, 8290, Dioxins/Furans, RUSH TAT

Sample "PC-20" had some internal standard recoveries lower than the method recommended goal of 40%. Generally, data quality is not considered affected if internal standard signal-to-noise is greater than 10:1, which is achieved for all internal standards in all samples.

There were no other anomalies associated with this project.

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 i014 E. Cooley Dr., Suite A Collon, CA 92324 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9330 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0043 FAX (602) 785-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9589

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COC-GB Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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2852 Alton Ave., Irvine, CA 92666 (949) 251-1022 FAX (949) 251-1228 1014 E. Cooley Dr., Suite A Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0043 FAX (602) 785-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-968

CHAIN OF CUSTODY FORM

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services request due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this ghain of custody form and any additional analyses performed on this project. Payment for services is large. The project of invoice. Sample(s) will be disposed of after 30 days.

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2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

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LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention Sally Bilodeau Project Boeing/Rocketdyne

870071

Sampled: 06/29/00 Received: 06/29/00

Reported: 07/11/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Project Manager

Pat Abe



2852 Alton Ave., trvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071 Report Number: IJF1026

Sampled: 06/29/00 Received: 06/29/00

DATA QUALIFIERS AND DEFINITIONS

M2 Matrix Spike recovery was outside the method control limits. See Corrective Action Report.

R2 The RPD exceeded the method control limit. See Corrective Action Report.

Z1 Surrogate recovery was outside acceptance limits. See Corrective Action Report.

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

NR Not reported.

RPD Relative Percent Difference

2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department:

GC

Date:

6/30/00

Method:

EPA 8082

Matrix:

Soil

OC Batch:

I0F3032

Identification and Definition of Problem:

Aroclor 1016, Aroclor 1260, and the surrogate were below the acceptance limits in the matrix spike duplicate. The RPD was above the acceptance limits for Aroclor 1016 and 1260.

Determination of the Cause

The gas pressure during the reduction process of the matrix spike duplicate affected the Aroclor and surrogate recoveries.

Corrective Action:

The laboratory control sample was within acceptance limits for all target analytes. All samples reported were ND. The matrix spike duplicate was flagged with an 'M2' indicating the low recoveries. The matrix spike duplicate was also flagged with an 'R2' indicating the RPD was above the acceptance limits. The surrogate was flagged with a 'Z1' qualifier indicating the low surrogate recovery.

Quality Assurance Approval: Date: 7/7/05

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 281-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Sulte A Colton, CA 92234 (999) 370-4667 FAX (999) 370-1046
16525 Sherman Way, Sulte C-11, Van Nuys, CA 91406 (918) 779-1944 FAX (189) 779-1943
9830 South Sirt St., Suite 91-120, Phoenix, AZ 65044 (602) 785-0049 FAX (602) 785-0659
9494 Chesapeake Dr., Sulte 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

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CASE NARRATIVE

- 1

QUANTERRA INCORPORATED PROJECT NUMBER G0F300201

SOLID, 8290, Dioxins/Furans, RUSH TAT

Sample "PC-20" had some internal standard recoveries lower than the method recommended goal of 40%. Generally, data quality is not considered affected if internal standard signal-to-noise is greater than 10:1, which is achieved for all internal standards in all samples.

There were no other anomalies associated with this project.

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (9149) 261-1022 FAX (9149) 261-1122 FAX (9149) 261-1122 FAX (9149) 261-1122 FAX (9149) 261-1128 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (918) 779-1844 FAX (819) 779-1849 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0043 FAX (602) 785-0851 9494 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the selvices requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



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(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851



LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Project

Attention Sally Bilodeau

Boeing/Rocketdyne

870071

Sampled: 07/10/00

Received: 07/10/00

Reported: 07/18/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe

Project Manager



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IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

Report Number: IJG0192

Sampled: 07/10/00 Received: 07/10/00

DATA QUALIFIERS AND DEFINITIONS

M-NR No results were reported for the MS/MSD. The sample used for the MS/MSD required dilution due to the sample

matrix. Because of this, the spike compounds were diluted below the detection limit.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine Pat Abe Project Manager

C Del Mar Analytical

2852 Alton Ave., Irvine, CA 92566 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Sulte A Collon, CA 92324 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Sulte A Til, Yan Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 South 51st St., Sulte B-120, Phoenix, AZ 85044 (502) 785-0043 FAX (610) 785-0851 9484 Chesapeake Dr., Sulte 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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Burbank, CA 91532		(z			
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Note: By elinquishing samples to Del Mar Analytical, client agrees to pay for the services requested of this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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PMA Chesippane Ma, Sathe BCS, San Diego, CA 92173 (1919) 505-9599

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CHAIN OF CUSTODY FORM

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CHAIN OF CUSTODY FORM

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Note: By elinquishing samples to Del Mar Analytical, client agrees to pay for the services requested of this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

CASE NARRATIVE

Analysis of Samples for the Presence of

Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by

High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

July 16, 2000

Client ID:

Del Mar Analytical

P.O. Number:

870071/IJG0194

TLI Project Number:

51383

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Rev. 11/19/97

Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the soil samples.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Ten soil samples were received from Del Mar Analytical at 5.0 °C in good condition on July 11, 2000 and stored in a refrigerator at 4 °C. The sample containers for the samples CBC-50S, CBC-55S and CBC-56SW arrive broken. Samples were stored in the plastic bags for analyses.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: The percent recoveries of 2378-TCDD, 12378-PeCDF, and 23478-PeCDF analytes in the LCSD analysis are slightly above the QC criteria (70-130%). However, the relative percent differences are well within the QC criteria (< 20%). Results for these analytes may be over-estimated in the field samples. However, no associated analytes are detected in the field samples above the target detection limits, the results of the field samples are not significantly affected.

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact a Project Scientist, at 919/544-5729.

For Triangle Laboratories, Inc.,

Released by,

DinaZinicola Report Preparation Chemist

The total number of pages in the data package is : 348.

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1226 1014 E. Cocley Dt., Sutte A Cotton, CA 92324 (909) 370-4667 FAX (909) 370-1046 16825 Sherman Way, Sutte C-11, Van Nuya, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 Soyih S1st St., Sutte B-120, Phoenix, AZ 85044 (802) 785-0043 FAX (802) 785-0851 9464 Chestopesite Dt., Sutte 805, Sqn Diego, CA 92123 (618) 505-9589

CHAIN OF CUSTODY FORM

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services reduces of this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Project

Attention Sally Bilodeau

Boeing/Rocketdyne

870071

Sampled: 07/11/00

Received:

07/11/00

Reported: 07/13/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

Report Number: IJG0225

Sampled: 07/11/00 Received: 07/11/00

DATA QUALIFIERS AND DEFINITIONS

M-HA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).

Z3 The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine Pat Abe Project Manager



2852 Alton Ave., Irvine, CA 92506 (949) 261-1022 FAX (949) 261-122 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-104 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-184 9830 South 51** St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-085

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 7/19/00	Del Mar Analytical	Project Manager:_	fat
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0

ADDITIONAL ANALYSIS REQUEST FORM

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Project: Boeing / F	Emcon Contact: Pocketdyne / 8	70071	
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9893 South Fist St., Suite B-120, Phoenix, AZ 86044 (602) 785-0043 FAX (602) 785-0939
9894 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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* Flease hold all 6" and 9" Samples Invoice to Boars Results to IT and Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the servicas requested on this chair and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days. Special Instructions 1967. 2007. 72 hours 5 days Turnaround Time: (Check) same day 24 hours 48 hours Analysis Required 7-11-00 Date /Time: Date /Time: 子公子 子で 子子 まこに #PCD Fax Number: (\$18) 846-9280 (\$) 8 3 Received in Lab by: Preservatives Phone Number: (8/8) 841-1160 Received by: ZZZ 7/11/00 0470 1015 122 27.1 140 200/ 1630 1145 84041 S S 638 110 灵 Sampling Date/Time Project/PO Number: # of Cont. 7/11/60 @ Date /Time: Date /Time: Date /Time: 7-11-00 Client Name/Address: Being % IT Col S. Glenoaks BRd, Skit 314 Sample Container
Matrix Type 405 Project Manager: S. M. H. H. <u>~~~</u> Burbank, CA 91502 CAC-648@6" CAC-648@9" 2AC-64B@3" talour AC-65806" 240-630 CQ 74c-63B@6" AC-658@3 CAC-59 B@6, 7AC-63B@3 CAC-628@3" 3AC-628@6" 14C-59883" CAC-61B Description CAC-608 Sample Sampler: BKE elinquished By. eligquished By: elinguished By

C Del Mar Analytical

2852 Atlon Ave., Irvine, CA 9266 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Colon, CA 92324 (999) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (819) 779-1844 FAX (819) 779-1849 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0931 FAX (602) 785-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (819) 505-9689

CHAIN OF CUSTODY FORM

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Page Z of Z

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Client Name/Address: Being & IT	Project/PO Number:		Analy	Analysis Required	
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Burbank, CA 91502	かわった	<i></i>	z.\$0\$		Perults to Boeing
Project Manager: J. McMillan	Phone Number (8/8) 841-160	T	27 (TI OWN
Sample: 7, /	Fax Number (2)	\$ <u>\</u>			+ Hold all 6" and 9"
- Sto	(8/8)846-7280				Samples, please x
Sample Sample Container Description Matrix Type	# of Sampling Cont. Date/Time	Preservatives ()	1		Special Instructions
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Relinguished/By: // Date /Time:		Received by:	Date /Time:	24 hours	5 days
Corelas 7.	052)			48 hours	X normal
Relinquished By: Date /Time:	e:	Received in Lab by:	Date /Time:	Sample Integrity:	sgrity: (Check)
Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is	ent agrees to pay for the service	ces requested on t	his chain of custody form and an	y additional analyses perform	ed on this project. Payment for services is

COC-GB cuang or custody torm and any additional analyses performed on this project. Payment for services is duce within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention Sally Bilodeau Project Boeing/Rocketdyne

870071

Sampled: 07/21/00 Received: 07/21/00 Reported: 07/26/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



1014 €. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-9596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071 Report Number: IJG0597

Sampled: 07/21/00 Received: 07/21/00

DATA QUALIFIERS AND DEFINITIONS

- H Sample analysis performed past method-specified holding time.
- The MS and/or MSD were outside of the acceptance limits due to sample matrix interference. See Blank Spike M (LCS).
- R The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
- Z1Surrogate recovery was outside acceptance limits. See Corrective Action Report.
- **Z3** The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- NR Not reported.
- **RPD** Relative Percent Difference

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 (818) 779-1844 FAX (818) 779-1843 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-9596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228

CORRECTIVE ACTION REPORT

Department: GC

EPA 8082

Date:

8/7/00

OC Batch:

Method:

I0H0743

Matrix:

Soil

Identification and Definition of Problem:

Sample IJG0597-23 was re-extracted past the method holding time for sample extraction.

Determination of the Cause

The original extraction and analysis of sample IJG0597-23 was within the method holding time, however due to the surrogate recovery below the acceptance limits, reextraction was required. The difference in both the surrogate and Aroclor 1254 results between the two extractions indicate that a portion of the original extract may have been spilled during the final steps of the extraction process.

Corrective Action:

Both results were reported. The original result was reported with a qualifier to indicate poor surrogate recovery. The re-extraction of sample IJG0597-23 was reported with an 'H' qualifier to indicate the extraction was performed after the holding time. Due to the stability of Aroclors, the analysis past the holding time should not have a significant impact on the data.

Ouality Assurance Approval:

Date: 8/10/00



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: $8/2/$	OD Del Mar Anal	ytical Project Manager:	tet
Request via:	ne chain of custody form	n fax transmission	E-mail other
Client: IT Corp.	Con	tact: <u>Bally Bilo</u>	deau
Project: Boeing /	ocketdyne	870071	
		ate Received:7/	_
Status: in progress _	completedreceived	today received yesterday	on hold other
	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
(CAC-63B@9"	8082-PCB	
	CAC-62B@9"	\ \frac{1}{2}	
Please add to	Work Order	_ IJG0597	
TURNAROUND	STATUS:Same D	ay24hr48h StandardNo Rush Cha	*



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9830 South 51" St. Suite B-120 Phoenix AZ 85044 (480) 785-0043 FAX (480) 785-0043 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 88/	Del Mar Analyt	ical Project Manager:_	Fal
Request via: V telepho	one chain of custody form	fax transmission	E-mail other
Client: <u>PT Corp</u>	Conta	ct: Sally Bib,	deau
Project: Boeing /	Conta Rocketolyne, 121 Dat	870071	
Date Sampled:7	/21 Dat	te Received: 7/2	-1
	completed received too		
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
LJG0597-17 -18	HG-1 HG-2	TCLP-Hg	TTLC-Hg = 83 ppm = 450 ppm = 130 ppm
-19	HG-3 HG-4		=130ppn =570ppn
Please add to	orig. Work Op	der	
TURNAROUND	STATUS:Same Day	24hr48l	nr3days
	5daysSta	andardNo Rush Ch	arge

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FAX (818) 779-1843

FAX (602) 785-0851 FAX (619) 505-9689 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 9830 South 51st St., Suite B-120, Phoenix, AZ 85644 (602) 785-0043 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596

CHAIN OF CUSTODY FORM

64 CAC 34 B-4'away nom 69B 2'skbouttron 62B Composit la ,16 Nour Boews ain of cuspody form and any additional analyses performed on this project. Payment for services is Special Instructions Send results to Boews and X (H5) and Ic W CAC 43B 72 hours 5 days X (VCB) compared to the compar (Check) Sample Integrity: (Check) 31: 3 >600 only amalia if 638,00% is >600 3"13>600 Turnaround Time: 668 3" 5 > 600 same day 24 hours 48 hours 628064 70B at 69 Baf Analysis Required ·신] 4 only amalta 1 odly analize only analiz Date /Time: / Date /Time: Date /Time: Total Mercury × × × × × Preservatives Recej**i∕e**d by:∖ Received by KONE Fax Number: 46 9280 1/2/ 9:10 9.R 9:50 9:% 9:26 Phone Number: 8/8 84/ 1160 9.40 00 970 800/ 935 Ø 4:3 Sampling Date/Time 11:35 127 5:13 10018 Cont. 6 "Paint 4 2/12/100 121/60 4020Az Date /Time: John Mc Millar/Sally Biloder Spelwa / Rocketdrye
Spelwa / Rocketdrye
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Borbank Ca 9 1502 Date /fime: Sample | Container Sate /Time Matrix ラス CAC-69809" CAC-69866" 70 B.@9 CAC-63009" CAC-660 6 3" 1900 - CEC- CECE 6" CAC-66809" CAC - 6603" Description Sample: Sample 3312-19 3212-15 Relinquished By:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the serviced requested on dis-due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Colton, CA 9224 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 9140 (818) 779-1844 FAX (819) 779-1843 9830 South Fist St., Suite B-120, Phoenix, Z. 56044 (612) 785-0043 FAX (612) 785-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9889

CHAIN OF CUSTODY FORM

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Special Instructions Composit W Composit 34 = $\overline{}$ 72 hours 5 days normal on ice (Check) Sample Integrity: (Check) Turnaround Time: same day 24 hours 48 hours intact 7:08 Analysis Required 15/3 Date /Time: Date /Time: Date /Time Pot potal Received in pab by Preservatives rong Received by: Received by 7/21/00/11.29 143 145 177 1150 153 1631 155 1205 三 1715 17.10 1207 Sampling Date/Time Project/PO Number 1513 Phone Number Fax Number: Cont. ţ0 # Date /Time: 7/21/60 Date /Time: 6.25 Date /Time: 8 Container Type Sample Matrix Z, Client Name/Address: 5 3312-40 3312-46 ر م 0 3312-49 3312-50 Description 3312 - Ja 95-2525 3312-1c 3312-26 3312-3a 3312-2c Sample Project Manager: 3186 3186-3186-Manished By juished By: Relingylished By Sampler:

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services fequested on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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2822 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Colton, CA 92234 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Muys, CA 91406 (919) 770-9144 FAX (1919) 770-1048 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0049 FAX (602) 785-0691 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9595 FAX (619) 505-9699

CHAIN OF CUSTODY FORM

000527

Special Instructions Composit 3:1 72 hours 5 days Turnaround Time: (Check) Sample Integrity: (Check) same day 24 hours 48 hours intact 120014 Analysis Required Date Fime: Date /Time: Date /Time Total Mercery Received in Lab by: Preservatives Regeived by: Rece/ved by: Fax Number: 818 846 9280 Bowlewk, CA 91502
Bowlewk, CA 91502
Tobac Manager:
Sohn McMillan, Sally Blodder 818841 1160 £62) 1245 (250 1256 1252 1225 1239 Sampling Date/Time 1227 957) 1233 1231 Project/PO Number 1/4 Cont. Date /Time:
7/21/00
Date/Time:
72/60 Sample Container Matrix Type 641103 3186-39 3186-36 13186- 4c 13186-49 Sample Description 13186-35 3186-45 3186-2c 3186-26 Client Name/Address: 186-7c B18-12 B 18 - 2a 1318-25 B18-16 Selinquished By: B18-

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on the contract of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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2852 Alion Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Sulte A Colton, CA 92324 (969) 370-4667 FAX (969) 370-1046 16525 Sherman Way, Sulte C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 South 51st St., Sulte B-120, Phoenix, AZ 85044 (602) 755-0043 FAX (602) 785-0651 9484 Chesapeake Dr., Sulte 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689	505-9689	CHA	CHAIN OF CUSTODY FORM	Y FORM	Page L of L
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Sampler: JCE /SUB	Fax Number: 416 9280	Lat Mari			and IT
Sample Sample Container Description Matrix Type	# of Sampling Preservatives Cont. Date/Time				Cookiel Instruction
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B18-3c	1304	X			
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(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention Sally Bilodeau Project Boeing/Rocketdyne

870071, 94040000

Sampled: 08/11/00

Received: 08/11/00 Reported: 08/21/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe

Project Manager



(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank 601 S. Glenoaks Boulevard, Suite 314 Burbank, CA 91502 Attention: Sally Bilodeau

Client Project ID: Boeing/Rocketdyne 870071, 94040000

Report Number: IJH0438

Sampled: 08/11/00 Received: 08/11/00

DATA QUALIFIERS AND DEFINITIONS

Z3 The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine Pat Abe Project Manager

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Colton, CA 92324 (909) 370-4867 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (802) 785-0043 FAX (802) 785-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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Relification By: S Date/Time: 8 Date/Time:	1	Date /Time:	Well Distriction 8/11/00 15	By: Qate /Time:			CAC- 78B	CAC- 778	CAC: 76B	CAC- 78B	CAC- 74B	CAC - 738	CAC-720	C+C-72B	CAC-71 B Soil 40522m 1	Sample Sample Container # of Description Matrix Type Cont.	7	··········		C/O IT 601 S Slenoak # 314		
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Note: By William String samples to Del Mar Analytical, client agrees to pay for the services requested on this change further services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne

870071

Sampled: 08/17/00

Received: 08/17/00

Reported: 09/06/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager

(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department:

GC

Date:

9/01/00

Method:

EPA 8082

Matrix:

Soil

QC Batch:

I0H2832

Identification and Definition of Problem:

The Aroclor 1016, Aroclor 1260, and DCB recoveries in the matrix spike duplicate were below the acceptance limits.

Determination of the Cause of the Problem:

The low recoveries of all target analytes in the matrix spike duplicate indicate that a portion of the sample extract may have been spilled during the final portion of the extraction procedure.

Corrective Action:

The laboratory control sample and matrix spike were within acceptance limits for all target analytes. The surrogate recoveries of all other QC and samples were within the acceptance limits. The MSD results were flagged with an 'M2' qualifier indicating the low MSD recoveries.

Quality Assurance Approval: Way Swad Date: 9/10/00

Del Mar Analytical

FAX (949) 261-1228 FAX (909) 370-1046 FAX (818) 779-1843 2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Sulte A Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Sulte C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 9830 South 51st St., Sulte B-120, Phoenix, AZ 85044 (902) 785-0043 FAX (602) 785-0651 9484 Chesapeake Dr., Sulte 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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* Please homosonize 1.0000 each sample prior Boews, result lnvoire goes to Special Instructions **も aaa**れい soto Irand Boews 72 hours Turnaround Time: (Check) same day 24 hours 8.17.00 1295 Analysis Required 06237 SM. 74!(Date /Time: Total Mercury Preservatives NONE Fax Number: 818 846 9280 Phone Number: 818 841 1160 8 58 011 8/17/00925 Sampling Date/Time Date /Time: (2) 12:49 Project/PO Number 120018 # of Cont. હ્ય ro d Date /Time;)a4 Sample | Container roject Manager. Sally Biloclean / John McMillan 200 Boews / Poclatolyne co IT 601 S Glenoale #314 Burbanic ex 91502 Matrix -795W 18C-795W Description Client Name/Address; Selinquished By

Del Mar Analytical, Client agrees to pay for the services requested on this chair of custody form and any additional analyses performed on this project. Payment for services is due within/30 days from the gate of invoice. Sample(s) will be disposed of after 30 days.

COC-GB

PC-23 normal

48 hours

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Sample Integrity: (Check)

intact

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8-17-00

eceived ip

1450

Date / Time;

Relinquis

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8.17.00

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92506 (449) 261-1022. FAX (449) 261-1228 1014 E. Cooley Dr., Sulte A Colton, CA 92324 (909) 370-4867 FAX (909) 370-1046 16525 Sherman Way, Sulte C-11, ANN Muye, CAS 94106 (181) 739-1844 PAX (818) 779-1844 9830 South 51st St., Sulte B-120, Phoenix, AZ 86044 (602) 785-0043 FAX (822) 785-0943 PAX (622) 785-0043 FAX (629) 585-0689 14494 Cheaspeake Dr., Sulte 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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Note: By refineuishing samples of Del Mar Analytical, client agrees to pay for the services requested on this chair of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the gate of invoice. Sample(s) will be disposed of after 30 days.

COC-GB

CASE NARRATIVE

Analysis of Samples for the Presence of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

August 23, 2000

Client ID:

Del Mar Analytical

P.O. Number:

IJH0606

TLI Project Number:

51687

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Rev. 11/19/97

Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the soil samples.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Three soil samples were received from Del Mar Analytical at 4.0 °C in good condition on August 18, 2000 and stored in a refrigerator at 4 °C. The sample identifications on the sample labels did not exactly match those on the client's chain of custody. The sample identifications on the sample labels were used for all reports and paperwork.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

Method 8290 contains separate criteria for beginning and ending continuing calibrations. When the ending calibration meets criteria established for the beginning calibration, the average response factor from the initial calibration is used. When the ending calibration only meets the less stringent criteria specified for an ending calibration, the average of the response factor from the beginning and ending calibration is used for analyte and internal standard calculations. Affected samples are identified by the listing of both the beginning and ending calibration filename on the sample report.

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact a Project Scientist, at 919/544-5729.

For Triangle Laboratories, Inc.,

Released by,

Report Preparation Chemist

Kenneth Varley

The total number of pages in the data package is: 121.

Method 8290 Sample Calculations:

Analyte Concentration

The concentration or amount of any analyte is calculated using the following expression.

$$C_{(\sigma)} = \frac{A_{\sigma} * Q_{\beta}}{A_{\beta} * RRF_{(\sigma)} * W}$$

Where:

 $C_{(\sigma)}$ = concentration or amount of a given analyte

 A_{σ} = integrated current for the characteristic ions of the analyte

 A_{β} = integrated current of the characteristic ions of the corresponding

internal standard

 Q_{β} = amount of internal standard added to the sample before extraction

 $RRF_{(\sigma)} =$ mean analyte relative response factor from the initial calibration

W = sample weight or volume

Detection Limits

The detection limit reported for a target analyte that is not detected or presents an analyte response that is less than 2.5 times the background level is calculated by using the following expression. The area of the analyte is replaced by the noise level measured in a region of the chromatogram clear of genuine GC signals. The detection limits represent the maximum possible concentration of a target analyte that could be present without being detected.

$$DL_{(\sigma)} = \frac{2.5 * H * Q_{\beta}}{H_{\beta} * RRF_{(\sigma)} * W}$$

Where:

 $DL_{(\sigma)}$ = estimated detection limit for a target analyte

2.5 = minimum response required for a GC signal

H = sum heights of the noise

 H_{β} = sum of peak heights of the characteristic ions of the corresponding

internal standard

 Q_{β} = amount of internal standard added to the sample before extraction

 $RRF_{(\sigma)}$ = mean analyte relative response factor from the initial calibration

W = sample weight or volume

Data Flags

In order to assist with data interpretation, data qualifier flags are used on the final reports. Please note that all data qualifier flags are subjective and are applied as consistently as possible. Each flag has been reviewed by two independent Chemists and the impact of the data qualifier flag on the quality of the data discussed above. The most commonly used flags are:

- A 'B' flag is used to indicate that an analyte has been detected in the laboratory method blank as well as in an associated field sample. The 'B' flag is used only when the concentration of analyte found in the sample is less than 20 times that found in the associated blank. This flag denotes possible contribution of background laboratory contamination to the concentration or amount of that analyte detected in the field sample.
- An 'E' flag is used to indicate a concentration based on an analyte to internal standard ratio which exceeds the range of the calibration curve. Values which are outside the calibration curve are estimates only.
- An 'I' flag is used to indicate labeled standards have been interfered with on the GC column by coeluting, interferent peaks. The interference may have caused the standard's area to be overestimated. All quantitations relative to this standard, therefore, may be underestimated.
- A 'J' flag is used to indicate a concentration based on an analyte to internal standard ratio which is below the calibration curve. Values which are outside the calibration curve are estimates only.
- A 'PR' flag is used to indicate that a GC peak is poorly resolved. This resolution problem may be seen as two closely eluting peaks without a reasonable valley between the peak tops, overly broad peaks, or peaks whose shapes vary greatly from a normal distribution. The concentrations or amounts reported for such peaks are most likely overestimated.
- A 'Q' flag is used to indicate the presence of QC ion instabilities caused by quantitative interferences.
- An 'RO' flag is used to indicate that a labeled standard has an ion abundance ratio that is outside of the acceptable QC limits, most likely due to a coeluting interference. This may have caused the percent recovery of the standard to be overestimated. All quantitations versus this standard, therefore, may be underestimated.
- An 'S' flag indicates that the response of a specific PCDD/PCDF isomer has exceeded the normal dynamic range of the mass spectrometer detection system. The corresponding signal is saturated and the reported analyte concentration is a 'minimum estimate'. When the 'S' qualifier is used in the reporting of 'totals', there is saturation of one (not

necessarily from a specific isomer) or more saturated signals for a given class of compounds. Results for saturated analytes are reported as greater than the upper calibration limit.

A 'U' flag is used to indicate that a specific isomer cannot be resolved from a large, coeluting interferent GC peak. The specific isomer is reported as not detected as a valid concentration cannot be determined. The calculated detection limit, therefore, should be considered an underestimated value.

A 'V' flag is used to indicate that, although the percent recovery of a labeled standard may be below a specific QC limit, the signal-to-noise ratio of the peak is greater than ten-to-one. The standard is considered reliably quantifiable. All quantitations derived from the standard are considered valid as well.

An 'X' flag is used to indicate that a polychlorodibenzofuran (PCDF) peak has eluted at the same time as the associated diphenyl ether (DPE) and that the DPE peak intensity is at least ten percent of the total PCDF peak intensity. Total PCDF values are flagged 'X' if the total DPE contribution to the total PCDF value is greater than ten percent. All PCDF peaks that are significantly influenced by the presence of DPE peaks are either reported as "estimated maximum possible concentration (EMPC) values without regard to the isotopic abundance ratio, or are included in the detection limit value depending on the analytical method.



(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne

870071

Sampled: 08/25/00

Received: 08/25/00

Reported: 09/04/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe

Project Manager



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IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJH0919

Sampled: 08/25/00

Received: 08/25/00

DATA QUALIFIERS AND DEFINITIONS

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine

Pat Abe Project Manager

(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department:

GC

EPA 8082

QC Batch:

Method:

I0H2832

Date:

9/01/00

Matrix:

Soil

Identification and Definition of Problem:

The Aroclor 1016, Aroclor 1260, and DCB recoveries in the matrix spike duplicate were below the acceptance limits.

Determination of the Cause of the Problem:

The low recoveries of all target analytes in the matrix spike duplicate indicate that a portion of the sample extract may have been spilled during the final portion of the extraction procedure.

Corrective Action:

The laboratory control sample and matrix spike were within acceptance limits for all target analytes. The surrogate recoveries of all other QC and samples were within the acceptance limits. The MSD results were flagged with an 'M2' qualifier indicating the low MSD recoveries.

Quality Assurance Approval: Alexander Date: 9/6/00

C Del Mar Analytical

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CHAIN OF CUSTODY FORM

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COC-GB Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days front the date of invoice. Sample(s) will be disposed of after 30 days.

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1014 E. Cooley Dr., Suite A Colton, CA 92324 (199) 370-4667 FAX (949) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 94406 (1819) 779-1844 FAX (818) 779-1849
8930 South Site St., Suite B-120, Phoenix, AZ 86044 (602) 785-0047 FAX (602) 785-0851
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9699

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hous. By remiquishing samples to be man pringly continued by set to pay for the service due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC-GB

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CHAIN OF CUSTODY FORM

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484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 1014 E. Cooley Dr., Suite A Colton, CA 92324 (909) 370-4667 6525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0043

Del Mar Analytical

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on the services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC-GB

Del Mar Analytical

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1014 E. Cooley Dr., Suite A Collon, CA 92324 (909) 370-4667
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (1819) 779-1844
9830 South 51st St., Suite B-120, Phoenix, AZ 86044 (602) 785-0049
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596

FAX (909) 370-1046 FAX (818) 779-1843 FAX (602) 785-0851 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

000567

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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CASE NARRATIVE

Analysis of Samples for the Presence of

Polychlorinated Biphenyls by

High-Resolution Chromatography / High-Resolution Mass Spectrometry

Date:

October 4, 2000

Client ID:

Del Mar Analytical

P.O. Number:

IJH0950

TLI Project Number:

51765B

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Rev. 05/08/97

Overview

Sixteen soil samples were received from Del Mar Analytical in good condition August 30, 2000 at 3.0 °C and stored in a refrigerator at 4°C. Two samples were extracted and analyzed by Triangle Laboratories' WHO List procedures. Any particular difficulties encountered during the sample handling by Triangle Labs will be discussed in the QC remark section below. Results relate only to the items tested.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared and analyzed along with the samples.

A laboratory control spike/spike duplicate pair (LCS/LCSD) was also prepared and analyzed along with the samples.

QC Remarks

The release of this particular set of Del Mar Analytical analytical data by Triangle Labs was authorized by the Quality Control Chemist who has reviewed each sample data package individually following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below. Specific QC problems associated with this particular project are:

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: Please note there are no limits for recovery or ion abundance ratios for the MonoCB, DiCB, or TriCB internal standards. The chemistry of these compounds is such that recovery limits for these compounds can not be guaranteed. The reported limits are advisory limits only. The software applies the "V" flag based on these advisory limits.

The 2,2',4,4',5-PentaCB (#101) and 3,3',4,4'5,5'-HexaCB (#169) internal standard recoveries are above the QC limits in the samples. This is due to the quantitative interference affecting these standards. The results of these analytes may be slightly overestimated in the samples.

The Hexa PCB #156 relative percent differences is outside the QC limits in the LCS/LCSD analyses. This is due to a qualitative interference which co-eluted with this analyte in the LCSD. Since the LCSD was the only sample showing this particular interference, the field sample data are not considered to be significantly affected.

By our interpretation, the analytical data in this project is valid based on the guidelines of Triangle Laboratories' WHO List procedures. Any specific QC concerns or problems have been discussed in the QC REMARKS section with emphasis on their affect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to a contact a Project Scientist at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released By

Rose West

Report Preparation Chemist

The total number of pages in this data package is:

CASE NARRATIVE

Analysis of Samples for the Presence of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

September 7, 2000

Client ID:

Del Mar Analytical

P.O. Number:

IJH0950

TLI Project Number:

51765A

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Rev. 11/19/97

Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the fourteen soil samples.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Sixteen soil samples were received from Del Mar Analytical at 3.0 °C in good condition on August 30, 2000 and stored in a refrigerator at 4 °C.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: The percent recoveries of 12378-PeCDF and 23478-PeCDF in the LCS and LCSD analyses are slightly above the QC criteria (70-130%). However, the relative percent differences are well within the QC criteria (< 20%). TLI guidelines allow up to two analytes to have percent recovery as high as 145% as low as 60%, so long as the relative percent differences are within the QC criteria. Results for these analytes may be over-estimated in the field samples.

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact a Project Scientist, at 919/544-5729.

For Triangle Laboratories, Inc.,

Released by,

Report Preparation Chemist

The total number of pages in the data package is: 495

el Mar Analytical

DEL MAR ANALYTICAL

949 261 1228 2002 AIRON AVE., ITVINE. GA SZOUD 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123

9830 South 51st St., Suite B-120, Phoenix, AZ 85044

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IJI0055

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne

870071

Sampled: 09/01/00

Received:

09/01/00

Reported: 09/07/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager MAILED

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DEL MAR ANALYTICAL

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Del Mar Analytical

T Corporation/Emcon - Burbank

501 S. Glenoaks Boulevard, Suite 314 3urbank, CA 91502

Attention: Sally Bilodeau

Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJ10055

Sampled: 09/01/00

Received: 09/01/00

DATA QUALIFIERS AND DEFINITIONS

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

R Not reported.

PD Relative Percent Difference

el Mar Analytical, Irvine at Abe toject Manager

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DEL MAR ANALYTICAL

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Q&Q Graphic (714) 898-9702

CASE NARRATIVE

Analysis of Samples for the Presence of

Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by

High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Datet

September 14, 2000

Client ID:

Del Mar Analytical

P.O. Number:

870071

TLI Project Number:

51826

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Rev 11/19/97

Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties ancountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the soil samples.

Onality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples are extracted and analyzed along with the samples. A report summarizing the analyte scoveries and relative percent differences for these samples is included in the data makage.

dean-up blank was processed along with the sample to prove that contamination was not introduced during the cleanup procedures. The results of this clean-up blank are included with the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each comple data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC basies associated with this particular project are:

Cample receipt: Five soil samples were received from Del Mar Analytical at 5.0 °C in good condition on September 7, 2000 and stored in a refrigerator at 4 °C.

Lample Preparation Laboratory: None

was Specirometry: None

- ta Review: None

Gither Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact a Project Scientist, at (919) 544-5729.

for Triangle Unboratories, Inc.,

Released by,

Hina Zinicola

Peport Preparation Chemist

The total number of pages in the data package is : 276 .

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Note By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

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LABORATORY REPORT

4-48 2- <109

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau Project: Boeing/Rocketdyne

870071

Sampled: 09/15/00

Received: 09/15/00

Reported: 09/20/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



CASE NARRATIVE

Client:

IT Corporation / Emcon

Project: Boeing / Rocketdyne 870071

Date Sampled:

9/15/00

Lab#:

JJ10547

Date Received:

9/15/00

Sample Description	Del Mar Lab #	Sample Matrix	Analyses Performed
PCS-29	IJI0547-01	Soil	EPA 8270C, EPA 8082 EPA 6010B, EPA 7471A EPA 300.0 Mod.
PCS-30	IJ10547-02	Soil	EPA 8270C, EPA 8082 EPA 6010B, EPA 7471A EPA 300.0 Mod.
PCS-32	IJI0547-03	Soil	EPA 8270C, EPA 8082 EPA 6010B, EPA 7471A EPA 300.0 Mod.
PCS-31	IJI0547-04	Soil	EPA 8270C, EPA 8082 EPA 6010B, EPA 7471A EPA 300.0 Mod.
PCS-33B	IJI0547-05	Soil	EPA 8270C, EPA 8082 EPA 6010B, EPA 7471A EPA 300.0 Mod.
CAC-100BE	IJI0547-06	Soil	EPA 7471A
CAC-101BE	IJI0547-07	Soil	EPA 7471A
CAC-101BED	IJ10547-08	Soil	EPA 7471A
CBC-102SW	IJI0547-09	Soil	EPA 7471A

SAMPLE RECEIPT:

Samples were received intact and with chain of custody number 000572. The

cooler temperature was measured at 5 °C upon receipt at the laboratory.

HOLDING TIMES:

All samples were analyzed within holding times. -

PROBLEMS

ENCOUNTERED:

No problems were encountered during sample analysis.

QA/QC CRITERIA:

The MS and MSD recoveries for Antimony were below acceptance limits due to sample matrix interference for EPA 6010B QC batch I0I1858. See LCS for batch validation,

Due to high levels of Mercury found in sample IJI0312-05, the MS/MSD calculation does not provide useful spike recovery information for EPA 7471A QC batch I0I1937. See LCS for batch validation.

The MSD recovery for Perchlorate was above acceptance limits due to sample matrix interference for EPA 300.0 Mod. QC batch 10l1622. See LCS for batch validation.

OBSERVATIONS:

No significant observations were made.

DEL MAR ANALYTICAL

Pat Åbe
Project Manager



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

M

Attention: Sally Bilodeau

Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJI0547

Sampled:09/15/00 Received:09/15/00

DATA QUALIFIERS AND DEFINITIONS

The MS and/or MSD were outside of the acceptance limits due to sample matrix interference. See Blank Spike

(LCS).

M-HA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine



QA/QC PACKAGE: LEVEL IV
PREPARED FOR IT CORPORATION / EMCON
LABORATORY NUMBER: IJI0547
PROJECT: BOEING / ROCKETDYNE 870071

CHAIN OF CUSTODY FORM

CHAIN OF CUSTODY FORM

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2852 Alton Ava., Irvine, CA 92606 (949) 261-1022 1014 E. Cooley Dr., Suite A Colton, CA 92324 (909) 370-4667 16525 Sherman Wey, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 9830 South \$1st St., Suite B-120, Phoenix, AZ 85044 (502) 785-0043

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FAX (949) 261-1228

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this characteristics is ductional analyses performed on this project. Payment for services is duction the date of invoice. Sample(s) will be disposed of after 30 days.

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Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 281-1022 1014 E. Cooley Dr., Suite A Colton, CA 9224 (909) 370-1667 16525 Sherman Way, Suite Crit, Van Nuys, CA 91406 (1819) 770-1844 9830 South 513 St., Suite B-120, Phoenix, A. 56044 (602) 785-0043 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chard of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

CASE NARRATIVE

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Analysis of Samples for the Presence of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

September 30, 2000

Client ID:

Del Mar Analytical

P.O. Number:

870071

TLI Project Number:

51895r1

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Rev. 11/19/97

Overview

The sample(s) and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the soil samples.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Six soil samples were received from Del Mar Analytical at 4°C in good condition on September 16, 2000, and stored in a refrigerator at 4°C.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

Method 8290 contains separate criteria for beginning and ending continuing calibrations. When the ending calibration meets criteria established for the beginning calibration, the average response factor from the initial calibration is used. When the ending calibration only meets the less stringent criteria specified for an ending calibration, the average of the response factor from the beginning and ending calibration is used for analyte and internal standard calculations. Affected samples are identified by the listing of both the beginning and ending calibration filename on the sample report.

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact our Project Scientists at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released by,

S.A Panies 9/30/2000

Saroj A. Parikh Report Preparation Chemist

The total number of pages in the data package is: 273.

Method 8290 Sample Calculations:

Analyte Concentration

The concentration or amount of any analyte is calculated using the following expression.

$$C_{(\sigma)} = \frac{A_{\sigma} * Q_{\beta}}{A_{\beta} * RRF_{(\sigma)} * W}$$

Where:

 $C_{(\sigma)}$ = concentration or amount of a given analyte

 A_{σ} = integrated current for the characteristic ions of the analyte

 A_{β} = integrated current of the characteristic ions of the corresponding

internal standard

 Q_{β} = amount of internal standard added to the sample before extraction RRF_(σ) = mean analyte relative response factor from the initial calibration

W = sample weight or volume

Detection Limits

The detection limit reported for a target analyte that is not detected or presents an analyte response that is less than 2.5 times the background level is calculated by using the following expression. The area of the analyte is replaced by the noise level measured in a region of the chromatogram clear of genuine GC signals. The detection limits represent the maximum possible concentration of a target analyte that could be present without being detected.

$$DL_{(\sigma)} = \frac{2.5 * H * Q_{\beta}}{H_{\beta} * RRF_{(\sigma)} * W}$$

Where:

 $DL_{(\sigma)}$ = estimated detection limit for a target analyte

2.5 = minimum response required for a GC signal

H = sum heights of the noise

 H_{β} = sum of peak heights of the characteristic ions of the corresponding

internal standard

 Q_{β} = amount of internal standard added to the sample before extraction mean analyte relative response factor from the initial calibration

W = sample weight or volume

Data Flags

In order to assist with data interpretation, data qualifier flags are used on the final reports. Please note that all data qualifier flags are subjective and are applied as consistently as possible. Each flag has been reviewed by two independent Chemists and the impact of the data qualifier flag on the quality of the data discussed above. The most commonly used flags are:

A 'B' flag is used to indicate that an analyte has been detected in the laboratory method blank as well as in an associated field sample. The 'B' flag is used only when the concentration of analyte found in the sample is less than 20 times that found in the associated blank. This flag denotes possible contribution of background laboratory contamination to the concentration or amount of that analyte detected in the field sample.

An 'E' flag is used to indicate a concentration based on an analyte to internal standard ratio which exceeds the range of the calibration curve. Values which are outside the calibration curve are estimates only.

An 'I' flag is used to indicate labeled standards have been interfered with on the GC column by coeluting, interferent peaks. The interference may have caused the standard's area to be overestimated. All quantitations relative to this standard, therefore, may be underestimated.

A 'J' flag is used to indicate a concentration based on an analyte to internal standard ratio which is below the calibration curve. Values which are outside the calibration curve are estimates only.

A 'PR' flag is used to indicate that a GC peak is poorly resolved. This resolution problem may be seen as two closely eluting peaks without a reasonable valley between the peak tops, overly broad peaks, or peaks whose shapes vary greatly from a normal distribution. The concentrations or amounts reported for such peaks are most likely overestimated.

A 'Q' flag is used to indicate the presence of QC ion instabilities caused by quantitative interferences.

An 'RO' flag is used to indicate that a labeled standard has an ion abundance ratio that is outside of the acceptable QC limits, most likely due to a coeluting interference. This may have caused the percent recovery of the standard to be overestimated. All quantitations versus this standard, therefore, may be underestimated.

An 'S' flag indicates that the response of a specific PCDD/PCDF isomer has exceeded the normal dynamic range of the mass spectrometer detection system. The corresponding signal is saturated and the reported analyte concentration is a 'minimum estimate'. When the 'S' qualifier is used in the reporting of 'totals', there is saturation of one (not

necessarily from a specific isomer) or more saturated signals for a given class of compounds. Results for saturated analytes are reported as greater than the upper calibration limit.

A 'U' flag is used to indicate that a specific isomer cannot be resolved from a large, coeluting interferent GC peak. The specific isomer is reported as not detected as a valid concentration cannot be determined. The calculated detection limit, therefore, should be considered an underestimated value.

A 'V' flag is used to indicate that, although the percent recovery of a labeled standard may be below a specific QC limit, the signal-to-noise ratio of the peak is greater than ten-to-one. The standard is considered reliably quantifiable. All quantitations derived from the standard are considered valid as well.

An 'X' flag is used to indicate that a polychlorodibenzofuran (PCDF) peak has eluted at the same time as the associated diphenyl ether (DPE) and that the DPE peak intensity is at least ten percent of the total PCDF peak intensity. Total PCDF values are flagged 'X' if the total DPE contribution to the total PCDF value is greater than ten percent. All PCDF peaks that are significantly influenced by the presence of DPE peaks are either reported as "estimated maximum possible concentration (EMPC) values without regard to the isotopic abundance ratio, or are included in the detection limit value depending on the analytical method.

. Uel Mar Analytical

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FAX (516) 775-1048 FAX (516) 775-1043 FAX (502) 785-0651 FAX (515) 505-9648

CHAIN OF CUSTODY FORM

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(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

IJI0778

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne 870071

Sampled: 09/22/00

Received: 09/22/00

Reported: 09/25/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314 Burbank, CA 91502

Attention: Sally Bilodeau

Client Project ID: Boeing/Rocketdyne

DATA QUALIFIERS AND DEFINITIONS

870071

Report Number: IJI0778

Sampled:09/22/00 Received:09/22/00

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine Pat Abe

Project Manager

The results n

Del Mar Analytical

2852 Afton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Collon, CA 92324 (919) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (919) 779-1847 FAX (919) 779-1849 9930 South 51st St., Suite B-120, Phoenix, AZ 85044 (602) 785-0043 FAX (610) 785-0851 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

1046 2- Perchlorates (24 Mrs)

CHAIN OF CUSTODY FORM

IJI0778 000574

to analysis * Invoir to Bocin Results to Boeing Jamples original Special Instructions homogen lac X Flease 5 days normal (Check) Sample Integrity: (Check) Turnaround Time: same day 24 hours 48 hours intact رياهك Analysis Required 00-22-6 Date /Time: Received in Lab by Froject Manager: S. McHillan / S. B. Palkar Phone Number: (8/8)841-1/60 Preservatives Fax Number: (8/15) 84(6-9280) Repelived by: 9/24/00@145/ None @142c Sampling Date/Time 9/22/00 (d) 14:52 Project/PO Number: Client Name/Address: Brains of IT | Projectity Number. Date Mime: Sample Container Date /Time: 903 R Sampler: B. Entchason Description

Note: By relinquishing samples to Del Mar Anafytical, client agrees to pay for the services requested on this chan of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

(949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne

870071

TULDAIS

Sampled: 09/26/00

Received: 09/27/00

Reported: 09/28/00

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> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe

Project Manager



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IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau

Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJI0915

Sampled:09/26/00 Received:09/27/00

DATA QUALIFIERS AND DEFINITIONS

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine

Pat Abe Project Manager

Del Mar Analytical

2852 Alton Ave., Invine, CA 92806 (949), 261-1022 FAX (949), 261-1028 1014 E. Cooley Dr., Sulle A, Collon, CA 82324 (919) 370-1046 7277 Haywenturst, Suite B-12, VAN Invise, CA 91406 (1815) 779-1844 FAX (1915) 779-1943 9830 Soull fist St., Sulle B-120, Phoenix, AZ 86044 (480) 785-0043 FAX, (480) 785-083 9494 Chesapeake Dr., Suite B05, San Diego, CA 92123 (859) 505-9596 FAX (858) 505-9689

3- Perchlorates (24 lws)

T210915

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CHAIN OF CUSTODY FORM

25 Yrom wend North S. Such west end treach # Hamosimica Special Instructions Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody (gbm and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days. Sample 72 hours 5 days normal Check) Sample Integrity: (Check) same day QUSK Turnaround Time: 24 hours 48 hours Analysis Required Date Times Date /Time: Received in Lab by: # of | Sampling | Sampling | Preservatives Received by: NUNR Received by: Fax Number: R18 846 9280 700 9/26/00 16 20 1645 Phone Number: 818 841 1160 8% Project/PO Number: 120018 Date Sorit. 9/22/w [615 Ą Date /Time: Date /Time: Container Date /Time: Type S. Bilodean, J. MrMilla Gol S. Glenoaly Such 314 Sorbant CA 91502 Sample Sor Boews Go IT CON as a second 065 × 40 Description PCS-39 17-50d Client Name/Address: Sample Sampler: Sold (Sel Relinquished By Relinquished By Relinquished By



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

TITORY

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne

870071

Sampled: 09/28/00

Received: 09/28/00

Reported: 10/02/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine Pat Abe

Project Manager



2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A, Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (949) 261-1022 FAX (949) 261-1228 (909) 370-4667 FAX (909) 370-1046 (818) 779-1844 FAX (818) 779-1843 (858) 505-9596 FAX (858) 505-9689 (480) 785-0043 FAX (480) 785-0851

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJI0967

Sampled:09/28/00 Received:09/28/00

DATA QUALIFIERS AND DEFINITIONS

M1 The sample required a dilution due to matrix interference. Because of this dilution, the matrix spike concentrations in the sample were reduced to a level where the recovery calculation does not provide useful information. See Blank Spike (LCS).

The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine

Pat Abe Project Manager

C Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Colton, CA 92224 (909) 370-4867 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843 8930 South Sist St., Suite B-120, Phoenix, AZ 85044 (602) 785-0045 FAX (602) 785-0851 9494 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689

CHAIN OF CUSTODY FORM

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Project Manager: Fully Bildkau, John McMillan		Phone (3/9)	Phone Number: (349) 841-1160			9t						٠	
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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested of this chain of custody form and any additional analyses performed on this project. Payment for services is	r Analytical, clie	int agree	s to pay for the	services requeste	d on this	chain of cu	custody form	and any additic	nal analyse	s performed c	on this project	t. Payment for services is	٦

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Del Mar Analytical

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CHAIN OF CUSTODY FORM

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Project Manager: 4/14 Milodett/ Sampler: Sample Descriptio BA-22-3-19 BA-22-3-17 BA-23-17 BR-23-17 BR-26-4-21

COC-GB Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the safvices requested or this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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CHAIN OF CUSTODY FORM

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Page \mathcal{L} of \mathcal{L}

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Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is	Mar Analytical,	client agre	es to pay for th	e services reques	ted on this	chain of cus	tody form and	any addition	al analyse	s performed o	on this proje	ct. Payment for services is	1

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COC-GB

CASE NARRATIVE

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Analysis of Samples for the Presence of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

October 9, 2000

Client ID:

Del Mar Analytical

P.O. Number:

IJ10970

TLI Project Number:

52004

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Rev. 11/19/97

Overview

The sample(s) and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the soil sample(s).

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the sample(s).

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Fourteen soil sample(s) were received from Del Mar Analytical at 7.0 °C in good condition on October 2, 2000 and stored in a refrigerator at 4 °C.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

Method 8290 contains separate criteria for beginning and ending continuing calibrations. When the ending calibration meets criteria established for the beginning calibration, the average response factor from the initial calibration is used. When the ending calibration only meets the less stringent criteria specified for an ending calibration, the average of the response factor from the beginning and ending calibration is used for analyte and internal standard calculations. Affected samples are identified by the listing of both the beginning and ending calibration filename on the sample report.

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact our Project Scientist, Mary McDonald, at 919/544-5729 ext. 269.

For Triangle Laboratories, Inc.,

Released by,

Report Preparation Chemist

The total number of pages in the data package is:

CASE NARRATIVE

. }

Analysis of Samples for the Presence of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

October 12, 2000

Client ID:

Del Mar Analytical

P.O. Number:

IJI0970

TLI Project Number:

52003r1

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Rev. 11/19/97

Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analysis of the soil samples.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Two soil samples were received from Del Mar Analytical at 7°C in good condition on October 2, 2000, and stored in a refrigerator at 4°C.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

Method 8290 contains separate criteria for beginning and ending continuing calibrations. When the ending calibration meets criteria established for the beginning calibration, the average response factor from the initial calibration is used. When the ending calibration only meets the less stringent criteria specified for an ending calibration, the average of the

response factor from the beginning and ending calibration is used for analyte and internal standard calculations. Affected samples are identified by the listing of both the beginning and ending calibration filename on the sample report.

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact a Project Scientist at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released by,

Kenneth Varley

Report Preparation Chemist

The total number of pages in the data package is:



Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 1014 E. Cooley Dr., Suite A. Colton, CA 92324 16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 9830 South 51st St., Suite B-120, Phoenix, AZ 85044

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LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

IJI 0178

Attention: Sally Bilodeau

Sampled: 10/04/00

Project: Boeing/Rocketdyne

Received: 10/05/00

870071

Reported: 10/16/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

> CA ELAP Certificate #1197 AZ DHS License #AZ0428

Del Mar Analytical, Irvine

Pat Abe Project Manager



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IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJJ0179

Sampled: 10/04/00 Received: 10/05/00

DATA QUALIFIERS AND DEFINITIONS

R The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries,

however, were within acceptance limits.

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine

Pat Abe Project Manager

Del Mar Analytical

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CHAIN OF CUSTODY FORM

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CHAIN OF CUSTODY FORM

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Del Mar Analytical, client agrees to pay for the services requested on this chair of custody form and any additional analyses performed on this project. Payment for services is Note: By relinquishing samples is Del Mar Analytical, client agrees to pay for the service due within 30 days from the gate of invoice. Sample(s) will be disposed of after 30 days.

CASE NARRATIVE

Analysis of Samples for the Presence of Polychlorinated Dibenzo-p-Dioxins and Dibenzofurans by High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:

October 18, 2000

Client ID:

Del Mar Analytical

P.O. Number:

IJJ0178

TLI Project Number:

52059

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Rev. 11/19/97

Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analyses of the soil samples.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the samples.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Del Mar Analytical analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Three soil samples were received from Del Mar Analytical at 4.0 °C in y good condition on October 7, 2000 and stored in a refrigerator at 4 °C.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

Method 8290 contains separate criteria for beginning and ending continuing calibrations. When the ending calibration meets criteria established for the beginning calibration, the average response factor from the initial calibration is used. When the ending calibration only meets the less stringent criteria specified for an ending calibration, the average of the response factor from the beginning and ending calibration is used for analyte and internal standard calculations. Affected samples are identified by the listing of both the beginning and ending calibration filename on the sample report.

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Del Mar Analytical have any questions or comments regarding this data package, please feel free to contact a Project Scientist, at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released by,

Kenneth Varley
Report Preparation Chemist

The total number of pages in the data package is : 231

Method 8290 Sample Calculations:

Analyte Concentration

The concentration or amount of any analyte is calculated using the following expression.

$$C_{(\sigma)} = \frac{A_{\sigma} * Q_{\beta}}{A_{\beta} * RRF_{(\sigma)} * W}$$

Where:

= concentration or amount of a given analyte

integrated current for the characteristic ions of the analyte A_{σ} $A_{\scriptscriptstyle \mathrm{R}}$

integrated current of the characteristic ions of the corresponding

internal standard

amount of internal standard added to the sample before extraction Q_{β} $RRF_{(\sigma)} =$

mean analyte relative response factor from the initial calibration

sample weight or volume

Detection Limits

The detection limit reported for a target analyte that is not detected or presents an analyte response that is less than 2.5 times the background level is calculated by using the following expression. The area of the analyte is replaced by the noise level measured in a region of the chromatogram clear of genuine GC signals. The detection limits represent the maximum possible concentration of a target analyte that could be present without being detected.

$$DL_{(\sigma)} = \frac{2.5 * H * Q_{\beta}}{H_{\beta} * RRF_{(\sigma)} * W}$$

Where:

 $DL_{(\sigma)} =$ estimated detection limit for a target analyte 2.5 minimum response required for a GC signal

H sum heights of the noise

sum of peak heights of the characteristic ions of the corresponding H_{B} internal standard

 Q_{B} amount of internal standard added to the sample before extraction == $RRF_{(\sigma)} =$ mean analyte relative response factor from the initial calibration

W sample weight or volume

Data Flags

In order to assist with data interpretation, data qualifier flags are used on the final reports. Please note that all data qualifier flags are subjective and are applied as consistently as possible. Each flag has been reviewed by two independent Chemists and the impact of the data qualifier flag on the quality of the data discussed above. The most commonly used flags are:

- A 'B' flag is used to indicate that an analyte has been detected in the laboratory method blank as well as in an associated field sample. The 'B' flag is used only when the concentration of analyte found in the sample is less than 20 times that found in the associated blank. This flag denotes possible contribution of background laboratory contamination to the concentration or amount of that analyte detected in the field sample.
- An 'E' flag is used to indicate a concentration based on an analyte to internal standard ratio which exceeds the range of the calibration curve. Values which are outside the calibration curve are estimates only.
- An 'I' flag is used to indicate labeled standards have been interfered with on the GC column by coeluting, interferent peaks. The interference may have caused the standard's area to be overestimated. All quantitations relative to this standard, therefore, may be underestimated.
- A 'J' flag is used to indicate a concentration based on an analyte to internal standard ratio which is below the calibration curve. Values which are outside the calibration curve are estimates only.
- A 'PR' flag is used to indicate that a GC peak is poorly resolved. This resolution problem may be seen as two closely eluting peaks without a reasonable valley between the peak tops, overly broad peaks, or peaks whose shapes vary greatly from a normal distribution. The concentrations or amounts reported for such peaks are most likely overestimated.
- A 'Q' flag is used to indicate the presence of QC ion instabilities caused by quantitative interferences.
- An 'RO' flag is used to indicate that a labeled standard has an ion abundance ratio that is outside of the acceptable QC limits, most likely due to a coeluting interference. This may have caused the percent recovery of the standard to be overestimated. All quantitations versus this standard, therefore, may be underestimated.
- An 'S' flag indicates that the response of a specific PCDD/PCDF isomer has exceeded the normal dynamic range of the mass spectrometer detection system. The corresponding signal is saturated and the reported analyte concentration is a 'minimum estimate'. When the 'S' qualifier is used in the reporting of 'totals', there is saturation of one (not

necessarily from a specific isomer) or more saturated signals for a given class of compounds. Results for saturated analytes are reported as greater than the upper calibration limit.

A 'U' flag is used to indicate that a specific isomer cannot be resolved from a large, coeluting interferent GC peak. The specific isomer is reported as not detected as a valid concentration cannot be determined. The calculated detection limit, therefore, should be considered an underestimated value.

A 'V' flag is used to indicate that, although the percent recovery of a labeled standard may be below a specific QC limit, the signal-to-noise ratio of the peak is greater than ten-to-one. The standard is considered reliably quantifiable. All quantitations derived from the standard are considered valid as well.

An 'X' flag is used to indicate that a polychlorodibenzofuran (PCDF) peak has eluted at the same time as the associated diphenyl ether (DPE) and that the DPE peak intensity is at least ten percent of the total PCDF peak intensity. Total PCDF values are flagged 'X' if the total DPE contribution to the total PCDF value is greater than ten percent. All PCDF peaks that are significantly influenced by the presence of DPE peaks are either reported as "estimated maximum possible concentration (EMPC) values without regard to the isotopic abundance ratio, or are included in the detection limit value depending on the analytical method.



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LABORATORY REPORT

Prepared For:

IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502

Attention: Sally Bilodeau

Project: Boeing/Rocketdyne

870071

Sampled: 11/09/00

Received: 11/09/00

Reported: 11/10/00

This laboratory report is confidential and is intended for the sole use of Del Mar Analytical and its client. This entire report was reviewed and approved for release.

CA ELAP Certificate #1197 AZ DHS License #AZ0428

F.64

Del Mar Analytical, Irvine Pat Abe

Project Manager



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IT Corporation/Emcon - Burbank

601 S. Glenoaks Boulevard, Suite 314

Burbank, CA 91502 Attention: Sally Bilodeau Client Project ID: Boeing/Rocketdyne

870071

Report Number: IJK0373

Sampled: 11/09/00

Received: 11/09/00

DATA QUALIFIERS AND DEFINITIONS

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

NR Not reported.

RPD Relative Percent Difference

Del Mar Analytical, Irvine

Pat Abe Project Manager

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A Colton, CA 92324 (990) 370-4667 FAX (909) 370-1046 16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (919) 779-1844 FAX (819) 779-1843 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (502) 785-0043 FAX (602) 785-0851 9494 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (615) 505-9689

CHAIN OF CUSTODY FORM

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LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: LOX WPAA 9444 Farnham Street, Suite 300 Boeing SSFL

9444 Farnham Street, Suite 300 San Diego, CA 92123

Attention: Lisa J. Tucker

Sampled: 07/27/06 Received: 07/27/06

Issued: 08/10/06 17:37

NELAP #01108CA California ELAP#1197 CSDLAC #10117

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: Enclosed are partial results. Results for the geophysical analyses are pending.

CLIENT ID	MATRIX
MJ838	Soil
MJ839	Soil
MJ840	Soil
MJ841	Soil
MJ842	Soil
MJ843	Soil
MJ844	Soil
MJ845	Soil
MJ846	Soil
MJ847	Soil
	MJ838 MJ839 MJ840 MJ841 MJ842 MJ843 MJ844 MJ845



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06

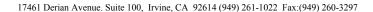
Received: 07/27/06

LABORATORY ID	CLIENT ID	MATRIX
IPG2469-11	MJ848	Soil
IPG2469-12	MJ849	Soil
IPG2469-13	MJ850	Soil
IPG2469-14	MJ851	Water
IPG2469-15	MJ852	Water

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager

Michele Chamberdin





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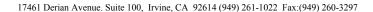
METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6H01010 Extracted: 08/01/0	6										
Blank Analyzed: 08/01/2006 (6H01010-F	BLK1)										
Benzene	ND	2.0	0.28	ug/l							
Bromobenzene	ND	5.0	0.27	ug/l							
Bromochloromethane	ND	5.0	0.32	ug/l							
Bromodichloromethane	ND	2.0	0.30	ug/l							
Bromoform	ND	5.0	0.32	ug/l							
Bromomethane	ND	5.0	0.42	ug/l							
n-Butylbenzene	ND	5.0	0.37	ug/l							
sec-Butylbenzene	ND	5.0	0.25	ug/l							
tert-Butylbenzene	ND	5.0	0.22	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Chlorobenzene	ND	2.0	0.36	ug/l							
Chloroethane	ND	5.0	0.40	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloromethane	ND	5.0	0.30	ug/l							
2-Chlorotoluene	ND	5.0	0.28	ug/l							
4-Chlorotoluene	ND	5.0	0.29	ug/l							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dibromo-3-chloropropane	ND	5.0	0.92	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	0.32	ug/l							
Dibromomethane	ND	2.0	0.36	ug/l							
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l							
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l							
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l							
Dichlorodifluoromethane	ND	5.0	0.79	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
cis-1,2-Dichloroethene	ND	2.0	0.32	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
1,3-Dichloropropane	ND	2.0	0.32	ug/l							
2,2-Dichloropropane	ND	2.0	0.34	ug/l							
1,1-Dichloropropene	ND	2.0	0.28	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							

TestAmerica - Irvine, CA

Michele Chamberlin





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Boeing SSFL

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METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6H01010 Extracted: 08/01/06	_										
Blank Analyzed: 08/01/2006 (6H01010-B)											
Ethylbenzene	ND	2.0	0.25	ug/l							
Hexachlorobutadiene	ND	5.0	0.38	ug/l							
Isopropylbenzene	ND	2.0	0.25	ug/l							
p-Isopropyltoluene	ND	2.0	0.28	ug/l							
Methylene chloride	ND	5.0	0.70	ug/l							
Naphthalene	ND	5.0	0.41	ug/l							
n-Propylbenzene	ND	2.0	0.27	ug/l							
Styrene	ND	2.0	0.16	ug/l							
1,1,1,2-Tetrachloroethane	ND	5.0	0.27	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,2,3-Trichlorobenzene	ND	5.0	0.45	ug/l							
1,2,4-Trichlorobenzene	ND	5.0	0.48	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
1,2,3-Trichloropropane	ND	10	0.40	ug/l							
1,2,4-Trimethylbenzene	ND	2.0	0.23	ug/l							
1,3,5-Trimethylbenzene	ND	2.0	0.26	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
o-Xylene	ND	2.0	0.30	ug/l							
m,p-Xylenes	ND	2.0	0.60	ug/l							
Surrogate: Dibromofluoromethane	22.6			ug/l	25.0		90	80-120			
Surrogate: Toluene-d8	27.1			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			



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METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Lillit	MIDL	Units	Levei	Result	70KEC	Lillits	KLD	Lillit	Quanners
Batch: 6H01010 Extracted: 08/01/0	<u>6</u>										
LCS Analyzed: 08/01/2006 (6H01010-B	S1)										
1,1-Dichloroethene	22.7	5.0	0.42	ug/l	25.0		91	70-130			
cis-1,2-Dichloroethene	23.2	2.0	0.32	ug/l	25.0		93	65-125			
trans-1,2-Dichloroethene	24.0	2.0	0.27	ug/l	25.0		96	65-130			
Tetrachloroethene	26.8	2.0	0.32	ug/l	25.0		107	65-125			
Trichloroethene	21.6	2.0	0.26	ug/l	25.0		86	70-125			
Vinyl chloride	34.1	5.0	0.26	ug/l	25.0		136	50-130			L
Surrogate: Dibromofluoromethane	24.5			ug/l	25.0		98	80-120			
Surrogate: Toluene-d8	27.7			ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	27.6			ug/l	25.0		110	80-120			
Matrix Spike Analyzed: 08/01/2006 (6H	01010-MS1)				Sou	rce: IPG	2515-01R	E1			
1,1-Dichloroethene	232	50	4.2	ug/l	250	ND	93	60-135			
cis-1,2-Dichloroethene	267	20	3.2	ug/l	250	29	95	60-130			
trans-1,2-Dichloroethene	252	20	2.7	ug/l	250	13	96	60-135			
Tetrachloroethene	303	20	3.2	ug/l	250	3.2	120	60-130			
Trichloroethene	837	20	2.6	ug/l	250	650	75	60-125			
Vinyl chloride	325	50	2.6	ug/l	250	ND	130	40-135			
Surrogate: Dibromofluoromethane	231			ug/l	250		92	80-120			
Surrogate: Toluene-d8	269			ug/l	250		108	80-120			
Surrogate: 4-Bromofluorobenzene	279			ug/l	250		112	80-120			
Matrix Spike Dup Analyzed: 08/01/2000	6 (6H01010-M	ISD1)			Sou	rce: IPG	2515-01R	E1			
1,1-Dichloroethene	217	50	4.2	ug/l	250	ND	87	60-135	7	20	
cis-1,2-Dichloroethene	264	20	3.2	ug/l	250	29	94	60-130	1	20	
trans-1,2-Dichloroethene	249	20	2.7	ug/l	250	13	94	60-135	1	20	
Tetrachloroethene	319	20	3.2	ug/l	250	3.2	126	60-130	5	20	
Trichloroethene	786	20	2.6	ug/l	250	650	54	60-125	6	20	M2
Vinyl chloride	318	50	2.6	ug/l	250	ND	127	40-135	2	30	
Surrogate: Dibromofluoromethane	225			ug/l	250		90	80-120			
Surrogate: Toluene-d8	266			ug/l	250		106	80-120			
Surrogate: 4-Bromofluorobenzene	288			ug/l	250		115	80-120			





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METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5030B/8260B)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6H02007 Extracted: 08/02/06	<u> </u>										
Blank Analyzed: 08/02/2006 (6H02007-B	LK1)										
Trichloroethene	0.470	2.0	0.26	ug/l							J
Surrogate: Dibromofluoromethane	23.4			ug/l	25.0		94	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.1			ug/l	25.0		104	80-120			
LCS Analyzed: 08/02/2006 (6H02007-BS	1)										
Trichloroethene	22.1	2.0	0.26	ug/l	25.0		88	70-125			
Surrogate: Dibromofluoromethane	23.7			ug/l	25.0		95	80-120			
Surrogate: Toluene-d8	26.5			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	28.8			ug/l	25.0		115	80-120			
Matrix Spike Analyzed: 08/02/2006 (6H0	02007-MS1)				Sou	rce: IPH(0103-02				
Trichloroethene	22.4	2.0	0.26	ug/l	25.0	ND	90	60-125			
Surrogate: Dibromofluoromethane	23.2			ug/l	25.0		93	80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	28.0			ug/l	25.0		112	80-120			
Matrix Spike Dup Analyzed: 08/02/2006	(6H02007-MSD1)			Source: IPH0103-02							
Trichloroethene	22.4	2.0	0.26	ug/l	25.0	ND	90	60-125	0	20	
Surrogate: Dibromofluoromethane	22.3			ug/l	25.0		89	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.4			ug/l	25.0		110	80-120			
Trichloroethene Surrogate: Dibromofluoromethane Surrogate: Toluene-d8 Surrogate: 4-Bromofluorobenzene Matrix Spike Dup Analyzed: 08/02/2006 Trichloroethene Surrogate: Dibromofluoromethane Surrogate: Toluene-d8	22.4 23.2 26.6 28.0 (6H02007-MS 22.4 22.3 27.0	SD1)		ug/l ug/l ug/l ug/l ug/l ug/l	25.0 25.0 25.0 25.0 Sou 25.0 25.0 25.0	ND rce: IPH(90 93 106 112 0103-02 90 89 108	80-120 80-120 80-120 60-125 80-120 80-120	0	20	



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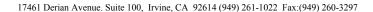
Report Number: IPG2469

Sampled: 07/27/06 Received: 07/27/06

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6G31017 Extracted: 07/31/00	<u>6</u>										
Blank Analyzed: 07/31/2006 (6G31017-E	BLK1)										
1,1-Dichloroethene	ND	5.0	0.45	ug/kg wet							
cis-1,2-Dichloroethene	ND	2.0	0.83	ug/kg wet							
trans-1,2-Dichloroethene	ND	2.0	0.41	ug/kg wet							
Tetrachloroethene	ND	2.0	0.49	ug/kg wet							
Trichloroethene	ND	2.0	0.34	ug/kg wet							
Vinyl chloride	ND	2.0	0.91	ug/kg wet							
Surrogate: Dibromofluoromethane	51.7			ug/kg wet	50.0		103	80-125			
Surrogate: Toluene-d8	49.0			ug/kg wet	50.0		98	80-120			
Surrogate: 4-Bromofluorobenzene	45.4			ug/kg wet	50.0		91	80-120			
LCS Analyzed: 07/31/2006 (6G31017-BS	51)										
1,1-Dichloroethene	44.0	5.0	0.45	ug/kg wet	50.0		88	70-130			
cis-1,2-Dichloroethene	50.5	2.0	0.83	ug/kg wet	50.0		101	65-125			
trans-1,2-Dichloroethene	48.9	2.0	0.41	ug/kg wet	50.0		98	65-130			
Tetrachloroethene	42.9	2.0	0.49	ug/kg wet	50.0		86	65-125			
Trichloroethene	43.3	2.0	0.34	ug/kg wet	50.0		87	70-125			
Vinyl chloride	56.0	2.0	0.91	ug/kg wet	50.0		112	50-130			
Surrogate: Dibromofluoromethane	50.4			ug/kg wet	50.0		101	80-125			
Surrogate: Toluene-d8	49.3			ug/kg wet	50.0		99	80-120			
Surrogate: 4-Bromofluorobenzene	45.6			ug/kg wet	50.0		91	80-120			
LCS Dup Analyzed: 07/31/2006 (6G3101	17-BSD1)										
1,1-Dichloroethene	50.8	5.0	0.45	ug/kg wet	50.0		102	70-130	14	20	
cis-1,2-Dichloroethene	58.1	2.0	0.83	ug/kg wet	50.0		116	65-125	14	20	
trans-1,2-Dichloroethene	55.4	2.0	0.41	ug/kg wet	50.0		111	65-130	12	20	
Tetrachloroethene	47.8	2.0	0.49	ug/kg wet	50.0		96	65-125	11	20	
Trichloroethene	45.6	2.0	0.34	ug/kg wet	50.0		91	70-125	5	20	
Vinyl chloride	63.1	2.0	0.91	ug/kg wet	50.0		126	50-130	12	25	
Surrogate: Dibromofluoromethane	54.8			ug/kg wet	50.0		110	80-125			
Surrogate: Toluene-d8	49.8			ug/kg wet	50.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	48.1			ug/kg wet	50.0		96	80-120			



%REC



MWH-San Diego/Boeing

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San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Reporting

Sampled: 07/27/06

RPD

Limit

Data

Qualifiers

Received: 07/27/06

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Spike

Source

Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD
Batch: 6H01027 Extracted: 08	3/01/06								
Blank Analyzed: 08/02/2006 (6H0	1027-BLK1)								
Benzene	ND	100	34	ug/kg wet					
Bromobenzene	ND	250	34	ug/kg wet					
Bromochloromethane	ND	250	50	ug/kg wet					
Bromodichloromethane	ND	100	31	ug/kg wet					
Bromoform	ND	250	39	ug/kg wet					
Bromomethane	ND	250	45	ug/kg wet					
n-Butylbenzene	ND	250	34	ug/kg wet					
sec-Butylbenzene	ND	250	31	ug/kg wet					
tert-Butylbenzene	ND	250	27	ug/kg wet					
Carbon tetrachloride	ND	250	28	ug/kg wet					
Chlorobenzene	ND	100	30	ug/kg wet					
Chloroethane	ND	250	45	ug/kg wet					
Chloroform	ND	100	44	ug/kg wet					
Chloromethane	ND	250	50	ug/kg wet					
2-Chlorotoluene	ND	250	32	ug/kg wet					
4-Chlorotoluene	ND	250	32	ug/kg wet					
Dibromochloromethane	ND	100	27	ug/kg wet					
1,2-Dibromo-3-chloropropane	ND	250	59	ug/kg wet					
1,2-Dibromoethane (EDB)	ND	100	40	ug/kg wet					
Dibromomethane	ND	100	42	ug/kg wet					
1,2-Dichlorobenzene	ND	100	32	ug/kg wet					
1,3-Dichlorobenzene	ND	100	31	ug/kg wet					
1,4-Dichlorobenzene	ND	100	34	ug/kg wet					
Dichlorodifluoromethane	ND	200	61	ug/kg wet					
1,1-Dichloroethane	ND	100	40	ug/kg wet					
1,2-Dichloroethane	ND	100	41	ug/kg wet					
1,1-Dichloroethene	ND	250	48	ug/kg wet					
cis-1,2-Dichloroethene	ND	100	48	ug/kg wet					
trans-1,2-Dichloroethene	ND	100	50	ug/kg wet					
1,2-Dichloropropane	ND	100	35	ug/kg wet					
1,3-Dichloropropane	ND	100	36	ug/kg wet					
2,2-Dichloropropane	ND	100	27	ug/kg wet					
1,1-Dichloropropene	ND	100	39	ug/kg wet					
cis-1,3-Dichloropropene	ND	100	36	ug/kg wet					
trans-1,3-Dichloropropene	ND	100	35	ug/kg wet					

TestAmerica - Irvine, CA

Michele Chamberlin Project Manager





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06 Received: 07/27/06

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6H01027 Extracted: 08/01/0	<u>)6</u>										
Blank Analyzed: 08/02/2006 (6H01027-	BLK1)										
Ethylbenzene	ND	100	27	ug/kg wet							
Hexachlorobutadiene	ND	250	39	ug/kg wet							
Isopropylbenzene	ND	100	35	ug/kg wet							
p-Isopropyltoluene	ND	100	48	ug/kg wet							
Methylene chloride	ND	1000	430	ug/kg wet							
Naphthalene	ND	250	81	ug/kg wet							
n-Propylbenzene	ND	100	36	ug/kg wet							
Styrene	ND	100	30	ug/kg wet							
1,1,1,2-Tetrachloroethane	ND	250	21	ug/kg wet							
1,1,2,2-Tetrachloroethane	ND	100	54	ug/kg wet							
Tetrachloroethene	ND	100	44	ug/kg wet							
Toluene	ND	100	33	ug/kg wet							
1,2,3-Trichlorobenzene	ND	250	58	ug/kg wet							
1,2,4-Trichlorobenzene	ND	250	51	ug/kg wet							
1,1,1-Trichloroethane	ND	100	38	ug/kg wet							
1,1,2-Trichloroethane	ND	100	53	ug/kg wet							
Trichloroethene	ND	100	38	ug/kg wet							
Trichlorofluoromethane	ND	250	58	ug/kg wet							
1,2,3-Trichloropropane	ND	500	48	ug/kg wet							
1,2,4-Trimethylbenzene	ND	100	33	ug/kg wet							
1,3,5-Trimethylbenzene	ND	100	30	ug/kg wet							
Vinyl chloride	ND	250	65	ug/kg wet							
o-Xylene	ND	100	28	ug/kg wet							
m,p-Xylenes	ND	100	53	ug/kg wet							
Surrogate: Dibromofluoromethane	2110			ug/kg wet	2500		84	55-140			
Surrogate: Toluene-d8	2220			ug/kg wet	2500		89	60-140			
Surrogate: 4-Bromofluorobenzene	2230			ug/kg wet	2500		89	65-140			



9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06 Received: 07/27/06

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6H01027 Extracted: 08/01/	/06										
LCS Analyzed: 08/01/2006 (6H01027-	BS1)										
1,1-Dichloroethene	2200	250	48	ug/kg wet	2500		88	75-140			
cis-1,2-Dichloroethene	2310	100	48	ug/kg wet	2500		92	65-130			
trans-1,2-Dichloroethene	2380	100	50	ug/kg wet	2500		95	65-130			
Tetrachloroethene	2550	100	44	ug/kg wet	2500		102	65-125			
Trichloroethene	2220	100	38	ug/kg wet	2500		89	70-130			
Vinyl chloride	1320	250	65	ug/kg wet	2500		53	10-120			
Surrogate: Dibromofluoromethane	2320			ug/kg wet	2500		93	55-140			
Surrogate: Toluene-d8	2540			ug/kg wet	2500		102	60-140			
Surrogate: 4-Bromofluorobenzene	2430			ug/kg wet	2500		97	65-140			
LCS Dup Analyzed: 08/01/2006 (6H01	1027-BSD1)										
1,1-Dichloroethene	2310	250	48	ug/kg wet	2500		92	75-140	5	20	
cis-1,2-Dichloroethene	2370	100	48	ug/kg wet	2500		95	65-130	3	20	
trans-1,2-Dichloroethene	2420	100	50	ug/kg wet	2500		97	65-130	2	20	
Tetrachloroethene	2550	100	44	ug/kg wet	2500		102	65-125	0	20	
Trichloroethene	2270	100	38	ug/kg wet	2500		91	70-130	2	20	
Vinyl chloride	1310	250	65	ug/kg wet	2500		52	10-120	1	30	
Surrogate: Dibromofluoromethane	2420			ug/kg wet	2500		97	55-140			
Surrogate: Toluene-d8	2620			ug/kg wet	2500		105	60-140			
Surrogate: 4-Bromofluorobenzene	2520			ug/kg wet	2500		101	65-140			
Matrix Spike Analyzed: 08/03/2006 (6	H01027-MS1)				Sou	rce: IPG	2451-02				
1,1-Dichloroethene	2410	250	48	ug/kg wet	2520	ND	96	55-155			
cis-1,2-Dichloroethene	2430	100	48	ug/kg wet	2520	ND	96	55-135			
trans-1,2-Dichloroethene	2460	100	50	ug/kg wet	2520	ND	98	55-145			
Tetrachloroethene	2520	100	44	ug/kg wet	2520	ND	100	60-150			
Trichloroethene	2160	100	38	ug/kg wet	2520	ND	86	65-150			
Vinyl chloride	1470	250	66	ug/kg wet	2520	ND	58	10-120			
Surrogate: Dibromofluoromethane	2360			ug/kg wet	2520	-	94	55-140			
Surrogate: Toluene-d8	2360			ug/kg wet	2520		94	60-140			
Surrogate: 4-Bromofluorobenzene	2370			ug/kg wet	2520		94	65-140			

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06 Received: 07/27/06

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6H01027 Extracted: 08/01/06	<u> </u>										
Matrix Spike Dup Analyzed: 08/03/2006	(6H01027-N	ISD1)			Sou	ırce: IPG	2451_02				
1,1-Dichloroethene	2400	250	48	ug/kg wet		ND	96	55-155	0	25	
cis-1,2-Dichloroethene	2370	100	48	ug/kg wet		ND	94	55-135	2	25	
trans-1,2-Dichloroethene	2450	100	50	ug/kg wet		ND	98	55-145	0	25	
Tetrachloroethene	2390	100	44	ug/kg wet		ND	95	60-150	5	25	
Trichloroethene	2180	100	38	ug/kg wet		ND	87	65-150	1	25	
Vinyl chloride	1270	250	65	ug/kg wet		ND	51	10-120	15	35	
Surrogate: Dibromofluoromethane	2340			ug/kg wet	2510	112	93	55-140			
Surrogate: Toluene-d8	2380			ug/kg wet	2510		95	60-140			
Surrogate: 4-Bromofluorobenzene	2310			ug/kg wet			92	65-140			
Batch: 6H01030 Extracted: 08/01/06	<u>i</u> _										
Blank Analyzed: 08/01/2006 (6H01030-B	LK1)										
Trichloroethene	ND	2.0	0.34	ug/kg wet							
Surrogate: Dibromofluoromethane	50.1			ug/kg wet	50.0		100	80-125			
Surrogate: Toluene-d8	51.9			ug/kg wet	50.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	46.3			ug/kg wet	50.0		93	80-120			
LCS Analyzed: 08/01/2006 (6H01030-BS	1)										
Trichloroethene	43.7	2.0	0.34	ug/kg wet	50.0		87	70-125			
Surrogate: Dibromofluoromethane	54.1			ug/kg wet	50.0		108	80-125			
Surrogate: Toluene-d8	52.2			ug/kg wet	50.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	54.8			ug/kg wet	50.0		110	80-120			
Matrix Spike Analyzed: 08/01/2006 (6H0	1030-MS1)				Sou	ırce: IPG	2696-02R	E1			
Trichloroethene	47.4	2.0	0.34	ug/kg wet	49.3	ND	96	70-135			
Surrogate: Dibromofluoromethane	55.0			ug/kg wet	49.3		112	80-125			
Surrogate: Toluene-d8	49.8			ug/kg wet	49.3		101	80-120			
Surrogate: 4-Bromofluorobenzene	41.8			ug/kg wet	49.3		85	80-120			





MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06

Received: 07/27/06

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6H01030 Extracted: 08/01/0	<u>6</u>										
Matrix Spike Dup Analyzed: 08/01/2006	(6Н01030-М	SD1)			Sou	rce: IPG2	2696-02R	E1			
Trichloroethene	48.9	2.0	0.34	ug/kg wet	50.0	ND	98	70-135	3	25	
Surrogate: Dibromofluoromethane	53.4			ug/kg wet	50.0		107	80-125			
Surrogate: Toluene-d8	50.5			ug/kg wet	50.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	41.5			ug/kg wet	50.0		83	80-120			





MWH-San Diego/Boeing 9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06 Received: 07/27/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result %REO	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6H02131 Extracted: 08/02/06	<u>5</u>									
Blank Analyzed: 08/02/2006 (6H02131-E	BLK1)									
Percent Solids	ND	0.10	N/A	%						
Duplicate Analyzed: 08/02/2006 (6H0213	31-DUP1)				Sou	rce: IPG2323-01				
Percent Solids	90.7	0.10	N/A	%		90		1	20	



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06

Received: 07/27/06

DATA QUALIFIERS AND DEFINITIONS

- 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.
- L Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.
- M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- **RPD** Relative Percent Difference





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: LOX WPAA

Boeing SSFL

Report Number: IPG2469

Sampled: 07/27/06 Received: 07/27/06

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
API RP 40	Soil		
ASTM D2937	Soil		
ASTM	Soil		
EPA 160.3 MOD	Solid	N/A	N/A
EPA 160.3	Soil		
EPA 5035	Soil		
EPA 8260B	Soil	X	X
EPA 8260B	Soil-extr	X	X
EPA 8260B	Water	X	X
Hydrol Cond	Soil		
Sat Zone Pkg	Soil		

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

Subcontracted Laboratories

Keantan Laboratories

640 N. Diamond Bar Blvd. - Diamond Bar, CA 91765

Analysis Performed: BulkDensity-ASTM2937

 $Samples: \ \ IPG2469-01, IPG2469-02, IPG2469-03, IPG2469-04, IPG2469-05, IPG2469-06, IPG2469-07, IPG2469-07, IPG2469-08, IPG2469-09, IPG269-09, I$

IPG2469-08, IPG2469-09, IPG2469-10, IPG2469-11, IPG2469-12

Analysis Performed: Hyd Cond

 $Samples: \ IPG2469-01, IPG2469-02, IPG2469-03, IPG2469-04, IPG2469-05, IPG2469-06, IPG2469-07, IPG2469-07, IPG2469-08, IPG2469-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09, I$

IPG2469-08, IPG2469-09, IPG2469-10, IPG2469-11, IPG2469-12

Analysis Performed: Moisture Content

Samples: IPG2469-01, IPG2469-02, IPG2469-03, IPG2469-04, IPG2469-05, IPG2469-06, IPG2469-07,

IPG2469-08, IPG2469-09, IPG2469-10, IPG2469-11, IPG2469-12

Analysis Performed: Porosity, Total

Samples: IPG2469-01, IPG2469-02, IPG2469-03, IPG2469-04, IPG2469-05, IPG2469-06, IPG2469-07,

IPG2469-08, IPG2469-09, IPG2469-10, IPG2469-11, IPG2469-12

Analysis Performed: Satur Zone Pkg

 $Samples: \ IPG2469-01, IPG2469-02, IPG2469-03, IPG2469-04, IPG2469-05, IPG2469-06, IPG2469-07, IPG2469-07, IPG2469-08, IPG2469-09, IPG269-09, IPG269-09, IPG2469-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09, IPG269-09,$

IPG2469-08, IPG2469-09, IPG2469-10, IPG2469-11, IPG2469-12

Analysis Performed: Specific Gravity

Samples: IPG2469-01, IPG2469-02, IPG2469-03, IPG2469-04, IPG2469-05, IPG2469-06, IPG2469-07,

IPG2469-08, IPG2469-09, IPG2469-10, IPG2469-11, IPG2469-12

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Company		Droject Number:	1891264					Redues	Requested Analyses		Instructions/1A1
Report to:	Lisa I ucke	Lighter Hammer		+			L				Legend:
Address:	9444 Farnham Street	Project Manager:				 					Numerical values for
	Suite 300	PM Phone #:	(626) 568-6897								around time in days
	San Diego	Field Contact:									PioH - H
	CA	Field Contact #:									EH - Extract Hold
	92123	Lab Name:	Test America, Inc.					Perc			
Email:	boeingedms@ch2m.com	Lab Contact:	Michele Chamberlin	rļi.			PC				
	Lisa.Tucker@mwhglobal.com	Lab Address:	17461 Derian Ave	Derian Ave, Suite 100			B by				
			Irvine, CA 92606		by 1		, sv				
		Lab Phone:	(949) 261-1022		1613E		/ 8082				
		Metrix	Date	No. of Containers	3 - Soil s - Soil	ercury roup 8	- Soil	- Soil -WET			Comments
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				Geotracker EDF	Jethod Gentra	acker EDF	

Comments: Lab Leachate for all perchlorate analysis. Homogenize all sample sleeves of sample FSBS0069S01 before analysis, run Method Spike/Spike

Data Validation Package 🗹 Level IV

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MWHSV20070212_00 1 of 1

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Hold all amalysis except for pH Legend: Numerical values for analyses equate to furn anural time in days Hold ell areatyske except for pH Homogenize and run MSANSD H - Hold EH - Extrad_Hold 2 Data Velidadon Package 4. Received by: Boeing P1∜: Company Geotracker EDF 7134: /3/)_ Lab Leachate for all perchionate analysis. Homogenize all sample steeves of sample FSBS0069S01before analysis, run Method Spike/Spike Dupicate. 2 2 9 2 pH by SW9045C - Soil Company Threading Shelby Valenzuela 10 2 I I ů. 2 표 弫 40 우 5 5 9 PCB by SWB082 - Soil 3. Relinquished by: I 40 2 ₽ 2 2 õ I I Metals 90108/6020 Soil Group 8 Collector: Contact #: 2 2 I I Dinkin by 16138 - Soil 2 5 I 므 5 \$ 9 % Solids - Soil 11mm: 17461 Derian Ave, Sulte 100 9 Group 8 Data Gept-Soil Michale Chamberlin Test America, Inc. Inline, CA 92606 Diana Buchahan (949) 261-1022 **₹** 13.58 12:57 13:26 11:03 = 12:26 10,20 (626) 568-6897 Telmoster 1891284 2/12/2007 2/12/2007 2/12/2007 2/12/2007 2/12/2007 242/2007 2/12/2007 DOE 212/2007 2. Received by: Project Menager: Sampling Event: Project Number Fletd Contact #: Company Fleid Contact: Lab Address: Lab Contact: PM Phone #: Clera Name: Lab Phone: Lab Neme: 2-13-07 So So **S**0 **S** S Sol So Sol Dete Lista. Tucker@mwhglobal.com boeingedma@ch2m.com 9444 Femham Straet somed deras Report to: Lites Tucker San Diego Surite 300 1, Relinquistred by: 92123 Company. MVVH SSFL 4 Comments: F\$850070502 F\$850070501 F\$850071801 FSB\$0007501 FSES0069801 FSBS0004801 F\$B\$0005501 F\$8\$0006807 Company: Address: ξ 是 ig Que



LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 1891264

San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/12/07 Received: 02/13/07

Issued: 03/05/07 15:08

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: This is a complete final report. The EPA 7471 Mercury was added.

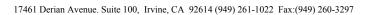
LABORATORY ID	CLIENT ID	MATRIX
IQB1216-01	FSBS0004S01	Soil
IQB1216-02	FSBS0005S01	Soil
IQB1216-03	FSBS0006S01	Soil
IQB1216-04	FSBS0007S01	Soil
IQB1216-05	FSBS0071S01	Soil
IQB1216-06	FSBS0069S01	Soil
IQB1216-07	FSBS0070S01	Soil
IQB1216-08	FSBS0070S02	Soil

Reviewed By:

TestAmerica - Irvine, CA

Michele Chamberdin

Michele Chamberlin Project Manager





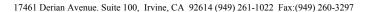
9444 Farnham Street, Suite 300 San Diego, CA 92123 Project ID: SSFL Group 8 - DOE

1891264 Report Number: IQB1216 Sampled: 02/12/07 Received: 02/13/07

Attention: Lisa J. Tucker

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: FSBS0004S01 (IQB1216-01) - Soi	1				
EPA 9045C	1	02/12/2007 10:20	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0005S01 (IQB1216-02) - Soi	1				
EPA 9045C	1	02/12/2007 11:03	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0006S01 (IQB1216-03) - Soi	1				
EPA 9045C	1	02/12/2007 11:33	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0007S01 (IQB1216-04) - Soi	1				
EPA 9045C	1	02/12/2007 12:05	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0071S01 (IQB1216-05) - Soi	1				
EPA 9045C	1	02/12/2007 12:57	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0069S01 (IQB1216-06) - Soi	l				
EPA 9045C	1	02/12/2007 13:25	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0070S01 (IQB1216-07) - Soi	l				
EPA 9045C	1	02/12/2007 13:59	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45
Sample ID: FSBS0070S02 (IQB1216-08) - Soi	1				
EPA 9045C	1	02/12/2007 14:20	02/13/2007 13:15	02/13/2007 16:55	02/13/2007 17:45



0/ DEC



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Donouting

Sampled: 02/12/07

Received: 02/13/07

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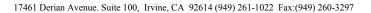
Data

METHOD BLANK/QC DATA

POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

Spiles Source

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B14097 Extracted: 02/14	<u>1/07</u>										
Blank Analyzed: 02/14/2007 (7B1409	7-BLK1)										
Aroclor 1016	ND	50	15	ug/kg wet							
Aroclor 1221	ND	50	15	ug/kg wet							
Aroclor 1232	ND	50	10	ug/kg wet							
Aroclor 1242	ND	50	10	ug/kg wet							
Aroclor 1248	ND	50	10	ug/kg wet							
Aroclor 1254	ND	50	10	ug/kg wet							
Aroclor 1260	ND	50	10	ug/kg wet							
Surrogate: Decachlorobiphenyl	29.0			ug/kg wet	33.3		87	45-120			
LCS Analyzed: 02/14/2007 (7B14097	-BS2)										
Aroclor 1016	241	50	15	ug/kg wet	267		90	60-115			
Aroclor 1260	261	50	10	ug/kg wet	267		98	60-115			
Surrogate: Decachlorobiphenyl	31.7			ug/kg wet	33.3		95	45-120			
Matrix Spike Analyzed: 02/15/2007 (7B14097-MS2)				Sou	ırce: IQB	1216-06				
Aroclor 1016	280	56	17	ug/kg dry	300	ND	93	45-120			
Aroclor 1260	296	56	11	ug/kg dry	300	ND	99	45-120			
Surrogate: Decachlorobiphenyl	37.6			ug/kg dry	37.5		100	45-120			
Matrix Spike Dup Analyzed: 02/15/2	007 (7B14097-M	SD2)			Sou	ırce: IQB	1216-06				
Aroclor 1016	281	56	17	ug/kg dry	300	ND	94	45-120	0	30	
Aroclor 1260	290	56	11	ug/kg dry	300	ND	97	45-120	2	30	
Surrogate: Decachlorobiphenyl	35.9			ug/kg dry	37.5		96	45-120			





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Sampled: 02/12/07

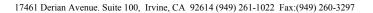
Received: 02/13/07

METHOD BLANK/QC DATA

METALS

Name			Reporting			Spike	Source		%REC		RPD	Data
Blank Analyzed: 02/15/2007 (7B14108-Bi K1)	Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Blank Analyzed: 02/15/2007 (7B14108-Bi K1)	Batch: 7B14108 Extracted: 02/14/07	7										
Antimony ND 1.0 0.030 mg/kg wet Arsenic ND 0.50 0.25 mg/kg wet Barium ND 0.50 0.080 mg/kg wet Beryllium ND 0.30 0.040 mg/kg wet Cadmium ND 0.50 0.080 mg/kg wet Cadmium ND 0.50 0.080 mg/kg wet Cobalt ND 0.50 0.080 mg/kg wet Copper ND 1.0 0.50 0.080 mg/kg wet Copper ND 1.0 0.00 mg/kg wet Copper ND 1.0 0.00 0.050 mg/kg wet Copper ND 1.0 0.00 mg/kg wet		_										
Arsenic ND 0.50 0.25 mg/kg wet Column Column <th>Blank Analyzed: 02/15/2007 (7B14108-E</th> <th>BLK1)</th> <th></th>	Blank Analyzed: 02/15/2007 (7B14108-E	BLK1)										
Barium ND 0.50 0.080 mg/kg wet Cadmium ND 0.30 0.040 mg/kg wet Cadmium ND 0.50 0.025 mg/kg wet Chromium 0.334 1.0 0.35 mg/kg wet Cobalt ND 0.50 0.000 mg/kg wet Copper ND 1.0 0.20 mg/kg wet Lead ND 0.50 0.000 mg/kg wet Nokolybdenum ND 1.0 0.45 mg/kg wet Nikel ND 1.0 0.45 mg/kg wet Selenium ND 1.0 0.45 mg/kg wet Silver ND 0.50 0.50 mg/kg wet Thallium ND 0.50 0.50 mg/kg wet Zine 5.86 10 0.3 mg/kg wet Arsenic 44.6 0.50 0.25 mg/kg wet Arsenic 44.6 0.50 0.25 mg/kg wet	Antimony	ND	1.0	0.030	mg/kg wet							
Beryllium	Arsenic	ND	0.50	0.25	mg/kg wet							
Cadmium ND 0.50 0.025 mg/kg wet Chromium 0.384 1.0 0.35 mg/kg wet Chromium J Cobalt ND 0.50 0.080 mg/kg wet Chromium	Barium	ND	0.50	0.080	mg/kg wet							
Chromium	Beryllium	ND	0.30	0.040	mg/kg wet							
Cobalt ND 0.50 0.080 mg/kg wet Copper ND 1.0 0.20 mg/kg wet Lead ND 0.50 0.050 mg/kg wet Molybdenum ND 1.0 0.10 mg/kg wet Nickel ND 1.0 0.45 mg/kg wet Selenium ND 1.0 0.20 mg/kg wet Silver ND 1.0 0.00 mg/kg wet Silver ND 0.50 0.050 mg/kg wet Vanadium ND 1.0 0.40 mg/kg wet Zinc 5.86 10 1.3 mg/kg wet LCS Analyzed: 02/15/2007 (7B14108-BSI) LCS Analyzed: 02/15/2007 (7B14108-BSI) Arsenic 44.6 0.50 0.25 mg/kg wet 5.0 97 80-120 Barium 47.2 0.50 0.080 mg/kg wet 5.0 97 80-120 Cadmium 46.5 0.50 0.080 mg/kg wet <td>Cadmium</td> <td>ND</td> <td>0.50</td> <td>0.025</td> <td>mg/kg wet</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Cadmium	ND	0.50	0.025	mg/kg wet							
Copper	Chromium	0.384	1.0	0.35	mg/kg wet							J
Lead ND 0.50 0.050 mg/kg wet	Cobalt	ND	0.50	0.080	mg/kg wet							
Molybdenum ND 1.0 0.10 mg/kg wet Nickel ND 1.0 0.45 mg/kg wet Selenium ND 1.0 0.20 mg/kg wet Silver ND 0.50 0.050 mg/kg wet Thallium ND 0.50 0.10 mg/kg wet Vanadium ND 1.0 0.40 mg/kg wet Zine 5.86 10 1.3 mg/kg wet Antimony 48.3 1.0 0.030 mg/kg wet 50.0 97 80-120 Arsenic 44.6 0.50 0.25 mg/kg wet 50.0 97 80-120 Barium 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 94 80-120 Chromium 47.2 0.50 0.025 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50	Copper	ND	1.0	0.20	mg/kg wet							
Nickel ND 1.0 0.45 mg/kg wet Selenium ND 1.0 0.20 mg/kg wet Silver ND 0.50 0.050 mg/kg wet Thallium ND 0.50 0.10 mg/kg wet Vanadium ND 1.0 0.40 mg/kg wet Zinc 5.86 10 1.3 mg/kg wet LCS Analyzed: 02/15/2007 (7B14108-BS1) V </td <td>Lead</td> <td>ND</td> <td>0.50</td> <td>0.050</td> <td>mg/kg wet</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Lead	ND	0.50	0.050	mg/kg wet							
Selenium ND 1.0 0.20 mg/kg wet Silver ND 0.50 0.050 mg/kg wet Thallium ND 0.50 0.10 mg/kg wet Vanadium ND 1.0 0.40 mg/kg wet Zinc 5.86 10 1.3 mg/kg wet Atimony 48.3 1.0 0.030 mg/kg wet 50.0 97 80-120 Arsenic 44.6 0.50 0.25 mg/kg wet 50.0 97 80-120 Barium 47.2 0.50 0.080 mg/kg wet 50.0 97 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 94 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0	Molybdenum	ND	1.0	0.10	mg/kg wet							
Silver ND 0.50 0.050 mg/kg wet Thallium ND 0.50 0.10 mg/kg wet Vanadium ND 1.0 0.40 mg/kg wet Zinc 5.86 10 1.3 mg/kg wet LCS Analyzed: 02/15/2007 (7B14108-BS1) James and the properties of the	Nickel	ND	1.0	0.45	mg/kg wet							
Thallium ND 0.50 0.10 mg/kg wet Vanadium ND 1.0 0.40 mg/kg wet Zinc 5.86 10 1.3 mg/kg wet LCS Analyzed: 02/15/2007 (7B14108-BS1) V V S	Selenium	ND	1.0	0.20	mg/kg wet							
Vanadium ND 1.0 0.40 mg/kg wet Amg/kg wet Mmg/kg wet Mmg	Silver	ND	0.50	0.050	mg/kg wet							
Zinc 5.86 10 1.3 mg/kg wet J LCS Analyzed: 02/15/2007 (7B14108-BS1) Antimony 48.3 1.0 0.030 mg/kg wet 50.0 97 80-120 Arsenic 44.6 0.50 0.25 mg/kg wet 50.0 89 80-120 Barium 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 94 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 <	Thallium	ND	0.50	0.10	mg/kg wet							
LCS Analyzed: 02/15/2007 (7B14108-BS1) Antimony 48.3 1.0 0.030 mg/kg wet 50.0 97 80-120 Arsenic 44.6 0.50 0.25 mg/kg wet 50.0 89 80-120 Barium 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 104 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 94 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Vanadium	ND	1.0	0.40	mg/kg wet							
Antimony 48.3 1.0 0.030 mg/kg wet 50.0 97 80-120 Arsenic 44.6 0.50 0.25 mg/kg wet 50.0 89 80-120 Barium 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 104 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 94 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Zinc	5.86	10	1.3	mg/kg wet							J
Arsenic 44.6 0.50 0.25 mg/kg wet 50.0 89 80-120 Barium 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 104 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	LCS Analyzed: 02/15/2007 (7B14108-BS	51)										
Barium 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Beryllium 52.2 0.30 0.040 mg/kg wet 50.0 104 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Antimony	48.3	1.0	0.030	mg/kg wet	50.0		97	80-120			
Beryllium 52.2 0.30 0.040 mg/kg wet mg/kg wet mg/kg wet solo 50.0 104 80-120 Cadmium 46.5 0.50 0.025 mg/kg wet solo 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet solo 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet solo 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet solo 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet solo 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet solo 50.0 94 80-120	Arsenic	44.6	0.50	0.25	mg/kg wet	50.0		89	80-120			
Cadmium 46.5 0.50 0.025 mg/kg wet 50.0 93 80-120 Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Barium	47.2	0.50	0.080	mg/kg wet	50.0		94	80-120			
Chromium 47.2 1.0 0.35 mg/kg wet 50.0 94 80-120 Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Beryllium	52.2	0.30	0.040	mg/kg wet	50.0		104	80-120			
Cobalt 47.2 0.50 0.080 mg/kg wet 50.0 94 80-120 Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Cadmium	46.5	0.50	0.025	mg/kg wet	50.0		93	80-120			
Copper 47.5 1.0 0.20 mg/kg wet 50.0 95 80-120 Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Chromium	47.2	1.0	0.35	mg/kg wet	50.0		94	80-120			
Lead 44.6 0.50 0.050 mg/kg wet 50.0 89 80-120 Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Cobalt	47.2	0.50	0.080	mg/kg wet	50.0		94	80-120			
Molybdenum 47.0 1.0 0.10 mg/kg wet 50.0 94 80-120	Copper	47.5	1.0	0.20	mg/kg wet	50.0		95	80-120			
	Lead	44.6	0.50	0.050	mg/kg wet	50.0		89	80-120			
Nickel 47.3 1.0 0.45 mg/kg wet 50.0 95 80-120	Molybdenum	47.0	1.0	0.10	mg/kg wet	50.0		94	80-120			
	Nickel	47.3	1.0	0.45	mg/kg wet	50.0		95	80-120			
Selenium 41.7 1.0 0.20 mg/kg wet 50.0 83 80-120	Selenium	41.7	1.0	0.20	mg/kg wet	50.0		83	80-120			
Silver 29.3 0.50 0.050 mg/kg wet 25.0 117 80-120	Silver	29.3	0.50	0.050	mg/kg wet	25.0		117	80-120			
Thallium 43.7 0.50 0.10 mg/kg wet 50.0 87 80-120	Thallium	43.7	0.50	0.10	mg/kg wet	50.0		87	80-120			
Vanadium 45.8 1.0 0.40 mg/kg wet 50.0 92 80-120	Vanadium	45.8	1.0	0.40	mg/kg wet	50.0		92	80-120			
Zinc 41.2 10 1.3 mg/kg wet 50.0 82 80-120	Zinc	41.2	10	1.3	mg/kg wet	50.0		82	80-120			

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager





MWH-San Diego/Boeing 9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Sampled: 02/12/07

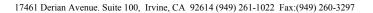
Received: 02/13/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 7B14108 Extracted: 02/14/07	<u>7_</u>										
Matrix Spike Analyzed: 02/15/2007 (7B)	(4108-MS1)				Sor	ırce: IQB	1216-06				
Antimony	14.9	1.1	0.034	mg/kg dry		0.13	26	75-125			M2
Arsenic	45.9	0.56	0.28	mg/kg dry		3.6	75	75-125			
Barium	125	0.56	0.090	mg/kg dry	56.3	76	87	75-125			
Beryllium	46.9	0.34	0.045	mg/kg dry	56.3	0.51	82	75-125			
Cadmium	43.4	0.56	0.028	mg/kg dry	56.3	0.16	77	75-125			
Chromium	60.4	1.1	0.39	mg/kg dry	56.3	14	82	75-125			
Cobalt	48.6	0.56	0.090	mg/kg dry	56.3	5.1	77	75-125			
Copper	47.3	1.1	0.23	mg/kg dry	56.3	9.2	68	75-125			M2
Lead	53.5	0.56	0.056	mg/kg dry	56.3	6.6	83	75-125			
Molybdenum	43.6	1.1	0.11	mg/kg dry	56.3	0.52	77	75-125			
Nickel	51.7	1.1	0.51	mg/kg dry	56.3	9.2	75	75-125			
Selenium	40.3	1.1	0.23	mg/kg dry	56.3	0.27	71	75-125			M2
Silver	27.0	0.56	0.056	mg/kg dry	28.2	0.098	95	75-125			
Thallium	47.4	0.56	0.11	mg/kg dry	56.3	0.30	84	75-125			
Vanadium	75.6	1.1	0.45	mg/kg dry	56.3	25	90	75-125			
Zinc	77.7	11	1.5	mg/kg dry	56.3	42	63	75-125			M2
Matrix Spike Dup Analyzed: 02/15/2007	′ (7B14108-M	SD1)			Sou	ırce: IQB	1216-06				
Antimony	15.5	1.1	0.034	mg/kg dry	56.3	0.13	27	75-125	4	20	M2
Arsenic	46.0	0.56	0.28	mg/kg dry	56.3	3.6	75	75-125	0	20	
Barium	126	0.56	0.090	mg/kg dry	56.3	76	89	75-125	1	20	
Beryllium	45.3	0.34	0.045	mg/kg dry	56.3	0.51	80	75-125	3	20	
Cadmium	43.8	0.56	0.028	mg/kg dry	56.3	0.16	78	75-125	1	20	
Chromium	58.5	1.1	0.39	mg/kg dry	56.3	14	79	75-125	3	20	
Cobalt	48.1	0.56	0.090	mg/kg dry	56.3	5.1	76	75-125	1	20	
Copper	46.7	1.1	0.23	mg/kg dry	56.3	9.2	67	75-125	1	20	M2
Lead	54.2	0.56	0.056	mg/kg dry	56.3	6.6	85	75-125	1	20	
Molybdenum	44.0	1.1	0.11	mg/kg dry	56.3	0.52	77	75-125	1	20	
Nickel	50.9	1.1	0.51	mg/kg dry	56.3	9.2	74	75-125	2	20	M2
Selenium	39.7	1.1	0.23	mg/kg dry	56.3	0.27	70	75-125	1	20	M2
Silver	26.8	0.56	0.056	mg/kg dry	28.2	0.098	95	75-125	1	20	
Thallium	48.3	0.56	0.11	mg/kg dry	56.3	0.30	85	75-125	2	20	
Vanadium	74.1	1.1	0.45	mg/kg dry	56.3	25	87	75-125	2	20	
Zinc	75.7	11	1.5	mg/kg dry	56.3	42	60	75-125	3	20	M2

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Sampled: 02/12/07

Received: 02/13/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B14110 Extracted: 02/14/07	,										
Batta. /Billio Extracted. 02/11/0/	_										
Blank Analyzed: 02/15/2007 (7B14110-B	LK1)										
Aluminum	ND	10	5.0	mg/kg wet							
Boron	ND	5.0	1.0	mg/kg wet							
Lithium	ND	6.3	3.8	mg/kg wet							
Potassium	24.7	50	19	mg/kg wet							J
Sodium	ND	50	24	mg/kg wet							
LCS Analyzed: 02/15/2007 (7B14110-BS	1)										
Aluminum	47.6	10	5.0	mg/kg wet	50.0		95	80-120			
Boron	48.8	5.0	1.0	mg/kg wet	50.0		98	80-120			
Lithium	50.1	6.3	3.8	mg/kg wet	50.0		100	80-120			
Potassium	503	50	19	mg/kg wet	500		101	80-120			
Sodium	480	50	24	mg/kg wet	500		96	80-120			
Matrix Spike Analyzed: 02/15/2007 (7B1	4110-MS1)				Sou	ırce: IQB	1216-06				
Aluminum	16400	11	5.6	mg/kg dry	56.3	14000	4263	75-125			MHA
Boron	57.4	5.6	1.1	mg/kg dry	56.3	2.9	97	75-125			
Lithium	79.2	7.1	4.3	mg/kg dry	56.3	25	96	75-125			
Potassium	4410	56	21	mg/kg dry	563	3700	126	75-125			MHA
Sodium	614	56	27	mg/kg dry	563	58	99	75-125			
Matrix Spike Dup Analyzed: 02/15/2007	(7B14110-M	ISD1)			Sou	ırce: IQB	1216-06				
Aluminum	16400	11	5.6	mg/kg dry	56.3	14000	4263	75-125	0	20	MHA
Boron	58.4	5.6	1.1	mg/kg dry	56.3	2.9	99	75-125	2	20	
Lithium	79.7	7.1	4.3	mg/kg dry	56.3	25	97	75-125	1	20	
Potassium	4340	56	21	mg/kg dry	563	3700	114	75-125	2	20	MHA
Sodium	616	56	27	mg/kg dry	563	58	99	75-125	0	20	





9444 Farnham Street, Suite 300 San Diego, CA 92123

Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Sampled: 02/12/07

Received: 02/13/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B16119 Extracted: 02/16/07	_										
Blank Analyzed: 02/16/2007 (7B16119-Bl	LK1)										
Zirconium	ND	25	1.5	mg/kg wet							
LCS Analyzed: 02/16/2007 (7B16119-BS1	1)										
Zirconium	47.8	25	1.5	mg/kg wet	50.0		96	80-120			
Matrix Spike Analyzed: 02/16/2007 (7B10	6119-MS1)				Sou	rce: IQB	1216-06				
Zirconium	29.9	28	1.7	mg/kg dry	56.3	1.7	50	75-125			M2
Matrix Spike Dup Analyzed: 02/16/2007	(7B16119-M	SD1)			Sou	rce: IQB	1216-06				
Zirconium	29.1	28	1.7	mg/kg dry	56.3	1.7	49	75-125	3	20	M2





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Sampled: 02/12/07

Received: 02/13/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B13136 Extracted: 02/13/07	-										
Duplicate Analyzed: 02/13/2007 (7B1313	6-DUP1)				Sou	rce: IQB	1216-01				
pH	7.45	NA	0.00	pH Units		7.43			0	5	
Duplicate Analyzed: 02/13/2007 (7B1313	6-DUP2)				Sou	rce: IQB	1216-06				
pH	6.94	NA	0.00	pH Units		6.94			0	5	
Batch: 7B15123 Extracted: 02/15/07	-										
Blank Analyzed: 02/16/2007 (7B15123-Bit Percent Solids	LK1) ND	0.10	0.10	%							
		0.10	0.10	/0	_						
Duplicate Analyzed: 02/16/2007 (7B1512) Percent Solids	3-DUP1) 88.7	0.10	0.10	%	Sou	rce: IQB 89	1216-06		0	20	
		0.10	0.10	70		09			U	20	
Batch: 7B21099 Extracted: 02/21/07	_										
Blank Analyzed: 02/21/2007 (7B21099-B	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/21/2007 (7B21099-BS	1)										
Perchlorate	52.7	4.0	0.80	ug/l	50.0		105	85-115			
Matrix Spike Analyzed: 02/21/2007 (7B2	1099-MS1)				Sou	rce: IQB	1216-02				
Perchlorate	52.9	4.0	0.80	ug/l	50.0	ND	106	80-120			
Matrix Spike Dup Analyzed: 02/21/2007	(7B21099-M	ISD1)			Sou	rce: IQB	1216-02				
Perchlorate	52.9	4.0	0.80	ug/l	50.0	ND	106	80-120	0	20	



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

MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 San Diego, CA 92123 1891264 Sampled: 02/12/07

Attention: Lisa J. Tucker

Report Number: IQB1216 Received: 02/13/07

DATA QUALIFIERS AND DEFINITIONS

k.
k

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.

M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

RL1 Reporting limit raised due to sample matrix effects.

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

RPD Relative Percent Difference



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1216

Sampled: 02/12/07 Received: 02/13/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A
EPA 314.0 DI-RFI	Soil		
EPA 3545/8082	Soil	X	X
EPA 6010B	Soil	X	X
EPA 6020	Soil	X	X
EPA 8082	Soil	X	X
EPA 9045C	Soil	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

Subcontracted Laboratories

Paradigm Labs - SUB

5500 Business Dr. - Wilmington, NC 28405

Analysis Performed: 1613-Dioxin-HR OUT

Samples: IQB1216-06, IQB1216-07

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745 Analysis Performed: Mercury-7471 (dry wt)

Samples: IQB1216-01, IQB1216-02, IQB1216-03, IQB1216-04, IQB1216-06, IQB1216-07



Laboratory Results

Ms. Michele Chamberlin Test America 17461 Derian Ave. Suite 100 Irvine CA 92614

Phone:

949-261-1022

Fax:

Dear Ms. Chamberlin:

Enclosed is a full data package containing the final results for samples received by Paradigm Analytical Labs, Inc. on February 15, 2007 under your project name "IQB1216". The samples were analyzed by Method 1613 following Paradigm's Standard Operating Procedures and are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards.

Number of Samples Received:

Your Project Reference:

IQB1216

PAL Project Number:

G579-222

We appreciate your business and look forward to working with you again. Please contact me at 910-350-1903 if you have questions or need additional technical support.

Singerely

Christopher K. Cornwell Assistant Director Data

Page 1 of _____



Case Narrative
SGS Project: G579-222

Project Name: IQB1216

For Method: 1613

• The submitted samples was accepted into the lab on February 15th, 2007 and extracted on February 19th, 2007 by method 3540C. The sample extracts and associated QC extracts were then processed through clean-up by method 3630/3620 and analyzed by HRGC/HRMS for methods 1613.

Craig R. Tronzo

Data Validation/QA Officer

Secondary Review

W. Mike Larkins Technical Director Date

Heather Patterson

Director

Date

2

SGS

List of Qualifiers

- B Analyte was detected in the Lab Method Blank at a level above the Reporting Limit.
- EDL "Estimated Detection Limit"

EMPC "Estimated Maximum Possible Concentration"

- ppt Parts-per-trillion (pg/g; ng/L)
- V Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit.
- # Outside quality control limits
- * See case narrative

An average uncertainty of 30% can be routinely achieved as concluded from the evaluation of HRGC-HRMS standard operating procedures. The following flags warn the data user of situations where the uncertainty may be greater than stated.

- A Amount detected is less than the Lower Calibration Limit.
- J Amount detected is between the Method Detection Limit and the Lower Calibration Limit.
- E Amount detected is greater than the Upper Calibration Limit.
- S The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s).
- Q Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s).
- I Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s).
- DPE Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s).



Toxic Equivalency Factors

Analyte	WHO* 1998	WHO* 2005	International-89	MADEP ⁺
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	1	1	0.5	0.5
1,2,3,4,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.01	0.1
OCDD	0.0001	0.0003	0.001	0.001
2,3,7,8-TCDF	0.1	0.1	0.1	0.1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.5
2,3,4,7,8-PeCDF	0.5	0.3	0.5	0.5
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0,1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.1
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.1
OCDF	0.0001	0.0003	0.001	0.001

^{*} World Health Organization

† Massachusetts Department of Environmental Protection

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

			ummary She			T
Analyte	Amount	EDL	Adj. RL	RT	Ratio	Qualifier
	(pg/g)	(pg/g)	(pg/g)	(min.)		
2,3,7,8-TCDD	ND	0.109	1.00			
1,2,3,7,8-PeCDD	ND	0.109	5.00			Q
1,2,3,4,7,8-HxCDD	ND	0.133	5.00			1
1,2,3,6,7,8-HxCDD	ND	0.133	5.00			
1,2,3,7,8,9-HxCDD	ND	0.132	5.00			
1,2,3,4,6,7,8-HpCDD	ND	0.202	5.00			
OCDD	0.734	0.358	10.0	44:08	0.88	A
2,3,7,8-TCDF	ND	0.128	1.00			
1,2,3,7,8-PeCDF	ND	0.0690	5.00			1
2,3,4,7,8-PeCDF	0.0880	0.0710	5.00	33:51	1.61	A
1,2,3,4,7,8-HxCDF	ND	0.0976	5.00			
1,2,3,6,7,8-HxCDF	ND	0.0914	5.00			
2,3,4,6,7,8-HxCDF	ND	0.0982	5.00			
1,2,3,7,8,9-HxCDF	ND	0.130	5.00			l
1,2,3,4,6,7,8-HpCDF	ND	0.120	5.00			
1,2,3,4,7,8,9-HpCDF	ND	0.190	5.00			
OCDF	ND	0.275	10.0			
Total TCDDs	ND	0.109	1.00			
Total PeCDDs	ND	0.109	5.00			
Total HxCDDs	ND	0.133	5.00			
Total HpCDDs	ND	0.202	5.00			
Total TCDFs	ND	0.128	1.00			
Total PeCDFs	0.0880	0.0700	5.00			A
Total HxCDFs	ND	0.103	5.00			"
Total HpCDFs	ND	0.151	5.00		_	-
ITEF TEQ (ND=0)	0.0447					
ITEF TEQ (ND=1/2)	0.178			ļ		

		Sample Information	Sample Information						
		Matrix:	0						
		Weight / Volume:	10.00 Grams						
		Solids / Lipids:	100 %						
		Original pH:	NA						
Laboratory Informati	<u>on</u>	Batch ID:	WG14123						
Sample ID:	LMB14123	Filename:	a22feb07a-4						
		Retchk:	a22feb07a-1						
		Begin ConCal:	a22feb07a-1						
Extraction Date:	19-Feb-07								
Analysis Date:	22-Feb-07 18:4	9 Initial Cal:	m1613-071006e						

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

Labeled	Expected	Measured	Percent	RT	Ratio	Qualifler
Standard	Amount	Amount	Recovery	K.	KAUU	Anumer
Station 6	(ng)	(ng)	(%)	(min.)		
Extraction Standards						
¹³ C ₁₂ -2,3,7,8-TCDD	2.00	1.82	91.0	31:09	0.78	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	2.00	1.77	88.3	34:02	1.59	Q
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	2.00	1.80	89.9	36:36	1.34	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	2.00	1.83	91.3	36:41	1.19	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	2.00	1.70	84.8	39:57	1.06	
¹³ C ₁₂ -OCDD	4.00	3.07	76.8	44:07	0.90	
¹³ C ₁₂ -2,3,7,8-TCDF	2.00	1.86	93.0	30:25	0.79	
¹³ C ₁₂ -1,2,3,7,8-PeCDF	2.00	1.81	90.7	33:14	1.58	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	2.00	1.76	88.2	33:51	1.59	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	2.00	1.85	92.6	35:53	0.52]
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	2.00	1.91	95.4	35:60	0.52	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	2.00	1.87	93.6	36:28	0.53	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	2.00	1.75	87.4	37:14	0.53	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	2.00	1.70	84.8	38:42	0.45	
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	2.00	1.64	82.2	40:36	0.45	
Cleanup Standards						
³⁷ Cl ₄ -2,3,7,8-TCDD	0.400	0.363	90.8	31:10	_	
Injection Standards						
¹³ C ₁₂ -1,2,3,4-TCDD	2.00			30:37	0.78	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	2.00			36:55	1.25	

			Sample Information				
			Matrix:	0			
			Weight / Volume:	10.00	Grams		
			Solids / Lipids:	100	%		
			Original pH:	NA			
Laboratory Information	<u>n</u>		Batch ID:	WG1412	3		
Sample ID:	LMB14123		Filename:	a22feb07	a-4		
·			Retchk:	a22feb07	a-1		
			Begin ConCal:	a22feb07	a-1		
Extraction Date:	19-Feb-07						
Analysis Date:	22-Feb-07	18:49	Initial Cal:	m1613-0	71006¢		
Analyzed by: _ ¬			Reviewed by:				
Date: 02-235	<u>1</u>			Date: 7/2%	VCT		

Analytical Results for

Ongoing Precision Result (OPR)

Analyte	Spiked	AMT	REC	Range	e pg/ul	Flag
·	pg/ul	pg/ul	%	Lower	Upper	
2,3,7,8-TCDD	10.0	9.56	95.6	6.70	15.8	
1,2,3,7,8-PeCDD	50.0	48.6	97.2	35.0	71.0	
1,2,3,4,7,8-HxCDD	50.0	50.2	100	35.0	82.0	
1,2,3,6,7,8-HxCDD	50.0	51.1	102	38.0	67.0	
1,2,3,7,8,9-HxCDD	50.0	49.8	99.5	32.0	81.0	
1,2,3,4,6,7,8-HpCDD	50.0	49.2	98.5	35.0	70.0	
OCDD	100	96.6	96.6	78.0	144	
2,3,7,8-TCDF	10.0	9.16	91.6	7.50	15.8	
1,2,3,7,8-PeCDF	50.0	49.4	98.8	40.0	67.0	
2,3,4,7,8-PeCDF	50.0	49.5	98.9	34.0	80.0	
1,2,3,4,7,8-HxCDF	50.0	49.2	98.4	36.0	67.0	
1,2,3,6,7,8-HxCDF	50.0	49.8	99.7	42.0	65.0	
2,3,4,6,7,8-HxCDF	50.0	49.4	98.9	35.0	78.0	
1,2,3,7,8,9-HxCDF	50.0	49.2	98.5	39.0	65.0	
1,2,3,4,6,7,8-HpCDF	50.0	49.5	98.9	41.0	61.0	
1,2,3,4,7,8,9-HpCDF	50.0	48.1	96.1	39.0	69.0	
OCDF	100	103	103	63.0	170	

= Outside range limits

* = Ion Ratio Out

File Information OC Information

OPR Lab ID: Extraction Date: OPR14123 19-Feb-07

22-Feb-07

OPR Filename: Retchk:

Begin ConCal:

a22feb07a-2 a22feb07a-1 a22feb07a-1

Analysis Date: Method: 1613

Initial Cal:

m1613-071006e

Sample Information

Matrix:

Soil

Analytical Results for Ongoing Precision Result (OPR)

Labeled	Spiked	AMT	REC	Range	e pg/ul	Flag
Standard	pg/ul	pg/ul	%	Lower	Upper	
Extraction Standards						
¹³ C ₁₂ -2,3,7,8-TCDD	100	91.0	91.0	20.0	175	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	100	86.8	86.8	21.0	227	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	100	91.5	91.5	21.0	193	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	100	89.1	89.1	25.0	163	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	100	86.9	86.9	26.0	166	
¹³ C ₁₂ -OCDD	200	159	79.7	26.0	397	
¹³ C ₁₂ -2,3,7,8-TCDF	100	93.9	93.9	22.0	152	1
¹³ C ₁₂ -1,2,3,7,8-PeCDF	100	90.9	90.9	21.0	192	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	100	87.1	87.1	13.0	328	1
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	100	89.7	89.7	19.0	202	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	100	90.4	90.4	21.0	159	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	100	93.1	93.1	22.0	176	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	100	90.2	90.2	17.0	205	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	100	88.1	88.1	21.0	158	
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	100	89.0	89.0	20.0	186	<u> </u>
Cleanup Standards						
³⁷ C ₁₄ -2,3,7,8-TCDD	20.0	18.8	93.8	6.20	38.2	
		i				

Form Version:[OPRv3.474]1613

OC Information

OPR Lab ID:

Extraction Date:

Analysis Date:

OPR14123 19-Feb-07

22-Feb-07

Method:

1613

File Information

OPR Filename:

Retchk:

a22feb07a-2 a22feb07a-1

Begin ConCal:

a22feb07a-1

Initial Cal:

m1613-071006e

Sample Information

Matrix:

Soil

Reviewed by:

Date Reviewed: 2/2-727

112



Released By

SUBCONTRACT ORDER - PROJECT # IQB1216 /

	G LABORATORY:		RECEIVING LABORATORY:
TestAmerica - Irvine, CA		Paradigm Labs -	
17461 Derian Avenue. Suite	100	5500 Business D Wilmington, NC	
Irvine, CA 92614		Phone :(910) 350	
Phone: (949) 261-1022		Fax: (910) 350-1	
Fax: (949) 260-3297		1 1 ax. (910) 330-1	337
Project Manager: Michele Cha	amberlin	Project Location:	California
Work Order Comments:	Level 4 QC. Boeing EDD, Report to M	ADL w/ J flags, report in dr	y weight, 2 week TAT.
Standard TAT is requested	unless specific due date is requeste	ed => Due Date:	Initials:
Analysis	Expiration		Comments
Sample ID: 1QB1216-06 Soil	Sampled: 02/12/07 13:25	MS/MSD	
1613-Dioxin-HR OUT	02/26/07 13:25		Sub=Paradigm,17 cngnrs,dry wt(soil), 2
I IA - DDD OUT	02/12/05 12.05	V /	wkTAT,Jflag
Level 4 + EDD-OUT MS/MSD	03/12/07 13:25 03/12/07 13:25		Sub to Paradigm, TAT=2 weeks, EDD=Boeing, CD
Containers Supplied: 250 ml Glass (IQB1216-06K)			
Sample ID: IQB1216-07 Soil	Sampled: 02/12/07 13:59	/	
1613-Dioxin-HR OUT	02/26/07 13:59	✓	Sub=Paradigm,17 cngnrs,dry wt(soil), 2
Level 4 + EDD-OUT	03/12/07 13:59		wkTAT,Jflag Sub to Paradigm, TAT=2 weeks, EDD=Boeing, CD
Containers Supplied: 2 oz jar (IQB1216-07C)			
	SAMPI	LE INTEGRITY:	
All containers intact:	☐ No Sample labels/COC agree:	Yes No	Samples Received On Ice:: Yes No
	□ No Samples Preserved Proper		Samples Received at (temp):
	1 , ,	(()n	A
Elyand	Pate Time	Alla XV	VAT 2115107 1135

Received By

Time

Date

Time

Date



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

03/02/07 16:54

02/14/07 11:40

Normal

Report Date:

Received Date:

Turn Around:

7021429

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine

17461 Derian Ave, Suite 100

Irvine, CA 92614

Attention: Michele Chamberlin

(2.42) 2.41

Phone: (949) 261-1022

Fax: (949) 260-3297 Client Project: IQB1216

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

Work Order #:

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 02/14/07 11:40 with the Chain of Custody document. The samples were received in good condition, at 3.0 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager



Page 1 of 11





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021429 Project ID: IQB1216 Date Received: 02/14/07 11:40 Date Reported: 03/02/07 16:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQB1216-01	client		7021429-01	Solid	02/12/07 10:20
IQB1216-02	client		7021429-02	Solid	02/12/07 11:03
IQB1216-03	client		7021429-03	Solid	02/12/07 11:33
IQB1216-04	client		7021429-04	Solid	02/12/07 12:05
IQB1216-06	client	MS/MSD	7021429-05	Solid	02/12/07 13:25
IQB1216-07	client		7021429-06	Solid	02/12/07 13:59



Week Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021429 Project ID: IQB1216 Date Received: 02/14/07 11:40 Date Reported: 03/02/07 16:54

QUALITY CONTROL SECTION



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021429 Project ID: IQB1216 Date Received: 02/14/07 11:40 Date Reported: 03/02/07 16:54

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reportin Limit	g Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7B0623 - EPA 7471A										
Blank (W7B0623-BLK1)				Analyzed:	02/22/07					
Mercury, Total	0.00108	0.010	mg/kg wet							J
LCS (W7B0623-BS1)				Analyzed:	02/22/07					
Mercury, Total	0.0827	0.010	mg/kg wet	0.0833		99.3	80-120			
Matrix Spike (W7B0623-MS1)	Sour	ce: 7021327-	-10	Analyzed:	02/22/07					
Mercury, Total	0.146	0.011	mg/kg dry	0.0926	0.052	102	70-130			
Matrix Spike (W7B0623-MS2)	Sour	ce: 7021429	-05	Analyzed:	02/22/07					
Mercury, Total	0.104	0.011	mg/kg dry	0.0908	0.017	95.8	70-130			
Matrix Spike Dup (W7B0623-MSD1)	Sour	ce: 7021327-	-10	Analyzed:	02/22/07					
Mercury, Total	0.148	0.011	mg/kg dry	0.0897	0.052	107	70-130	1.36	25	
Matrix Spike Dup (W7B0623-MSD2)	Sour	ce: 7021429	-05	Analyzed:	02/22/07					
Mercury, Total	0.102	0.011	mg/kg dry	0.0923	0.017	92.1	70-130	1.94	25	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614

Report ID: 7021429 Project ID: IQB1216

Date Received: 02/14/07 11:40 Date Reported: 03/02/07 16:54

Notes and Definitions

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL) ND

dry Sample results reported on a dry weight basis

Relative Percent Difference RPD

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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Customer	Customer Information		Project Information	ation			Proje	info	Project Information	5	a Vent makened man bear	1					
Site:	SSFL		Client Name:	DOE			Collector:	tor:	Shelby Valenzuela	Valen	zuela				Boeing PM:		***************************************
Company:	MWH		Sampling Event:	Group 8	8 Data Gaps-Soil	s-Soil	Contact #:	# #								- Library and an analysis of the second	TO BE A DESCRIPTION OF THE PERSON OF THE PER
Report to:	Lisa Tucker		Project Number:	1891264	*		-	-	<u> </u>	-	Seque	sted A	Requested Analyses	-		Instru	Instructions/TAT
Address:	9444 Farnham Street		Project Manager:	↓	Diana Buchanan								-			Legend:	Legend: Numerical values for
	Suite 300		PM Phone #:	(626) 5	(626) 568-6897	and the state of t										analyse	analyses equate to turn around time in days
	San Diego		Field Contact:													Ī	
	CA		Field Contact #:					M				S				EH-EH	EH - Extract_Hold
	92123		Lab Name:	Test A	Test America, Inc.			etals			Perr	VOCs	T			,	
Email:	boeingedms@ch2m.com		Lab Contact:	Michele	e Chamberlin	<u>.⊆</u>											
	Lisa Tucker@mwhglobal.com	E O	Lab Address:	17461	17461 Derian Ave, Suite 100	, Suite 100											
				Irvine,	Irvine, CA 92606									826			
	A decision of the second of th		Lab Phone:	(949) 2	(949) 261-1022									ne s			
Sample Name	The state of the s		Matrix	Date	Time	No. of Containers	s - Soil	Group 8 	lercury	2 - Soil	- Soil I-WET	l - Soil	I - Soil	oil Full		Com	Comments
FSBS0067S01	2	Soil	8	2/13/2007	8:40	2	10	10 10	10	10	10 10			_			
FSBS0067S02	02	Soil	2	2/13/2007	9:08	2	I	I	I	표	1 5					Hotd a	Hold all analysis except for pH
FSBS0066D01	01	Soil	3	2/13/2007	9:27	2	10	10 10	10	9	10 10						
FSBS0066501	01	Soil	8	2/13/2007	9:27	2	10	10 10	10	, 0t	10 10			_			
FSBS0066502	02	Soil		2/13/2007	9:55	2	I	I	I	击	무			-		Hold a for pH	Hold all analysis except for pH
FSBS0065S01	01	Soil		2/13/2007	10:21	1					£			\vdash			
FSBS0064S01	01	Soil		2/13/2007	10:55	+					9	_		-			
FSBS0064S02	02	Soil		2/13/2007	11:11	1					Ī	\dashv		\dashv		Hold	Hold analysis
FSBS0064S03	03	Soil		2/13/2007	11:20	-			4		I	_		1		Hold a	Hold analysis
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1/2	eners &	2/14/2007	&		{	1.0H1/c	M	1/	10	1/ /		7/	140,	~	Harrist	\approx	12-61-2
Company:		Time: /000/	Company:	742	(1)	Time: /000/	Company		7			Time.	£	රි	Company:		Time: 1945
Comments:													ğ	otracke	Geotracker EDF		7,2
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MWHSV20070213_03 Page: 2 of 2

COC #:

Customer	Customer Information		Project Information	mation			Project Information	formati	5				e delega e e e e e e e e e e e e e e e e e e		
Site:	SSFL		Client Name:	DOE	ш		Collector:	Shelby Valenzuela	Valen	zuela			Boeing PM:		
Company:	MWH		Sampling Event:	+	Group 8 Data Gaps-Soil	ps-Soil	Contact #:							And many to a propagation of the second of t	to be a company of the company of th
Report to:	Lisa Tucker		Project Number:	er: 1891	11264		and the second of the second o			Sedne	sted Ar	Requested Analyses	h	Instructi	nstructions/TAT
Address:	9444 Farnham Street		Project Manager:	+	Diana Buchanan									Legend: Numerica	Legend: Numerical values for
	Suite 300		PM Phone #:	(626)	6) 568-6897									analyses a	analyses equate to turn around time in days
	San Diego		Field Contact:											Ī	
	CA		Field Contact #:	#				M			s			EH - Extract, Hold	ıct Hold
	92123		Lab Name:	Test	st America, Inc.					Per	VOC				
Email:	boeingedms@ch2m.com	F	Lab Contact:	ž	Michele Chamberlin	rlin					s by				
38.44	Lisa.Tucker@mwhglobal.com	al.com	Lab Address:	17,	17461 Derian Ave, Suite 100	e, Suite 100					SW				
				<u>Z</u>	Irvine, CA 92606		by '				32700				
			Lab Phone:	99	(949) 261-1022		1613				CSIN				
Sample Name			Matrix	a tag	Time	No. of Containers	B - Soil	lercury Froup 8	2 - Soil	C - Soil N-WET	1 - Soil	oil Full 		Comments	at .
FSBS0068S01	101	Soil		2/13/2007	12:05	2	I	-	ᇤ	5				Hold all a	Hold all analysis except for pH
FSBS0014S01	101	Soil		2/13/2007	12:45	æ	I	I	H	т 5	표	H		Hold all a	Hold all analysis except for pH
FS830018S01	301	Soil		2/13/2007	13:21	-				5		-			
FSBS0014S02	302	Soil		2/13/2007	13:30	ဟ	I	I	표	5	Ŧ	II.		Hold all a	Hold all analysis except for pH
FSBS0017S01	301	Soil		2/13/2007	13:50	1				9					
FSBS0016S01	301	Soil		2/13/2007	13:57	1				I				Hold analysis	/sis
FSBS0019S01	301	Soil		2/13/2007	14:23	1				I				Hold analysis	ysis
FSBS0020801	301	Soil		2/13/2007	14:28	-				I				Hold analysis	ysis
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Comments:	11				Geotra	Geotracker EDF	
					Data V	Data Validation Package 🗹 Level IV	svel IV



LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 1891264

San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/13/07 Received: 02/14/07 Revised: 03/16/07 12:45

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: Enclosed are complete final results. This report was revised to a an M-HA qualifer for potassium on QC

batch 7B15107.

LABORATORY ID	CLIENT ID	MATRIX
IQB1487-01	FSBS0067S01	Soil
IQB1487-02	FSBS0067S02	Soil
IQB1487-03	FSBS0066D01	Soil
IQB1487-04	FSBS0066S01	Soil
IQB1487-05	FSBS0066S02	Soil
IQB1487-06	FSBS0065S01	Soil
IQB1487-07	FSBS0064S01	Soil
IQB1487-10	FSBS0068S01	Soil
IQB1487-11	FSBS0014S01	Soil



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07

Received: 02/14/07

LABORATORY ID	CLIENT ID	MATRIX
IQB1487-12	FSBS0018S01	Soil
IQB1487-13	FSBS0014S02	Soil
IQB1487-14	FSBS0017S01	Soil

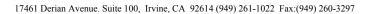
Reviewed By:

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Nicholas Marx

Project Manager





Attention: Lisa J. Tucker

9444 Farnham Street, Suite 300 San Diego, CA 92123 Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07 Received: 02/14/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: FSBS0067S01 (IQB1487-01) - Soi	l				
EPA 9045C	1	02/13/2007 08:40	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0067S02 (IQB1487-02) - Soi	l				
EPA 9045C	1	02/13/2007 09:08	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0066D01 (IQB1487-03) - So	il				
EPA 9045C	1	02/13/2007 09:27	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0066S01 (IQB1487-04) - Soi	l				
EPA 9045C	1	02/13/2007 09:27	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0066S02 (IQB1487-05) - Soi	l				
EPA 9045C	1	02/13/2007 09:55	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0068S01 (IQB1487-10) - Soi	l				
EPA 9045C	1	02/13/2007 12:05	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0014S01 (IQB1487-11) - Soi	l				
EPA 9045C	1	02/13/2007 12:45	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10
Sample ID: FSBS0014S02 (IQB1487-13) - Soi	l				
EPA 9045C	1	02/13/2007 13:30	02/14/2007 19:45	02/15/2007 11:00	02/15/2007 12:10





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

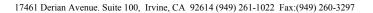
Sampled: 02/13/07

Received: 02/14/07

METHOD BLANK/QC DATA

POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B19093 Extracted: 02/1	9/07										
Blank Analyzed: 02/20/2007 (7B1909	93-BLK1)										
Aroclor 1016	ND	50	15	ug/kg wet							
Aroclor 1221	ND	50	15	ug/kg wet							
Aroclor 1232	ND	50	10	ug/kg wet							
Aroclor 1242	ND	50	10	ug/kg wet							
Aroclor 1248	ND	50	10	ug/kg wet							
Aroclor 1254	ND	50	10	ug/kg wet							
Aroclor 1260	ND	50	10	ug/kg wet							
Surrogate: Decachlorobiphenyl	39.1			ug/kg wet	33.3		117	45-120			
LCS Analyzed: 02/20/2007 (7B19093	3-BS2)										
Aroclor 1016	240	50	15	ug/kg wet	267		90	60-115			
Aroclor 1260	256	50	10	ug/kg wet	267		96	60-115			
Surrogate: Decachlorobiphenyl	39.1			ug/kg wet	33.3		117	45-120			
Matrix Spike Analyzed: 02/20/2007 ((7B19093-MS2)				Sou	ırce: IQB	1140-15				
Aroclor 1016	344	50	15	ug/kg wet	266	ND	129	45-120			M1
Aroclor 1260	219	50	10	ug/kg wet	266	ND	82	45-120			
Surrogate: Decachlorobiphenyl	17.4			ug/kg wet	33.2		52	45-120			
Matrix Spike Dup Analyzed: 02/20/2	2007 (7B19093-M	SD2)			Sou	ırce: IQB	1140-15				
Aroclor 1016	290	50	15	ug/kg wet	266	ND	109	45-120	17	30	
Aroclor 1260	211	50	10	ug/kg wet	266	ND	79	45-120	4	30	
Surrogate: Decachlorobiphenyl	19.5			ug/kg wet	33.2		59	45-120			





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07

Received: 02/14/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 7B15106 Extracted: 02/15/07	7										
	 "										
Blank Analyzed: 02/15/2007 (7B15106-B	,										
Antimony	ND	1.0	0.030								
Arsenic	ND	0.50	0.25	mg/kg wet							
Barium	ND	0.50	0.080	mg/kg wet							
Beryllium	ND	0.30	0.040	mg/kg wet							
Cadmium	ND	0.50	0.025	mg/kg wet							
Chromium	ND	1.0	0.35	mg/kg wet							
Cobalt	ND	0.50	0.080	mg/kg wet							
Copper	ND	1.0	0.20	mg/kg wet							
Lead	ND	0.50	0.050	mg/kg wet							
Molybdenum	ND	1.0	0.10	mg/kg wet							
Nickel	ND	1.0	0.45	mg/kg wet							
Selenium	ND	1.0	0.20	mg/kg wet							
Silver	ND	0.50	0.050	mg/kg wet							
Thallium	ND	0.50	0.10	mg/kg wet							
Vanadium	ND	1.0	0.40	mg/kg wet							
Zinc	ND	10	1.3	mg/kg wet							
LCS Analyzed: 02/15/2007 (7B15106-BS	51)										
Antimony	44.9	1.0	0.030	mg/kg wet	50.0		90	80-120			
Arsenic	44.3	0.50	0.25	mg/kg wet	50.0		89	80-120			
Barium	44.7	0.50	0.080	mg/kg wet	50.0		89	80-120			
Beryllium	50.1	0.30	0.040	mg/kg wet	50.0		100	80-120			
Cadmium	44.3	0.50	0.025	mg/kg wet	50.0		89	80-120			
Chromium	47.0	1.0	0.35	mg/kg wet	50.0		94	80-120			
Cobalt	47.0	0.50	0.080	mg/kg wet	50.0		94	80-120			
Copper	47.0	1.0	0.20	mg/kg wet	50.0		94	80-120			
Lead	44.4	0.50	0.050	mg/kg wet	50.0		89	80-120			
Molybdenum	45.5	1.0	0.10	mg/kg wet	50.0		91	80-120			
Nickel	47.3	1.0	0.45	mg/kg wet	50.0		95	80-120			
Selenium	41.6	1.0	0.20	mg/kg wet			83	80-120			
Silver	28.1	0.50	0.050	mg/kg wet			112	80-120			
Thallium	44.3	0.50	0.10	mg/kg wet			89	80-120			
Vanadium	47.0	1.0	0.40	mg/kg wet			94	80-120			
Zinc	40.9	10	1.3	mg/kg wet			82	80-120			
-				88							

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Project Manager



9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07 Received: 02/14/07

METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B15106 Extracted: 02/15/07											
	_										
Matrix Spike Analyzed: 02/15/2007 (7B1	5106-MS1)				Sou	rce: IQB	1487-01				
Antimony	14.6	1.1	0.034	mg/kg dry	57.3	0.11	25	75-125			M2
Arsenic	45.9	0.57	0.29	mg/kg dry	57.3	2.5	76	75-125			
Barium	132	0.57	0.092	mg/kg dry	57.3	93	68	75-125			M2
Beryllium	48.5	0.34	0.046	mg/kg dry	57.3	0.55	84	75-125			
Cadmium	44.6	0.57	0.029	mg/kg dry	57.3	0.23	77	75-125			
Chromium	65.2	1.1	0.40	mg/kg dry	57.3	19	81	75-125			
Cobalt	50.5	0.57	0.092	mg/kg dry	57.3	5.5	79	75-125			
Copper	49.7	1.1	0.23	mg/kg dry	57.3	8.9	71	75-125			M2
Lead	52.4	0.57	0.057	mg/kg dry	57.3	4.5	84	75-125			
Molybdenum	45.8	1.1	0.11	mg/kg dry	57.3	0.56	79	75-125			
Nickel	55.2	1.1	0.52	mg/kg dry	57.3	11	77	75-125			
Selenium	41.2	1.1	0.23	mg/kg dry	57.3	0.30	71	75-125			M2
Silver	27.6	0.57	0.057	mg/kg dry	28.6	ND	97	75-125			
Thallium	48.8	0.57	0.11	mg/kg dry	57.3	0.27	85	75-125			
Vanadium	90.0	1.1	0.46	mg/kg dry	57.3	34	98	75-125			
Zinc	76.3	11	1.5	mg/kg dry	57.3	48	49	75-125			M2
Matrix Spike Dup Analyzed: 02/15/2007	(7B15106-M	SD1)			Sou	rce: IQB	1487-01				
Antimony	15.7	1.1	0.034	mg/kg dry	57.3	0.11	27	75-125	7	20	M2
Arsenic	45.3	0.57	0.29	mg/kg dry	57.3	2.5	75	75-125	1	20	
Barium	133	0.57	0.092	mg/kg dry	57.3	93	70	75-125	1	20	M2
Beryllium	48.1	0.34	0.046	mg/kg dry	57.3	0.55	83	75-125	1	20	
Cadmium	44.9	0.57	0.029	mg/kg dry	57.3	0.23	78	75-125	1	20	
Chromium	64.2	1.1	0.40	mg/kg dry	57.3	19	79	75-125	2	20	
Cobalt	50.6	0.57	0.092	mg/kg dry	57.3	5.5	79	75-125	0	20	
Copper	49.4	1.1	0.23	mg/kg dry	57.3	8.9	71	75-125	1	20	M2
Lead	52.5	0.57	0.057	mg/kg dry	57.3	4.5	84	75-125	0	20	
Molybdenum	45.5	1.1	0.11	mg/kg dry	57.3	0.56	78	75-125	1	20	
Nickel	55.0	1.1	0.52	mg/kg dry	57.3	11	77	75-125	0	20	
Selenium	41.4	1.1	0.23	mg/kg dry	57.3	0.30	72	75-125	1	20	M2
Silver	27.7	0.57	0.057	mg/kg dry	28.6	ND	97	75-125	0	20	
Thallium	49.3	0.57	0.11	mg/kg dry	57.3	0.27	86	75-125	1	20	
Vanadium	89.0	1.1	0.46	mg/kg dry	57.3	34	96	75-125	1	20	
Zinc	76.8	11	1.5	mg/kg dry	57.3	48	50	75-125	1	20	M2

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Project Manager



9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07

Received: 02/14/07

METHOD BLANK/QC DATA

METALS

	B 1	Reporting	LEDI	T I •	Spike	Source	A/DEG	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B15107 Extracted: 02/15/07	_										
Blank Analyzed: 02/15/2007 (7B15107-B	LK1)										
Aluminum	ND	10	5.0	mg/kg wet							
Boron	ND	5.0	1.0	mg/kg wet							
Lithium	ND	6.3	3.8	mg/kg wet							
Potassium	34.2	50	19	mg/kg wet							J
Sodium	ND	50	24	mg/kg wet							
LCS Analyzed: 02/15/2007 (7B15107-BS	1)										
Aluminum	43.1	10	5.0	mg/kg wet	50.0		86	80-120			
Boron	46.6	5.0	1.0	mg/kg wet	50.0		93	80-120			
Lithium	47.6	6.3	3.8	mg/kg wet	50.0		95	80-120			
Potassium	510	50	19	mg/kg wet	500		102	80-120			
Sodium	485	50	24	mg/kg wet	500		97	80-120			
Matrix Spike Analyzed: 02/15/2007 (7B1	5107-MS1)				Sou	rce: IQB	1487-01				
Aluminum	16700	11	5.7	mg/kg dry	57.3	14000	4712	75-125			MHA
Boron	56.1	5.7	1.1	mg/kg dry	57.3	4.0	91	75-125			
Lithium	75.1	7.2	4.4	mg/kg dry	57.3	23	91	75-125			
Potassium	4210	57	22	mg/kg dry	573	3500	124	75-125			MHA
Sodium	622	57	27	mg/kg dry	573	73	96	75-125			
Matrix Spike Dup Analyzed: 02/15/2007	(7B15107-M	SD1)			Sou	rce: IQB	1487-01				
Aluminum	16000	11	5.7	mg/kg dry	57.3	14000	3490	75-125	4	20	MHA
Boron	55.6	5.7	1.1	mg/kg dry	57.3	4.0	90	75-125	1	20	
Lithium	73.3	7.2	4.4	mg/kg dry	57.3	23	88	75-125	2	20	
Potassium	3960	57	22	mg/kg dry	573	3500	80	75-125	6	20	MHA
Sodium	583	57	27	mg/kg dry	573	73	89	75-125	6	20	





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07 Received: 02/14/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B16119 Extracted: 02/16/07	_										
Blank Analyzed: 02/16/2007 (7B16119-B	LK1)										
Zirconium	ND	25	1.5	mg/kg wet							
LCS Analyzed: 02/16/2007 (7B16119-BS	1)										
Zirconium	47.8	25	1.5	mg/kg wet	50.0		96	80-120			
Matrix Spike Analyzed: 02/16/2007 (7B1	6119-MS1)				Sou	rce: IQB	1216-06				
Zirconium	29.9	28	1.7	mg/kg dry	56.3	1.7	50	75-125			M2
Matrix Spike Dup Analyzed: 02/16/2007	(7B16119-M	SD1)			Sou	rce: IQB	1216-06				
Zirconium	29.1	28	1.7	mg/kg dry	56.3	1.7	49	75-125	3	20	M2



9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07

Received: 02/14/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B15100 Extracted: 02/15/07	_										
Duplicate Analyzed: 02/15/2007 (7B1510	0-DUP1)				Sou	rce: IQB	1455-01				
рН	7.09	NA	0.00	pH Units		7.05			1	5	
Duplicate Analyzed: 02/15/2007 (7B1510	0-DUP2)				Sou	rce: IQB	1455-14				
pH	8.46	NA	0.00	pH Units		8.43			0	5	
Batch: 7B16117 Extracted: 02/16/07											
Daten. /D1011/ Extracted. 02/10/07	_										
Blank Analyzed: 02/19/2007 (7B16117-B	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 02/19/2007 (7B1611	7-DUP1)				Sou	rce: IQB	1519-01				
Percent Solids	18.0	0.10	0.10	%	~~~	18			0	20	
Dunlingto Analyzed, 02/10/2007 (7D1611)	7 DHD2)				Com	was IOD	1510.02				
Duplicate Analyzed: 02/19/2007 (7B1611) Percent Solids	19.9	0.10	0.10	%	Sou	rce: IQB	1519-02		1	20	
Percent Solids	19.9	0.10	0.10	%0		20			1	20	
Batch: 7B22090 Extracted: 02/22/07	_										
D	F 774\										
Blank Analyzed: 02/22/2007 (7B22090-B	,			_							
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/22/2007 (7B22090-BS	1)										
Perchlorate	48.4	4.0	0.80	ug/l	50.0		97	85-115			
Matrix Spike Analyzed: 02/22/2007 (7B2	2090-MS1)				Sou	rce: IQB	1487-06				
Perchlorate	48.1	4.0	0.80	ug/l	50.0	ND	96	80-120			



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07

Received: 02/14/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		KPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B22090 Extracted: 02/22/07	_										
Matrix Spike Dup Analyzed: 02/23/2007	(7B22090-M	SD1)			Sou	rce: IQB14	487-06				
Perchlorate	48.6	4.0	0.80	ug/l	50.0	ND	97	80-120	1	20	



MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 San Diego, CA 92123 1891264 Sampled: 02/13/07 Report Number: IQB1487 Received: 02/14/07

Attention: Lisa J. Tucker

DATA QUALIFIERS AND DEFINITIONS

A-01 Sample result might be biased high due to coelution of Aroclors 1254 and 1260.

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.

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

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

RPD Relative Percent Difference



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1487

Sampled: 02/13/07

Received: 02/14/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A
EPA 314.0 DI-RFI	Soil		
EPA 3545/8081A	Soil	X	X
EPA 3545/8082	Soil	X	X
EPA 6010B	Soil	X	X
EPA 6020	Soil	X	X
EPA 8082	Soil	X	X
EPA 9045C	Soil	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

Subcontracted Laboratories

Paradigm Labs - SUB

5500 Business Dr. - Wilmington, NC 28405

Analysis Performed: 1613-Dioxin-HR OUT

Samples: IQB1487-01, IQB1487-03, IQB1487-04

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Analysis Performed: Mercury-7471 (dry wt)

Samples: IQB1487-01, IQB1487-03, IQB1487-04



Laboratory Results

Ms. Michele Chamberlin Test America 17461 Derian Ave. Suite 100 Irvine CA 92614

Phone:

949-261-1022

Fax:

Dear Ms. Chamberlin:

Enclosed is a full data package containing the final results for samples received by Paradigm Analytical Labs, Inc. on February 16, 2007 under your project name "IQB1487". The samples were analyzed by Method 1613 following Paradigm's Standard Operating Procedures and are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards.

Number of Samples Received:

IQB1487

Your Project Reference:
PAL Project Number:

G579-225

We appreciate your business and look forward to working with you again. Please contact me at 910-350-1903 if you have questions or need additional technical support.

Sincerely,

Christopher K. Cornwell Assistant Director

Date



Case Narrative SGS Project: **G579-225** Project Name: **IBQ1487**

For Method: 1613

• The submitted samples were accepted into the lab on February 16th, 2007 and extracted on February 19th, 2007 by method 3540C. The sample extracts and associated QC extracts were then processed through clean-up by method 3630/3620 and analyzed by HRGC/HRMS for methods 1613.

Craig R. Tronzo
Data Validation/QA Officer

Secondary Review

W. Mike Larkins Technical Director Date

Heather Patterson

Director

MAID

Date

SGS

Table of Contents

Section 1: Cover Letter/Case Narrative

Contains the Table of Contents, a project narrative, the client and PAL project identifiers, the number and type of samples, the methodology used to process the samples, and a summary table of sample results. A listing of current certifications by state, a table of abbreviations and qualifiers and the Toxic Equivalent Factors (TEF) are also supplied.

Section 2: Project Information

Contains the chain-of-custody(s), internal chain-of-custody(s) if applicable, sample login summary, sample receipt checklist, and any other project/client specific information.

Section 3: Sample Analytical Results

Contains results for client samples. Sample results include two pages of summarized analytical data and the associated raw data. The raw data includes a quantitation report from the instrumentation used that lists, ion areas, ratios, retention times, concentrations, and signal-to-noise ratios. It also has the selected ion current profiles (SICPs) for all homolog groups and any manual integrations.

Section 4: Quality Control Analytical Results

Contains results for each analytical workgroup associated with the submitted samples. A workgroup consists of the Lab Method Blank (LMB) and the Ongoing Precision and Recovery sample (OPR). All sample preparation data, including dry weight determinations, extraction logs, clean-up logs and observation notes are also documented. Any other supporting QC data will be documented here upon client request.

Section 5: Initial Calibration

Contains a table summarizing calibration data such as relative response factors, concentrations, and percent relative standard deviation. This section also contains related daily instrument QC information: GC performance data, mass resolution check, windows defining mix, and SICPs for all homolog groups and any manual integrations as well as the injection prep and instrument run logs.

Section 6: Continuing Calibration Data

Contains all daily instrument quality control information. This includes mass resolution checks, a table summarizing the window defining peaks, SICPs for the first and last eluters for each homolog group, SICPs documenting GC performance, a summary quantitation report showing RRFs for the Ccal and Ical, and SICPs for all homolog groups and any manual integrations, injection prep and instrumentation runlogs.

SGS

List of Oualifiers

- B Analyte was detected in the Lab Method Blank at a level above the Reporting Limit.
- EDL "Estimated Detection Limit"

EMPC "Estimated Maximum Possible Concentration"

- ppt Parts-per-trillion (pg/g; ng/L)
- V Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit.
- # Outside quality control limits
- * See case narrative

An average uncertainty of 30% can be routinely achieved as concluded from the evaluation of HRGC-HRMS standard operating procedures. The following flags warn the data user of situations where the uncertainty may be greater than stated.

- A Amount detected is less than the Lower Calibration Limit.
- J Amount detected is between the Method Detection Limit and the Lower Calibration Limit.
- E Amount detected is greater than the Upper Calibration Limit.
- S The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s).
- Q Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s).
- I Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s).
- DPE Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s).



Toxic Equivalency Factors

<u>Analyte</u>	WHO* 1998	WHO* 2005	International-89	MADEP ⁺
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	1	1	0.5	0.5
1,2,3,4,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.01	0.1
OCDD	0.0001	0.0003	0.001	0.001
2,3,7,8-TCDF	0.1	0.1	0.1	0.1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.5
2,3,4,7,8-PeCDF	0.5	0.3	0.5	0.5
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.1
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.1
OCDF	0.0001	0.0003	0.001	0.001

^{*} World Health Organization

* Massachusetts Department of Environmental Protection

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

Analytical Data Summary Sheet									
Analyte	Amount	EDL	Adj. RL	RT	Ratio	Qualifier			
	(pg/g)	(pg/g)	(pg/g)	(min.)					
2,3,7,8-TCDD	ND	0.109	1.00						
1,2,3,7,8-PeCDD	ND	0.109	5.00						
1,2,3,4,7,8-HxCDD	ND	0.133	5.00						
1,2,3,6,7,8-HxCDD	ND	0.133	5.00						
1,2,3,7,8,9-HxCDD	ND	0.132	5.00			İ			
1,2,3,4,6,7,8-HpCDD	ND	0.202	5.00						
OCDD	0.734	0.358	10.0	44:08	0.88	A			
2,3,7,8-TCDF	ND	0.128	1.00						
1,2,3,7,8-PeCDF	ND	0.0690	5.00						
2,3,4,7,8-PeCDF	0.0880	0.0710	5.00	33:51	1.61	Α			
1,2,3,4,7,8-HxCDF	ND	0.0976	5.00						
1,2,3,6,7,8-HxCDF	ND	0.0914	5.00						
2,3,4,6,7,8-HxCDF	ND	0.0982	5.00						
1,2,3,7,8,9-HxCDF	ND	0.130	5.00						
1,2,3,4,6,7,8-HpCDF	ND	0.120	5.00						
1,2,3,4,7,8,9-HpCDF	ND	0.190	5.00			1			
OCDF	ND	0.275	10.0						
Total TCDDs	ND	0.109	1.00						
Total PeCDDs	ND	0.109	5.00						
Total HxCDDs	ND	0.133	5.00			1			
Total HpCDDs	ND	0.202	5.00						
Total TCDFs	ND	0.128	1.00						
Total PeCDFs	0.0880	0.0700	5.00			A			
Total HxCDFs	ND	0.103	5.00						
Total HpCDFs	ND	0.151	5.00			<u> </u>			
WHO-2005 TEQ (ND=0)	0.0266								
WHO-2005 TEQ (ND=1/2)	0.346								

		Sample Information	<u>1</u>
		Report Basis:	Dry Weight
		Matrix:	Soil
		Weight / Volume:	10.00 Grams
		Solids / Lipids:	100 %
		Original pH:	NA
Laboratory Informati	<u>on</u>	Batch ID:	WG14123
Sample ID:	LMB14123	Filename:	a22feb07a-4
		Retchk:	a22feb07a-1
		Begin ConCal:	a22feb07a-1
Extraction Date:	19-Feb-07		
Analysis Date:	22-Feb-07 18:4	Initial Cal:	m1613-071006e

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

	Anai	ytical Data Si	ummary Sne	et		
Labeled	Expected	Measured	Percent	RT	Ratio	Qualifier
Standard	Amount	Amount	Recovery			
	(ng)	(ng)	(%)	(min.)		ļ
Extraction Standards						
¹³ C ₁₂ -2,3,7,8-TCDD	2.00	1.82	91.0	31:09	0.78	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	2.00	1.77	88.3	34:02	1.59	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	2.00	1.80	89.9	36:36	1.34	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	2.00	1.83	91.3	36:41	1.19	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	2.00	1.70	84.8	39:57	1.06	
¹³ C ₁₂ -OCDD	4.00	3.07	76.8	44:07	0.90	
¹³ C ₁₂ -2,3,7,8-TCDF	2.00	1.86	93.0	30:25	0.79	
¹³ C ₁₂ -1,2,3,7,8-PeCDF	2.00	1.81	90.7	33:14	1.58	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	2.00	1.76	88.2	33:51	1.59	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	2.00	1.85	92.6	35:53	0.52	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	2.00	1.91	95.4	35:60	0.52	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	2.00	1.87	93.6	36:28	0.53	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	2.00	1.75	87.4	37:14	0.53	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	2.00	1.70	84.8	38:42	0.45	
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	2.00	1.64	82.2	40:36	0.45	
Cleanup Standards						
³⁷ Cl ₄ -2,3,7,8-TCDD	0.400	0.363	90.8	31:10	_	
Injection Standards						
¹³ C ₁₂ -1,2,3,4-TCDD	2.00			30:37	0.78	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	2.00			36:55	1.25	

		Sample Information		
		Report Basis:	Dry Weig	ght
		Matrix:	Soil	
		Weight / Volume:	10.00	Grams
		Solids / Lipids:	100	%
		Original pH:	NA	
<u>l</u>		Batch ID:	WG1412	3
LMB14123		Filename:	a22feb07	a-4
		Retchk:	a22feb07	a-1
		Begin ConCal:	a22feb07	a-1
19-Feb-07				
22-Feb-07	18:49	Initial Cal:	m1613-0	71006e
		Reviewe	ed by: HMI	?
			Date: 02 N	Tai D7
	19-Feb-07	LMB14123	Report Basis: Matrix: Weight / Volume: Solids / Lipids: Original pH: Batch ID: LMB14123 Filename: Retchk: Begin ConCal: 19-Feb-07 22-Feb-07 18:49 Initial Cal:	Report Basis: Dry Weight Matrix: Soil Weight / Volume: 10.00 Solids / Lipids: 100 Original pH : NA Batch ID: WG1412

Analytical Results

for Ongoing Precision Result (OPR)

Analyte	Spiked	AMT	REC	Range	e pg/ul	Flag
	pg/ul	pg/ul	%	Lower	Upper	
2,3,7,8-TCDD	10.0	9.56	95.6	6.70	15.8	
1,2,3,7,8-PeCDD	50.0	48.6	97.2	35.0	71.0	
1,2,3,4,7,8-HxCDD	50.0	50.2	100	35.0	82.0	
1,2,3,6,7,8-HxCDD	50.0	51.1	102	38.0	67.0	
1,2,3,7,8,9-HxCDD	50.0	49.8	99.5	32.0	81.0	
1,2,3,4,6,7,8-HpCDD	50.0	49.2	98.5	35.0	70.0	
OCDD	100	96.6	96.6	78.0	144	E
2,3,7,8-TCDF	10.0	9.16	91.6	7.50	15.8	
1,2,3,7,8-PeCDF	50.0	49.4	98.8	40.0	67.0	
2,3,4,7,8-PeCDF	50.0	49.5	98.9	34.0	80.0	
1,2,3,4,7,8-HxCDF	50.0	49.2	98.4	36.0	67.0	
1,2,3,6,7,8-HxCDF	50.0	49.8	99.7	42.0	65.0	
2,3,4,6,7,8-HxCDF	50.0	49.4	98.9	35.0	78.0	
1,2,3,7,8,9-HxCDF	50.0	49.2	98.5	39.0	65.0	
1,2,3,4,6,7,8-HpCDF	50.0	49.5	98.9	41.0	61.0	
1,2,3,4,7,8,9-HpCDF	50.0	48.1	96.1	39.0	69.0	
OCDF	100	103	103	63.0	170	

= Outside range limits

* = Ion Ratio Out

QC Information		File Information	
OPR Lab ID:	OPR14123	OPR Filename:	a22feb07a-2
Extraction Date:	19-Feb-07	Retchk:	a22feb07a-1
Analysis Date:	22-Feb-07	Begin ConCal:	a22feb07a-1
Method:	1613		
		Initial Cal:	m1613-071006e
Sample Information			
Matrix:	Soil		

Analytical Results

for

Ongoing Precision Result (OPR)

Labeled	Spiked	AMT	REC	Range	e pg/ul	Flag
Standard	pg/ul	pg/ul	%	Lower	Upper	
Extraction Standards	. = -					
¹³ C ₁₂ -2,3,7,8-TCDD	100	91.0	91.0	20.0	175	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	100	86.8	86.8	21.0	227	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	100	91.5	91.5	21.0	193	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	100	89.1	89.1	25.0	163	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	100	86.9	86.9	26.0	166	•
¹³ C ₁₂ -OCDD	200	159	79.7	26.0	397	
¹³ C ₁₂ -2,3,7,8-TCDF	100	93.9	93.9	22.0	152	
¹³ C ₁₂ -1,2,3,7,8-PeCDF	100	90.9	90.9	21.0	192	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	100	87.1	87.1	13.0	328	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	100	89.7	89.7	19.0	202	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	100	90.4	90.4	21.0	159	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	100	93.1	93.1	22.0	176	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	100	90.2	90.2	17.0	205	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	100	88.1	88.1	21.0	158	
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	100	89.0	89.0	20.0	186	
Cleanup Standards						
³⁷ C ₁₄ -2,3,7,8-TCDD	20.0	18.8	93.8	6.20	38.2	

Form Version:[OPRv3.474]1613

QC Information

OPR Lab ID:

OPR14123

Extraction Date:

19-Feb-07

Analysis Date:

22-Feb-07

Method: 1613 File Information

OPR Filename:

a22feb07a-2

Retchk:

a22feb07a-1

Begin ConCal:

a22feb07a-1

Initial Cal:

m1613-071006e

Sample Information

Matrix:

Soil

Reviewed by:

Date Reviewed: 2/37/27



SUBCONTRACT ORDER - PROJECT # IQB1487 (7579.225

RY:	
Paradigm La 5500 Busine Wilmington Phone :(910 Fax: (910) 3	ess Dr. , NC 28405) 350-1903 550-1557 tion: California
c due date is requested => Due Date:	Initials:
	Comments
0	Sub=Paradigm,17 cngnrs,dry wt(soil), 2 wkTAT,Jflag Sub to Paradigm, TAT=2 weeks, EDD=Boeing, CD
7	Sub=Paradigm,17 engnrs,dry wt(soil), 2 wkTAT,Jflag Sub to Paradigm, TAT=2 weeks, EDD=Boeing, CD
7	Sub=Paradigm,17 cngnrs,dry wt(soil), 2 wkTAT,Jflag Sub to Paradigm, TAT=2 weeks, EDD=Boeing, CD
SAMPLE INTEGRITY: Sample labels/COC agree:	1/ 2 . 62
	Wilmington Phone:(910) Fax: (910) 3 Project Locat Goeing EDD, Report to MDL w/ J flags, report c due date is requested => Due Date: Died: 02/13/07 08:40 Oled: 02/13/07 09:27 7 SAMPLE INTEGRITY:

Released By Date Time Received By Date Time



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine

17461 Derian Ave, Suite 100

Irvine, CA 92614

Attention: Michele Chamberlin

Phone: (949) 261-1022

Fax: (949) 260-3297

Report Date: 03/02/07 16:55

Received Date: 02/15/07 10:10

Turn Around: Normal

Work Order #: 7021518

Client Project: IQB1487

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 02/15/07 10:10 with the Chain of Custody document. The samples were received in good condition, at 5.7 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager



Page 1 of 8





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021518 Project ID: IQB1487 Date Received: 02/15/07 10:10 Date Reported: 03/02/07 16:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQB1487-01	client		7021518-01	Solid	02/13/07 08:40
IQB1487-03	client		7021518-02	Solid	02/13/07 09:27
IQB1487-04	client		7021518-03	Solid	02/13/07 09:27



Week Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021518 Project ID: IQB1487 Date Received: 02/15/07 10:10 Date Reported: 03/02/07 16:55

QUALITY CONTROL SECTION



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021518 Project ID: IQB1487 Date Received: 02/15/07 10:10 Date Reported: 03/02/07 16:55

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	g Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7B0623 - EPA 7471A										
Blank (W7B0623-BLK1)				Analyzed:	02/22/07					
Mercury, Total	0.00108	0.010	mg/kg wet							J
LCS (W7B0623-BS1)				Analyzed:	02/22/07					
Mercury, Total	0.0827	0.010	mg/kg wet	0.0833		99.3	80-120			
Matrix Spike (W7B0623-MS1)	Sour	ce: 7021327-	10	Analyzed:	02/22/07					
Mercury, Total	0.146	0.011	mg/kg dry	0.0926	0.052	102	70-130			
Matrix Spike (W7B0623-MS2)	Sour	ce: 7021429-	05	Analyzed:	02/22/07					
Mercury, Total	0.104	0.011	mg/kg dry	0.0908	0.017	95.8	70-130			
Matrix Spike Dup (W7B0623-MSD1)	Sour	ce: 7021327-	10	Analyzed:	02/22/07					
Mercury, Total	0.148	0.011	mg/kg dry	0.0897	0.052	107	70-130	1.36	25	
Matrix Spike Dup (W7B0623-MSD2)	Sour	ce: 7021429-	05	Analyzed:	02/22/07					
Mercury, Total	0.102	0.011	mg/kg dry	0.0923	0.017	92.1	70-130	1.94	25	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7021518 Project ID: IQB1487

Date Received: 02/15/07 10:10 Date Reported: 03/02/07 16:55

Notes and Definitions

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

ND NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

CHAIN OF CUSTODY RECORD

MWHSV20070214_01 # 2000 ******

Page: 1 of 2

Custome	Customer Information	Ę	Project Information	tion		Project II	Project Information				
Site:	SSFL	5	Client Name:	DOE		Collector:	Shelby Valenzuela		Boeing PM:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Company:	MWH	Sa	Sampling Event:	Group 8	Group 8 Data Gaps-Soil	Contact #:				Audie mysgenicken yn y y oede ar de saeddal en bestellinger in bestellinger in y de bestellinger in de beste	
Report to:	Lisa Tucker	ď	Project Number:	1891264			Requ	Requested Analyses		Instructions/TAT	5
Address:	9444 Farnham Street	ď	Project Manager:	Diana Buchanan	chanan					Legend: Numerical values for	for
	Suite 300	2	PM Phone #:	(626) 568-6897	-6897					analyses equate to turn	o turn
	San Diego	E	Field Contact:								<u>,</u>
	CA	iğ.	Field Contact #:							EH - Extract_Hold	
	92123	ב	Lab Name:	Test Ame	Test America, Inc.	 	Pe				
Email:	boeingedms@ch2m.com	2	Lab Contact:	Michele (Michele Chamberlin	Mei					
	Lisa.Tucker@mwhglobal.com		Lab Address:	17461 De	Derian Ave, Suite 100	als 6					
				Irvine, C	CA 92606						
		2	Lab Phone:	(949) 261-1022	-1022						
Sample Name	BITTE	₹	Matrix	Date	No. of Time Containers	Arsenic s - Soil	C - Soil			Comments	
FSBS0021S01	101	Soil	2/1	2/14/2007	9:14		I			Hold analysis	
FSBS0022S01	301	Soil	2/1	2/14/2007	9:20		10				
FSBS0022S02	302	Soil	2/1	2/14/2007	9:27		I			Hold analysis	
FSBS0023S01	301	Soil	2/1	2/14/2007	9:29 1		10				
FSBS0024S01	301	Soil	2/1	2/14/2007	9:35 1		I			Hold analysis	Ì
FSBS0024S02	302	Soil	2/2	2/14/2007	9:40		I			Hold analysis	
FSBS0025S01	301	Soil	2/.	2/14/2007	9:49		I			Hold analysis	
FSBS0025S02	302	Soil	2/.	2/14/2007	9:58 1		ı			Hold analysis	
FSBS0061S01	301	Soil	2/.	2/14/2007	10:35		10				
FSBS0061S02	302	Soil	2/.	2/14/2007	10:47 1		I			Hold analysis	
1. Reling	1. Relinquished by: Date:	ä	2. Received by:	\ :	Date:	3. Relinqu	3. Relinquished by:	Date:	4. Received by:	Date:	
V	2115 Johnson	2/15/2007	The K		3/18/0	No.		2/15/17	Brahmett.	1-2	1051-2
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 								Data	Data Validation Package	✓ Level IV	

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MWHSV20070214_01

COC #:

2 of 2

Page:

Legend:

Numerical values for
analyses equate to turn
around time in days Hold all analysis except pH Instructions/TAT H - Hold EH - Extract_Hold Hold analysis Comments Hold analysis Hold analysis **Boeing PM:** Requested Analyses Shelby Valenzuela Project Information 5 pH by SW9045C - Soil 2 2 I Perchlorate 314 Soil DI-WET Collector: Contact #: Metals 6020 Soil Arsenic I % Solids - Soil No. of Containers 17461 Derian Ave, Suite 100 Group 8 Data Gaps-Soil Michele Chamberlin Test America, Inc. Irvine, CA 92606 Project Manager: Diana Buchanan 13:15 (949) 261-1022 13:50 (626) 568-6897 13:22 13:27 13:31 13:36 1891264 2/14/2007 DOE 2/14/2007 2/14/2007 2/14/2007 2/14/2007 2/14/2007 Date Project Information Sampling Event: Project Number: Field Contact #: Field Contact: Client Name: Lab Address: PM Phone #: Lab Contact: Lab Phone: Lab Name: Matrix Soil Soil Soil Soil Soff Soil Lisa Tucker@mwhglobal.com boeingedms@ch2m.com 9444 Farnham Street Customer Information Report to: Lisa Tucker San Diego Suite 300 92123 SSFL Company: MWH Ą Sample Name FSBS0029S01 FSBS0063S01 FSBS0027S01 FSBS0028S01 FSBS0030S01 FSBS0026S01 Address: Email:

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished byz	Date:	4. Received by:	Date:
est foras	2/15/2007	A South	70/5/67	24 Com. C	SISO	Haraf &	1051-2
Company:	Time:	Company	Time: /++/	Company:	Time:	Company:	Time ; 0
Comments:	7				Geotr	Geotracker EDF	
					Data	Data Validation Package V Level IV	

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14:10

2/14/2007

Soil

FSBS0015S01

Data Validation Package



LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - SSPN

1891263

9444 Farnham Street, Suite 300 San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/14/07 Received: 02/15/07

Revised: 03/12/07 12:22

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

ADDITIONAL

INFORMATION: Enclosed are complete final results. There were two results reported for Perchlorate on sample IQB1684-02

due to matrix inferences and both of these results can be considered estimates only. The report was revised

to correct the sample ID's for IQB1684-16 and IQB1684-17.

LABORATORY ID	CLIENT ID	MATRIX
IQB1684-02	FSBS0022S01	Soil
IQB1684-04	FSBS0023S01	Soil
IQB1684-09	FSBS0061S01	Soil
IQB1684-12	FSBS0027S01	Soil
IQB1684-14	FSBS0028S01	Soil
IQB1684-16	FSBS0063S01	Soil
IQB1684-17	FSBS0015S01	Soil

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin

Michele Chamberdin

Project Manager



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300 San Diego, CA 92123

Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - SSPN

1891263

Report Number: IQB1684

Sampled: 02/14/07

Received: 02/15/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: FSBS0063S01 (IQB1684-16) - Soi	il				
EPA 9045C	1	02/14/2007 13:50	02/15/2007 19:15	02/16/2007 09:50	02/16/2007 11:30
Sample ID: FSBS0015S01 (IQB1684-17) - Soi	il				
EPA 9045C	1	02/14/2007 14:10	02/15/2007 19:15	02/16/2007 09:50	02/16/2007 11:30





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - SSPN

1891263

Report Number: IQB1684

Sampled: 02/14/07

Received: 02/15/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B22114 Extracted: 02/22/07	<u>'</u>										
Blank Analyzed: 02/22/2007 (7B22114-B	LK1)										
Arsenic	ND	0.50	0.25	mg/kg wet							
LCS Analyzed: 02/22/2007 (7B22114-BS	1)										
Arsenic	42.2	0.50	0.25	mg/kg wet	50.0		84	80-120			
Matrix Spike Analyzed: 02/22/2007 (7B2	2114-MS1)				Sou	rce: IQB	2309-02				
Arsenic	40.4	0.54	0.27	mg/kg dry	53.6	1.9	72	75-125			M2
Matrix Spike Dup Analyzed: 02/22/2007	(7B22114-MS	SD1)			Sou	rce: IQB	2309-02				
Arsenic	42.5	0.54	0.27	mg/kg dry	53.6	1.9	76	75-125	5	20	





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - SSPN

1891263

Report Number: IQB1684

Sampled: 02/14/07

Received: 02/15/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B16073 Extracted: 02/16/07	_										
Duplicate Analyzed: 02/16/2007 (7B1607 pH	3-DUP1) 7.56	NA	0.00	pH Units	Sou	rce: IQB 7.55	1681-01		0	5	
Batch: 7B16117 Extracted: 02/16/07	_										
Blank Analyzed: 02/19/2007 (7B16117-B	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 02/19/2007 (7B1611	7-DUP1)				Sou	rce: IQB	1519-01				
Percent Solids	18.0	0.10	0.10	%		18			0	20	
Duplicate Analyzed: 02/19/2007 (7B1611	7-DUP2)				Sou	rce: IQB	1519-02				
Percent Solids	19.9	0.10	0.10	%		20			1	20	
Batch: 7B22090 Extracted: 02/22/07	_										
Blank Analyzed: 02/22/2007 (7B22090-B	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/22/2007 (7B22090-BS)	1)										
Perchlorate	48.4	4.0	0.80	ug/l	50.0		97	85-115			
Matrix Spike Analyzed: 02/22/2007 (7B2	2090-MS1)				Sou	rce: IQB	1487-06				
Perchlorate	48.1	4.0	0.80	ug/l	50.0	ND	96	80-120			
Matrix Spike Dup Analyzed: 02/23/2007	(7B22090-M	(SD1)			Sou	rce: IQB	1487-06				
Perchlorate	48.6	4.0	0.80	ug/l	50.0	ND	97	80-120	1	20	



MWH-San Diego/Boeing

Project ID: SSFL Group 8 - SSPN 1891263

9444 Farnham Street, Suite 300 San Diego, CA 92123

Sampled: 02/14/07

Attention: Lisa J. Tucker

Report Number: IQB1684 Received: 02/15/07

DATA QUALIFIERS AND DEFINITIONS

M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

N1 See case narrative.

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

RPD Relative Percent Difference



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - SSPN

1891263

Report Number: IQB1684

Sampled: 02/14/07

Received: 02/15/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A
EPA 314.0 DI-RFI	Soil		
EPA 6020	Soil	X	X
EPA 9045C	Soil	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

CHAIN OF CUSTODY RECORD CONTROL OF COC#

MWHSV20070216_00

1 of 1

Page:

		Project Information	nation			Project Information	format	uo O		1			
CUSTOTIE	Customer and and							.					
Site:	SSFL	Client Name:	DOE			Collector:	Shelb	Shelby Valenzuela	zuela			Boeing PM:	
Company: MWH	MWH	Sampling Event:	it: Group 8	8 Data Gaps-Soi	s-Soil	Contact #:			:				
Donort to:	isa Tucker	Project Number:	r: 1891264	54	Value of the state				Redne	Requested Analyses	ahyses	A. Company and a make a	Instructions/TAT
Nepolt 10.	0444 Farnham Street	Project Manager:	+	Diana Buchanan									Legend:
Wadinas.		Die Die month		(878) 568 6897									analyses equate to turn
	Suite 300	PM Phone #:	(070)	000-000									around time in days
	San Diego	Field Contact:											PloH - H
	CA	Field Contact #:	≠ £			M			S'				EH - Extract_Hold
	92123	Lab Name:	Test A	Test America, Inc.		etals	M	Per	VOC:				
Email:	boeingedms@ch2m.com	Lab Contact:	Michele	le Chamberlin	lin	6010					,		
	Lisa.Tucker@mwhglobal.com	Lab Address:	17461	17461 Derian Ave, Suite 100	, Suite 100)B/60					voc		
			Inine,	Irvine, CA 92606							8260		
		Lab Phone:	(949)	(949) 261-1022	valder 4						08 Sc		
Samole Name	95	Matrix	Oate	E E	No. of Containers	roup 8 s - Soil	- Soil ercury	-WET	- Soil - Soil	- Soil	oil Full		Comments
FSBS0011D01		Soil	2/16/2007	8:36	9	10 10	10 10	5	5 5	5	10		Sleeve(2), Poly(1), Encore(3)
FSBS0011S01		Soil	2/16/2007	8:36	9	5 10	10	5	10	10	S.		Sleeve(2), Poly(1), Encore(3)
FSBS0012S01		Soil	2/16/2007	9:21	13	5 10	10	5	10 10	5	22		Sleeve(2), Poły(2), Encore(9). Run MS/MSD.See Note

HE 2-16-67 1850

S(1), P(1), E(3). Hold all analysis except for pH.

10 EH EH

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9:46

2/16/2007

Sol

FSBS0013S01

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	4. Received by:	nate:
1 Same	2-16-01	11/2	LC(9))7-				
Company:	Time:	Company:	Time:	Company:	Time:	Company:	Time:
Z Z	272)				

Data Validation Package 🗹 Level IV Comments: Homogenize all sample sleeves of FSBS0012S01 before analysis, run method Spike/Spike Duplicate. Lab leachate for all perchlo Geotracker EDF analysis.

intart (6.0/15.5.



LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

9444 Farnham Street, Suite 300 San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/16/07 Received: 02/16/07

Issued: 03/11/07 17:29

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 16°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: Enclosed are complete final results. The results for Mercury were added.

LABORATORY ID	CLIENT ID	MATRIX
IQB1815-01	FSBS0011D01	Soil
IQB1815-02	FSBS0011S01	Soil
IQB1815-03	FSBS0012S01	Soil
IQB1815-04	FSBS0013S01	Soil

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin

Michele Chamberdin

Project Manager



MWH-San Diego/Boeing

Attention: Lisa J. Tucker

9444 Farnham Street, Suite 300 San Diego, CA 92123 Project ID: SSFL Group 8 - DOE

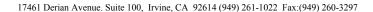
1891264

Report Number: IQB1815

Sampled: 02/16/07 Received: 02/16/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: FSBS0011D01 (IQB1815-01) - Soi	1				
EPA 9045C	1	02/16/2007 08:36	02/16/2007 17:50	02/17/2007 09:55	02/17/2007 11:35
Sample ID: FSBS0011S01 (IQB1815-02) - Soil	l				
EPA 9045C	1	02/16/2007 08:36	02/16/2007 17:50	02/17/2007 09:55	02/17/2007 11:35
Sample ID: FSBS0012S01 (IQB1815-03) - Soil	l				
EPA 9045C	1	02/16/2007 09:21	02/16/2007 17:50	02/17/2007 09:55	02/17/2007 11:35
Sample ID: FSBS0013S01 (IQB1815-04) - Soil	l				
EPA 9045C	1	02/16/2007 09:46	02/16/2007 17:50	02/17/2007 09:55	02/17/2007 11:35



0/ DEC



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9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Donouting

Sampled: 02/16/07

Received: 02/16/07

DDD

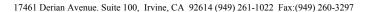
Data

METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Spiles Source

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B20072 Extracted: 02/20/07	_										
DI I A I I 02/20/2007 (7D20072 D	F T24)										
Blank Analyzed: 02/20/2007 (7B20072-B)	LKI)										
EFH (C8 - C30)	ND	5.0	3.5	mg/kg wet							
EFH (C8 - C11)	ND	5.0	3.5	mg/kg wet							
EFH (C12 - C14)	ND	5.0	3.5	mg/kg wet							
EFH (C15 - C20)	ND	5.0	3.5	mg/kg wet							
EFH (C21 - C30)	ND	5.0	3.5	mg/kg wet							
Surrogate: n-Octacosane	4.22			mg/kg wet	6.67		63	40-125			
LCS Analyzed: 02/20/2007 (7B20072-BS)	1)										
EFH (C8 - C30)	26.3	5.0	3.5	mg/kg wet	33.3		79	40-115			
Surrogate: n-Octacosane	4.37			mg/kg wet	6.67		66	40-125			
Matrix Spike Analyzed: 02/20/2007 (7B2	0072-MS1)				Sou	rce: IQB	1815-03				
EFH (C8 - C30)	31.5	5.6	4.0	mg/kg dry	37.7	ND	84	40-120			
Surrogate: n-Octacosane	5.23			mg/kg dry	7.53		69	40-125			
Matrix Spike Dup Analyzed: 02/20/2007	(7B20072-MS	SD1)			Sou	rce: IQB	1815-03				
EFH (C8 - C30)	30.8	5.6	4.0	mg/kg dry	37.7	ND	82	40-120	2	30	
Surrogate: n-Octacosane	5.26			mg/kg dry	7.53		70	40-125			





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1891264

Report Number: IQB1815

Reporting

Sampled: 02/16/07 Received: 02/16/07

RPD

Limit

Data

Qualifiers

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Spike

Source

Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD
Batch: 7B19031 Extracted: 02	/19/07								
Blank Analyzed: 02/19/2007 (7B19	031-BLK1)								
Acetone	ND	10	8.0	ug/kg wet					
Benzene	ND	2.0	0.50	ug/kg wet					
Bromobenzene	ND	5.0	0.84	ug/kg wet					
Bromochloromethane	ND	5.0	0.90	ug/kg wet					
Bromodichloromethane	ND	2.0	0.42	ug/kg wet					
Bromoform	ND	5.0	0.80	ug/kg wet					
Bromomethane	ND	5.0	0.92	ug/kg wet					
2-Butanone (MEK)	ND	10	6.0	ug/kg wet					
n-Butylbenzene	ND	5.0	0.72	ug/kg wet					
sec-Butylbenzene	ND	5.0	0.67	ug/kg wet					
tert-Butylbenzene	ND	5.0	0.62	ug/kg wet					
Carbon tetrachloride	ND	5.0	0.50	ug/kg wet					
Chlorobenzene	ND	2.0	0.52	ug/kg wet					
Chloroethane	ND	5.0	1.5	ug/kg wet					
2-Chloroethyl vinyl ether	ND	5.0	3.8	ug/kg wet					
Chloroform	ND	2.0	0.50	ug/kg wet					
Chloromethane	ND	5.0	1.0	ug/kg wet					
2-Chlorotoluene	ND	5.0	0.87	ug/kg wet					
4-Chlorotoluene	ND	5.0	0.74	ug/kg wet					
Dibromochloromethane	ND	2.0	0.56	ug/kg wet					
1,2-Dibromo-3-chloropropane	ND	5.0	1.5	ug/kg wet					
1,2-Dibromoethane (EDB)	ND	2.0	0.80	ug/kg wet					
Dibromomethane	ND	2.0	0.90	ug/kg wet					
1,2-Dichlorobenzene	ND	2.0	0.95	ug/kg wet					
1,3-Dichlorobenzene	ND	2.0	0.84	ug/kg wet					
1,4-Dichlorobenzene	ND	2.0	0.94	ug/kg wet					
Dichlorodifluoromethane	ND	5.0	1.5	ug/kg wet					
1,1-Dichloroethane	ND	2.0	0.50	ug/kg wet					
1,2-Dichloroethane	ND	2.0	0.80	ug/kg wet					
1,1-Dichloroethene	ND	5.0	0.60	ug/kg wet					
cis-1,2-Dichloroethene	ND	2.0	0.83	ug/kg wet					
trans-1,2-Dichloroethene	ND	2.0	0.70	ug/kg wet					
1,2-Dichloropropane	ND	2.0	0.35	ug/kg wet					
1,3-Dichloropropane	ND	2.0	0.63	ug/kg wet					
2,2-Dichloropropane	ND	2.0	0.45	ug/kg wet					

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Michele Chamberlin Project Manager





MWH-San Diego/Boeing

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San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Reporting

Sampled: 02/16/07 Received: 02/16/07

Data

RPD

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

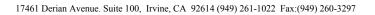
Spike

Source

Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B19031 Extracted: 02/19/0	<u>)7</u>										
Blank Analyzed: 02/19/2007 (7B19031-	BLK1)										
1,1-Dichloropropene	ND	2.0	0.40	ug/kg wet							
cis-1,3-Dichloropropene	ND	2.0	0.44	ug/kg wet							
trans-1,3-Dichloropropene	ND	2.0	0.61	ug/kg wet							
Ethylbenzene	ND	2.0	0.50	ug/kg wet							
Hexachlorobutadiene	ND	5.0	0.73	ug/kg wet							
2-Hexanone	ND	10	9.1	ug/kg wet							
Isopropylbenzene	ND	2.0	0.54	ug/kg wet							
p-Isopropyltoluene	ND	2.0	0.72	ug/kg wet							
Methylene chloride	ND	20	6.5	ug/kg wet							
4-Methyl-2-pentanone (MIBK)	ND	5.0	3.2	ug/kg wet							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	1.0	ug/kg wet							
Naphthalene	ND	5.0	1.1	ug/kg wet							
n-Propylbenzene	ND	2.0	0.61	ug/kg wet							
Styrene	ND	2.0	0.58	ug/kg wet							
1,1,1,2-Tetrachloroethane	ND	5.0	0.57	ug/kg wet							
1,1,2,2-Tetrachloroethane	ND	2.0	0.86	ug/kg wet							
Tetrachloroethene	ND	2.0	0.49	ug/kg wet							
Toluene	ND	2.0	0.50	ug/kg wet							
1,2,3-Trichlorobenzene	ND	5.0	1.0	ug/kg wet							
1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg wet							
1,1,1-Trichloroethane	ND	2.0	0.70	ug/kg wet							
1,1,2-Trichloroethane	ND	2.0	0.87	ug/kg wet							
Trichloroethene	ND	2.0	0.50	ug/kg wet							
Trichlorofluoromethane	ND	5.0	0.54	ug/kg wet							
1,2,3-Trichloropropane	ND	10	1.0	ug/kg wet							
1,2,4-Trimethylbenzene	ND	2.0	0.78	ug/kg wet							
1,3,5-Trimethylbenzene	ND	2.0	0.63	ug/kg wet							
Vinyl chloride	ND	2.0	0.91	ug/kg wet							
o-Xylene	ND	2.0	0.50	ug/kg wet							
m,p-Xylenes	ND	2.0	0.80	ug/kg wet							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	4.0	ug/kg wet							
Surrogate: Dibromofluoromethane	47.0			ug/kg wet	50.0		94	80-125			
Surrogate: Toluene-d8	49.9			ug/kg wet	50.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	50.1			ug/kg wet	50.0		100	80-120			

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9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Sampled: 02/16/07

Received: 02/16/07

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B19031 Extracted: 02/19/0'	7										
2	<u>—</u>										
LCS Analyzed: 02/19/2007 (7B19031-BS	S1)										
Acetone	63.6	10	8.0	ug/kg wet	50.0		127	25-145			M-3
Benzene	41.3	2.0	0.50	ug/kg wet	50.0		83	65-120			
Bromobenzene	42.7	5.0	0.84	ug/kg wet	50.0		85	75-120			
Bromochloromethane	40.8	5.0	0.90	ug/kg wet	50.0		82	70-135			
Bromodichloromethane	42.7	2.0	0.42	ug/kg wet	50.0		85	70-135			
Bromoform	37.0	5.0	0.80	ug/kg wet	50.0		74	55-135			
Bromomethane	38.3	5.0	0.92	ug/kg wet	50.0		77	60-145			
2-Butanone (MEK)	48.6	10	6.0	ug/kg wet	50.0		97	40-145			
n-Butylbenzene	45.8	5.0	0.72	ug/kg wet	50.0		92	70-130			
sec-Butylbenzene	44.9	5.0	0.67	ug/kg wet	50.0		90	70-125			
tert-Butylbenzene	44.4	5.0	0.62	ug/kg wet	50.0		89	70-125			
Carbon tetrachloride	41.4	5.0	0.50	ug/kg wet	50.0		83	65-140			
Chlorobenzene	42.8	2.0	0.52	ug/kg wet	50.0		86	75-120			
Chloroethane	32.7	5.0	1.5	ug/kg wet	50.0		65	60-140			
2-Chloroethyl vinyl ether	35.7	5.0	3.8	ug/kg wet	50.0		71	25-170			
Chloroform	39.2	2.0	0.50	ug/kg wet	50.0		78	70-130			
Chloromethane	48.4	5.0	1.0	ug/kg wet	50.0		97	45-145			
2-Chlorotoluene	43.8	5.0	0.87	ug/kg wet	50.0		88	70-125			
4-Chlorotoluene	44.0	5.0	0.74	ug/kg wet	50.0		88	75-125			
Dibromochloromethane	44.7	2.0	0.56	ug/kg wet	50.0		89	65-140			
1,2-Dibromo-3-chloropropane	40.6	5.0	1.5	ug/kg wet	50.0		81	50-135			
1,2-Dibromoethane (EDB)	43.5	2.0	0.80	ug/kg wet	50.0		87	70-130			
Dibromomethane	44.5	2.0	0.90	ug/kg wet	50.0		89	70-130			
1,2-Dichlorobenzene	43.8	2.0	0.95	ug/kg wet	50.0		88	75-120			
1,3-Dichlorobenzene	44.0	2.0	0.84	ug/kg wet	50.0		88	75-125			
1,4-Dichlorobenzene	43.3	2.0	0.94	ug/kg wet	50.0		87	75-120			
Dichlorodifluoromethane	44.0	5.0	1.5	ug/kg wet	50.0		88	35-160			
1,1-Dichloroethane	38.9	2.0	0.50	ug/kg wet	50.0		78	70-130			
1,2-Dichloroethane	44.1	2.0	0.80	ug/kg wet	50.0		88	60-140			
1,1-Dichloroethene	38.1	5.0	0.60	ug/kg wet	50.0		76	70-125			
cis-1,2-Dichloroethene	39.7	2.0	0.83	ug/kg wet	50.0		79	70-125			
trans-1,2-Dichloroethene	39.7	2.0	0.70	ug/kg wet	50.0		79	70-125			
1,2-Dichloropropane	42.7	2.0	0.35	ug/kg wet	50.0		85	70-130			
1,3-Dichloropropane	44.7	2.0	0.63	ug/kg wet	50.0		89	70-125			
2,2-Dichloropropane	42.7	2.0	0.45	ug/kg wet	50.0		85	60-145			

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San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Sampled: 02/16/07

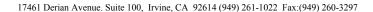
Received: 02/16/07

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B19031 Extracted: 02/19/0'	<u>7_</u>										
	<u> </u>										
LCS Analyzed: 02/19/2007 (7B19031-BS	51)										
1,1-Dichloropropene	43.5	2.0	0.40	ug/kg wet	50.0		87	70-130			
cis-1,3-Dichloropropene	39.7	2.0	0.44	ug/kg wet	50.0		79	75-125			
trans-1,3-Dichloropropene	40.6	2.0	0.61	ug/kg wet	50.0		81	70-135			
Ethylbenzene	45.1	2.0	0.50	ug/kg wet	50.0		90	70-125			
Hexachlorobutadiene	43.7	5.0	0.73	ug/kg wet	50.0		87	60-135			
2-Hexanone	49.2	10	9.1	ug/kg wet	50.0		98	40-150			
Isopropylbenzene	50.4	2.0	0.54	ug/kg wet	50.0		101	75-130			
p-Isopropyltoluene	46.2	2.0	0.72	ug/kg wet	50.0		92	75-125			
Methylene chloride	33.3	20	6.5	ug/kg wet	50.0		67	55-135			
4-Methyl-2-pentanone (MIBK)	43.1	5.0	3.2	ug/kg wet	50.0		86	40-145			
Methyl-tert-butyl Ether (MTBE)	40.2	5.0	1.0	ug/kg wet	50.0		80	60-140			
Naphthalene	44.2	5.0	1.1	ug/kg wet	50.0		88	55-135			
n-Propylbenzene	46.0	2.0	0.61	ug/kg wet	50.0		92	70-130			
Styrene	45.0	2.0	0.58	ug/kg wet	50.0		90	75-130			
1,1,1,2-Tetrachloroethane	44.0	5.0	0.57	ug/kg wet	50.0		88	70-130			
1,1,2,2-Tetrachloroethane	46.3	2.0	0.86	ug/kg wet	50.0		93	55-140			
Tetrachloroethene	40.7	2.0	0.49	ug/kg wet	50.0		81	70-125			
Toluene	43.4	2.0	0.50	ug/kg wet	50.0		87	70-125			
1,2,3-Trichlorobenzene	43.3	5.0	1.0	ug/kg wet	50.0		87	60-130			
1,2,4-Trichlorobenzene	44.4	5.0	1.0	ug/kg wet	50.0		89	70-135			
1,1,1-Trichloroethane	39.2	2.0	0.70	ug/kg wet	50.0		78	65-135			
1,1,2-Trichloroethane	43.4	2.0	0.87	ug/kg wet	50.0		87	65-135			
Trichloroethene	43.2	2.0	0.50	ug/kg wet	50.0		86	70-125			
Trichlorofluoromethane	39.1	5.0	0.54	ug/kg wet	50.0		78	60-145			
1,2,3-Trichloropropane	41.2	10	1.0	ug/kg wet	50.0		82	60-135			
1,2,4-Trimethylbenzene	44.6	2.0	0.78	ug/kg wet	50.0		89	70-125			
1,3,5-Trimethylbenzene	45.9	2.0	0.63	ug/kg wet	50.0		92	70-125			
Vinyl chloride	43.7	2.0	0.91	ug/kg wet	50.0		87	55-135			
o-Xylene	44.6	2.0	0.50	ug/kg wet	50.0		89	70-125			
m,p-Xylenes	91.7	2.0	0.80	ug/kg wet	100		92	70-125			
Surrogate: Dibromofluoromethane	47.8			ug/kg wet	50.0		96	80-125			
Surrogate: Toluene-d8	50.7			ug/kg wet	50.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	53.1			ug/kg wet	50.0		106	80-120			

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RPD



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9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Reporting

Sampled: 02/16/07 Received: 02/16/07

RPD

Limit

Data

Qualifiers

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

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Spike

Source

		Keporung			Spike	Source		70KEC
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits
Batch: 7B19031 Extracted: 02/19/07	<u>7_</u>							
Matrix Spike Analyzed: 02/19/2007 (7B)	19031-MS1)				Sou	rce: IQB	1737-17	
Benzene	37.8	2.0	0.50	ug/kg wet	49.5	ND	76	65-130
Bromobenzene	53.1	5.0	0.83	ug/kg wet	49.5	ND	107	65-140
Bromochloromethane	46.6	5.0	0.89	ug/kg wet	49.5	ND	94	65-145
Bromodichloromethane	45.6	2.0	0.42	ug/kg wet	49.5	ND	92	65-145
Bromoform	36.7	5.0	0.79	ug/kg wet	49.5	ND	74	50-145
Bromomethane	49.1	5.0	0.91	ug/kg wet	49.5	ND	99	60-155
2-Butanone (MEK)	78.1	9.9	5.9	ug/kg wet	49.5	ND	158	25-170
n-Butylbenzene	104	5.0	0.71	ug/kg wet	49.5	49	111	55-145
sec-Butylbenzene	78.0	5.0	0.66	ug/kg wet	49.5	26	105	60-135
tert-Butylbenzene	49.7	5.0	0.61	ug/kg wet	49.5	1.6	97	60-140
Carbon tetrachloride	32.6	5.0	0.50	ug/kg wet	49.5	ND	66	60-145
Chlorobenzene	55.8	2.0	0.51	ug/kg wet	49.5	ND	113	70-130
Chloroethane	45.2	5.0	1.5	ug/kg wet	49.5	ND	91	60-150
2-Chloroethyl vinyl ether	48.3	5.0	3.8	ug/kg wet	49.5	ND	98	25-170
Chloroform	43.2	2.0	0.50	ug/kg wet	49.5	ND	87	65-135
Chloromethane	45.6	5.0	0.99	ug/kg wet	49.5	ND	92	40-145
2-Chlorotoluene	52.9	5.0	0.86	ug/kg wet	49.5	ND	107	60-135
4-Chlorotoluene	53.3	5.0	0.73	ug/kg wet	49.5	ND	108	65-135
Dibromochloromethane	44.9	2.0	0.55	ug/kg wet	49.5	ND	91	60-145
1,2-Dibromo-3-chloropropane	39.3	5.0	1.5	ug/kg wet	49.5	ND	79	40-150
1,2-Dibromoethane (EDB)	49.5	2.0	0.79	ug/kg wet	49.5	ND	100	65-140
Dibromomethane	46.0	2.0	0.89	ug/kg wet	49.5	ND	93	65-140
1,2-Dichlorobenzene	45.9	2.0	0.94	ug/kg wet	49.5	ND	93	70-130
1,3-Dichlorobenzene	49.1	2.0	0.83	ug/kg wet	49.5	ND	99	70-130
1,4-Dichlorobenzene	49.1	2.0	0.93	ug/kg wet	49.5	ND	99	70-130
Dichlorodifluoromethane	43.3	5.0	1.5	ug/kg wet	49.5	ND	87	30-160
1,1-Dichloroethane	43.7	2.0	0.50	ug/kg wet	49.5	ND	88	65-135
1,2-Dichloroethane	44.1	2.0	0.79	ug/kg wet	49.5	ND	89	60-150
1,1-Dichloroethene	47.4	5.0	0.59	ug/kg wet	49.5	ND	96	65-135
cis-1,2-Dichloroethene	43.9	2.0	0.82	ug/kg wet	49.5	ND	89	65-135
trans-1,2-Dichloroethene	38.5	2.0	0.69	ug/kg wet	49.5	ND	78	70-135
1,2-Dichloropropane	54.7	2.0	0.35	ug/kg wet	49.5	ND	111	65-130
1,3-Dichloropropane	46.4	2.0	0.62	ug/kg wet	49.5	ND	94	65-140
2,2-Dichloropropane	34.8	2.0	0.45	ug/kg wet	49.5	ND	70	65-150
1,1-Dichloropropene	48.1	2.0	0.40	ug/kg wet	49.5	ND	97	65-135

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MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Sampled: 02/16/07 Received: 02/16/07

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B19031 Extracted: 02/19/0	7_										
Matrix Spike Analyzed: 02/19/2007 (7B	10021 MS1)				Son	ırce: IQB	1727 17				
cis-1,3-Dichloropropene	40.0	2.0	0.44	ug/kg wet	49.5	ND	81	70-135			
trans-1,3-Dichloropropene	41.3	2.0	0.60	ug/kg wet	49.5	ND ND	83	60-145			
Ethylbenzene	73.8	2.0	0.50	ug/kg wet	49.5	ND 13	123	70-135			
Hexachlorobutadiene	24.1	5.0	0.72	ug/kg wet	49.5	ND	49	50-145			M2
2-Hexanone	26.8	9.9	9.0	ug/kg wet	49.5	ND	54	35-160			1712
Isopropylbenzene	121	2.0	0.53	ug/kg wet	49.5	42	160	70-145			M1
p-Isopropyltoluene	64.3	2.0	0.71	ug/kg wet	49.5	14	102	60-140			1711
Methylene chloride	40.0	20	6.4	ug/kg wet	49.5	ND	81	55-145			
4-Methyl-2-pentanone (MIBK)	124	5.0	3.2	ug/kg wet	49.5	ND ND	251	40-155			<i>M1</i>
Methyl-tert-butyl Ether (MTBE)	44.5	5.0	0.99	ug/kg wet	49.5	ND	90	55-155			2011
Naphthalene	108	5.0	1.1	ug/kg wet	49.5	55	107	40-150			
n-Propylbenzene	178	2.0	0.60	ug/kg wet	49.5	84	190	65-140			<i>M1</i>
Styrene	53.3	2.0	0.57	ug/kg wet	49.5	ND	108	70-140			
1,1,1,2-Tetrachloroethane	49.3	5.0	0.56	ug/kg wet	49.5	ND	100	65-145			
1,1,2,2-Tetrachloroethane	49.8	2.0	0.85	ug/kg wet	49.5	ND	101	40-160			
Tetrachloroethene	45.8	2.0	0.49	ug/kg wet	49.5	ND	93	65-135			
Toluene	51.3	2.0	0.50	ug/kg wet	49.5	2.4	99	70-130			
1,2,3-Trichlorobenzene	35.5	5.0	0.99	ug/kg wet	49.5	ND	72	45-145			
1,2,4-Trichlorobenzene	37.5	5.0	0.99	ug/kg wet	49.5	ND	76	50-140			
1,1,1-Trichloroethane	35.0	2.0	0.69	ug/kg wet	49.5	ND	71	65-145			
1,1,2-Trichloroethane	62.8	2.0	0.86	ug/kg wet	49.5	ND	127	65-140			
Trichloroethene	47.8	2.0	0.50	ug/kg wet	49.5	ND	97	65-140			
Trichlorofluoromethane	39.2	5.0	0.53	ug/kg wet	49.5	ND	79	55-155			
1,2,3-Trichloropropane	41.8	9.9	0.99	ug/kg wet	49.5	ND	84	50-150			
1,2,4-Trimethylbenzene	57.9	2.0	0.77	ug/kg wet	49.5	5.4	106	65-140			
1,3,5-Trimethylbenzene	65.9	2.0	0.62	ug/kg wet	49.5	10	113	65-135			
Vinyl chloride	48.8	2.0	0.90	ug/kg wet	49.5	ND	99	55-140			
o-Xylene	60.6	2.0	0.50	ug/kg wet	49.5	5.7	111	65-130			
m,p-Xylenes	120	2.0	0.79	ug/kg wet	99.0	8.9	112	70-130			
Surrogate: Dibromofluoromethane	46.0			ug/kg wet	49.5		93	80-125			
Surrogate: Toluene-d8	50.6			ug/kg wet	49.5		102	80-120			
Surrogate: 4-Bromofluorobenzene	46.9			ug/kg wet	49.5		95	80-120			

TestAmerica - Irvine, CA Michele Chamberlin Project Manager



MWH-San Diego/Boeing

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1891264

Report Number: IQB1815

Reporting

Sampled: 02/16/07 Received: 02/16/07

RPD

Data

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Spike

Source

		reporting			Spine	Source		/UILL		IXI D	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B19031 Extracted: 02/	/19/07										
Matrix Spike Dup Analyzed: 02/19	9/2007 (7B19031-M	ISD1)			Sou	rce: IQB	1737-17				
Benzene	37.2	2.0	0.50	ug/kg wet	49.6	ND	75	65-130	2	20	
Bromobenzene	51.2	5.0	0.83	ug/kg wet	49.6	ND	103	65-140	4	25	
Bromochloromethane	45.5	5.0	0.89	ug/kg wet	49.6	ND	92	65-145	2	25	
Bromodichloromethane	44.5	2.0	0.42	ug/kg wet	49.6	ND	90	65-145	2	20	
Bromoform	38.0	5.0	0.79	ug/kg wet	49.6	ND	77	50-145	3	30	
Bromomethane	42.9	5.0	0.91	ug/kg wet	49.6	ND	86	60-155	13	25	
2-Butanone (MEK)	82.7	9.9	6.0	ug/kg wet	49.6	ND	167	25-170	6	40	
n-Butylbenzene	98.9	5.0	0.71	ug/kg wet	49.6	49	101	55-145	5	30	
sec-Butylbenzene	73.4	5.0	0.66	ug/kg wet	49.6	26	96	60-135	6	25	
tert-Butylbenzene	46.6	5.0	0.62	ug/kg wet	49.6	1.6	91	60-140	6	25	
Carbon tetrachloride	31.1	5.0	0.50	ug/kg wet	49.6	ND	63	60-145	5	25	
Chlorobenzene	54.7	2.0	0.52	ug/kg wet	49.6	ND	110	70-130	2	25	
Chloroethane	40.2	5.0	1.5	ug/kg wet	49.6	ND	81	60-150	12	25	
2-Chloroethyl vinyl ether	48.7	5.0	3.8	ug/kg wet	49.6	ND	98	25-170	1	30	
Chloroform	42.1	2.0	0.50	ug/kg wet	49.6	ND	85	65-135	3	20	
Chloromethane	44.8	5.0	0.99	ug/kg wet	49.6	ND	90	40-145	2	25	
2-Chlorotoluene	51.1	5.0	0.86	ug/kg wet	49.6	ND	103	60-135	3	25	
4-Chlorotoluene	51.5	5.0	0.73	ug/kg wet	49.6	ND	104	65-135	3	25	
Dibromochloromethane	45.0	2.0	0.56	ug/kg wet	49.6	ND	91	60-145	0	25	
1,2-Dibromo-3-chloropropane	40.5	5.0	1.5	ug/kg wet	49.6	ND	82	40-150	3	30	
1,2-Dibromoethane (EDB)	49.7	2.0	0.79	ug/kg wet	49.6	ND	100	65-140	0	25	
Dibromomethane	45.7	2.0	0.89	ug/kg wet	49.6	ND	92	65-140	1	25	
1,2-Dichlorobenzene	44.7	2.0	0.94	ug/kg wet	49.6	ND	90	70-130	3	25	
1,3-Dichlorobenzene	47.5	2.0	0.83	ug/kg wet	49.6	ND	96	70-130	3	25	
1,4-Dichlorobenzene	47.5	2.0	0.93	ug/kg wet	49.6	ND	96	70-130	3	25	
Dichlorodifluoromethane	40.7	5.0	1.5	ug/kg wet	49.6	ND	82	30-160	6	35	
1,1-Dichloroethane	44.2	2.0	0.50	ug/kg wet	49.6	ND	89	65-135	1	25	
1,2-Dichloroethane	43.2	2.0	0.79	ug/kg wet	49.6	ND	87	60-150	2	25	
1,1-Dichloroethene	46.9	5.0	0.60	ug/kg wet	49.6	ND	95	65-135	1	25	
cis-1,2-Dichloroethene	42.9	2.0	0.82	ug/kg wet	49.6	ND	86	65-135	2	25	
trans-1,2-Dichloroethene	38.1	2.0	0.69	ug/kg wet	49.6	ND	77	70-135	1	25	
1,2-Dichloropropane	53.9	2.0	0.35	ug/kg wet	49.6	ND	109	65-130	1	20	
1,3-Dichloropropane	45.5	2.0	0.62	ug/kg wet	49.6	ND	92	65-140	2	25	
2,2-Dichloropropane	32.6	2.0	0.45	ug/kg wet	49.6	ND	66	65-150	7	25	
1,1-Dichloropropene	46.8	2.0	0.40	ug/kg wet		ND	94	65-135	3	20	
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TestAmerica - Irvine, CA

Michele Chamberlin Project Manager



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1891264

Report Number: IQB1815

Sampled: 02/16/07 Received: 02/16/07

METHOD BLANK/QC DATA

VOLATILE ORGANICS by GC/MS (EPA 5035/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 7B19031 Extracted: 02/19/07	7										
	_										
Matrix Spike Dup Analyzed: 02/19/2007	′ (7B19031-M	ISD1)			Sou	ırce: IQB	1737-17				
cis-1,3-Dichloropropene	38.9	2.0	0.44	ug/kg wet	49.6	ND	78	70-135	3	25	
trans-1,3-Dichloropropene	40.0	2.0	0.61	ug/kg wet	49.6	ND	81	60-145	3	25	
Ethylbenzene	75.6	2.0	0.50	ug/kg wet	49.6	13	126	70-135	2	25	
Hexachlorobutadiene	19.3	5.0	0.72	ug/kg wet	49.6	ND	39	50-145	22	35	M2
2-Hexanone	29.3	9.9	9.0	ug/kg wet	49.6	ND	59	35-160	9	40	
Isopropylbenzene	118	2.0	0.54	ug/kg wet	49.6	42	153	70-145	3	25	M1
p-Isopropyltoluene	60.5	2.0	0.71	ug/kg wet	49.6	14	94	60-140	6	25	
Methylene chloride	37.2	20	6.4	ug/kg wet	49.6	ND	75	55-145	7	25	
4-Methyl-2-pentanone (MIBK)	118	5.0	3.2	ug/kg wet	49.6	ND	238	40-155	5	40	M1
Methyl-tert-butyl Ether (MTBE)	44.2	5.0	0.99	ug/kg wet	49.6	ND	89	55-155	1	35	
Naphthalene	114	5.0	1.1	ug/kg wet	49.6	55	119	40-150	5	40	
n-Propylbenzene	172	2.0	0.61	ug/kg wet	49.6	84	177	65-140	3	25	MI
Styrene	52.3	2.0	0.58	ug/kg wet	49.6	ND	105	70-140	2	25	
1,1,1,2-Tetrachloroethane	48.1	5.0	0.57	ug/kg wet	49.6	ND	97	65-145	2	20	
1,1,2,2-Tetrachloroethane	50.3	2.0	0.85	ug/kg wet	49.6	ND	101	40-160	1	30	
Tetrachloroethene	45.1	2.0	0.49	ug/kg wet	49.6	ND	91	65-135	2	25	
Toluene	52.0	2.0	0.50	ug/kg wet	49.6	2.4	100	70-130	1	20	
1,2,3-Trichlorobenzene	36.5	5.0	0.99	ug/kg wet	49.6	ND	74	45-145	3	30	
1,2,4-Trichlorobenzene	37.6	5.0	0.99	ug/kg wet	49.6	ND	76	50-140	0	30	
1,1,1-Trichloroethane	32.7	2.0	0.69	ug/kg wet	49.6	ND	66	65-145	7	20	
1,1,2-Trichloroethane	62.9	2.0	0.86	ug/kg wet	49.6	ND	127	65-140	0	30	
Trichloroethene	47.0	2.0	0.50	ug/kg wet	49.6	ND	95	65-140	2	25	
Trichlorofluoromethane	39.5	5.0	0.54	ug/kg wet	49.6	ND	80	55-155	1	25	
1,2,3-Trichloropropane	43.4	9.9	0.99	ug/kg wet	49.6	ND	88	50-150	4	30	
1,2,4-Trimethylbenzene	55.5	2.0	0.77	ug/kg wet	49.6	5.4	101	65-140	4	25	
1,3,5-Trimethylbenzene	63.3	2.0	0.62	ug/kg wet	49.6	10	107	65-135	4	25	
Vinyl chloride	45.4	2.0	0.90	ug/kg wet	49.6	ND	92	55-140	7	30	
o-Xylene	60.7	2.0	0.50	ug/kg wet	49.6	5.7	111	65-130	0	25	
m,p-Xylenes	120	2.0	0.79	ug/kg wet	99.2	8.9	112	70-130	0	25	
Surrogate: Dibromofluoromethane	44.9			ug/kg wet	49.6		91	80-125			
Surrogate: Toluene-d8	50.5			ug/kg wet	49.6		102	80-120			
Surrogate: 4-Bromofluorobenzene	46.9			ug/kg wet	49.6		95	80-120			

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager



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San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

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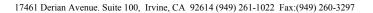
Sampled: 02/16/07

Received: 02/16/07

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B19031 Extracted: 02/19/0	<u>)7</u>										
Blank Analyzed: 02/19/2007 (7B19031-	·BLK1)										
2-Chloro-1,1,1-trifluoroethane	ND	10	N/A	ug/kg wet							
Chlorotrifluoroethene	ND	10	N/A	ug/kg wet							





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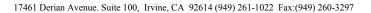
METHOD BLANK/QC DATA

POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7B23106 Extracted: 02/23/	<u>07</u>										
Blank Analyzed: 02/23/2007 (7B23106-	-BLK1)										
Aroclor 1016	ND	50	15	ug/kg wet							
Aroclor 1221	ND	50	15	ug/kg wet							
Aroclor 1232	ND	50	10	ug/kg wet							
Aroclor 1242	ND	50	10	ug/kg wet							
Aroclor 1248	ND	50	10	ug/kg wet							
Aroclor 1254	ND	50	10	ug/kg wet							
Aroclor 1260	ND	50	10	ug/kg wet							
Surrogate: Decachlorobiphenyl	31.2			ug/kg wet	33.3		94	45-120			
LCS Analyzed: 02/23/2007 (7B23106-E	3S2)										
Aroclor 1016	269	50	15	ug/kg wet	267		101	60-115			
Aroclor 1260	287	50	10	ug/kg wet	267		107	60-115			
Surrogate: Decachlorobiphenyl	36.4			ug/kg wet	33.3		109	45-120			
Matrix Spike Analyzed: 02/24/2007 (7)	B23106-MS2)				Sou	ırce: IQB	1815-03				
Aroclor 1016	317	56	17	ug/kg dry	301	ND	105	45-120			
Aroclor 1260	330	56	11	ug/kg dry	301	ND	110	45-120			
Surrogate: Decachlorobiphenyl	42.6			ug/kg dry	37.7		113	45-120			
Matrix Spike Dup Analyzed: 02/24/200	07 (7B23106-1	MSD2)			Sou	ırce: IQB	1815-03				
Aroclor 1016	292	56	17	ug/kg dry	301	ND	97	45-120	8	30	
Aroclor 1260	317	56	11	ug/kg dry	301	ND	105	45-120	4	30	
Surrogate: Decachlorobiphenyl	40.0			ug/kg dry	37.6		106	45-120			
Batch: 7B26083 Extracted: 02/26/0	<u>07</u>										
Blank Analyzed: 02/26/2007 (7B26083-	-BLK1)										
Aroclor 1016	ND	50	15	ug/kg wet							
Aroclor 1221	ND	50	15	ug/kg wet							
Aroclor 1232	ND	50	10	ug/kg wet							
Aroclor 1242	ND	50	10	ug/kg wet							
Aroclor 1248	ND	50	10	ug/kg wet							
Aroclor 1254	ND	50	10	ug/kg wet							
Aroclor 1260	ND	50	10	ug/kg wet							
Surrogate: Decachlorobiphenyl	32.2			ug/kg wet	33.3		97	45-120			

TestAmerica - Irvine, CAMichele Chamberlin

Project Manager





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METHOD BLANK/QC DATA

POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B26083 Extracted: 02/26/07	_										
LCS Analyzed: 02/26/2007 (7B26083-BS	2)										
Aroclor 1016	265	50	15	ug/kg wet	267		99	60-115			
Aroclor 1260	271	50	10	ug/kg wet	267		101	60-115			
Surrogate: Decachlorobiphenyl	35.0			ug/kg wet	33.3		105	45-120			
Matrix Spike Analyzed: 02/27/2007 (7B2	6083-MS2)				Sou	rce: IQB	1140-15R	E2			
Aroclor 1016	463	50	15	ug/kg wet	266	ND	174	45-120			M1
Aroclor 1260	282	50	10	ug/kg wet	266	ND	106	45-120			
Surrogate: Decachlorobiphenyl	19.5			ug/kg wet	33.2		59	45-120			
Matrix Spike Dup Analyzed: 02/27/2007	(7B26083-M	ISD2)			Sou	rce: IQB	1140-15R	E2			
Aroclor 1016	440	50	15	ug/kg wet	267	ND	165	45-120	5	30	MI
Aroclor 1260	244	50	10	ug/kg wet	267	ND	91	45-120	14	30	
Surrogate: Decachlorobiphenyl	17.2			ug/kg wet	33.3		52	45-120			





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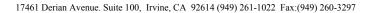
Received: 02/16/07

METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B22114 Extracted: 02/22/07	7										
	_										
Blank Analyzed: 02/22/2007 (7B22114-B	BLK1)										
Antimony	ND	1.0	0.030	mg/kg wet							
Arsenic	ND	0.50	0.25	mg/kg wet							
Barium	ND	0.50	0.080	mg/kg wet							
Beryllium	ND	0.30	0.040	mg/kg wet							
Cadmium	ND	0.50	0.025	mg/kg wet							
Chromium	ND	1.0	0.35	mg/kg wet							
Cobalt	ND	0.50	0.080	mg/kg wet							
Copper	ND	1.0	0.20	mg/kg wet							
Lead	ND	0.50	0.050	mg/kg wet							
Molybdenum	ND	1.0	0.10	mg/kg wet							
Nickel	ND	1.0	0.45	mg/kg wet							
Selenium	ND	1.0	0.20	mg/kg wet							
Silver	ND	0.50	0.050	mg/kg wet							
Thallium	ND	0.50	0.10	mg/kg wet							
Vanadium	ND	1.0	0.40	mg/kg wet							
Zinc	ND	10	1.3	mg/kg wet							
LCS Analyzed: 02/22/2007 (7B22114-BS	51)										
Antimony	42.6	1.0	0.030	mg/kg wet	50.0		85	80-120			
Arsenic	42.2	0.50	0.25	mg/kg wet	50.0		84	80-120			
Barium	43.1	0.50	0.080	mg/kg wet	50.0		86	80-120			
Beryllium	44.9	0.30	0.040	mg/kg wet	50.0		90	80-120			
Cadmium	43.1	0.50	0.025	mg/kg wet	50.0		86	80-120			
Chromium	43.4	1.0	0.35	mg/kg wet	50.0		87	80-120			
Cobalt	43.6	0.50	0.080	mg/kg wet	50.0		87	80-120			
Copper	45.0	1.0	0.20	mg/kg wet	50.0		90	80-120			
Lead	42.3	0.50	0.050	mg/kg wet	50.0		85	80-120			
Molybdenum	42.3	1.0	0.10	mg/kg wet	50.0		85	80-120			
Nickel	43.6	1.0	0.45	mg/kg wet	50.0		87	80-120			
Selenium	41.0	1.0	0.20	mg/kg wet	50.0		82	80-120			
Silver	22.4	0.50	0.050	mg/kg wet	25.0		90	80-120			
Thallium	42.9	0.50	0.10	mg/kg wet	50.0		86	80-120			
Vanadium	42.6	1.0	0.40	mg/kg wet	50.0		85	80-120			
Zinc	43.7	10	1.3	mg/kg wet	50.0		87	80-120			

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1891264

Report Number: IQB1815

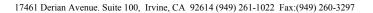
Sampled: 02/16/07 Received: 02/16/07

METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B22114 Extracted: 02/22/	<u>07</u>										
Matrix Spike Analyzed: 02/22/2007 (71	B22114-MS1)				Sou	ırce: IQB	2309-02				
Antimony	12.5	1.1	0.032	mg/kg dry	53.6	0.086	23	75-125			M2
Arsenic	40.4	0.54	0.27	mg/kg dry	53.6	1.9	72	75-125			M2
Barium	113	0.54	0.086	mg/kg dry	53.6	83	56	75-125			M2
Beryllium	41.3	0.32	0.043	mg/kg dry	53.6	0.53	76	75-125			
Cadmium	39.0	0.54	0.027	mg/kg dry	53.6	0.12	73	75-125			M2
Chromium	54.8	1.1	0.38	mg/kg dry	53.6	14	76	75-125			
Cobalt	45.3	0.54	0.086	mg/kg dry	53.6	5.3	75	75-125			
Copper	46.5	1.1	0.21	mg/kg dry	53.6	9.8	68	75-125			M2
Lead	48.2	0.54	0.054	mg/kg dry	53.6	6.6	78	75-125			
Molybdenum	38.1	1.1	0.11	mg/kg dry	53.6	0.33	70	75-125			M2
Nickel	48.4	1.1	0.48	mg/kg dry	53.6	9.3	73	75-125			M2
Selenium	37.4	1.1	0.21	mg/kg dry	53.6	ND	70	75-125			M2
Silver	20.1	0.54	0.054	mg/kg dry	26.8	0.064	75	75-125			
Thallium	43.6	0.54	0.11	mg/kg dry	53.6	0.23	81	75-125			
Vanadium	67.4	1.1	0.43	mg/kg dry	53.6	27	75	75-125			
Zinc	75.6	11	1.4	mg/kg dry	53.6	41	65	75-125			M2
Matrix Spike Dup Analyzed: 02/22/200	07 (7B22114-M	(SD1)			Sou	ırce: IQB	2309-02				
Antimony	12.8	1.1	0.032	mg/kg dry	53.6	0.086	24	75-125	2	20	<i>M</i> 2
Arsenic	42.5	0.54	0.27	mg/kg dry	53.6	1.9	76	75-125	5	20	
Barium	124	0.54	0.086	mg/kg dry		83	76	75-125	9	20	
Beryllium	43.3	0.32	0.043	mg/kg dry	53.6	0.53	80	75-125	5	20	
Cadmium	41.3	0.54	0.027	mg/kg dry	53.6	0.12	77	75-125	6	20	
Chromium	57.7	1.1	0.38	mg/kg dry	53.6	14	82	75-125	5	20	
Cobalt	47.9	0.54	0.086	mg/kg dry	53.6	5.3	79	75-125	6	20	
Copper	49.2	1.1	0.21	mg/kg dry	53.6	9.8	74	75-125	6	20	M2
Lead	52.4	0.54	0.054	mg/kg dry	53.6	6.6	85	75-125	8	20	
Molybdenum	40.6	1.1	0.11	mg/kg dry	53.6	0.33	75	75-125	6	20	
Nickel	51.9	1.1	0.48	mg/kg dry	53.6	9.3	79	75-125	7	20	
Selenium	39.4	1.1	0.21	mg/kg dry	53.6	ND	74	75-125	5	20	<i>M</i> 2
Silver	21.0	0.54	0.054	mg/kg dry	26.8	0.064	78	75-125	4	20	
Thallium	46.5	0.54	0.11	mg/kg dry	53.6	0.23	86	75-125	6	20	
Vanadium	70.6	1.1	0.43	mg/kg dry	53.6	27	81	75-125	5	20	
Zinc	81.5	11	1.4	mg/kg dry	53.6	41	76	75-125	8	20	

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Sampled: 02/16/07 Received: 02/16/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Limit		Cints	Lever	resure	, une	Limits	III D	Limit	Quantities
Batch: 7B22115 Extracted: 02/22/07	_										
Blank Analyzed: 02/23/2007 (7B22115-B	LK1)										
Aluminum	ND	10	5.0	mg/kg wet							
Boron	ND	5.0	1.0	mg/kg wet							
Lithium	ND	6.3	3.8	mg/kg wet							
Potassium	ND	50	19	mg/kg wet							
Sodium	ND	50	24	mg/kg wet							
Zirconium	ND	25	1.5	mg/kg wet							
LCS Analyzed: 02/23/2007 (7B22115-BS	1)										
Aluminum	45.3	10	5.0	mg/kg wet	50.0		91	80-120			
Boron	47.3	5.0	1.0	mg/kg wet	50.0		95	80-120			
Lithium	48.4	6.3	3.8	mg/kg wet	50.0		97	80-120			
Potassium	516	50	19	mg/kg wet	500		103	80-120			
Sodium	496	50	24	mg/kg wet	500		99	80-120			
Zirconium	52.4	25	1.5	mg/kg wet	50.0		105	80-120			
Matrix Spike Analyzed: 02/23/2007 (7B2	2115-MS1)				Sou	rce: IQB	2309-02				
Aluminum	17000	11	5.4	mg/kg dry	53.6	14000	5597	75-125			MHA
Boron	45.6	5.4	1.1	mg/kg dry	53.6	1.1	83	75-125			
Lithium	64.1	6.8	4.1	mg/kg dry	53.6	17	88	75-125			
Potassium	3350	54	20	mg/kg dry	536	2900	84	75-125			
Sodium	606	54	26	mg/kg dry	536	84	97	75-125			
Zirconium	42.9	27	1.6	mg/kg dry	53.6	2.6	75	75-125			
Matrix Spike Dup Analyzed: 02/23/2007	(7B22115-M	ISD1)			Sou	rce: IQB	2309-02				
Aluminum	17600	11	5.4	mg/kg dry	53.6	14000	6716	75-125	3	20	MHA
Boron	46.1	5.4	1.1	mg/kg dry	53.6	1.1	84	75-125	1	20	
Lithium	64.8	6.8	4.1	mg/kg dry	53.6	17	89	75-125	1	20	
Potassium	3450	54	20	mg/kg dry	536	2900	103	75-125	3	20	
Sodium	601	54	26	mg/kg dry	536	84	96	75-125	1	20	
Zirconium	41.5	27	1.6	mg/kg dry	53.6	2.6	73	75-125	3	20	M2





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Sampled: 02/16/07

Received: 02/16/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B17034 Extracted: 02/17/03	7										
Duplicate Analyzed: 02/17/2007 (7B1703	84-DUP1)				Sou	rce: IQB	1815-04				
pH	7.31	NA	0.00	pH Units		7.22			1	5	
Duplicate Analyzed: 02/17/2007 (7B1703	84-DUP2)				Sou	rce: IQB	1822-01				
pH	7.57	NA	0.00	pH Units		7.54			0	5	
Batch: 7B19107 Extracted: 02/19/07	7										
	_										
Blank Analyzed: 02/20/2007 (7B19107-E	BLK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 02/20/2007 (7B1910	07-DUP1)				Sou	rce: IQB	1815-03				
Percent Solids	89.8	0.10	0.10	%		88			2	20	
Batch: 7B26114 Extracted: 02/26/07	7										
	· _										
Blank Analyzed: 02/26/2007 (7B26114-E	BLK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/26/2007 (7B26114-BS	51)										
Perchlorate	44.6	4.0	0.80	ug/l	50.0		89	85-115			
Matrix Spike Analyzed: 02/27/2007 (7B2)6114_MS1)				Sou	rce: IQB	1815_03				
Perchlorate	46.0	4.0	0.80	ug/l	50.0	ND	92	80-120			
			0.00	~ o				50 120			
Matrix Spike Dup Analyzed: 02/27/2007	•	*	0.00			rce: IQB		00.100		•	
Perchlorate	46.0	4.0	0.80	ug/l	50.0	ND	92	80-120	0	20	



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

MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300

1891264 Report Number: IQB1815

Sampled: 02/16/07 Received: 02/16/07

San Diego, CA 92123 Attention: Lisa J. Tucker

DATA QUALIFIERS AND DEFINITIONS

- 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.
- L Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- M7 The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
- MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- **ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- **RPD** Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD. The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For TICs:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO):

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1815

Sampled: 02/16/07

Received: 02/16/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California		
EPA 160.3 MOD	Soil	N/A	N/A		
EPA 314.0 DI-RFI	Soil				
EPA 3545/8081A	Soil	X	X		
EPA 3545/8082	Soil	X	X		
EPA 6010B	Soil	X	X		
EPA 6020	Soil	X	X		
EPA 8015B	Soil	X	X		
EPA 8082	Soil	X	X		
EPA 8260B	Soil	X	X		
EPA 9045C	Soil	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

Subcontracted Laboratories

Calscience-SUB California Cert #1230

7440 Lincoln Way - Garden Grove, CA 92841

Analysis Performed: 8270C (SIM)

Samples: IQB1815-01, IQB1815-02, IQB1815-03

Analysis Performed: Dry Wt

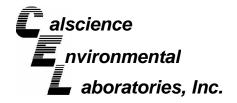
Samples: IQB1815-01, IQB1815-02, IQB1815-03

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Analysis Performed: Mercury-7471 (dry wt)

Samples: IQB1815-01, IQB1815-02, IQB1815-03





February 27, 2007

Michele Chamberlin TestAmerica 17461 Derian Avenue, Suite 100 Irvine, CA 92614-5845

Subject: Calscience Work Order No.: 07-02-1177

Client Reference: IQB1815

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/19/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental Laboratories, Inc.

Steven L. Lane Laboratory Director

CA-ELAP

NELAP ID: 03220CA

CSDLAC ID: 10109

SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 ·

TEL:(714) 895-5494

FAX: (714) 894-7501





Case Narrative for 07-02-1177

Sample Condition on Receipt

Four soil samples were received as part of this Work Order on February 19, 2007. The sample was transferred to the laboratory in an ice-chest following strict chain-of-custody procedures. The temperature (3.1°C) of the samples was measured upon arrival in the laboratory and were within acceptable limits. The samples were logged into the Laboratory Information Management System (LIMS), given laboratory identification numbers, and stored in refrigeration units pending analysis.

The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in it entirety.

Data Summary

The samples included in this report were analyzed in accordance with the attached chain-of-custody (COC) records. Data is presented on a dry weight basis.

Holding Times

All holding time requirements were met.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Blanks

The method blank data showed non-detectable levels for all constituents.

Matrix Spikes

Matrix Spikes (MS) and Matrix Spike Duplicates (MSD) were performed at required frequencies. All recoveries were within acceptable limits, with the exception of specific analytes by EPA Method 8270C SIM. Please see Table A for details.







Case Narrative for 07-02-1177

Table A: Ma	Table A: Matrix Spike / Matrix Spike Duplicate outside acceptable limits								
EPA Method 8270C SIM									
Batch #	Analytes(s)								
070219S05	2-Nitrophenol [*] , 4-Chloro-3-Methylphenol [*] , Di-n-Butyl Phthalate [*] &								
	Dimethyl Phthalate								

^{*}The relative percent difference (RPD) are outside acceptable limits. These recoveries have been flagged with a "4" qualifier.

Laboratory Control Samples

The Laboratory Control Sample (LCS) analyses were performed at the required frequencies. All recoveries were within acceptable limits.

Surrogates

Surrogate recoveries for all samples were within acceptable control limits.

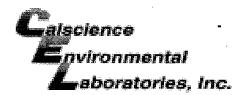


CALSCIENCE ENVIRONMENTAL LABORATORIES, INC. Sample Summary Report

WORK ORDER #: 07-02-1177 QAPP: 0000

#	Client Sample ID	Matrix	Date Collected	NoC	Comment
1	IQB1815-01	S	02/19/2007	1	
2	IQB1815-02	S	02/19/2007	1	
3	IQB1815-03	S	02/19/2007	1	MS/MSD on this sample.
4	IQB1815-04	S	02/19/2007	1	EPA 8270C: Extract & Hold
4	IQB1815-04	S	02/19/2007	1	EPA 8270C: Extract & Hold

02/27/07



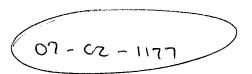
WORK ORDER #: 07 - 0 2 - \ \ \ 7

Cooler _ \ of _ \

SAMPLE RECEIPT FORM

CLIENT: TEST AMERICA	DATE: 2-19-07
TEMPERATURE - SAMPLES RECEIVED BY:	
CALSCIENCE COURIER: Chilled, cooler with temperature blank provided. Chilled, cooler without temperature blank. Chilled and placed in cooler with wet ice. Ambient and placed in cooler with wet ice. Ambient temperature. ° C Temperature blank.	LABORATORY (Other than Calscience Courier): °C Temperature blank. °C IR thermometer. Ambient temperature.
CUSTODY SEAL INTACT:	
Sample(s): Cooler: No (Not l	ntact) : Not Present: Initial:
SAMPLE CONDITION: Chain-Of-Custody document(s) received with samples	
COMMENTS:	





SUBCONTRACT ORDER - PROJECT # IQB1815

SENDING LABORATORY:

TestAmerica - Irvine, CA

17461 Derian Avenue. Suite 100

Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 260-3297

Released By

Date

Time

Received By

Project Manager. Michele Chamberlin

RECEIVING LABORATORY:

Calscience-SUB
7440 Lincoln Way
Garden Grove, CA 92841
Phone:714-895-5494
Fax: 714-894-7501

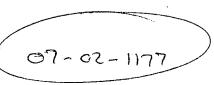
Project Location: California

Work Order Comments:	Level 4 QC. Boeing EDD, Report t	o MDL w/ J flags, report in	dry weight, 2 week TAT.
Standard TAT is requested	unless specific due date is requ	ested => Due Date:	Initials:
Analysis	Expiration		Comments
Sample ID: IQB1815-01 Soil 8270C (SIM)-OUT Dry Wt-OUT Level 3 Data Package - Out	Sampled: 02/16/07 08:36 03/02/07 08:36 03/16/07 08:36 03/16/07 08:36		NDMA+PAHS+phthltes(1 run).Sub=Calsci,calc w sx wt % solids, sub to Calscience, \$10/sample Sub to Calscience, TA Lvl IV, EDD=Boxing
Containers Supplied: 2 oz jar (IQB1815-01F)			,
Sample ID: IQB1815-02 Soil 8270C (SIM)-OUT Dry Wt-OUT Level 3 Data Package - Out	Sampled: 02/16/07 08:36 03/02/07 08:36 03/16/07 08:36 03/16/07 08:36		NDMA+PAHS+phthltes(1 run).Sub=Calsci,calc w. sx wt % solids, sub to Calscience, \$10/sample Sub to Calscience, TA Lvl IV, EDD=Boeing
Containers Supplied: 2 oz jar (IQB1815-02F)			The to Camelones, ITI St. 1. , EDD Booms
Sample ID: IQB1815-03 Soil 8270C (SIM)-OUT Dry Wt-OUT Level 3 Data Package - Out MS/MSD	Sampled: 02/16/07 09:21 03/02/07 09:21 03/16/07 09:21 03/16/07 09:21 03/16/07 09:21	MS/MSD	NDMA+PAHS+phthltes(1 run).Sub=Calsci,calc w/sx wt % solids, sub to Calscience, \$10/sample Sub to Calscience, TA Lvl IV,EDD=Bosing
Containers Supplied: 4 oz Jar (IQB1815-03H)			
Sample ID: IQB1815-04 Soil Extract/Hold-8270C-SIM-OUT	Sampled: 02/16/07 09:46 03/02/07 09:46		Sub to Calscience
Containers Supplied: 2 oz jar (IQB1815-04D)			
Released By	Date Time	Received By	Date Time

Time

Date





SUBCONTRACT ORDER - PROJECT # IQB1815

				Sampli	INT	EGRI'	TY:			
All containers intact: Custody Scals Present:	Yes Yes	 No No		Sample labels/COC agree: Samples Preserved Properly:				 Samples Received On Ice:; Samples Received at (mmp);	☐ Yes	□ No
Released By	 		Date	Time	Recei	ved By	,	Date		l'inc
Released By	 _	 	Date	Time	Recei	vod By	,	 Date	 7	lime





SUBCONTRACT ORDER - PROJECT # IQB1815

SENDING LABORATORY:

TestAmerica - Irvine, CA

17461 Derian Avenue. Suite 100

Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 260-3297

Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Calscience-SUB 7440 Lincoln Way

Garden Grove, CA 92841 Phone:714-895-5494 Fax: 714-894-7501

Project Location: California

Work Order Comments:	Level 4 QC. Boeing EDD, Report to MDL w/ J flags, report in dry weight, 2 week TAT.									
Standard TAT is requested	unless specific due date is requested =>	Due Date: Initials:								
Analysis	Expiration	Comments								
Sample ID: IQB1815-01 Soil 8270C (SIM)-OUT	Sampled: 02/16/07 08:36 03/02/07 08:36	NDMA+PAHS+phthltes(1 run).Sub=Calsci,calc w								
Level 3 Data Package - Out	03/16/07 08:36	sx wt Sub to Calscience,TA Lvl IV,EDD=Boeing								
Containers Supplied: 2 oz jar (IQB1815-01F)										
Sample ID: IQB1815-02 Soil 8270C (SIM)-OUT	Sampled: 02/16/07 08:36 03/02/07 08:36	NDMA+PAHS+phthltes(1 run).Sub=Calsci,calc w								
Level 3 Data Package - Out	03/16/07 08:36	sx wt Sub to Calscience,TA Lvl IV,EDD=Boeing								
Containers Supplied: 2 oz jar (IQB1815-02F)		•								
Sample ID: IQB1815-03 Soil 8270C (SIM)-OUT	Sampled: 02/16/07 09:21 M 03/02/07 09:21	NDMA+PAHS+phthltes(1 run).Sub=Calsci,calc w								
Level 3 Data Package - Out MS/MSD	03/16/07 09:21 03/16/07 09:21	Sub to Calscience, TA Lvl IV, EDD=Boeing								
Containers Supplied: 4 oz Jar (IQB1815-03H)										
Sample ID: IQB1815-04 Soil Extract/Hold-8270C-SIM-OUT	Sampled: 02/16/07 09:46 © 03/02/07 09:46	Sub to Calscience								
Containers Supplied: 2 oz jar (IQB1815-04D)										

Hange El	7070	0900	Torke	- T.	AT 2/19/0	7 090
Released By U	Date	Time	Received By		1Date	Time
Ontrow TAI	2/19/07	0950	Wdoath	W :	2/19/07	0950
Released By	Date t	Time	Received By		Date	Time



Quality Control - Duplicate



TestAmerica

17461 Derian Avenue, Suite 100

Irvine, CA 92614-5845

Date Received: Work Order No:

Preparation: Method:

02/19/07

07-02-1177

N/A EPA 160.3

Project: IQB1815

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
07-02-1178-4	Solid	N/A	N/A	02/21/07	70221TSD1
					_
<u>Parameter</u>	Sample Conc	DUP Conc	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
Solids, Total	84.7	84.5	0	0-25	



Quality Control - Spike/Spike Duplicate



TestAmerica 17461 Derian Avenue, Suite 100 Irvine, CA 92614-5845 Date Received: Work Order No: Preparation: Method: 02/19/07 07-02-1177 EPA 3545 EPA 8270C SIM

Project IQB1815

Quality Control Sample ID	Matrix Instrument		Date Prepared	A	Date Analyzed	MS/MSD Batch Number
IQB1815-03	Solid	GC/MS N	02/19/07	(02/22/07	070219S05
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	<u>RPD</u>	RPD CL	<u>Qualifiers</u>
2,4,6-Trichlorophenol	73	88	40-160	19	0-20	
2,4-Dichlorophenol	74	90	40-160	20	0-20	
2-Methylphenol	78	89	40-160	13	0-20	
2-Nitrophenol	92	117	40-160	24	0-20	4
4-Chloro-3-Methylphenol	82	101	40-160	21	0-20	4
Acenaphthene	88	106	40-106	18	0-20	
Benzo (a) Pyrene	93	112	17-163	19	0-20	
Chrysene	93	107	17-168	14	0-20	
Di-n-Butyl Phthalate	101	130	40-160	24	0-20	4
Dimethyl Phthalate	86	111	40-160	25	0-20	4
Fluoranthene	93	112	26-137	18	0-20	
Fluorene	90	109	59-121	19	0-20	
N-Nitrosodimethylamine	92	112	40-160	19	0-20	
Naphthalene	89	103	21-133	14	0-20	
Phenanthrene	86	102	54-120	18	0-20	
Phenol	75	91	40-160	19	0-20	
Pyrene	90	113	6-156	23	0-46	

MMM_

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



TestAmerica 17461 Derian Avenue, Suite 100 Irvine, CA 92614-5845 Date Received: Work Order No: Preparation: Method:

07-02-1177 EPA 3545 EPA 8270C SIM

N/A

Project: IQB1815

Quality Control Sample ID	Matrix	Instrument			te /zed	LCS/LCSD Bato Number	h
099-12-413-26	Solid	GC/MS N	02/16/07	02/23	/07	070219L05	
<u>Parameter</u>	LCS %RI	EC LCSD %	REC %I	REC CL	RPD	RPD CL	Qualifiers
2,4,6-Trichlorophenol	76	76	•	40-160	0	0-20	
2,4-Dichlorophenol	74	74		40-160	1	0-20	
2-Methylphenol	85	85	•	40-160	0	0-20	
2-Nitrophenol	88	91	•	40-160	4	0-20	
4-Chloro-3-Methylphenol	88	87	•	40-160	1	0-20	
Acenaphthene	84	83	•	48-108	1	0-11	
Benzo (a) Pyrene	89	89		17-163	1	0-20	
Chrysene	84	83		17-168	1	0-20	
Di-n-Butyl Phthalate	90	91		40-160	1	0-20	
Dimethyl Phthalate	87	86		40-160	1	0-20	
Fluoranthene	88	87	:	26-137	1	0-20	
Fluorene	85	84		59-121	1	0-20	
N-Nitrosodimethylamine	88	84	•	40-160	4	0-20	
Naphthalene	83	83	;	21-133	0	0-20	
Phenanthrene	82	82		54-120	0	0-20	
Phenol	77	78	•	40-160	2	0-20	
Pyrene	93	95	;	28-106	2	0-16	



Glossary of Terms and Qualifiers



Work Order Number: 07-02-1177

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.



7-022010

SUBCONTRACT ORDER - PROJECT # IQB1815

SENDING LABORATORY:

TestAmerica - Irvine, CA

17461 Derian Avenue. Suite 100

Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 260-3297

Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Weck Laboratories, Inc 14859 E. Clark Avenue City of Industry, CA 91745 Phone: (626) 336-2139 Fax: (626) 336-2634

Project Location: California

Work Order Comments:	Level 4 QC. Boeing EDD, Report to M	MDL w/ J flags, report in	dry weight, 2 week TAT.
Standard TAT is requested	unless specific due date is request	ed => Due Date:	Initials:
Analysis	Expiration		Comments
Sample ID: IQB1815-01 Soil Level 4 Data Package - Weck Mercury-7471 (dry wt)-OUT	Sampled: 02/16/07 08:36 03/16/07 08:36 03/16/07 08:36		sub to Weck, provide Element transfer EDD J & B flag, sub to Weck, 9 day TAT
Containers Supplied: 2 oz jar (IQB1815-01E)	2	9	
Sample ID: IQB1815-02 Soil Level 4 Data Package - Weck Mercury-7471 (dry wt)-OUT	Sampled: 02/16/07 08:36 03/16/07 08:36 03/16/07 08:36		sub to Weck, provide Element transfer EDD J & B flag, sub to Weck, 9 day TAT
Containers Supplied: 2 oz jar (IQB1815-02E)	ħ	-	
Sample ID: IQB1815-03 Soil Level 4 Data Package - Weck Mercury-7471 (dry wt)-OUT MS/MSD Required - Out	Sampled: 02/16/07 09:21 03/16/07 09:21 03/16/07 09:21 03/16/07 09:21	MS/MSD	sub to Weck, provide Element transfer EDD J & B flag, sub to Weck, 9 day TAT
Containers Supplied: 4 oz Jar (IQB1815-03G)			·

All containers intact: Yes Custody Seals Present: Yes	. / 0	mple labels/COC a		No Sample	s Received On Ice:: s Received at (temp):	Yes U No
Hunfortel		(2) (2) (3)	Hush	ia e i u	29000	7:00
Released By/	Date 21907	Time 843	Received By	tons	Date 2/20/3	Time 9:45
Released By	Date	Time	Received By		Date	Time



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine Report Date: 03/06/07 15:02

17461 Derian Ave, Suite 100 **Received Date:** 02/20/07 08:45

Irvine, CA 92614 Turn Around: Normal

Attention: Michele Chamberlin

Work Order #: 7022010

Phone: (949) 261-1022

Fax: (949) 260-3297 Client Project: IQB1815

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 02/20/07 08:45 with the Chain of Custody document. The samples were received in good condition, at 4.1 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager



Page 1 of 9





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022010 Project ID: IQB1815 Date Received: 02/20/07 08:45 Date Reported: 03/06/07 15:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQB1815-01	client		7022010-01	Solid	02/16/07 08:36
IQB1815-02	client		7022010-02	Solid	02/16/07 08:36
IQB1815-03	client		7022010-03	Solid	02/16/07 09:21



Week Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022010 Project ID: IQB1815 Date Received: 02/20/07 08:45 Date Reported: 03/06/07 15:02

QUALITY CONTROL SECTION



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022010 Project ID: IQB1815 Date Received: 02/20/07 08:45 Date Reported: 03/06/07 15:02

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

		D		Spike	Courag		%REC		RPD	Data
		Reporting		Spike	Source		/OKEC		KrD	Dutu
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers

Batch W7B1018 - General Preparation

Duplicate (W7B1018-DUP1)	Source	ce: 7022008-01	Analyzed: 02/26/07			
% Solids	87.1	0.100 % by Weight	86.6	0.576	20	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022010 Project ID: IQB1815 Date Received: 02/20/07 08:45 Date Reported: 03/06/07 15:02

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7B0833 - EPA 7471A										
Blank (W7B0833-BLK1)				Analyzed:	02/22/07					
Mercury, Total	0.000902	0.010 г	mg/kg wet							J
LCS (W7B0833-BS1)				Analyzed:	02/22/07					
Mercury, Total	0.0806	0.010 г	mg/kg wet	0.0833		96.8	80-120			
Matrix Spike (W7B0833-MS1)	Sour	ce: 7022010-0	3	Analyzed: 02/22/07						QM-02
Mercury, Total	2.20	0.44 1	mg/kg dry	0.0876	2.2	0.00	70-130			
Matrix Spike Dup (W7B0833-MSD1)	Sour	ce: 7022010-0	3	Analyzed:	02/22/07					
Mercury, Total	2.31	0.44 1	mg/kg dry	0.0905	2.2	122	70-130	4.88	25	QM-02



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022010 Project ID: IQB1815

Date Received: 02/20/07 08:45 Date Reported: 03/06/07 15:02

Notes and Definitions

QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte

inherent in the sample.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

ND NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

CHAIN OF CUSTODY RECORD

COC #:

MWHSV20070215_02 **Page**: 1 of 3

Custome	Customer Information	·	Project Information	nation			Project Information	formation			The second secon	
Site:	SSFL		Client Name:	DOE			Collector:	Shelby Valenzuela		Boeing PM:		
Company:	MWH	†	Sampling Event:	t: Group	8 Data Gaps-Soil	s-Soil	Contact #:				•	1
Report to:	Lisa Tucker		Project Number:	r: 1891264	54		;-	Redu	Requested Analyses		Instructions/TAT	TAT
Address:	9444 Farnham Street		Project Manager:	Diana	Buchanan						Legend: Numerical values for	is for
	Suite 300		PM Phone #:	(626)	568-6897						analyses equate to turn around time in days	to turn lays
	San Diego		Field Contact:								Ţ Ţ	
	CA		Field Contact #:								EH - Extract Hold	Ŗ
	92123		Lab Name:	Test A	Test America, Inc.		Pe					
Email:	boeingedms@ch2m.com		Lab Contact:	Miche	le Chamberlin	. <u>s</u>	orchlo					
	Lisa. Tucker@mwhglobal.com	moo	Lab Address:	17461	Derian Ave, Suite 100	, Suite 100	rate					
				Ivine,	CA 92606		314					
			Lab Phone:	(848)	261-1022		Soil C					
Servicie Name			Matrix	a do	Time	No. of Containers	DI-WET				Comments	
FSBS0041S01	.01	Soil		2/15/2007	8:35	1	I				Hold analysis	
FSBS0042S01	01	Soil		2/15/2007	8:40	-	I				Hold analysis	
FSBS0044S01	101	Soll		2/15/2007	8:44	4-	I				Hold analysis	
FSBS0043S01	101	Soil		2/15/2007	8:51	-	I				Hold analysis	
FSBS0045S01	301	- S S		2/15/2007	8:59	-	I				Hold analysis	
FSBS0046S01	301	Soil		2/15/2007	9:25	1	I				Hold analysis	
FSBS0048S01	, jo	Soil		2/15/2007	9:30	1	H				Hold analysis	
FSBS0050S01	301	Soil		2/15/2007	9:34	+	Ŧ				Hold analysis	
FSBS0047S01	301	Soil		2/15/2007	9:39	*	I				Hold analysis	
FSBS0049S01	301	Soil		2/15/2007	9:44	*	I				Hold analysis	
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<u>, </u>	of Grass	7.10/2/01/7	200	رغفا)		Hyper	NA X	Cour	Hyles	Elenn	n. 4	16/10
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									Uäta	Data Validation Package	- 1	

MWHSV20070215_02

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Custome	Customer Information	Project	Project Information	ō		10 mm mm m	Project Information	ormation		, midde er fan e en en en en en en en en en en en en		
Site:	SSFL	Client Name:	ame:	DOE			Collector:	Shelby Valenzuela		Boeing PM:		
Company:	, MWH	Samplir	Sampling Event:	Group 8	Group 8 Data Gaps-Soil	-Soil	Contact #:					•
Report to:	; Lisa Tucker	Project	Project Number:	1891264	:			Redne	Requested Analyses		Instructions/TAT	s/TAT
Address:		Project	Project Manager:	Diana Buchanan	chanan						Legend: Numerical values for	ues for
		PM Phone #:	ne #:	(626) 568-6897	3-6897	- T- T- T- T- T- T- T- T- T- T- T- T- T-					analyses equate to turn around time in days	ate to tun
	San Diego	Field Contact:	ontact:								E H	
	CA	Field C	Field Contact #:								EH - Extract Hold	Por
	92123	Lab Name:	me:	Test Amer	erica, Inc.		Pe					
Email:	boeingedms@ch2m.com	Lab Contact:	ntact:	Michele	Michele Chamberlin	c	rchlo					
	Lisa.Tucker@mwhglobal.com	com Lab Address:	dress:	17461 D	erian Ave,	17461 Derian Ave, Suite 100	rate 3					
				Irvine, CA	A 92606		314 S					
		Lab Phone:	one:	(949) 261-1022	1-1022		oil D					
Servole Name	Zame	Matrix	-	Date	Time	No. of Containers	i-WET				Comments	
FSBS0062S01	S01	Soil	2/1	2/15/2007	10:08	-	10					
FSBS0051S01	501	Soil	2/1	2/15/2007	10:32	-	10					
FSBS0052S01	:501	Soil	2/1	2/15/2007	10:35	+	10					
FSBS0055S01	3501	Soil	2/1	2/15/2007	10:37	+	I				Hold analysis	
FSBS0053S01	1501	Soil	2/1	2/15/2007	10:40	1	I				Hold analysis	
FSBS0054S01	1501	Soll	2/1	2/15/2007	10:44	+	10					
FSBS0031S01	1501	Soil	2/1	2/15/2007	13:18	-	I				Hold analysis	
FSBS0033801	3501	Soil	2/1	2/15/2007	13:20	+	10					
FSBS0035501	5501	Soil	2/1	2/15/2007	13:24	-	I				Hold analysis	
FSBS0032501	2501	Soil	2/1	2/15/2007	13:29	-	9					
1. Reling	1. Relinquished by: Da	Date: 2. Re	2. Received by:	, ;		Date:	3. Relinquished by:	shed by:	Date: 4.	4. Received by:	ă	Date:
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Comments:	nts:								Geotracker EDF Data Validation	Geotracker EDF Data Validation Package	Level IV	

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COC #:

3 of 3

Page:

Sustome	Customer Information	Project Information	ation		Project Information	ormation			
Site:	SSFL	Client Name:	DOE		Collector:	Shelby V	Shelby Valenzuela	Boeing PM:	:
Company: MWH	ММН	Sampling Event: Group	: Group 8 Date	8 Data Gaps-Soil	Contact #:	:			
Report to:	Report to: Lisa Tucker	Project Number:	: 1891264				Requested Analyses		Instructions/TAT
Address:	9444 Farnham Street	Project Manager: Diana	r: Diana Buchanan	nan					Legend: Numerical values for
	Suite 300	PM Phone #:	(626) 568-6897	97					analyses equate to turn around time in days
	San Diego	Field Contact:							POOL 1
	CA	Field Contact #:							EH - Extract Hold
	92123	Lab Name:	Test America, Inc.	a, Inc.	Pe				
Email:	boeingedms@ch2m.com	Lab Contact:	Michele Chamberlin	mberlin	rchlo				
	Lisa. Tucker@mwhglobal.com	n Lab Address:	17461 Derian	Derian Ave, Suite 100	rate :				
			Irvine, CA 92606	909;	314 \$				
		Lab Phone:	(949) 261-1022	122	Soil C				
		277	and T	No. of	H-WE				Comments
Semple Name	arne	MARITIA	-		- -				
FSBS0034S01	301	Soil	2/15/2007 13:33	33 1	I				Hold analysis
FSBS0036501	101	Soil	2/15/2007 13:59	1 1	10				

1. Relinquished by:	Date:	2. Received by:	Date: 3. I	3. Relinquished by:	Date:	4. Received by:	Date:
	2/16/2007				,		
12 Jana		23 Alocar	12/6/12 W	Theen	Heler	Grand Di	2/16/2
Company:	Time:	Company:	Time: Co	Company:	Time:	Company:	Time.
MWH	54/45	165 Amples	214> 1	TES AMERICA	100	1#+	1100
Comments:					Geotr	Geotracker EDF	
					Data	Data Validation Package 🗹 Level IV	,

03/2/5



LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

San Diego, CA 92123 Attention: Lisa J. Tucker

9444 Farnham Street, Suite 300

Sampled: 02/15/07 Received: 02/16/07

Issued: 03/03/07 18:27

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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, 3 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
IQB1861-11	FSBS0062S01	Soil
IQB1861-12	FSBS0051S01	Soil
IQB1861-13	FSBS0052S01	Soil
IQB1861-16	FSBS0054S01	Soil
IQB1861-18	FSBS0033S01	Soil
IQB1861-20	FSBS0032S01	Soil
IQB1861-22	FSBS0036S01	Soil

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin

Michile Chamberdin

Project Manager





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1861

Sampled: 02/15/07

Received: 02/16/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B26114 Extracted: 02/26/07	_										
Blank Analyzed: 02/26/2007 (7B26114-Bl	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/26/2007 (7B26114-BS1	a)										
Perchlorate	44.6	4.0	0.80	ug/l	50.0		89	85-115			
Matrix Spike Analyzed: 02/27/2007 (7B20	6114-MS1)				Sou	rce: IQB	1815-03				
Perchlorate	46.0	4.0	0.80	ug/l	50.0	ND	92	80-120			
Matrix Spike Dup Analyzed: 02/27/2007	(7B26114-MS	D1)			Sou	rce: IQB	1815-03				
Perchlorate	46.0	4.0	0.80	ug/l	50.0	ND	92	80-120	0	20	
Batch: 7B27069 Extracted: 02/27/07	-										
Blank Analyzed: 02/27/2007 (7B27069-Bl	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/27/2007 (7B27069-BS1	.)										
Perchlorate	53.0	4.0	0.80	ug/l	50.0		106	85-115			
Matrix Spike Analyzed: 02/27/2007 (7B2	7069-MS1)				Sou	rce: IQB	1861-20				
Perchlorate	52.1	4.0	0.80	ug/l	50.0	ND	104	80-120			
Matrix Spike Dup Analyzed: 02/27/2007	(7B27069-MS	D1)			Sou	rce: IQB	1861-20				
Perchlorate	52.6	4.0	0.80	ug/l	50.0	ND	105	80-120	1	20	



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

MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300

1891264 Sampled: 02/15/07

San Diego, CA 92123 Attention: Lisa J. Tucker Report Number: IQB1861 Received: 02/16/07

DATA QUALIFIERS AND DEFINITIONS

RL1 Reporting limit raised due to sample matrix effects.

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

RPD Relative Percent Difference



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB1861

Sampled: 02/15/07

Received: 02/16/07

Certification Summary

TestAmerica - Irvine, CA

Method Matrix Nelac California

EPA 314.0 DI-RFI Soil

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

CHAIN OF CUSTODY RECORD

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1 of 2

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Numerical values for
analyses equale to turn
around time in days Hold all analysis except for pH Hold all analysis except for pH Hold all analysis except for pH Hold all analysis except for pH Instructions/TAT H - Hold EH - Extract_Hold Comments **Boeing PM:** Requested Analyses Collector: Shelby Valenzuela Project Information 5 9 pH by SW9045C - Soil 9 I 9 2 I Metals 7471A Soil Mercury Contact #: I 2 I r 2 9 I Metals 6010B/6020 Soil Group 8 9 I 6 I 9 6 I I No. of Containers 17461 Derian Ave, Suite 100 ~ N Sampling Event: Group 8 Data Gaps-Soil Michele Chamberlin Test America, Inc. Irvine, CA 92606 Diana Buchanan (949) 261-1022 (626) 568-6897 12:45 13:15 11:30 12:30 9:15 9:35 1:00 13:05 1891264 DOE 2/21/2007 2/21/2007 2/21/2007 2/21/2007 2/21/2007 2/21/2007 2/21/2007 2/21/2007 Date D Project Information Project Manager: Project Number: Field Contact #: Field Contact: Client Name: PM Phone #: Lab Address: Lab Contact: Lab Phone: Lab Name: Matrix Soil Soil Soil Soil Soil Soil Soil Lisa.Tucker@mwhglobal.com boeingedms@ch2m.com 9444 Farnham Street Customer Information Report to: Lisa Tucker San Diego Suite 300 92123 SSFL Company: MWH Ą Sample Name PRBS0002502 PR®S0005S02 PRBS0001S01 PRBS0001S02 PRBS0003S01 PRBS0003S02 PR\$S0002S01 PRBS0005501 Address:

1. Relinquished by:	Date:	2. Received by:	Date:	3. Relinquished by:	Date:	Received by:	Date:
12/ Sarav	2/22/2007	(Misi Cen	02/2/27	Buile	72/67	Contraction of the Contraction o	Last -
Company: MWH	ڪر'≳)	Company. TESTAWERICA-INJINE	Time: 13	Company:	Time: 20 3 3	Company:	Time:
Comments:				y C	Geotri Data V	Geotracker EDF	

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Customer	Customer Information	Project Information	ation	And the second s	Project Information	ormati			
Site:	SSFL	Client Name:	DOE	real againment among an annual and an annual an annual and an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual an annual a	Collector:	Shelby	Collector: Shelby Valenzuela	Boeing PM:	
Company: MWH	MWH	Sampling Event:	+	Group 8 Data Gaps-Soil	Contact #:				
Report to:	Report to: Lisa Tucker	Project Number:	: 1891264				Requested Analyses	sas/	Instructions/TAT
Address:	9444 Farnham Street	Project Manager:	r: Diana Buchanan	shanan					Legend: Numerical values for
	Suite 300	PM Phone #:	(626) 568-	568-6897					analyses equate to turn around time in days
	San Diego	Field Contact:							Po II I
	CA	Field Contact #:			M				EH - Extract_Hold
	92123	Lab Name:	Test Ame	America, Inc.					
Email:	boeingedms@ch2m.com	Lab Contact:	Michele C	Michele Chamberlin					
	Lisa.Tucker@mwhglobal.com	n Lab Address:	17461 De	17461 Derian Ave, Suite 100					
			Irvine, CA 92606	95606)20 S				
		Lab Phone:	(949) 261-1022	-1022	Soil G				
Sample Name	ITTE	Matrix	Date	No. of Containers	iroup 8 s - Soil	C - Soil			Comments
PRBS0004S01	101	Soil	2/21/2007	13:40 2	10 10	10 10			

Time: 20% 28/2 Date: Data Validation Package 🗹 Level IV 4. Received by: Company: Geotracker EDF Time: 203 12/27 Date: 3. Relinquished by: Company: Time: Company: Testimetrica Ituro Ensiler 2. Received by: **Date:** 2/22/2007 Time: Holan 1. Relinquished by: Comments: Company: MWH

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LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 1891264

San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/21/07 Received: 02/22/07 Issued: 03/16/07 15:54

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: Enclosed are complete final results. Mercury data has been added.

LABORATORY ID	CLIENT ID	MATRIX
IQB2448-01	PRBS0003S01	Soil
IQB2448-02	PRBS0003S02	Soil
IQB2448-03	PRBS0002S01	Soil
IQB2448-04	PRBS0002S02	Soil
IQB2448-05	PRBS0005S01	Soil
IQB2448-06	PRBS0005S02	Soil
IQB2448-07	PRBS0001S01	Soil
IQB2448-08	PRBS0001S02	Soil
IQB2448-09	PRBS0004S01	Soil

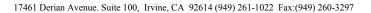
Reviewed By:

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Nicholas Mary

Project Manager





9444 Farnham Street, Suite 300 San Diego, CA 92123

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

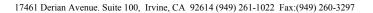
1891264 Report Number: IQB2448

Sampled: 02/21/07

Received: 02/22/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: PRBS0003S01 (IQB2448-01) - So	il				
EPA 9045C	1	02/21/2007 09:15	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0003S02 (IQB2448-02) - So	il				
EPA 9045C	1	02/21/2007 09:35	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0002S01 (IQB2448-03) - So	il				
EPA 9045C	1	02/21/2007 11:00	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0002S02 (IQB2448-04) - So	il				
EPA 9045C	1	02/21/2007 11:30	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0005S01 (IQB2448-05) - So	il				
EPA 9045C	1	02/21/2007 12:30	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0005S02 (IQB2448-06) - So	il				
EPA 9045C	1	02/21/2007 12:45	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0001S01 (IQB2448-07) - So	il				
EPA 9045C	1	02/21/2007 13:05	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0001S02 (IQB2448-08) - So	il				
EPA 9045C	1	02/21/2007 13:15	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20
Sample ID: PRBS0004S01 (IQB2448-09) - So	il				
EPA 9045C	1	02/21/2007 13:40	02/22/2007 20:30	02/23/2007 11:55	02/23/2007 13:20





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2448

Sampled: 02/21/07

Received: 02/22/07

METHOD BLANK/QC DATA

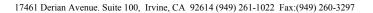
METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B23087 Extracted: 02/23/0	<u>07</u>										
Blank Analyzed: 02/23/2007 (7B23087-	-BLK1)										
Antimony	ND	1.0	0.030	mg/kg wet							
Arsenic	ND	0.50	0.25	mg/kg wet							
Barium	ND	0.50	0.080	mg/kg wet							
Beryllium	ND	0.30	0.040	mg/kg wet							
Cadmium	ND	0.50	0.025	mg/kg wet							
Chromium	ND	1.0	0.35	mg/kg wet							
Cobalt	ND	0.50	0.080	mg/kg wet							
Copper	0.452	1.0	0.20	mg/kg wet							J
Lead	ND	0.50	0.050	mg/kg wet							
Molybdenum	ND	1.0	0.10	mg/kg wet							
Nickel	ND	1.0	0.45	mg/kg wet							
Selenium	ND	1.0	0.20	mg/kg wet							
Silver	ND	0.50	0.050	mg/kg wet							
Thallium	ND	0.50	0.10	mg/kg wet							
Vanadium	ND	1.0	0.40	mg/kg wet							
Zinc	ND	10	1.3	mg/kg wet							
LCS Analyzed: 02/23/2007 (7B23087-E	BS1)										
Antimony	45.2	1.0	0.030	mg/kg wet	50.0		90	80-120			
Arsenic	47.9	0.50	0.25	mg/kg wet	50.0		96	80-120			
Barium	47.2	0.50	0.080	mg/kg wet	50.0		94	80-120			
Beryllium	50.4	0.30	0.040	mg/kg wet	50.0		101	80-120			
Cadmium	44.8	0.50	0.025	mg/kg wet	50.0		90	80-120			
Chromium	49.3	1.0	0.35	mg/kg wet	50.0		99	80-120			
Cobalt	48.5	0.50	0.080	mg/kg wet	50.0		97	80-120			
Copper	46.1	1.0	0.20	mg/kg wet	50.0		92	80-120			
Lead	48.9	0.50	0.050	mg/kg wet	50.0		98	80-120			
Molybdenum	46.0	1.0	0.10	mg/kg wet	50.0		92	80-120			
Nickel	47.3	1.0	0.45	mg/kg wet	50.0		95	80-120			
Selenium	46.9	1.0	0.20	mg/kg wet	50.0		94	80-120			
Silver	23.8	0.50	0.050	mg/kg wet	25.0		95	80-120			
Thallium	49.5	0.50	0.10	mg/kg wet	50.0		99	80-120			
Vanadium	48.3	1.0	0.40	mg/kg wet	50.0		97	80-120			
Zinc	43.5	10	1.3	mg/kg wet	50.0		87	80-120			

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Project Manager





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2448

Sampled: 02/21/07 Received: 02/22/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 7B23087 Extracted: 02/23/07	7										
	<u> </u>										
Matrix Spike Analyzed: 02/23/2007 (7B2	23087-MS1)				Sou	rce: IQB	2448-07				
Antimony	11.9	1.1	0.032	mg/kg dry	53.9	0.40	21	75-125			M2
Arsenic	48.1	0.54	0.27	mg/kg dry	53.9	2.3	85	75-125			
Barium	120	0.54	0.086	mg/kg dry	53.9	75	83	75-125			
Beryllium	49.2	0.32	0.043	mg/kg dry	53.9	0.53	90	75-125			
Cadmium	43.9	0.54	0.027	mg/kg dry	53.9	0.11	81	75-125			
Chromium	65.0	1.1	0.38	mg/kg dry	53.9	17	89	75-125			
Cobalt	53.3	0.54	0.086	mg/kg dry	53.9	5.5	89	75-125			
Copper	51.1	1.1	0.22	mg/kg dry	53.9	7.7	81	75-125			
Lead	53.1	0.54	0.054	mg/kg dry	53.9	5.4	88	75-125			
Molybdenum	44.6	1.1	0.11	mg/kg dry	53.9	0.61	82	75-125			
Nickel	56.5	1.1	0.49	mg/kg dry	53.9	9.7	87	75-125			
Selenium	46.5	1.1	0.22	mg/kg dry	53.9	0.32	86	75-125			
Silver	22.6	0.54	0.054	mg/kg dry	27.0	ND	84	75-125			
Thallium	48.1	0.54	0.11	mg/kg dry	53.9	0.32	89	75-125			
Vanadium	80.2	1.1	0.43	mg/kg dry	53.9	32	89	75-125			
Zinc	86.8	11	1.4	mg/kg dry	53.9	46	76	75-125			
Matrix Spike Dup Analyzed: 02/23/2007	(7B23087-N	ASD1)			Sou	ırce: IQB	2448-07				
Antimony	11.0	1.1	0.032	mg/kg dry	53.9	0.40	20	75-125	8	20	M2
Arsenic	47.9	0.54	0.27	mg/kg dry	53.9	2.3	85	75-125	0	20	
Barium	119	0.54	0.086	mg/kg dry	53.9	75	82	75-125	1	20	
Beryllium	48.7	0.32	0.043	mg/kg dry	53.9	0.53	89	75-125	1	20	
Cadmium	43.2	0.54	0.027	mg/kg dry	53.9	0.11	80	75-125	2	20	
Chromium	65.3	1.1	0.38	mg/kg dry	53.9	17	90	75-125	1	20	
Cobalt	53.1	0.54	0.086	mg/kg dry	53.9	5.5	88	75-125	0	20	
Copper	50.8	1.1	0.22	mg/kg dry	53.9	7.7	80	75-125	1	20	
Lead	54.4	0.54	0.054	mg/kg dry	53.9	5.4	91	75-125	2	20	
Molybdenum	44.3	1.1	0.11	mg/kg dry	53.9	0.61	81	75-125	1	20	
Nickel	56.0	1.1	0.49	mg/kg dry	53.9	9.7	86	75-125	1	20	
Selenium	45.9	1.1	0.22	mg/kg dry	53.9	0.32	85	75-125	1	20	
Silver	22.3	0.54	0.054	mg/kg dry	27.0	ND	83	75-125	1	20	
Thallium	47.9	0.54	0.11	mg/kg dry	53.9	0.32	88	75-125	0	20	
Vanadium	80.0	1.1	0.43	mg/kg dry	53.9	32	89	75-125	0	20	
Zinc	87.6	11	1.4	mg/kg dry	53.9	46	77	75-125	1	20	

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Project Manager



9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2448

Sampled: 02/21/07 Received: 02/22/07

METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B23097 Extracted: 02/23/07	7										
Blank Analyzed: 02/24/2007-03/05/2007	(7B23097-BL)	K1)									
Aluminum	ND	10	5.0	mg/kg wet							
Boron	1.32	5.0	1.0	mg/kg wet							J
Lithium	ND	6.3	3.8	mg/kg wet							
Potassium	ND	50	19	mg/kg wet							
Sodium	27.5	50	24	mg/kg wet							J
Zirconium	ND	25	1.5	mg/kg wet							
LCS Analyzed: 02/24/2007-03/05/2007 (7	/B23097-BS1)										
Aluminum	47.0	10	5.0	mg/kg wet	50.0		94	80-120			
Boron	49.5	5.0	1.0	mg/kg wet	50.0		99	80-120			
Lithium	49.2	6.3	3.8	mg/kg wet	50.0		98	80-120			
Potassium	521	50	19	mg/kg wet	500		104	80-120			
Sodium	557	50	24	mg/kg wet	500		111	80-120			
Zirconium	56.5	25	1.5	mg/kg wet	50.0		113	80-120			
Matrix Spike Analyzed: 02/24/2007-02/2	7/2007 (7B230	97-MS1)			Sou	ırce: IQB	2448-07				
Aluminum	16800	11	5.4	mg/kg dry	53.9	15000	3340	75-125			MHA
Boron	51.0	5.4	1.1	mg/kg dry	53.9	3.1	89	75-125			
Lithium	83.6	6.8	4.1	mg/kg dry	53.9	29	101	75-125			
Potassium	4120	54	20	mg/kg dry	539	3500	115	75-125			
Sodium	682	54	26	mg/kg dry	539	180	93	75-125			
Zirconium	37.6	27	1.6	mg/kg dry	53.9	ND	70	75-125			M2
Matrix Spike Dup Analyzed: 02/24/2007	-02/27/2007 (7	B23097-MS	D1)		Sou	ırce: IQB	2448-07				
Aluminum	17100	11	5.4	mg/kg dry	53.9	15000	3896	75-125	2	20	MHA
Boron	53.7	5.4	1.1	mg/kg dry	53.9	3.1	94	75-125	5	20	
Lithium	84.2	6.8	4.1	mg/kg dry	53.9	29	102	75-125	1	20	
Potassium	4160	54	20	mg/kg dry	539	3500	122	75-125	1	20	
Sodium	684	54	26	mg/kg dry	539	180	94	75-125	0	20	
Zirconium	39.4	27	1.6	mg/kg dry	53.9	ND	73	75-125	5	20	M2





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2448

Sampled: 02/21/07

Received: 02/22/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B23117 Extracted: 02/23/07	_										
Duplicate Analyzed: 02/23/2007 (7B2311	7-DUP1)				Sou	rce: IQB	2448-01				
рН	6.46	NA	0.00	pH Units		6.49			1	5	
Duplicate Analyzed: 02/23/2007 (7B2311	7-DUP2)				Sou	rce: IQB	2449-01				
рН	9.56	NA	0.00	pH Units		9.51			1	5	
Batch: 7C01145 Extracted: 03/01/07	<u>'</u> _										
Blank Analyzed: 03/02/2007 (7C01145-B	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 03/02/2007 (7C0114	5-DUP1)				Sou	rce: IQC	0100-01				
Percent Solids	4.20	0.10	0.10	%		4.2			0	20	



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

MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 San Diego, CA 92123 1891264 Sampled: 02/21/07 Report Number: IQB2448 Received: 02/22/07

Attention: Lisa J. Tucker

DATA QUALIFIERS AND DEFINITIONS

B Analyte was detected in the associated Method Blank.

 $\textbf{J} \hspace{1cm} \textbf{Estimated value.} \hspace{0.2cm} \textbf{Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the } \\$

Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

M2 The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

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

RPD Relative Percent Difference



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2448

Sampled: 02/21/07

Received: 02/22/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A
EPA 6010B	Soil	X	X
EPA 6020	Soil	X	X
EPA 9045C	Soil	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

Subcontracted Laboratories

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745 Analysis Performed: Mercury-7471 (dry wt)

Samples: IQB2448-01, IQB2448-03, IQB2448-05, IQB2448-07, IQB2448-09



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine

17461 Derian Ave, Suite 100

Irvine, CA 92614

Attention: Michele Chamberlin

Phone: (949) 261-1022

Fax: (949) 260-3297

Report Date: 03/12/07 12:09

Received Date: 02/23/07 08:15

Turn Around: Normal

Work Order #: 7022339

Client Project: IQB2448

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 02/23/07 08:15 with the Chain of Custody document. The samples were received in good condition, at 6.0 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen For Taylor Maligmat

Project Manager



franangiyen

Page 1 of 11





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022339 Project ID: IQB2448 Date Received: 02/23/07 08:15 Date Reported: 03/12/07 12:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQB2448-01	client		7022339-01	Solid	02/21/07 09:15
IQB2448-03	client		7022339-02	Solid	02/21/07 11:00
IQB2448-05	client		7022339-03	Solid	02/21/07 12:30
IQB2448-07	client		7022339-04	Solid	02/21/07 13:05
IQB2448-09	client		7022339-05	Solid	02/21/07 13:40



Week Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022339 Project ID: IQB2448 Date Received: 02/23/07 08:15 Date Reported: 03/12/07 12:09

QUALITY CONTROL SECTION



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022339 Project ID: IQB2448 Date Received: 02/23/07 08:15 Date Reported: 03/12/07 12:09

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

		D		Spike	Courag		%REC		RPD	Data
		Reporting		Spike	Source		/OKEC		KrD	Dutu
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers

Batch W7C0195 - General Preparation

Duplicate (W7C0195-DUP1)		7022339-03	Analyzed: 03/08/07		
% Solids	83.4	0.100 % by Weight	84.0	0.717	20



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TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022339 Project ID: IQB2448 Date Received: 02/23/07 08:15 Date Reported: 03/12/07 12:09

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7B1093 - EPA 7471A									
Blank (W7B1093-BLK1)			Analyzed:	03/10/07					
Mercury, Total	0.00400	0.010 mg/kg w	et						J
LCS (W7B1093-BS1)			Analyzed:	03/10/07					
Mercury, Total	0.0842	0.010 mg/kg w	et 0.0833		101	80-120			
Matrix Spike (W7B1093-MS1)	Sour	ce: 7022607-01	Analyzed:	03/10/07					
Mercury, Total	0.139	0.012 mg/kg dr	y 0.0992	0.039	101	70-130			
Matrix Spike Dup (W7B1093-MSD1)	Sour	ce: 7022607-01	Analyzed:	03/10/07					
Mercury, Total	0.165	0.012 mg/kg dr	y 0.0992	0.039	127	70-130	17.1	25	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

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TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022339 Project ID: IQB2448

Date Received: 02/23/07 08:15 Date Reported: 03/12/07 12:09

Notes and Definitions

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

ND NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

CHAIN OF CUSTODY RECORD

MWHSV20070222_00

300

1 of 2

Page:

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Customer	Customer Information		-	Project Information	nation			Projec	Project Information	rmati	5	1					
Site:	SSFL		-	Client Name:	DOE		e c'annable all de militar ad () e i i i i i i i i i i i i i i i i i i	Collector:	tor:	Shelby Valenzuela	Valen	zuela		Во	Boeing PM:		
Company:	MWH		0)	Sampling Event:	+	Group 8 Data Gaps-Soil	s-Soil	Contact #:	#							and a said and additionable in property of the said	
Report to:	Lisa Tucker			Project Number:	r: 1891264	64				-		Reque	Requested Analyses	88	The second second	Instruc	Instructions/TAT
Address:	9444 Farnham Street		-	Project Manager:		Diana Buchanan								~		Legend: Numerica	Legend: Numerical values for
	Suite 300		-	PM Phone #:	(626)	568-6897										analyse	analyses equate to turn around time in days
	San Diego		_	Field Contact:					_							I	
-	CA			Field Contact #:	-22											H. H.	EH - Extract_Hold
	92123	į		Lab Name:	Test A	America, Inc.					Per						
Email:	boeingedms@ch2m.com	٤		Lab Contact:	Miche	Michele Chamberlin	ڃ			Р	chlo	p					
	Lisa.Tucker@mwhglobal.com	Il.com		Lab Address:	17461	17461 Derian Ave, Suite 100	Suite 100			CB b	rate	H by					
					Ivine	Irvine, CA 92606				y SV	314 5	SWS				_	
			-	Lab Phone:	(946)	(949) 261-1022				V80 8:	Soil D	90450			-		
Samula Nama				Metrix	Date	a E	No. of	s - Soi	fercury B - Soi	2 - Soi	I-WET	C - Soi				Comments	ents
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FSBS0002S01	01		Soil		2/22/2007	10:40	2		10			10					
FSBS0010S01	91		Soil		2/22/2007	11:30	-				10						
FS850003501	91		Soil		2/22/2007	11:35	-	6	우	10		10					
FSBS0003S02	02		Soil		2/22/2007	11:39	-	I	I	표		10				Hold all	Hold all analysis except for pH
FSBS0008S01	01		Soil		2/22/2007	11:52	1		\vdash		9						
FSBS0008S02	02		Soil		2/22/2007	12:02	1				10						
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CHAIN OF CUSTODY RECORD

MWHSV20070222_06 **Page:** 2 of 2

COC #:

Customer	Customer Information	Project Information	ation		Project Information	ormat	ion				
Site:	SSFL	Client Name:	DOE		Collector:	Shelb	Shelby Valenzuela	zuela	Boei	Boeing PM:	And a section of the
Company: MWH	MWH	Sampling Event:	Group	8 Data Gaps-Soil	Contact #:		-				
Report to:	Report to: Lisa Tucker	Project Number:	1891264					Requested Analyses	Ses		Instructions/TAT
Address:	9444 Farnham Street	Project Manager: Diana	r: Diana Buchanan	U							Legend: Numerical values for
	Suite 300	PM Phone #:	(626) 568-6897								analyses equate to turn around time in days
	San Diego	Field Contact:									CONT.
	CA	Field Contact #:									EH - Extract_Hold
	92123	Lab Name:	Test America, Inc.	Inc.			Per				
Email:	boeingedms@ch2m.com	Lab Contact:	Michele Chamberlin	berlin			chlo	p			
	Lisa. Tucker@mwhglobal.com	om Lab Address:	17461 Derian /	Derian Ave, Suite 100			rate 3	H by			
			Irvine, CA 92606	8	by '		314 S	SWS			
		Lab Phone:	(949) 261-1022	2	16131		oil D	0450			
Sample Name	ime	Matrix	Date Time	No. of Containers	3 - Soil s - Soil	2 - Soil lercury	I-WET	C - Soil			Comments
FSBS0009S01	10	Soil	2/22/2007 12:37	-			10				
FSBS0009S02	02	Soil	2/22/2007 12:43	1			5				

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Customer	Customer Information		Project Information	nation			Project information	t Info	matio	=					2 Pa	5
Site:	SSFL		Client Name:	DOE			Collector:		Shelby Valenzuela	Valenz	uela			Boeing PM:		
Company:	МWН		Sampling Event:	1	Group 8 Data Gaps-Soll	08-Soll	Contact #:	# #:								-
Report to:	Lisa Tucker		Project Number:	ar: 1891264	1264					œ	teenba	Requested Analyses	***	1	Instructi	Instructions/TAT
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. ,	San Diego		Field Contact:												around tin	around time in days
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4	92123		Lab Name:	Test	st America, Inc.					P					- LU	of Hold
Email:	boeingedms@ch2m.com		Lab Contact:	MIC	Michele Chamberlin	iln	·		F							
	Lisa.Tucker@mwhglobal.com		Lab Address:	174	17461 Derian Ave, Suite 100	3, Suite 100	DIOX		СВ							
				MZI	Irvine, CA 92606				by S1							
			Lab Phone:	948	(949) 261-1022				///80 8							
Sample Name	700		Matrix	Date	Time	No. of Containers	B - Soil Is - Soil	Mercury	i2 - Soil	C - Soil					Gomments	ıts
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												5	ER VEI	Data Validation Package	V Level IV	



LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

9444 Farnham Street, Suite 300 San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/22/07 Received: 02/23/07

Revised: 03/19/07 12:16

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the TestAmerica

Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: Enclosed are complete final results. The results for Mercury and EPA 1613 Dioxin's have been added.

This report was revised to change the pH value from 8.35 to 8.32 for IQB2577-06. A transcription error

from the logbook to the computer system had occured.

LABORATORY ID	CLIENT ID	MATRIX
IQB2577-01	FSBS0006S02	Soil
IQB2577-02	FSBS0005S02	Soil
IQB2577-03	FSBS0002S01	Soil
IQB2577-04	FSBS0010S01	Soil
IQB2577-05	FSBS0003S01	Soil
IQB2577-06	FSBS0003S02	Soil
IQB2577-07	FSBS0008S01	Soil



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MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264 Report Number: IQB2577

Sampled: 02/22/07

Received: 02/23/07

Soil

Soil

LABORATORY ID CLIENT ID MATRIX
IOB2577-08 FSBS0008S02 Soil

IQB2577-00 FSBS0009S01 IQB2577-11 FSBS0009S02

Reviewed By:

TestAmerica - Irvine, CA

Nicholas Marz For Michele Chamberlin

Nicholas Marx

Project Manager



ANALYTICAL TESTING CORPORATION

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

MWH-San Diego/Boeing

Attention: Lisa J. Tucker

9444 Farnham Street, Suite 300 San Diego, CA 92123 Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2577

Sampled: 02/22/07

Received: 02/23/07

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: FSBS0006S02 (IQB2577-01) - Soi	l				
EPA 9045C	1	02/22/2007 08:45	02/23/2007 12:55	02/24/2007 08:55	02/24/2007 10:55
Sample ID: FSBS0005S02 (IQB2577-02) - Soi	l				
EPA 9045C	1	02/22/2007 09:45	02/23/2007 12:55	02/24/2007 08:55	02/24/2007 10:55
Sample ID: FSBS0003S01 (IQB2577-05) - Soi	l				
EPA 9045C	1	02/22/2007 11:35	02/23/2007 12:55	02/24/2007 08:55	02/24/2007 10:55
Sample ID: FSBS0003S02 (IQB2577-06) - Soi	l				
EPA 9045C	1	02/22/2007 11:39	02/23/2007 12:55	02/24/2007 08:55	02/24/2007 10:55





9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2577

Sampled: 02/22/07

Received: 02/23/07

METHOD BLANK/QC DATA

POLYCHLORINATED BIPHENYLS (EPA 3545/8082)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B27094 Extracted: 02/27/07	_										
Blank Analyzed: 03/01/2007 (7B27094-B	LK1)										
Aroclor 1016	ND	50	15	ug/kg wet							
Aroclor 1221	ND	50	15	ug/kg wet							
Aroclor 1232	ND	50	10	ug/kg wet							
Aroclor 1242	ND	50	10	ug/kg wet							
Aroclor 1248	ND	50	10	ug/kg wet							
Aroclor 1254	ND	50	10	ug/kg wet							
Aroclor 1260	ND	50	10	ug/kg wet							
Surrogate: Decachlorobiphenyl	34.1			ug/kg wet	33.3		102	45-120			
LCS Analyzed: 03/01/2007 (7B27094-BS	1)										
Aroclor 1016	285	50	15	ug/kg wet	267		107	65-115			
Aroclor 1260	296	50	10	ug/kg wet	267		111	65-115			
Surrogate: Decachlorobiphenyl	32.4			ug/kg wet	33.3		97	45-120			
Matrix Spike Analyzed: 03/01/2007 (7B2	7094-MS1)				Sou	rce: IQB	2309-04				
Aroclor 1016	323	58	17	ug/kg dry	308	ND	105	50-120			
Aroclor 1260	328	58	12	ug/kg dry	308	ND	106	50-125			
Surrogate: Decachlorobiphenyl	36.5			ug/kg dry	38.5		95	45-120			
Matrix Spike Dup Analyzed: 03/01/2007	(7B27094-M	SD1)			Sou	rce: IQB	2309-04				
Aroclor 1016	329	58	17	ug/kg dry	308	ND	107	50-120	2	30	
Aroclor 1260	331	58	12	ug/kg dry	308	ND	107	50-125	1	30	
Surrogate: Decachlorobiphenyl	37.3			ug/kg dry	38.5		97	45-120			



9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2577

Sampled: 02/22/07

Received: 02/23/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7B24061 Extracted: 02/24/07	=										
Duplicate Analyzed: 02/24/2007 (7B2406)	1-DUP1)				Sou	rce: IQB	2577-01				
рН	7.89	NA	N/A	pH Units		7.93			1	5	
Batch: 7C01138 Extracted: 03/01/07	_										
Blank Analyzed: 03/07/2007 (7C01138-Bl	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 03/07/2007 (7C01138-BS1	1)										
Perchlorate	50.8	4.0	0.80	ug/l	50.0		102	85-115			
Matrix Spike Analyzed: 03/07/2007 (7C0	1138-MS1)				Sou	rce: IQB	2577-10				
Perchlorate	50.1	4.0	0.80	ug/l	50.0	ND	100	80-120			
Matrix Spike Dup Analyzed: 03/07/2007	(7C01138-M	(SD1)			Sou	rce: IQB	2577-10				
Perchlorate	51.3	4.0	0.80	ug/l	50.0	ND	103	80-120	2	20	
Batch: 7C01145 Extracted: 03/01/07	_										
Blank Analyzed: 03/02/2007 (7C01145-Bl	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 03/02/2007 (7C0114:	5_DHP1)				Sou	rce: IQC	0100_01				
Percent Solids	4.20	0.10	0.10	%	50 u	4.2	0100-01		0	20	
i cicciii sollus	4.20	0.10	0.10	/0		4.∠			U	20	



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MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2577

Sampled: 02/22/07

Received: 02/23/07

DATA QUALIFIERS AND DEFINITIONS

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

RPD Relative Percent Difference



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQB2577

Sampled: 02/22/07

Received: 02/23/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A
EPA 314.0 DI-RFI	Soil		
EPA 3545/8082	Soil	X	X
EPA 8082	Soil	X	X
EPA 9045C	Soil	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

Subcontracted Laboratories

Paradigm Labs - SUB

5500 Business Dr. - Wilmington, NC 28405

Analysis Performed: 1613-Dioxin-HR OUT

Samples: IQB2577-03

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745 Analysis Performed: Mercury-7471 (dry wt)

Samples: IQB2577-05



Laboratory Results

Ms. Michele Chamberlin Test America 17461 Derian Ave. Suite 100 Irvine CA 92614

Phone:

949-261-1022

Fax:

Dear Ms. Chamberlin:

Enclosed is a full data package containing the final results for the sample received by Paradigm Analytical Labs, Inc. on February 24, 2007 under your project name "IQB2577". The sample was analyzed by Method 1613 following Paradigm's Standard Operating Procedures and is certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards.

Number of Samples Received:

Your Project Reference:

IQB2577

PAL Project Number:

G579-230

We appreciate your business and look forward to working with you again. Please contact me at 910-350-1903 if you have questions or need additional technical support.

Sincerely,

Christopher K. Cornwell

Assistant Director

3 4 o 7



Case Narrative SGS Project: **G579-230**

Project Name: IQB2577

For Method: 1613

 The submitted sample was accepted into the lab on February 24th, 2007 and extracted on February 28th, 2007 by method 3540C. The sample extract and associated QC extracts were then processed through clean-up by method 3630/3620 and analyzed by HRGC/HRMS for methods 1613.

Craig Ř. Tronzo

Data Validation/QA Officer

Secondary Review

W. Mike Larkins Technical Director Date

Heather Patterson

Director

Date

SGS

Table of Contents

Section 1: Cover Letter/Case Narrative

Contains the Table of Contents, a project narrative, the client and PAL project identifiers, the number and type of samples, the methodology used to process the samples, and a summary table of sample results. A listing of current certifications by state, a table of abbreviations and qualifiers and the Toxic Equivalent Factors (TEF) are also supplied.

Section 2: Project Information

Contains the chain-of-custody(s), internal chain-of-custody(s) if applicable, sample login summary, sample receipt checklist, and any other project/client specific information.

Section 3: Sample Analytical Results

Contains results for client samples. Sample results include two pages of summarized analytical data and the associated raw data. The raw data includes a quantitation report from the instrumentation used that lists, ion areas, ratios, retention times, concentrations, and signal-to-noise ratios. It also has the selected ion current profiles (SICPs) for all homolog groups and any manual integrations.

Section 4: Quality Control Analytical Results

Contains results for each analytical workgroup associated with the submitted samples. A workgroup consists of the Lab Method Blank (LMB) and the Ongoing Precision and Recovery sample (OPR). All sample preparation data, including dry weight determinations, extraction logs, clean-up logs and observation notes are also documented. Any other supporting QC data will be documented here upon client request.

Section 5: Initial Calibration

Contains a table summarizing calibration data such as relative response factors, concentrations, and percent relative standard deviation. This section also contains related daily instrument QC information: GC performance data, mass resolution check, windows defining mix, and SICPs for all homolog groups and any manual integrations as well as the injection prep and instrument run logs.

Section 6: Continuing Calibration Data

Contains all daily instrument quality control information. This includes mass resolution checks, a table summarizing the window defining peaks, SICPs for the first and last eluters for each homolog group, SICPs documenting GC performance, a summary quantitation report showing RRFs for the Ccal and Ical, and SICPs for all homolog groups and any manual integrations, injection prep and instrumentation runlogs.

SGS

List of Qualifiers

- B Analyte was detected in the Lab Method Blank at a level above the Reporting Limit.
- EDL "Estimated Detection Limit"

EMPC "Estimated Maximum Possible Concentration"

- ppt Parts-per-trillion (pg/g; ng/L)
- V Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit.
- # Outside quality control limits
- See case narrative

An average uncertainty of 30% can be routinely achieved as concluded from the evaluation of HRGC-HRMS standard operating procedures. The following flags warn the data user of situations where the uncertainty may be greater than stated.

- A Amount detected is less than the Lower Calibration Limit.
- J Amount detected is between the Method Detection Limit and the Lower Calibration Limit.
- E Amount detected is greater than the Upper Calibration Limit.
- S The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s).
- Q Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s).
- I Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s).
- DPE Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s).



Toxic Equivalency Factors

Analyte	WHO* 1998	WHO* 2005	International-89	MADEP ⁺
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	1	1	0.5	0.5
1,2,3,4,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.01	0.1
OCDD	0.0001	0.0003	0.001	0.001
2,3,7,8-TCDF	0.1	0.1	0.1	0.1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.5
2,3,4,7,8-PeCDF	0.5	0.3	0.5	0.5
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.1
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.1
OCDF	0.0001	0.0003	0.001	0.001

^{*} World Health Organization

† Massachusetts Department of Environmental Protection

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

	Anaiy	tical Data S	ummary Shee	et		
Analyte	Amount	EDL	Adj. RL	RT	Ratio	Qualifier
	(pg/g)	(pg/g)	(pg/g)	(min.)		
2,3,7,8-TCDD	ND	0.415	1.00			
1,2,3,7,8-PeCDD	ND	0.310	5.00			
1,2,3,4,7,8-HxCDD	ND	0.293	5.00			
1,2,3,6,7,8-HxCDD	ND	0.312	5.00			
1,2,3,7,8,9-HxCDD	ND	0.300	5.00			
1,2,3,4,6,7,8-HpCDD	ND	0.413	5.00			
OCDD	1.55	0.710	10.0	44:08	0.88	A
2,3,7,8-TCDF	0.608	0.366	1.00	30:26	0.84	A
1,2,3,7,8-PeCDF	ND	0.176	5.00			
2,3,4,7,8-PeCDF	ND	0.178	5.00			
1,2,3,4,7,8-HxCDF	ND	0.188	5.00			
1,2,3,6,7,8-HxCDF	ND	0.184	5.00			1
2,3,4,6,7,8-HxCDF	ND	0.177	5.00			
1,2,3,7,8,9-HxCDF	ND	0.247	5.00			1
1,2,3,4,6,7,8-HpCDF	ND	0.263	5.00			
1,2,3,4,7,8,9-HpCDF	ND	0.386	5.00			
OCDF	ND	0.545	10.0			
Total TCDDs	ND	0.415	1.00			
Total PeCDDs	ND	0.310	5.00			
Total HxCDDs	ND	0.301	5.00			
Total HpCDDs	ND	0.413	5.00			
Total TCDFs	0.608	0.366	1.00			Α
Total PeCDFs	ND	0.177	5.00			
Total HxCDFs	ND	0.197	5.00			
Total HpCDFs	ND	0.318	5.00			
WHO-2005 TEQ (ND=0)	0.0613					
WHO-2005 TEQ (ND=1/2)	1.03					

			Sample Information		
			Report Basis:	Dry Weig	ght
			Matrix:	Soil	
			Weight / Volume:	10.00	Grams
			Solids / Lipids:	100	%
			Original pH:	NA	
Laboratory Informati	<u>on</u>		Batch ID:	WG1412	9
Sample ID:	LMB14129		Filename:	a02mar07	7a_2-3
			Retchk:	a02mar07	7a-15
			Begin ConCal:	a02mar07	7a-15
Extraction Date:	28-Feb-07				
Analysis Date:	3-Mar-07	0:07	Initial Cal:	m1613-0	71006e

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

	ADAI	ytical Data Si	ummary Snee	et		
Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifler
Extraction Standards						
¹³ C ₁₂ -2,3,7,8-TCDD	2.00	1.31	65.4	31:09	0.77	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	2.00	1.49	74.7	34:02	1.58	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	2.00	1.42	70.8	36:36	1.27	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	2.00	1.44	72.2	36:41	1.26	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	2.00	1.45	72.4	39:57	1.05	
¹³ C ₁₂ -OCDD	4.00	2.69	67.3	44:08	0.89	
¹³ C ₁₂ -2,3,7,8-TCDF	2.00	1.37	68.3	30:25	0.79	
¹³ C ₁₂ -1,2,3,7,8-PeCDF	2.00	1.65	82.3	33:14	1.57	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	2.00	1.53	76.5	33:51	1.57	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	2.00	1.48	73.9	35:54	0.52	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	2.00	1.54	76.8	35:59	0.53	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	2.00	1.52	76.2	36:29	0.53	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	2.00	1.48	73.9	37:15	0.53	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	2.00	1.47	73.6	38:42	0.45	-
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	2.00	1.50	75.2	40:36	0.46	
Cleanup Standards						
³⁷ Cl ₄ -2,3,7,8-TCDD	0.400	0.266	66.5	31:10	-	
Injection Standards						
¹³ C ₁₂ -1,2,3,4-TCDD	2.00			30:37	0.77	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	2.00			36:56	1.25	

,			Sample Information	Dm. Waia	.h.		
			Report Basis:	Dry Weight			
			Matrix: Soil				
			Weight / Volume:	10.00	Grams		
			Solids / Lipids:	100	%		
			Original pH:	NA			
<u>Laboratory Information</u>			Batch ID:	WG14129			
Sample ID:	LMB14129		Filename:	a02mar07	/a_2-3		
			Retchk:	a02mar07	'a-15		
			Begin ConCal:	a02mar07	'a-15		
Extraction Date:	28-Feb-07		•				
Analysis Date:	03-Mar-07	0:07	Initial Cal:	m1613-0	71006e		
Analyzed by: 3-			Reviewe	d by:			
Date: 03-06-01			Date: 3/4/07				

Analytical Results

for Ongoing Precision Result (OPR)

Analyte	Spiked	AMT	REC	Range pg/ul		Flag
·	pg/ul	pg/ul	%	Lower Upper		1
2,3,7,8-TCDD	10,0	10.5	105	6.70	15.8	
1,2,3,7,8-PeCDD	50.0	51.9	104	35.0	71.0	
1,2,3,4,7,8-HxCDD	50.0	54.2	108	35.0	82.0	
1,2,3,6,7,8-HxCDD	50.0	55.6	111	38.0	67.0	
1,2,3,7,8,9-HxCDD	50.0	53.9	108	32.0	81.0	1
1,2,3,4,6,7,8-HpCDD	50.0	52.4	105	35.0	70.0	
OCDD	100	103	103	78.0	144	
2,3,7,8-TCDF	10.0	10.6	106	7.50	15.8	
1,2,3,7,8-PeCDF	50.0	53.7	107	40.0	67.0	
2,3,4,7,8-PeCDF	50.0	52.6	105	34.0	80.0	
1,2,3,4,7,8-HxCDF	50.0	52.4	105	36.0	67.0	
1,2,3,6,7,8-HxCDF	50.0	53.5	107	42.0	65.0	
2,3,4,6,7,8-HxCDF	50.0	52.8	106	35.0	78.0	
1,2,3,7,8,9-HxCDF	50.0	52.2	104	39.0	65.0	
1,2,3,4,6,7,8-HpCDF	50.0	55.6	111	41.0	61.0	
1,2,3,4,7,8,9-HpCDF	50.0	50.5	101	39.0	69.0	
OCDF	100	111	111	63.0	170	

	# ==	Outsid	le range	limits
--	------	--------	----------	--------

^{* =} Ion Ratio Out

OC Information		<u>File Information</u>	
OPR Lab ID:	OPR14129	OPR Filename :	a02mar07a_2-1 a02mar07a-15
Extraction Date:	28-Feb-07	Retchk: Begin ConCal:	a02mar07a-15
Analysis Date: Method:	02-Mar-07 1613	Begin Concar:	auzmaru/a-15
		Initial Cal:	m1613-071006e
Sample Information			
Matrix:	Soil		

Analytical Results

Ongoing Precision Result (OPR)

Labeled	Spiked	AMT	REC	Range	e pg/ul	Flag
Standard	pg/ul	pg/ul	%	Lower	Upper	
Extraction Standards						
¹³ C ₁₂ -2,3,7,8-TCDD	100	70.4	70.4	20.0	175	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	100	77.5	77.5	21.0	227	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	100	77.1	77.1	21.0	193	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	100	73.7	73.7	25.0	163	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	100	77.4	77.4	26.0	166	
¹³ C ₁₂ -OCDD	200	145	72.3	26.0	397	
¹³ C ₁₂ -2,3,7,8-TCDF	100	73.9	73.9	22.0	152	
¹³ C ₁₂ -1,2,3,7,8-PeCDF	100	78.7	78.7	21.0	192	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	100	78.8	78.8	13.0	328	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	100	78.2	78.2	19.0	202	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	100	78.3	78.3	21.0	159	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	100	77.4	77.4	22.0	176	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	100	77.5	77.5	17.0	205	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	100	80.9	80.9	21.0	158	
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	100	80.8	80.8	20.0	186	
Cleanup Standards		_				
³⁷ C ₁₄ -2,3,7,8-TCDD	20.0	14.7	73.4	6.20	38.2	

Form Version:[OPRv3.474]1613

OC Information

OPR Lab ID:

OPR14129 28-Feb-07

Extraction Date: Analysis Date:

02-Mar-07

Method:

1613

File Information

OPR Filename:

Begin ConCal:

Retchk:

a02mar07a_2-1 a02mar07a-15

a02mar07a-15

Initial Cal:

m1613-071006e

Sample Information

Matrix:

Soil

Reviewed by: _

Date Reviewed: 3/4/07



SUBCONTRACT ORDER - PROJECT # IQB2577 /

SENDING	G LABORATORY:	11		RECEIVING LABORA	TORY:
TestAmerica - Irvine, CA			Paradigm Labs -		
17461 Derian Avenue. Suite	100	1 1	5500 Business D		
Irvine, CA 92614			Wilmington, NC		
Phone: (949) 261-1022			Phone :(910) 35		
Fax: (949) 260-3297			Fax: (910) 350-1	1557	
Project Manager: Michele Ch	amherlin				
Troject (vialiage). Ivilonole Ch			Project Location:	California	
Work Order Comments:	Level 4 QC. Boeing EDD,	Report to MDL w/	J flags, report in d	ry weight, 2 week TAT.	
Standard TAT is requested	unless specific due date	is requested => 1	Due Date:		Initials:
Analysis	Expiration			Comments	
Sample ID: IQB2577-03 Soil 1613-Dioxin-HR OUT	Sampled: 02/22/0 03/08/07 10:40	7 10:40	-	Sub=Paradigm,17 cngni	rs dry wt(soil) 2
Level 4 + EDD-OUT	03/22/07 10:40			wkTAT,Jflag	2 weeks, EDD=Boeing, CD
					. •
Containers Supplied: 2 oz jar (IQB2577-03C)					
	•				
		SAMPLE INT	EGRITY:		
All containers intact: Yes Custody Seals Present: Yes	•	els/COC agree:	Yes No	Samples Received On Ice:: Samples Received at (temp	''•9
Amfer &	Q/Q3/ _D	ime Rece	MALL ived/By	7/14 Date	7 (O:Co
Notes by			· .		
Released By	Date T	ime Rece	ived By	Date	Time



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

TestAmerica, Inc. - Irvine **Client:**

Report Date:

03/13/07 09:50

17461 Derian Ave, Suite 100

Received Date:

02/26/07 08:00

Irvine, CA 92614

Fax: (949) 260-3297

Turn Around:

Normal

Attention: Michele Chamberlin

Work Order #:

7022607

Phone: (949) 261-1022

Client Project:

IQB2577

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 02/26/07 08:00 with the Chain of Custody document. The samples were received in good condition, at 2.9 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager



Page 1 of 7





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022607 Project ID: IQB2577 Date Received: 02/26/07 08:00 Date Reported: 03/13/07 09:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQB2577-05	client		7022607-01	Solid	02/22/07 11:35



Week Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022607 Project ID: IQB2577 Date Received: 02/26/07 08:00 Date Reported: 03/13/07 09:50

QUALITY CONTROL SECTION



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

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TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022607 Project ID: IQB2577 Date Received: 02/26/07 08:00 Date Reported: 03/13/07 09:50

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

		D		Spike	Courag		%REC		RPD	Data
		Reporting		Spike	Source		/OKEC		KrD	Dutu
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers

Batch W7C0195 - General Preparation

Duplicate (W7C0195-DUP1)		7022339-03	Analyzed: 03/08/07		
% Solids	83.4	0.100 % by Weight	84.0	0.717	20



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TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022607 Project ID: IQB2577 Date Received: 02/26/07 08:00 Date Reported: 03/13/07 09:50

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7B1093 - EPA 7471A									
Blank (W7B1093-BLK1)			Analyzed	: 03/10/07					
Mercury, Total	0.00400	0.010 mg/kg v	vet						J
LCS (W7B1093-BS1)			Analyzed	: 03/10/07					
Mercury, Total	0.0842	0.010 mg/kg v	vet 0.0833		101	80-120			
Matrix Spike (W7B1093-MS1)	Sour	ce: 7022607-01	Analyzed	: 03/10/07					
Mercury, Total	0.139	0.012 mg/kg	lry 0.0992	0.039	101	70-130			
Matrix Spike Dup (W7B1093-MSD1)	Sour	ce: 7022607-01	Analyzed	: 03/10/07					
Mercury, Total	0.165	0.012 mg/kg	lry 0.0992	0.039	127	70-130	17.1	25	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7022607 Project ID: IQB2577

Date Received: 02/26/07 08:00 Date Reported: 03/13/07 09:50

Notes and Definitions

Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

ND NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

1QC 2076

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 3-1	9 - 07 Del Mar Analytic	cal Project Manager:	hele Chamberly
	m Diego / Booing Cor		other
Date Sampled:	E	Date Received:	
Status: in progress	completed received today	received yesterday on ho	ld other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
I QB 2449-03	PRBS 0003502	1/0 Solids, Na, 110	
I9B 2449-01	1	910 Solids, Na, Pb	
IQB 2948-01	, PRB 0005 502	90 Solidy Na	
IQB 2448-08	P11 BS 0001 502	% 501:d; / Na	
	Add t	o new work order.	
			60,0 501
TURNARO	•	andardNo Rush Charge	
	Jne 3-30	g:\dmai\mi	sc\forms\add-req.doc

TALIL ONE

CHAIN OF CUSTODY RECORD

MV#SV20070221_00

SOOO HINK

5 of 2

:aðed

Legend: Numerical values for ensiyees equals to furn around time in days WHY KOD NAT P APD Na MAN ADD NO. toph Abb Na Instructions/TAT H - Hold EH - Ednad Hold Comments Boeing PM: Requested Analyses 今かで見る Collector: | Shelby Valenzuela 0||0||0 LEAD 0|| 0 2 Project information 93 10 10 10 0% H 03 | 04 | 03 | 01 x I x 10 10 10 Contect #: Æ 10 2 Ro. 94 17451 Derian Ave, Sulte 100 Sampling Event: Group 5 Data Gape-Soil Michele Chemberlin Test America, Inc. Project Manager: Diana Buchanan Infine, CA 92606 13:15 (040) 261-1022 8 7 7 (626) 568-6897 E 2 138 42.48 12.06 # 95.4 1861264 2212007 1/2/2007 2721.7007 2212007 271/2007 1717007 1/2/1/2007 221/2007 3 Project Information Project Number: Fleid Contact #: Cilent Name: Field Contact: Lab Address: PM Phone #: Lab Confact: Lab Phone: Lab Name: ¥#¥ **#**0\$ 3 Tog 30 **30** 70 100 ₩ *** Liss Tucker@mwhgbbal.com boeingedme@ch2m.com Address: | 9444 Farnham Sires! Customer information Report to: Liss Tucker San Diego Surfe 300 82128 SSFL Company: MWH 5 Sampale Name PR8 0003802 PROB DOC2502 PR& 0006802 PRES 0001801 PASS CO01802 PR68 D003901 PR\$5 0002801 PRES 0005601 Email: Site

1. Relinquished by:	Date	2. Pacal wad by:	******	S. Railinquished by:	ë *	Standard by:
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CHAIN OF CUSTODY RECORD

MWHSV20070221_00 Page: 2 of 2

COC #:

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Site.	SSFL	Client Name:	DOE		Collector:	Shelby \	Shelby Valenzuela	ň	Boeing PM:	
Company: MWH	MWH	Sampling Event:	t: Group 8 Data Gaps-Soil	38-Soil	Contact #:					
Report to:	Report to: Lisa Tucker	Project Number:	r: 1891264				Requested Analyses	alyses		Instructions/ IA I
Address:	9444 Farnham Street	Project Manager	er: Diana Buchanan							Legend: Numerical values for
	Suite 300	PM Phone #:	(626) 588-6897							analyses equate to turn around time in days
	San Diego	Field Contact:								PloH - H
	CA	Field Contact #:	2.0		M					EH - Extract_Hold
	92123	Lab Name:	Test America, Inc.			м				
Email:	boeingedms@ch2m.com	Lab Contact:	Michele Chamberlin	듣						
	Lisa Tucker@mwhglobal.com	Lab Address:	17461 Derian Ave, Suite 100	a, Suite 100		1 by :				2.835
			Irvine, CA 92606		20 S					
		Lab Phone:	(949) 261-1022		o# G					
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					Geotra	Geotracker EDF	
Comments:					Data V	Data Validation Package 🗹 Level IV	
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LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

San Diego, CA 92123

9444 Farnham Street, Suite 300

Attention: Lisa J. Tucker Sampled: 02/21/07

Issued: 03/27/07 16:38

Received: 03/20/07

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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
IQC2076-01	PRBS0003S02	Soil
IQC2076-02	PRBS0002S02	Soil
IQC2076-03	PRBS0005S02	Soil
IQC2076-04	PRBS0001S02	Soil

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin

Project Manager

Michele Chamberdin

IQC2076 <Page 1 of 7>





MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQC2076

Sampled: 02/21/07

Received: 03/20/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7C20108 Extracted: 03/20/07	, - -										
Blank Analyzed: 03/20/2007 (7C20108-B	LK1)										
Sodium	ND	50	24	mg/kg wet							
LCS Analyzed: 03/20/2007 (7C20108-BS	1)										
Sodium	508	50	24	mg/kg wet	500		102	80-120			
Matrix Spike Analyzed: 03/20/2007 (7C2	0108-MS1)				Sou	rce: IQC	2099-01				
Sodium	781	50	24	mg/kg wet	500	310	94	75-125			
Matrix Spike Dup Analyzed: 03/20/2007	(7C20108-MS	SD1)			Sou	rce: IQC	2099-01				
Sodium	794	50	24	mg/kg wet	500	310	97	75-125	2	20	
Batch: 7C20121 Extracted: 03/20/07	, _										
Blank Analyzed: 03/21/2007 (7C20121-B	LK1)										
Lead	ND	0.50	0.050	mg/kg wet							
LCS Analyzed: 03/21/2007 (7C20121-BS	1)										
Lead	47.5	0.50	0.050	mg/kg wet	50.0		95	80-120			
Matrix Spike Analyzed: 03/21/2007 (7C2	0121-MS1)				Sou	rce: IQC	2079-07				
Lead	261	0.59	0.059	mg/kg dry	58.8	210	87	75-125			MHA
Matrix Spike Dup Analyzed: 03/21/2007	(7C20121-MS	SD1)			Sou	rce: IQC	2079-07				
Lead	332	0.59	0.059	mg/kg dry	58.8	210	207	75-125	24	20	MHA, R-3



0/ DEC

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQC2076

Donouting

Sampled: 02/21/07

Received: 03/20/07

DDD

METHOD BLANK/QC DATA

INORGANICS

Spiles Source

		Keporting			Spike	Source	%KEC		KPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result %REC	Limits	RPD	Limit	Qualifiers
Batch: 7C20148 Extracted: 03/20/07	<u>-</u>									
Blank Analyzed: 03/20/2007 (7C20148-B	LK1)									
Percent Solids	ND	0.10	0.10	%						
Duplicate Analyzed: 03/20/2007 (7C2014	8-DUP1)				Sou	ırce: IQC2184-01				
Percent Solids	4.70	0.10	0.10	%		4.7		0	20	



MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 San Diego, CA 92123 1891264 Sampled: 02/21/07 Report Number: IQC2076 Received: 03/20/07

Attention: Lisa J. Tucker

DATA QUALIFIERS AND DEFINITIONS

MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

R-3 The RPD exceeded the acceptance limit due to sample matrix effects.

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

RPD Relative Percent Difference



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQC2076

Sampled: 02/21/07

Received: 03/20/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A
EPA 6010B	Soil	X	X
EPA 6020	Soil	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



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

1QC 2076

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 3-1	9 - 07 Del Mar Analytic	cal Project Manager:	hele Chamberly
	m Diego / Booing Cor		other
Date Sampled:	E	Date Received:	
Status: in progress	completed received today	received yesterday on ho	ld other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
I QB 2449-03	PRBS 0003502	1/0 Solids, Na, 110	
I9B 2449-01	1	910 Solids, Na, Pb	
IQB 2948-01	, PRB 0005 502	90 Solidy Na	
IQB 2448-08	P11 BS 0001 502	% 501:d; / Na	
	Add t	o new work order.	
			60,0 501
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2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

IQC2271

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 3-3ì-0	7 Del Mar Analytical	Project Manager:	Michele Chamberlin
Request via: telephone	e chain of custody form fa		
Client: MwH - Sm)	igo/Boing Conta	ect:	
Project: SSFL Gr	our 4		
Date Sampled: <u>Vຜ່າ</u> ງ	Dat	e Received:	
Status: in progress	completed received today	received yesterday o	on hold other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
I 9B 1487-05	FSBS 0066502	1613-Dioxin	J- Pandigm.
I QB 1487-10	F 5 BS 0068 SO1	1613 - Dioxin	
I 981487-08	FSBS0064502	% s.1:ds, Pk)
IQB 1487-09	FSBS 00 64 503	% solids, Pk	
IRB 1684-03	F5B50022502	10 solids, A	<u> </u>
I a B 1684-05	F5B5 0024501	% 50(ids, A	5
I 9B 1861-01	FSBS 0041501	% Solids As	
IQB 1861 - 15	FSBS 0053501	% 501:15, As	
IQB 1861 - 17	FSBS 0031 501	90 solids, As	1
I QB 1861 - 71	F5BS 0034501	90 Solids, A	la
I 9B1815-04	FSBS 0013 501	Mercary	-> Surp to Week
		ONK DILLY	F 1 4
TURNAROUND	STATUS:Same Day _	24hr48h	\
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	Due 4-3	g:\dma	ii\misc\forms\add-req.doc

MWHSV20070213_03 Page: 1 of 2

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Boeing PM:

Project Information
Collector: Shelby Valenzuela

Client Name: DOE Project information

Cuatomer Information Site: SSFL

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Company: MWH	MWH		Sampling Event:	-	Group 8 Data Gaps-Soil	aps-Soil	Contact #:	*										
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Address:	9444 Farnham Street		Project Manager:		Diana Buchanan									ME		Legend	Legend: Numerical volume for	
	Suite 300		PM Phone #:	(62E	(626) 568-6897				<u></u>				. ,,,,			ana	analyses equate to turn	
	San Diego		Field Contact:											4		, , , , , , , , , , , , , , , , , , ,	around little in days	
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	92123		Lab Name:	3	Test America, Inc.	į		ielais		Per				20				
Email:	boeingedms@ch2m.com		Lab Contact:	Mic	Michele Chamberlin	•rlin					p	_		50				
	Liss. Tucker@mwhglobal.com		Lab Address:	174	61 Derian A	461 Derien Ave, Suite 100	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				H by		VOC		7			
				2	Irvine, CA 92606	89					SWE			ر ا ا) (2)			
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Project Number: 1809/284 Project Number: 180	Site:	SSFL	Client N		DOE			Collecto		elby Va	enzuel	•			Boeing	 Æ		
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Data Validation Package 🗾 Level IV

Customer Information

SSFL

Report to: Lisa Tucker

Address:

Company: MWH

San Diego

82128

Email

Sample Marre

FS880021501 FS680022501

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Suite 300

: :# COC

MWHSV20070214_01

HALL BANKS EVE Legend:
Numerical values for analyses equate to turn around time in days. Holdenmyate Aut As AN AN AL 1012 Instructions/TAT H - Hold EH - Extract_Hold Hold enelysis Hold analysis Comments Hold enelysis Page: **Boeing PM:** 10401 Collector: Shelby Valenzuela 3 Project Information H 0 0 2 2 I I Contact #: 10/01 No. of Containers 17461 Derlan Ave, Suite 100 Sampling Event: Group 8 Data Geps-Soll Michele Chamberlin Test America, Inc. Project Manager: Diena Buchanan Irvine, CA 92606 (626) 568-6697 (949) 261-1022 Ē 9:14 4 8 8 9:27 87.0 8 8 9 Project Number: 1891264 DOE 2/14/2007 2/14/2007 2/14/2007 2/14/2007 2/14/2007 2/14/2007 2/14/2007 2/14/2007 Project Information ŝ Field Contact #: Client Name: PM Phone #: Field Contact: Lab Contact: Lab Address: Lab Name: Lab Phone: Ž Sol **8**0 Soil **3**0 ₩ **2**00 **8**0 **10**0 So Liss. Tucker@mwhglobal.com boeingedme@ch2m.com 9444 Farnham Street

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Site:	SSFL		Client Name:	DOE			Colle	Collector:		Shelby Valenzuela			Boeing P.M.		
Company: MWH	MWH	[Sampling Event:	+	Group 8 Data Gaps-Soil	8-Soil	Control	Contact #:						:	
Report to:	Report to: Lise Tucker		Project Number:	er: 1891264	36.		·		_	8	Requested Analyses	nelyses		,	Instructions/TAT
Address:	Address: 9444 Farnham Street		Project Manag	er: Diana	iger: Diana Buchanan		 	}							Legend
	Suite 300		PM Phone #:	(628)	(626) 568-6897										Numerical values for
	San Diego		Field Contact:									_			around time in days
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	92128		Leb Name:	196	Test America, Inc.		···-								En - Entract Hold
Email:	boeingedme@ch2m.com		Lab Contact:	Mich	Michele Chamberlin	£		Me							
	Liss. Tucker@mwhglobal.com	E	Lab Address:	1746	17461 Derien Ave, Suite 100	Sulte 100									
				ivin	Inine, CA 92606		%								
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CHAIN OF CUSTODY RECORD

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Custome	Customer Information	Project inform				5			į	-	:			٠	
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Company: MWH	MWH	Sampling Event:	╁	Group 8 Data Gaps-Soil	8-Soil	Contact #:	ct #:							-	
Report to:	Lista Tucker	Project Number:	: 1891264	9.4						1 1 1 1 1 1 1 1 1 1	pate	Requested Analyses	: - -	 : :	Instructions/TAT
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	San Diego	Field Contact:													a the state of the
	CA	Field Contact #:	 				м								EH - Extract, Hold
	92123	Lab Name:	Test A	Test America, Inc.					Per						
Email:	boeingedms@ch2m.com	Lab Contact:	Miche	Michele Chamberlin	드	·····			rchia						
	Lisa Tucker@mwhglobal.com	Lab Address:	17461	17461 Derlan Ave, Sulte 100	, Sulte 100				rate:						
			Irvine,	Irvine, CA 92606		%			314 5						
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Data Validation Package 🗹 Level IV

CHAIN OF CUSTODY RECORD

MWH\$V20070215_02

COC #:

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	Lisa. Tucker@mwhglobal.com	n Lab Address:	dress:	17461 Derl	17461 Derlan Ave, Suite 100		ws	· ii					
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Email: boeinge	boeingedme@ch2m.com	-	Lab Contact:	Michale Chamberlin	amberlin		O L		<u></u>					
	Lisa. Tucker@mwhglobal.com	1	Lab Address:	17461 Deri	17461 Derian Ave, Suite 100			٥١١						
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LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

San Diego, CA 92123 Attention: Lisa J. Tucker

9444 Farnham Street, Suite 300

Sampled: 02/13/07-02/16/07

Received: 03/21/07

Issued: 04/05/07 16:43

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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, 10 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 2°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: Refer to the last page for specific subcontract laboratory information included in this report.

ADDITIONAL

INFORMATION: Enclosed are complete final results. The results for Dioxin's and Mercury were added.

LABORATORY ID	CLIENT ID	MATRIX
IQC2271-01	FSBS0066S02	Soil
IQC2271-02	FSBS0064S02	Soil
IQC2271-03	FSBS0064S03	Soil
IQC2271-04	FSBS0068S01	Soil
IQC2271-05	FSBS0022S02	Soil
IQC2271-06	FSBS0024S01	Soil
IQC2271-07	FSBS0041S01	Soil
IQC2271-08	FSBS0053S01	Soil
IQC2271-09	FSBS0031S01	Soil
IQC2271-10	FSBS0034S01	Soil



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

Report Number: IQC2271

1891264

Sampled: 02/13/07-02/16/07

Received: 03/21/07

LABORATORY ID

CLIENT ID

MATRIX

IOC2271-11

FSBS0013S01

Soil

Reviewed By:

TestAmerica - Irvine, CA Michele Chamberlin

Michele Chamberdin

Project Manager





MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQC2271

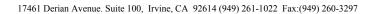
Sampled: 02/13/07-02/16/07

Received: 03/21/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7C23088 Extracted: 03/23/07	<u>'</u> _										
Blank Analyzed: 03/23/2007 (7C23088-B	LK1)										
Arsenic	ND	0.50	0.25	mg/kg wet							
Lead	ND	0.50	0.050	mg/kg wet							
LCS Analyzed: 03/23/2007 (7C23088-BS	1)										
Arsenic	44.3	0.50	0.25	mg/kg wet	50.0		89	80-120			
Lead	47.8	0.50	0.050	mg/kg wet	50.0		96	80-120			
Matrix Spike Analyzed: 03/23/2007 (7C2	3088-MS1)				Sou	rce: IQC	2271-02				
Arsenic	46.5	0.55	0.27	mg/kg dry	54.7	3.0	80	75-125			
Lead	57.6	0.55	0.055	mg/kg dry	54.7	5.9	95	75-125			
Matrix Spike Dup Analyzed: 03/23/2007	(7C23088-MS	SD1)			Sou	rce: IQC	2271-02				
Arsenic	46.2	0.55	0.27	mg/kg dry	54.7	3.0	79	75-125	1	20	
Lead	57.1	0.55	0.055	mg/kg dry	54.7	5.9	94	75-125	1	20	
Batch: 7C23117 Extracted: 03/23/07	<u>'</u>										
Blank Analyzed: 03/24/2007 (7C23117-B	LK1)										
Sodium	ND	50	24	mg/kg wet							
LCS Analyzed: 03/24/2007 (7C23117-BS	1)										
Sodium	524	50	24	mg/kg wet	500		105	80-120			
Matrix Spike Analyzed: 03/27/2007 (7C2	3117-MS1)				Sou	ırce: IQC	2330-01				
Sodium	1680	99	47	mg/kg wet		1200	97	75-125			
Matrix Spike Dup Analyzed: 03/27/2007	(7C23117-MS	SD1)			Sou	ırce: IQC	2330-01				
Sodium	1730	99	47	mg/kg wet		1200	108	75-125	3	20	





MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQC2271

Sampled: 02/13/07-02/16/07

Received: 03/21/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7C21154 Extracted: 03/21/07	<u>'</u>										
Blank Analyzed: 03/22/2007 (7C21154-B	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 03/22/2007 (7C2115	4-DUP1)				Sou	rce: IQC	1748-01				
Percent Solids	93.4	0.10	0.10	%		94			1	20	
Batch: 7C27147 Extracted: 03/27/07	<u>-</u>										
Blank Analyzed: 03/28/2007 (7C27147-B	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 03/28/2007 (7C2714	7-DUP1)				Sou	rce: IQC	2841-01				
Percent Solids	4.60	0.10	0.10	%		4.6			0	20	



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

MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

Report Number: IQC2271

9444 Farnham Street, Suite 300

1891264 Sampled: 02/13/07-02/16/07

San Diego, CA 92123 Attention: Lisa J. Tucker Received: 03/21/07

DATA QUALIFIERS AND DEFINITIONS

H-1 Sample analysis performed past the method-specified holding time per client's approval.

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.

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

RPD Relative Percent Difference



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Sampled: 02/13/07-02/16/07 Report Number: IQC2271

Received: 03/21/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California	
EPA 160.3 MOD	Soil	N/A	N/A	
EPA 6010B	Soil	X	X	
EPA 6020	Soil	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

Subcontracted Laboratories

Paradigm Labs - SUB

5500 Business Dr. - Wilmington, NC 28405

Analysis Performed: 1613-Dioxin-HR OUT Samples: IQC2271-01, IQC2271-04

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Analysis Performed: Mercury-7471 (dry wt)

Samples: IQC2271-11

RECEIVING LABORATORY:



SENDING LABORATORY:

SUBCONTRACT ORDER - PROJECT # IQC2271

TestAmerica - Irvine, CA 17461 Derian Avenue. Suite	100	Weck Laboratories, Inc 14859 E. Clark Avenue	*
Irvine, CA 92614	100	City of Industry, CA 91745	# #
Phone: (949) 261-1022		Phone :(626) 336-2139	
Fax: (949) 260-3297		Fax: (626) 336-2634	
Project Manager: Michele Ch	ombarlin		
Project Wanager. Whohere Ch	ramberini	Project Location: California	
Work Order Comments:	Level 4 QC. Boeing EDD, Report to MI	DL w/ J flags, report in dry weight, 2 week TAT.	
Standard TAT is requested	unless specific due date is requested	d ⇒ Due Date: 4(3(5)	Initials:
Analysis	Expiration	Comments	
Sample ID: IQC2271-11 Soil Mercury-7471 (dry wt)-OUT	Sampled: 02/16/07 09:46 03/16/07 09:46	add on IQB1815-04, 3/21/07 J & B flag, sub to Weel	c, 9 day TAT
Containers Supplied: 500 ml Poly (IQC2271-11A)			
			25
*		*	
超			
	200		
16			
		E INTEGRITY:	W 35 W55
	□ No Sample labels/COC agree: □ No Samples Preserved Properly:	☐ Yes ☐ No Samples Received On Ice:: ☐ Yes ☐ No Samples Received at (temp	-2 -2 100000 - A 1000-1
Elizaber Released By	3/22/07 0800 Date Time	Received By Date Day 3/21/07	12:30 23°
Released By	Date Time	Received By Date	Time
		Date	Page 1 of 1
			rage I of I



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

IQC2271

ADDITIONAL ANALYSIS REQUEST FORM

Today's Date: 3-3ì-0	7 Del Mar Analytical	Project Manager:	Michele Chamberlin
Request via: telephone	e chain of custody form fa		
Client: MwH - Sm)	igo/Boing Conta	ect:	
Project: SSFL Gr	our 4		
Date Sampled: <u>Vຜ່າ</u> ງ	Dat	e Received:	
Status: in progress	completed received today	received yesterday o	on hold other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
I 9B 1487-05	FSBS 0066502	1613-Dioxin	J- Pandigm.
I QB 1487-10	F 5 BS 0068 SO1	1613 - Dioxin	
I 981487-08	FSBS0064502	% s.1:ds, Pk)
IQB 1487-09	FSBS 00 64 503	% solids, Pk	
IRB 1684-03	F5B50022502	10 solids, A	<u> </u>
I a B 1684-05	F5B5 0024501	% 50(ids, A	5
I 9B 1861-01	FSBS 0041501	% Solids As	
IQB 1861 - 15	FSBS 0053501	% 501:15, As	
IQB 1861 - 17	FSBS 0031 501	90 solids, As	1
I QB 1861 - 71	F5BS 0034501	90 Solids, A	la
I 9B1815-04	FSBS 0013 501	Mercary	-> Surp to Week
		ONK DILLY	F 1 4
TURNAROUND	STATUS:Same Day _	24hr48h	\
	5daysStanda	ardNo Rush Cha	arge
	Due 4-3	g:\dma	ii\misc\forms\add-req.doc



Laboratory Results

Ms. Michele Chamberlin Test America 17461 Derian Avc. Suite 100 Irvine CA 92614

Phone:

949-261-1022

Fax:

Dear Ms. Chamberlin:

Enclosed is a full data package containing the final results for samples received by SGS Environmental Services, Inc. on March 22, 2007 under your project name "IQC2271". The samples were analyzed by Method 1613 following Paradigm's Standard Operating Procedures and are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards.

Number of Samples Received:

Your Project Reference:

IQC2271

PAL Project Number:

G579-241

We appreciate your business and look forward to working with you again. Please contact me at 910-350-1903 if you have questions or need additional technical support.

Sincerely,

Christopher K. Cornwell

Assistant Director

Date Uo+

Page	lot	
------	-----	--



Case Narrative SGS Project: **G579-241** Project Name: **IQC2271**

For Method: 1613

• The submitted samples were accepted into the lab on March 22nd, 2007 and extracted on March 26th, 2007 by method 3520C. The sample extracts and associated QC extracts were then processed through clean-up by method 3630/3620 and analyzed by GC/MS for methods 1613.

Craig R. Tronzo

Date

Data Validation/QA Officer

Secondary Review

W. Mike Larkins Technical Director Date

Heather Patterson

Director

Date

2

SGS

Table of Contents

Section 1: Cover Letter/Case Narrative

Contains the Table of Contents, a project narrative, the client and PAL project identifiers, the number and type of samples, the methodology used to process the samples, and a summary table of sample results. A listing of current certifications by state, a table of abbreviations and qualifiers and the Toxic Equivalent Factors (TEF) are also supplied.

Section 2: Project Information

Contains the chain-of-custody(s), internal chain-of-custody(s) if applicable, sample login summary, sample receipt checklist, and any other project/client specific information.

Section 3: Sample Analytical Results

Contains results for client samples. Sample results include two pages of summarized analytical data and the associated raw data. The raw data includes a quantitation report from the instrumentation used that lists, ion areas, ratios, retention times, concentrations, and signal-to-noise ratios. It also has the selected ion current profiles (SICPs) for all homolog groups and any manual integrations.

Section 4: Quality Control Analytical Results

Contains results for each analytical workgroup associated with the submitted samples. A workgroup consists of the Lab Method Blank (LMB) and the Ongoing Precision and Recovery sample (OPR). All sample preparation data, including dry weight determinations, extraction logs, clean-up logs and observation notes are also documented. Any other supporting QC data will be documented here upon client request.

Section 5: Initial Calibration

Contains a table summarizing calibration data such as relative response factors, concentrations, and percent relative standard deviation. This section also contains related daily instrument QC information: GC performance data, mass resolution check, windows defining mix, and SICPs for all homolog groups and any manual integrations as well as the injection prep and instrument run logs.

Section 6: Continuing Calibration Data

Contains all daily instrument quality control information. This includes mass resolution checks, a table summarizing the window defining peaks, SICPs for the first and last eluters for each homolog group, SICPs documenting GC performance, a summary quantitation report showing RRFs for the Ccal and Ical, and SICPs for all homolog groups and any manual integrations, injection prep and instrumentation runlogs.

SGS

List of Oualifiers

- B Analyte was detected in the Lab Method Blank at a level above the Reporting Limit.
- EDL "Estimated Detection Limit"

EMPC "Estimated Maximum Possible Concentration"

- ppt Parts-per-trillion (pg/g; ng/L)
- V Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit.
- # Outside quality control limits
- * Indicates that the ion-ratio fails high or low; analyte reported as an EMPC

An average uncertainty of 30% can be routinely achieved as concluded from the evaluation of HRGC-HRMS standard operating procedures. The following flags warn the data user of situations where the uncertainty may be greater than stated.

- A Amount detected is less than the Lower Calibration Limit.
- J Amount detected is between the Method Detection Limit and the Lower Calibration Limit.
- E Amount detected is greater than the Upper Calibration Limit.
- S The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s).
- Q Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s).
- I Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s).
- DPE Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s).



Toxic Equivalency Factors

<u>Analyte</u>	WHO* 1998	WHO* 2005	International-89	MADEP*
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	1	1	0.5	0.5
1,2,3,4,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDD	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.01	0.1
OCDD	0.0001	0.0003	0.001	0.001
2,3,7,8-TCDF	0.1	0.1	0.1	0.1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.5
2,3,4,7,8-PeCDF	0.5	0.3	0.5	0.5
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.1
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.1
OCDF	0.0001	0.0003	0.001	0.001

^{*} World Health Organization

† Massachusetts Department of Environmental Protection

Method 1613--Boeing LMB

Analytical Data Summary Sheet

Analyte	Amount	EDL	Adj. RL	RT	Ratio	Qualifier
remany to	(pg/g)	(pg/g)	(pg/g)	(min.)		
2,3,7,8-TCDD	ND	0.101	1.00			
1,2,3,7,8-PeCDD	ND	0.105	5.00			
1,2,3,4,7,8-HxCDD	ND	0.131	5.00			
1,2,3,6,7,8-HxCDD	ND	0.140	5.00			
1,2,3,7,8,9-HxCDD	ND	0.134	5.00			
1,2,3,4,6,7,8-HpCDD	0.324	0.306	5.00	40:07	1.05	A
OCDD	1.93	0.608	10.0	44:25	0.88	A
2,3,7,8-TCDF	0.290	0.0958	1.00	30:34	0.86	A
1,2,3,7,8-PeCDF	0.0880	0.0568	5.00	33:19	1.54	A
2,3,4,7,8-PeCDF	0.0840	0.0570	5.00	33:56	1.42	A
1,2,3,4,7,8-HxCDF	ND	0.0960	5.00			
1,2,3,6,7,8-HxCDF	ND	0.0936	5.00			i
2,3,4,6,7,8-HxCDF	ND	0.0936	5.00			
1,2,3,7,8,9-HxCDF	ND	0.136	5.00			
1,2,3,4,6,7,8-HpCDF	ND	0.150	5.00			
1,2,3,4,7,8,9-HpCDF	ND	0.233	5.00			
OCDF	ND	0.527	10.0			
Total TCDDs	ND	0.101	1.00			
Total PeCDDs	ND	0.105	5.00			
Total HxCDDs	ND	0.135	5.00			
Total HpCDDs	0.504	0.306	5.00			A
Total TCDFs	0.440	0.0958	1.00			A
Total PeCDFs	0.172	0.0568	5.00			A
Total HxCDFs	ND	0.103	5.00			
Total HpCDFs	ND	0.186	5.00			
WHO-2005 TEQ (ND=0)	0.0607					
WHO-2005 TEQ (ND=1/2)	0.354	<u> </u>	<u></u>			

			Sample Information			
			Report Basis:	Dry Weig	ht	
			Matrix:	Soil		
			Weight / Volume:	10.00	Grams	
			Solids / Lipids:	100	%	
			Original pH:	NA		
<u>Laboratory Information</u>			Batch ID:	WG14169		
Sample ID:	LMB14169		Filename:	a31mar07	'a_6-3	
			Retchk:	a31mar07	'a_5-13	
			Begin ConCal:	a31mar07	'a_5-13	
Extraction Date:	26-Mar-07					
Analysis Date:	2-Apr-07 1	17:20	Initial Cal:	m1613-0	71006e	

Method 1613 - Blank Results LMB

Analytical Data Summary Sheet

Analytical Data Summary Sheet							
Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier	
Extraction Standards							
¹³ C ₁₂ -2,3,7,8-TCDD	2.00	1.57	78.6	31:14	0.78		
¹³ C ₁₂ -1,2,3,7,8-PeCDD	2.00	1.54	76.8	34:06	1.58		
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	2.00	1.64	81.8	36:42	1.26		
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	2.00	1.87	93.4	36:47	1.27		
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	2.00	1.48	73.9	40:06	1.06		
13C ₁₂ -OCDD	4.00	2.15	53.6	44:23	0.90		
¹³ C ₁₂ -2,3,7,8-TCDF	2.00	1.62	80.9	30:33	0.79		
¹³ C ₁₂ -1,2,3,7,8-PeCDF	2.00	1.61	80.6	33:19	1.58		
¹³ C ₁₂ -2,3,4,7,8-PeCDF	2.00	1.56	77.8	33:55	1.59		
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	2.00	1.70	84.8	36:00	0.52		
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	2.00	1.81	90.3	36:06	0.53		
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	2.00	1.76	88.2	36:35	0.53		
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	2.00	1.65	82.7	37:21	0.53		
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	2.00	1.50	75.2	38:52	0.45		
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	2.00	1.41	70.4	40:46	0.45		
Cleanup Standards							
³⁷ Cl ₄ -2,3,7,8-TCDD	0.400	0.333	83.3	31:15	-		
Injection Standards							
¹³ C ₁₂ -1,2,3,4-TCDD	2.00			30:43	0.80		
¹³ C ₁₂ -1,2,3,7,8,9-HxCDD	2.00			37:02	1.26		

			Sample Information Report Basis: Matrix:	Dry Weiն Soil	ght
			Weight / Volume:	10.00	Grams
			Solids / Lipids:	100	%
			Original pH:	NA	
Laboratory Information			Batch ID:	WG1416	9
Sample ID:	LMB14169		Filename:	a31mar07a_6-3	
			Retchk:	a31mar07	7a_5-13
			Begin ConCal:	a31mar07	7a_5-13
Extraction Date:	26-Mar-07				
Analysis Date:	02-Apr-07	17:20	Initial Cal:	m1613-0	71006e
Analyzed by:			Reviewed	by:	<u> </u>
Date: 04-64-57			r	Date:	4/17

Analytical Results for Ongoing Precision Result (OPR)

Analyte	Spiked	AMT	REC	Range	e pg/ul	Flag
	pg/ul	p g/u l	%	Lower	Upper	
2,3,7,8-TCDD	10.0	10.2	102	6.70	15.8	
1,2,3,7,8-PeCDD	50.0	50.0	100	35.0	71.0	
1,2,3,4,7,8-HxCDD	50.0	53.2	106	35.0	82.0	
1,2,3,6,7,8-HxCDD	50.0	52.9	106	38.0	67.0	
1,2,3,7,8,9-HxCDD	50.0	51.2	102	32.0	81.0	
1,2,3,4,6,7,8-HpCDD	50.0	51.7	103	35.0	70.0	
OCDD	100	98.1	98.1	78.0	144	
2,3,7,8-TCDF	10.0	9.85	98.5	7.50	15.8	
1,2,3,7,8-PeCDF	50.0	52.6	105	40.0	67.0	
2,3,4,7,8-PeCDF	50.0	51.0	102	34.0	80.0	<u> </u>
1,2,3,4,7,8-HxCDF	50.0	52.3	105	36.0	67.0	
1,2,3,6,7,8-HxCDF	50.0	51.1	102	42.0	65.0	
2,3,4,6,7,8-HxCDF	50.0	50.9	102	35.0	78.0	ľ
1,2,3,7,8,9-HxCDF	50.0	51.4	103	39.0	65.0	
1,2,3,4,6,7,8-HpCDF	50.0	52.2	104	41.0	61.0	İ
1,2,3,4,7,8,9-HpCDF	50.0	50.3	101	39.0	69.0	
OCDF	100	102	102	63.0	170	

= Outside range limits * = Ion Ratio Out

	File Information	
OPR14169	OPR Filename :	a31mar07a_6-1
26-Mar-07	Retchk:	a31mar07a 5-13
02-Apr-07	Begin ConCal:	a31mar07a_5-13
1613	•	
	Initial Cal:	m1613-071006e
Soil		
	26-Mar-07 02-Apr-07 1613	OPR 14169 26-Mar-07 02-Apr-07 1613 OPR Filename: Retchk: Begin ConCal: Initial Cal:

Analytical Results for Ongoing Precision Result (OPR)

Labeled	Spiked	AMT	REC	Range	e pg/ul	Flag
Standard	pg/ul	pg/ul	%	Lower	Upper	
Extraction Standards		-				
¹³ C ₁₂ -2,3,7,8-TCDD	100	75.1	75.1	20.0	175	
¹³ C ₁₂ -1,2,3,7,8-PeCDD	100	76.3	76.3	21.0	227	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDD	100	83.1	83.1	21.0	193	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDD	100	86.7	86.7	25.0	163	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDD	100	75.6	75.6	26.0	166	
¹³ C ₁₂ -OCDD	200	110	55.1	26.0	397	
¹³ C ₁₂ -2,3,7,8-TCDF	100	79.6	79.6	22.0	152	
¹³ C ₁₂ -1,2,3,7,8-PeCDF	100	79.1	79.1	21.0	192	
¹³ C ₁₂ -2,3,4,7,8-PeCDF	100	79.0	79.0	13.0	328	
¹³ C ₁₂ -1,2,3,4,7,8-HxCDF	100	85.4	85.4	19.0	202	
¹³ C ₁₂ -1,2,3,6,7,8-HxCDF	100	92.6	92.6	21.0	159	
¹³ C ₁₂ -2,3,4,6,7,8-HxCDF	100	88.5	88.5	22.0	176	
¹³ C ₁₂ -1,2,3,7,8,9-HxCDF	100	83.3	83.3	17.0	205	
¹³ C ₁₂ -1,2,3,4,6,7,8-HpCDF	100	77.2	77.2	21.0	158	
¹³ C ₁₂ -1,2,3,4,7,8,9-HpCDF	100	72.7	72.7	20.0	186	
Cleanup Standards						
³⁷ C ₁₄ -2,3,7,8-TCDD	20.0	16.2	80.8	6.20	38.2	

Form Version:[OPRv3.474]1613

OC Information File Information

OPR Lab ID:

OPR14169 26-Mar-07 OPR Filename : Retchk: a31mar07a_6-1

Extraction Date: Analysis Date:

02-Apr-07

Begin ConCal:

a31mar07a_5-13 a31mar07a_5-13

Method:

1613

Initial Cal:

m1613-071006e

Sample Information

Matrix:

Soil

Reviewed by: _

Date Reviewed: 4/4/27



TestAmerica - Irvine, CA

SENDING LABORATORY:

G579.241

RECEIVING LABORATORY:

SUBCONTRACT ORDER - PROJECT # IQC2271 /

Paradigm Labs - SUB

17461 Derian Avenue. Suite 100 frvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 260-3297 Project Manager: Michele Chamberlin	5500 Business Dr. Wilmington, NC 28405 Phone: (910) 350-1903 Fax: (910) 350-1557 Project Location: California
Work Order Comments: Level 4 QC. Boeing EDD, Report to	MDL w/ J flags, report in dry weight, 2 week TAT.
Standard TAT is requested unless specific due date is reque	sted => Due Date: 4307 Initials:
Analysis Expiration	Comments
Sample ID: IQC2271-01 Soil Sampled: 02/13/07 09:55 1613-Dioxin-HR OUT 02/27/07 09:55	√ add on IQB1487-05, 3/21/07 Sub=Paradigm, 17 cngnrs, dry wt(soil), 2 wkTAT, Jflag
Containers Supplied: Brass Sizeve (IQC2271-01A)	
Sample ID: IQC2271-04 Soil Sampled: 02/13/07 12:05 1613-Dioxin-HR OUT 02/27/07 12:05	add on IQB1487-10, 3/21/07 Sub=Paradigm, 17 cngnrs, dry wt(soil), 2 wkTAT, Jflag
Containers Supplied: _Brass Sleeve (IQC2271-04A)	
500 ml poly	
	IPLE INTEGRITY:
All containers intact: Yes No Sample labels/COC agr Custody Seals Present: Yes No Samples Preserved Prop	·
Eliane n. 3/2/07	Julie Jhnon 3/22/07 1000
Released By Date Time	Received By Date Time
Released By Date Time	Received By Date Time Page 1 of 1



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine Report Date: 04/05/07 09:42

17461 Derian Ave, Suite 100 **Received Date:** 03/22/07 12:30

Irvine, CA 92614 Turn Around: Normal

Attention: Michele Chamberlin

Work Order #: 7032218

Work Order #: 7032 Phone: (949) 261-1022

Fax: (949) 260-3297 Client Project: IQC2271

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 03/22/07 12:30 with the Chain of Custody document. The samples were received in good condition, at 2.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Taylor Maligmat

Project Manager



Page 1 of 6





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7032218 Project ID: IQC2271 Date Received: 03/22/07 12:30 Date Reported: 04/05/07 09:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IQC2271-11	Client		7032218-01	Solid	02/16/07 09:46



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100

Irvine CA, 92614

Report ID: 7032218 Project ID: IQC2271 Date Received: 03/22/07 12:30 Date Reported: 04/05/07 09:42

QUALITY CONTROL **SECTION**



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7032218 Project ID: IQC2271 Date Received: 03/22/07 12:30 Date Reported: 04/05/07 09:42

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7C1010 - EPA 7471A										
Blank (W7C1010-BLK1)				Analyzed:	03/30/07					
Mercury, Total	ND	0.010	mg/kg wet							
LCS (W7C1010-BS1)				Analyzed:	03/30/07					
Mercury, Total	0.0805	0.010	mg/kg wet	0.0820		98.2	80-120			
Matrix Spike (W7C1010-MS1)	Source	ce: 7032011-0	02	Analyzed:	03/30/07					
Mercury, Total	0.110	0.012	mg/kg dry	0.0980	0.011	101	70-130			
Matrix Spike Dup (W7C1010-MSD1)	Source	ce: 7032011-0)2	Analyzed:	03/30/07					
Mercury, Total	0.104	0.012	mg/kg dry	0.0980	0.011	94.9	70-130	5.61	25	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100

Project ID: IQC2271

Date Received: 03/22/07 12:30 Date Reported: 04/05/07 09:42

Irvine CA, 92614

Notes and Definitions

Report ID: 7032218

O-09 This sample was received with the EPA recommended holding time expired.

NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL) ND

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0651 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

1000788

ADDITIONAL ANALYSIS REQUEST FORM

			ma
		rtical Project Manager:	
		fax transmissionX_ E-mail	
Client: <u>MWH - Sa</u>	n Diego C	Contact: <u>Edmund</u>	Sarao
•	-FSDF - DOE		
Date Sampled: 2/	13/07	Date Received: 2/14	4/07
Status: in progress _	completed received toda	y received yesterdayo	n hold other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
1WB1487-11	FSBS0014501	9/05olids, and M	nercury
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HONELSHOPS AND PS 2131 CONTRACTOR HOW 12-14-01 19 ALA SANTANATOR Legend:
Numerical values for analyses equate to turn around time in days Hold all analysis except for pH 1945 Instructions/TAT H - Hold EH - Extract, Hold Cerpanents 10/0/8 2/0/01 Boeing PM: 4. Received by: Compeny: 9 LEAD 6020 SOIL METALS 11407 THE WAY TPH by SW8015BM - Soil Dete 2 2 Shelby Valenzuela 01 01 01 01 01 01 9 I 2 2 I 9 2 H3 2 Project Information 3. Relinquished by: 10 10 10 10 I # | 0/ # 9 Company Collector: Contact #: 2 2 0 2 No. of Containers 0001 17461 Derian Ave, Suite 100 Tae Group 8 Data Gaps-Soil Michele Chamberlin Test America, Inc. Project Manager: Diana Buchanan Irvine, CA 92608 (949) 281-1022 10:55 11:11 11:20 Ĕ 1021 **9 8** (626) 568-6897 8 9:27 9.27 1891264 アイア 2/13/2007 2/13/2007 2/13/2007 2/13/2007 DOE 2/13/2007 2/13/2007 2/13/2007 2/13/2007 2/13/2007 3 Project Information 2. Received by: Project Number: Sempling Event: Field Contact #: Field Contact: PM Phone #: Company: Client Name: Lab Contact: Lab Address: Lab Phone: Leb Name: Metrix 0001 Date: 2/14/2007 ŝ Sox So∉ æ So So. 3 Soğ Sol ₩ So H Liee. Tucker@mwhglobal.com boeingedme@ch2m.com 9444 Farnham Street Customer Information Cat for Report to: Lisa Tucker San Diego Suite 300 1. Relinquished by: 92123 SSFL Company: MWH 5 Lampte Name FS850064502 FSBS0064503 FSBS0067502 FSBS0066001 FSBS006501 F81130006502 F5130065501 F5850064501 F\$\$\$0067501 Company: Addres s: Email:

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MWHSV20070213_03

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Company: MWH	MWH.	Sampling Event:	†	Group 8 Data Gaps-Soil	s-Soil	Con	Contact #:							-				
Report to:	Report to: Liss Tucker	Project Number:	Her: 1891264	264		1	:	-		2	Tests and	Requested Analyses	=				Instructions/TAT)
Address:	9444 Farnham Street	Project Manager:	+-	Diana Buchanan		1					1	: } i	:	h			Legend:	
	Suite 300	PM Phone #:		(626) 568-6897		· · · · ·					-			er deser :			Numerical values for analyses equate to turn	o turn
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	CA	Field Contact #:	#			т											H-HOM FRA: HR	
	92123	Lab Name:	Test	Test America, Inc.		т—				Pe		SVO						
Email:	boeingedms@ch2m.com	Lab Contact:		Michele Chamberlin	ڃ	1				orchik								
	Lisa.Tucker@mwhgiobal.com	Lab Address:		17461 Derian Ave, Suite 100	Suite 100					vale						······································		
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LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

9444 Farnham Street, Suite 300 San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/13/07 Received: 04/09/07

Issued: 04/17/07 16:42

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID CLIENT ID MATRIX
IQD0788-01 FSBS0014S01 Soil

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin
Project Manager

Michele Chamberdin



MWH-San Diego/Boeing 9444 Farnham Street, Suite 300 San Diego, CA 92123

Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQD0788

Sampled: 02/13/07

Received: 04/09/07

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 7D10141 Extracted: 04/10/07	<u>'</u>										
Blank Analyzed: 04/10/2007 (7D10141-B	LK1)										
Percent Solids	ND	0.10	0.10	%							
Duplicate Analyzed: 04/10/2007 (7D1014	1-DUP1)				Sou	rce: IQD	0934-01				
Percent Solids	4.80	0.10	0.10	%		4.8			0	20	



MWH-San Diego/Boeing 9444 Farnham Street, Suite 300

San Diego, CA 92123
Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQD0788

Reporting

Sampled: 02/13/07

Received: 04/09/07

RPD

Data

%REC

METHOD BLANK/QC DATA

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Spike

Source

Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: W7D0360 Extracted: 04/11/	<u>07</u>										
Blank Analyzed: 04/12/2007 (W7D0360-	-BLK1)										
Mercury, Total	ND	0.010	0.00065 1	ng/kg wet							
LCS Analyzed: 04/12/2007 (W7D0360-F	BS1)										
Mercury, Total	0.0781	0.010	0.00065 1	ng/kg wet	0.0781		100	80-120			
Matrix Spike Analyzed: 04/12/2007 (W7	7D0360-MS1)				Sou	rce: IQD	0788-01				
Mercury, Total	0.249	0.012	0.00075	mg/kg dry	0.0967	0.16	92	70-130			
Matrix Spike Dup Analyzed: 04/12/2007	7 (W7D0360-M	SD1)			Sou	rce: IQD	0788-01				
Mercury, Total	0.247	0.012	0.00075 1	mg/kg dry	0.0967	0.16	90	70-130	1	25	



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300 San Diego, CA 92123

Attention: Lisa J. Tucker

Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQD0788

Sampled: 02/13/07

Received: 04/09/07

DATA QUALIFIERS AND DEFINITIONS

H-1 Sample analysis performed past the method-specified holding time per client's approval.

O-09 This sample was received with the EPA recommended holding time expired.

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

RPD Relative Percent Difference



MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQD0788

Sampled: 02/13/07

Received: 04/09/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California
EPA 160.3 MOD	Soil	N/A	N/A

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

Subcontracted Laboratories

Weck Laboratories, Inc

14859 E. Clark Avenue - City of Industry, CA 91745

Method Performed: EPA 7471A Samples: IQD0788-01



2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0651 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

1000788

ADDITIONAL ANALYSIS REQUEST FORM

			ma
		rtical Project Manager:	
		fax transmissionX_ E-mail	
Client: <u>MWH - Sa</u>	n Diego C	Contact: <u>Edmund</u>	Sarao
•	-FSDF - DOE		
Date Sampled: 2/	13/07	Date Received: 2/14	4/07
Status: in progress _	completed received toda	y received yesterdayo	n hold other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS
1WB1487-11	FSBS0014501	9/05olids, and M	nercury
	* Add-on wit	h new wo#x	
			E 407
			u gw
TURNAROUN	ID STATUS:Same I	Day48	shr3days
	5days	StandardNo Rush Ch	narge

SUBCONTRACT ORDER

TestAmerica - Irvine, CA

IQD0788

SENDING LABORATORY:

TestAmerica - Irvine, CA

17461 Derian Avenue. Suite 100

Irvine, CA 92614

Phone: (949) 261-1022

Fax: (949) 260-3297

Project Manager: Michele Chamberlin

RECEIVING LABORATORY:

Weck Laboratories, Inc

14859 E. Clark Avenue

City of Industry, CA 91745

Phone: (626) 336-2139

Fax: (626) 336-2634

Project Location: California

Receipt Temperature:

°C

Ice: Y / N

Level 4 QC. Boeing EDD, Report to MDL w/ J flags, report in dry weight, 2 week TAT.

Analysis

Due

Expires

Comments

Sample ID: IQD0788-01

Soil

Sampled: 02/13/07 12:45

add on IQB1487-11, 4/9/07

Mercury-7471 (dry wt)-OUT 04/17/07 12:00

03/13/07 12:45

J & B flag, sub to Weck, 9 day TAT

Containers Supplied:

2 oz jar (B)

Released By Date Received By Date

Received By Date

Received By Date

Received By Date



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634 info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: TestAmerica, Inc. - Irvine

Report Date:

04/17/07 16:06

17461 Derian Ave, Suite 100

Received Date:

04/10/07 08:45

Irvine, CA 92614

Turn Around:

5 days

Attention: Michele Chamberlin

Work Order #:

7041003

Phone: (949) 261-1022

Fax: (949) 260-3297

Client Project: IQD0788

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Michele Chamberlin:

Enclosed are the results of analyses for samples received 04/10/07 08:45 with the Chain of Custody document. The samples were received in good condition, at 3.5 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

% Solids = 86.2% provided by Client (Michele Chamberlin).

Reviewed by:

Taylor Maligmat

Project Manager

nelac*

Page 1 of 6





Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7041003 Project ID: IQD0788 Date Received: 04/10/07 08:45 Date Reported: 04/17/07 16:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Laboratory	Matrix	Date Sampled
IOD0788-01	client		7041003-01	Solid	02/13/07 12:45



Week Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745 Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7041003 Project ID: IQD0788 Date Received: 04/10/07 08:45 Date Reported: 04/17/07 16:06

QUALITY CONTROL SECTION



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100 Irvine CA, 92614 Report ID: 7041003 Project ID: IQD0788 Date Received: 04/10/07 08:45 Date Reported: 04/17/07 16:06

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W7D0360 - EPA 7471A										
Blank (W7D0360-BLK1)				Analyzed:	04/12/07					
Mercury, Total	ND	0.010 m	ng/kg wet							
LCS (W7D0360-BS1)				Analyzed:	04/12/07					
Mercury, Total	0.0781	0.010 m	ng/kg wet	0.0781		100	80-120			
Matrix Spike (W7D0360-MS1)	Sourc	Source: 7041003-01		Analyzed: 04/12/07						
Mercury, Total	0.249	0.012 m	ng/kg dry	0.0967	0.16	92	70-130			
Matrix Spike Dup (W7D0360-MSD1)	Sourc	e: 7041003-01	l	Analyzed:	04/12/07					
Mercury, Total	0.247	0.012 m	ng/kg dry	0.0967	0.16	90	70-130	0.8	25	



Weck Laboratories, Inc. 14859 E. Clark Ave. Industry, CA 91745

Phone 626.336.2139 Fax 626.336.2634

TestAmerica, Inc. - Irvine 17461 Derian Ave, Suite 100

Irvine CA, 92614

Report ID: 7041003 Project ID: IQD0788

Date Received: 04/10/07 08:45 Date Reported: 04/17/07 16:06

Notes and Definitions

O-09 This sample was received with the EPA recommended holding time expired.

NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL) ND

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

% Rec Percent Recovery

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

MDA Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



ADDITIONAL ANALYSIS REQUEST FORM

Today's Date:	<u> </u>	tical Project Manager:	MC
	ne chain of custody form		
Client: MWH - SUNT	rigo/being c	ontact: Lisa TI	ickec
Project: SSFL Gr	pups-DOF/18	391264	
Date Sampled: 2	22/07	Date Received:	23/07
Status:in progress	completed received today	received yesterday o	n hold other
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	
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QB2577-66	FSBSØØØ3SØ	2 Al, Na	by to run past HT
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Lab Contact: Michele Chamberlin Lab Contact: Michele Chamberlin Lab Contact: 1766 Derivation Lab Address: 1766 Derivation Lab Address: 1766 Derivation Lab Phone: 1766 Derivation 1730 Lab Lab Lab Lab Lab Lab Lab Lab Lab Lab	T		ato (Valifie)	Test Ame	rica, Inc.		F			EH - Extract, Hold	Hold H
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Email:	boeingedms@ch2m.com	Lab Contact:	Michele Chamberlin	ertin		Met	erch			-			_
	Lisa Tucker@mwhgiobal.com	m Lab Address:	17461 Derlan Ave, Suite 100	re, Suite 100	Diex			pH b					
			Irvine, CA 92606	-				y SV					
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LABORATORY REPORT

Prepared For: MWH-San Diego/Boeing Project: SSFL Group 8 - DOE

1891264

9444 Farnham Street, Suite 300 San Diego, CA 92123 Attention: Lisa J. Tucker

Sampled: 02/22/07 Received: 05/11/07

Issued: 05/21/07 15:15

NELAP #01108CA California ELAP#1197 CSDLAC #10256

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, 4 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
IQE1350-01	FSBS0003S01	Soil
IQE1350-02	FSBS0003S02	Soil

Reviewed By:

TestAmerica - Irvine, CAMichele Chamberlin

Michele Chamberdin

Project Manager





MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQE1350

Sampled: 02/22/07 Received: 05/11/07

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7E18136 Extracted: 05/18/07	_										
Blank Analyzed: 05/19/2007 (7E18136-B	LK1)										
Aluminum	ND	10	5.0	mg/kg wet							
Sodium	29.5	50	24	mg/kg wet							J
LCS Analyzed: 05/19/2007 (7E18136-BS)	1)										
Aluminum	51.6	10	5.0	mg/kg wet	50.0		103	80-120			
Sodium	517	50	24	mg/kg wet	500		103	80-120			
Matrix Spike Analyzed: 05/19/2007 (7E1	8136-MS1)				Sou	rce: IQE	1603-03				
Aluminum	20100	20	10	mg/kg wet	50.0	13000	14200	75-125			MHA
Sodium	1730	100	48	mg/kg wet	500	640	218	75-125			M1
Matrix Spike Dup Analyzed: 05/19/2007	(7E18136-M	SD1)			Sou	rce: IQE	1603-03				
Aluminum	18200	20	10	mg/kg wet	50.0	13000	10400	75-125	10	20	MHA
Sodium	1320	100	48	mg/kg wet	500	640	136	75-125	27	20	M1





MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Sampled: 02/22/07 Report Number: IQE1350 Received: 05/11/07

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 7C01145 Extracted: 03/01/07	<u>1_</u>										
Blank Analyzed: 03/02/2007 (7C01145-E	BLK1)										
Percent Solids	ND	0.10	N/A	%							
Duplicate Analyzed: 03/02/2007 (7C0114	15-DUP1)				Sou	rce: IQC	0100-01				
Percent Solids	4.20	0.10	N/A	%		4.2			0	20	
Batch: 7E16155 Extracted: 05/16/07	<u>'</u>										
Blank Analyzed: 05/16/2007 (7E16155-B	LK1)										
Percent Solids	ND	0.10	N/A	%							
Duplicate Analyzed: 05/16/2007 (7E1615	5-DUP1)				Sou	rce: IQE	1106-03				
Percent Solids	6.20	0.10	N/A	%		7.5			19	20	



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

MWH-San Diego/Boeing

Project ID: SSFL Group 8 - DOE

9444 Farnham Street, Suite 300 San Diego, CA 92123

1891264 Sampled: 02/22/07 Report Number: IQE1350

Attention: Lisa J. Tucker

Received: 05/11/07

DATA QUALIFIERS AND DEFINITIONS

В Analyte was detected in the associated Method Blank.

H-1 Sample analysis performed past the method-specified holding time per client's approval.

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.

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery

information. See Blank Spike (LCS).

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

Relative Percent Difference RPD



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

MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQE1350

Sampled: 02/22/07

Received: 05/11/07

Certification Summary

TestAmerica - Irvine, CA

Method	Matrix	Nelac	California		
EPA 160.3 MOD	Soil	N/A	N/A		
EPA 6010B	Soil	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



ADDITIONAL ANALYSIS REQUEST FORM

Today's Date:5	<u> </u>	cal Project Manager:	40				
Request via: telephone chain of custody form fax transmission E-mail other							
Client: Mult san Digo/Boeing Contact: Lisa Tucker							
Project: 55FL 6100198- DOF /1891264							
Date Sampled: 2 2 20 07 Date Received: 2 23 07							
Status:in progress	completed received today	received yesterday or	n hold other				
SAMPLE NUMBER	SAMPLE DESCRIPTION	ANALYSIS REQUESTED	SPECIAL REQUIREMENTS				
1082577-05	F5B50003501	% 501 ids - post f	irom teden 7 CO1145,5x Al Na y to run past HT				
QB2577-06	F5B5\$\$\$\$2	Mosolids - ord	y to run past Ht				
Add-in to	10E1350 (F	F5B5@@03501 = -01 F5B5@@03502 = -02					
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